Mesopotamian lexical lists are of various kinds. A major distinction may be made between word lists and sign lists. Sign lists treat the (Sumerian) values of signs, and often add an Akkadian translation. Word lists include thematic lists, acrographic lists (ordered by the first or main sign of the word), and synonym lists. The series ur₅-ra = hubullu is the most important thematically arranged word list. It covers a variety of subjects, such as trees, wooden objects, reed and reed objects, metals, animals, stones, plants, clothing, geographical names, and foodstuffs. Strictly speaking ur₅-ra = hubullu, or in short ur₅-ra, is the name of the post-Old Babylonian version only. Sumerian ur₅-ra and its Akkadian equivalent hubullu denote a kind of loan. It is the incipit of a series of business expressions which fill the first two tablets of the late recension. These two tablets were added after the Old Babylonian period. The incipit of the Old Babylonian version is giš taskarin (boxwood). In this study the term 'Old Babylonian ur₅-ra' will be used as a convenient, though anachronistic, label.

Old Babylonian ur₅-ra was not created ex nihilo. Therefore, we will first pay attention to earlier thematic lexical texts.

2.1 Third Millennium Predecessors

2.1.1 Archaic Lexical Lists

The archaic lexical lists have recently been edited by Englund and Nissen (1993). The corpus mainly consists of small fragments, the majority of which could be attributed to one of several compositions, most of which are known from later third millennium sources. The identified lists include lists of professions (LU A), Fish, Cattle, Vessels, and Wood.

There is no way of knowing the degree to which the archaic lexical corpus may be taken as a representative sample. Archaeologically all tablets derive from secondary contexts. The layers in which they were found were disturbed by building activity from a much a later period. The tablets were removed from their original place of storage. What we have, therefore, is not an archive or a library, but the scattered remains of something that can no longer be reconstructed. Some 125 fragments could not be attributed to any composition. It is possible that some of these belong either to one of the known compositions, or to one as yet unrecognized. Other pieces may not belong to any standardized composition but may be incidental lists of words, or perhaps incipient compositions which were later abandoned. An example of this last possibility may be the so-called Swine list. The two tablets subsumed under this heading only share occasional entries and do not represent one common text. Still, both follow more or less the usual format of the archaic lexical texts. Each entry is preceded by the item sign (the sign otherwise used for the numeral 1), and contains a sign that is interpreted as ŠUBUR (swine).

1 The lists are given their conventional labels here. For a summary of the contents of these and other archaic lists the reader is referred to the introduction to Englund and Nissen 1993.

2 The interpretation of this sign, however, is controversial. Another option is 'servant' (Steinkeller 1996,
Research in the archaic lexical lists is still in its infancy, since the textual basis for such research has only been available in a useful format since 1993. The reconstructions prove that from the outset the archaic lists were standardized. The variants in writing and order of the items are mostly marginal. More difficult is the matter of the textual status of these lists. So far no fragment may be shown to have contained a single composition in its entirety. All the pieces are exercises which excerpt a larger composition. Probably these larger compositions primarily existed in the memories of those who had learned them by heart, and were, as such, rarely put into writing.

Archaic lexical lists were found together with large numbers of contemporary business documents. The kind of notation that is used in these business documents has a very limited need for verbs - if any. It seems that writing was conceived of as a series of signs, representing either things in the real world, or numbers. This may explain why the archaic lexical lists are lists of nouns. The system of writing in these documents does not reflect the grammar of the language. Rather, it more or less reflects the structure of the bureaucratic operation recorded. From the very beginning words for trees and wooden objects, fish, and birds are graphemically indicated by a special sign, the so-called determinative. Determinatives have no pendant in the language. They establish a direct relationship between graphemics and semantics. For this reason it often makes little difference whether we consider the lexical lists as being organized by thematic or by graphemic principles.

There is no one-to-one relation between the repertory of signs and words in the lists, and the vocabulary used in business documents. The archaic lexical lists contain numerous items which never appear outside this corpus. The list of vessels has a number of compound signs consisting of the sign for vessel (DUG) inscribed with some commodity. The compound sign denotes a vessel intended for, or filled with, that commodity. Some of these signs are attested in business documents but most of them are not. Such signs were labelled theoretical signs by Krispjin (1992, p.14). The term is felicitous because the signs demonstrate to us as well as to the ancient student the theoretical possibilities of the writing system. The list does not merely enumerate existing signs, but demonstrates one element of the system behind the sign inventory. Another case in point is the list of officials called LU A. It is very probable that this text gives a hierarchical inventory of professions and bureaucratic titles. The first entry - NAMEŠDA - is presumably the title of the highest official of archaic Uruk. Most of the signs used in this list are well known and widely used outside the lexical corpus. However, the signs are combined to refer to professions which never or hardly ever appear in administrative texts. In fact there are only a few entries in LU A which are attested elsewhere. Various explanations may be put forward. The hazards of excavation may have yielded an unbalanced picture. A more plausible explanation is

\[\text{p.212f.}\]

3 The exception is the Wood list, which is only standardized in its first section.

4 For the role of layout in the archaic documents see Green 1981.

5 On the archaic LU list see Nissen, Damerow, and Englund 1990, pp.153ff. There the officials that appear in business documents are discussed.
that some professions are more likely to appear in the administrative record than others. The list represents the hierarchy of archaic Uruk; the question of whether the entries listed were likely to occur in business documents was of no relevance to its compiler. If the lists were nothing but reference books for scribes in the administration, then the design and subsequent transmission of signs and entries which never appear in their records would seem to be unmotivated and useless complications. But the lists were more than just that. The apparent reason for the composition of the early lists was to facilitate, explore and expand the new recording technique.

2.1.2 Later Third Millennium Sources

Textual finds from Fāra in Southern Babylonia and Abū ṣalābīkh in Northern Babylonia show that in around 2600 BC there was a standardized corpus of lexical and literary texts. In essence the lexical corpus is the same as that from archaic Uruk. Some lists are slightly reworked (the list of Animals\(^6\)), others have been copied virtually verbatim (LU A). The god list is an example of a text not attested before. Since the history of this corpus has recently been studied by several authors\(^7\), I will restrict the discussion to some characteristics of prime importance in the present context.

The most striking feature of the third millennium lexical tradition is its textual stability. Texts copied over several centuries and in different centres in and outside the Mesopotamian heartland hardly changed. Most of the published sources originate in the first half of the period under discussion. It is now becoming increasingly clear that in the period of the Third Dynasty of Ur (2100-2000) the same texts were still in use\(^8\), at least in Nippur. By that time some of them had a history of about a millennium. The list that is found in most exemplars is the list of professions (LU A). It was devised in the archaic period and was still copied occasionally in Old Babylonian times\(^9\). Nearly every site where third millennium school texts have been found yielded at least one copy. The social and political changes that affected Mesopotamia during the third millennium must have made this list obsolete at an early period. The text commonly labelled Early Dynastic LU E is a modernized list of professions\(^10\). Here we find well-known titles and professions such as dub-sar (scribe), ensi\(^2\) (governor, or king), and nu-banda\(^3\) (supervisor), not found in LU A. Even though LU E was clearly more up-to-date in its contents, it never replaced LU A, which continued to be copied long after LU E was apparently forgotten.

The uses and the system of writing changed profoundly during the millennium between the

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\(^{6}\) See Veldhuis 1995.

\(^{7}\) Cavigneaux 1983, pp.612-616; Nissen 1981; Michalowski 1987; see further the editions of most important lists by Pettinato in MEE 3 (1981) and the introduction to Englund and Nissen 1993.

\(^{8}\) See §2.1.4

\(^{9}\) See the edition in Arcari 1982, and for the archaic sources Englund and Nissen 1993. Add further the prism fragment FAOS 2/1, Tafel 92 F20 (Old Babylonian; Kisurra). Old Babylonian copies with glosses are: UET 7, 86; U. 30497 (Civil 1983b, p.1 with n.2); and BM 58680 (unprovenanced).

\(^{10}\) See MEE 3, pp.27-46.; and MSL 12, pp.16-21, in particular the introduction p.16.
earliest texts and the start of the second millennium. From a one-purpose system, devised to record administrative transactions it grew into a multi-functional device, used for such different things as royal propaganda, long-distance communication (letters), magic, proof of ownership of land, and poetry. The system of writing underwent profound changes, both in the design and in the uses of the graphemes. All this means, again, that by early in the third millennium the lexical lists must have been out of date. We are, therefore, all the more impressed by the force of the tradition that kept them in use.

The stability of this tradition, however, should not blind us to changes in use. The later third millennium sources are not the products of pupils. They are almost always written by advanced scribes. In most cases a tablet has the entire text of one lexical list. The archaic lists were apparently created as educational tools. In F-ra and Ab-alabikh the lists have turned into sources of esteemed knowledge of high antiquity.

2.1.3 Ebla

A special place within the history of lexical lists is occupied by the finds from the ancient town of Ebla (modern Tell Mardikh in Syria). This town adopted the cuneiform system of writing in the twenty-fourth century BC. Together with the writing system the literary and lexical tradition was imported. Literacy was transmitted from Kiš, which was the most important centre in Northern Babylonia. The lexical texts found in Ebla basically represent the same tradition as that known from Mesopotamia a few centuries before. In some respects, however, this corpus is adapted. There is a large bilingual Sumerian - Semitic list. Well-known lexical compositions were sometimes written in unorthographic spelling. In these texts the entries are not given in the common orthography, but provide the pronunciation of the Sumerian words. In the so-called Ebla syllabary we find another innovative use of a traditional composition. This syllabary is a sign list that uses the order of the items in the list of professions LU A as its main organizational principle (Arcari 1983). These novelties reflect an environment where Sumerian had no tradition and where the need for such tools was felt more deeply than in the Sumerian heartland. Whether this environment was Ebla or Northern Babylonia is a question that cannot be settled here.

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11 Exercise texts from this period, mostly exercise business documents, are treated by Foster 1982.


13 There are indications that Mari also played a part in this process. See Archi 1992, pp.22-23.

14 The Ebla lexical corpus was published by Pettinato in MEE 3 and 4.

15 The Semitic language attested in Ebla is now regarded by most writers as an early form of Akkadian or a closely related language. See Michalowski 1987; Huehnergard 1996, p.259f. with note 38; and Krebernik 1996.

2.1.4 The Third Dynasty of Ur

The third millennium ends with the Third Dynasty of Ur (Ur III). This dynasty (ca. 2100-2000), which united all of Southern Mesopotamia under its rule, has left us tens of thousands of administrative tablets. To the most important king of this dynasty, Šulgi, a large number of organizational and religious reforms are attributed. These reforms affected the organization of the army, the system of taxes, administrative procedures, and the deification of the king. Moreover, Šulgi is said to have reformed the writing system and the scribal school. It is often assumed that the new lexical and literary corpus which emerges all of a sudden in the Old Babylonian period goes back to the literary creativity of the Ur III period, and to the reforms claimed by Šulgi. The evidence, however, requires a more balanced picture.

The core of the Old Babylonian literary corpus was created in the Ur III period. This can be argued first of all from its contents. There are numerous royal hymns in praise of Ur III kings. Moreover, the epic stories glorifying the ancient kings of Uruk, Gilgameş, Enmerkar, and Lugulbanda, were ideologically important to the kings of the Ur III dynasty who had adopted these kings as their ancestors. The Ur III roots of the literary tradition have been confirmed by the finding of a number of fragments of contemporary manuscripts. The Ur III literary corpus cannot possibly be identical to the Old Babylonian corpus. A number of compositions were added - such as the royal hymns for early Old Babylonian kings. Other compositions may have been abandoned or reworked. In detail the relation between the two corpora is largely unknown. In those cases where we can actually compare an Ur III fragment with the Old Babylonian version a highly differentiated picture arises. The Ur III manuscripts of the 'Curse of Agade' differ in spelling to their later counterparts, but essentially bear the same text. The same relation is found in the Temple Hymns, but the Ur III 'Lugalbanda' fragment exhibits a text that differs in more important ways from the known Old Babylonian recension.

For the lexical corpus an entirely different picture emerges. Ur III lexical texts hardly bear any similarity to Old Babylonian school texts. A number of lentil-shaped tablets from Nippur, previously treated as Old Babylonian exercise texts, were dated by Zettler to the Ur III period on archaeological grounds. Among these only one has a possible relation with an Old Babylonian composition (Proto-Izi II). However, both the archaeological context of this tablet and its attribution to Proto-Izi are uncertain, and therefore inconclusive. Another group of lentil-shaped tablets was claimed to be Ur III by Weidner (1914). Since these tablets were acquired

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17 For Šulgi's reforms see Steinkeller 1987, pp.16-17.
18 See e.g. Hallo 1989.
19 See Michalowski 1981, p.2
20 For the Ur III literary texts see Civil 1973, p.171 n.3; Civil 1985a; Michalowski 1985, p.216-217 and n.3; Alster 1993.
22 The tablet was found in a fill. See Zettler 1991, p.258, and the catalogue on pp.263-274.
23 The tablets were recently discussed by Alster (1993). At the time of Weidner's publication, the lentils
on the antiquities market their dating is based exclusively on palaeographic arguments. The elaborate and archaizing style of writing which led Weidner to his conclusion is by no means unusual for Old Babylonian school texts.

Extant Ur III lexical texts reproduce the third millennium tradition. We find the same lists of professions, birds, and fish well known from archaic sources and beyond24. A most interesting exception from Nippur was published by Civil (1973, p.177)25. It was dated by him as pre-Ur III, but the writing suggests an Ur III date (Cavigneaux 1983, p.616). The tablet is oblong in shape, and has 37 lines altogether. The beginning of the obverse, which is badly damaged, exhibits short sections on birds, liquids, and plants. Then follows a relatively long section on earthenware. The passage contains words for vessels (13-20), and ovens (21-22):

13 dug kur-ku-ru₂ large vessel for oil
14 dug dur₂-bur₃ fermenting vat
15 dug GAR₃-me
16 šika-dal
17 šika-KAL
18 šika-KAL
19 šika-KAL
20 šika-ugur₂-bal vessel for beer production
21 in₃ durun-na oven
22 in₄ NE-DU-DU

belonged to Peiser. After the latter’s death, his collection was bought by De Liagre Böhl. Three of the four published lentils have been located in the collection Liagre Böhl, property of the Dutch Institute for Near Eastern Studies (NINO) in Leiden: P.375 = LB 994, P.376 = LB 996, and P.371 = LB 995. The last number was identified by Wim Burgraaff, to whom I express my sincere thanks for his help in the Böhl collection. In the same range of LB numbers there are a few other lentils with area measures, wooden objects, and personal names. The copies by Weidner are excellent. The holes in LB 994 and LB 996, described by Weidner (1914, p.304), are certainly not for placing the tablet on a wall. They are finger grips for stabilizing the lentil in the hand (see for Nippur examples Falkowitz 1984, p.20). LB 995 (P.371) is a forerunner of ur₄-ra 8-9, which follows the Nippur text (MSL 7, p.191: 110-111; not used there). The style of all four lentils is the Nippur style, with two model lines copied by a pupil on the same side. The same type, however, also appears in Isin, whereas Nippur lentils occasionally have divergent formats (Falkowitz 1984). LB 994 (P.375) is probably Old Babylonian Proto-Lú 236 and 235 respectively. The variant EN₅·INANNA (for EN.ME₅·INANNA) also appears in Proto-Diri 383. The order of the items on the lentil corresponds to Proto-Diri. However, the lentil can hardly be Diri, since Diri always includes an Akkadian rendering. The other two pieces in Weidner’s publication are proverbs (Alster 1993, p.4 nt.10).

24 Lagaš: Birds: ITH II/2, 5898 + ITH V, 9251 (see Civil and Biggs 1966 and MEE 3, p.275). Nippur: LU A: 6N-T476 + 477 (see Civil 1984a, p.8). Additional unpublished 6N-T pieces are mentioned in the footnotes to the introduction to Englund and Nissen 1993. Unprovenanced: List of Names and Professions (Fales and Krispijn 1980). The Nippur name list NBC 11202 = 5N-T75 published by Cohen (1993) was dated by the editor to early Ur III or late Sargonic. This text does not belong to any of the well-known third millennium lists, although there is a duplicate of unknown origin (likewise published in Cohen 1993). Civil and Biggs 1966 (p.8 n.1) mention the Ur III bird list from Nippur A 31267. This number does not appear in the footnotes in Englund and Nissen 1993. The number may be an error for A 31247 = 6N-T681.

25 CBS 7269; collated.
Lines 17-19 correspond to the Old Babylonian list of vessels lines 99-101 (MSL 7, p.204), where we find dug-KAL instead of šika-KAL.²⁶ From other sources we know that there are three different readings for dug-KAL: dug-urrub² (Akkadian: uruppum); dug-zurzup² (Akkadian: šur ṣuppum); and dug-silima² (Akkadian: hupšašûm)²⁷. Most other items are found in the Old Babylonian text as well.²⁸ Although the text can hardly be considered a 'forerunner' of the Old Babylonian list of earthenware, it does show that apart from the ancient lexical tradition there were other elements which contributed in one way or another to the composition of the Old Babylonian lists.

2.2 Old Babylonian Lexical Findings.

The lexical finds from the Old Babylonian period differ strikingly from their third millennium counterparts. All existing lists were reworked and expanded to cover such important topics as reed and reed objects, stones, and heavenly bodies. The thematic lists were arranged in the series ur²-ra = hubullu. New types of lists were composed, including lists of simple and complex signs, and elementary lists designed to teach the fundamentals of cuneiform writing. The fixed and stable third millennium lexical tradition was replaced by a variety of fluid local traditions. Textually the relation between the third millennium lexical lists and their Old Babylonian counterparts is still largely unclarified. The animal list which goes back to archaic Uruk has a repetitive character. A set of qualifications is repeated for various types of cattle. This character is partly retained in the cattle section of Old Babylonian ur²-ra. The Old Babylonian list of birds may be regarded as a reworked version of its third millennium ancestor (Pettinato 1978, p.173; Black and Al-Rawi 1987, p.117). In other lists, such as the metal list, the relation between the third and second millennia traditions is not that clear, or has not been sufficiently investigated. The Old Babylonian corpus was certainly not created from nothing. However, both in general and in detail, there are so many differences from the earlier tradition that we can safely speak of a fresh start.

The lexical tablets we have are unevenly spread over the period and the geographic area that is covered by the label Old Babylonian. We will begin our discussion of the lexical corpus and its

²⁶ For šika instead of dug in Ur III Nippur see Sallaberger 1996, p.17 n.81 and p.33f.

²⁷ In later traditions there is a fourth reading dug-ursub² (Akkadian: ur ūppu). Bilingual evidence is most conveniently collected in CAD Š sv šur ūppu. Old Babylonian Proto-Diri, Old Babylonian, and Middle Babylonian ur²-ra have three items dug-KAL. For Middle Babylonian ur²-ra see MSL 7, p.115: 21-23 (Alalakh); Emar VI/4, p.87: 8'-10'. None of the Ugarit texts has been published so far (see Van Soldt 1995). See now Sallaberger 1996, p.51 and p.102 sv dug-KAL.

²⁸ The items im²durun-na and im²NE-DU-DU were discussed by Civil 1973. The other items are treated by Sallaberger 1996, and can be found in his Sumerian glossary pp.95-109. Line 15 was read by Sallaberger (p.108) dug-ubur-me(?). The entry is listed under the heading dug ubur-imin-bi ('seven-teat vessel'). In Sallaberger's reading the word may be interpreted as a 'vessel with teats'. However, the sign transliterated ubur by Sallaberger remains a problem, indicated by his question mark. According to Sallaberger (personal communication) the sign cannot be GAR, but must be an imperfectly written UBUR or perhaps an AMAS (ubur).
institutional context with a historical overview.

2.2.1 Early Old Babylonian Period

The end of the third millennium was marked by the destruction of the Ur III empire. The period that follows, the Old Babylonian period (2000-1595), is characterized by political fragmentation and instability. In the early Old Babylonian period the city states of Isin and Larsa alternate in their claims to sovereignty over Southern Babylonia (2000-1763). Nippur, in the northern part of this area, continually changed hands. In his thirtieth year (1793) Rim-Sîn of Larsa finally defeated Isin. He remained in power for another thirty years. Only a few lexical tablets may with some degree of confidence be dated to the period before 1763. They derive from Larsa in the south and Kisurra in the vicinity of Nippur. Cavigneaux has argued that the so-called Scherbenloch in Uruk, which contained a mixture of school texts, administrative texts and letters, represents a coherent archive, to be dated between Rim-Sîn 32 and 43 (Cavigneaux 1996, pp.1-5). Accordingly the Uruk school texts belong to the end of the early Old Babylonian period. The lists of stones from Larsa (BBVOT 3,1) and Uruk (Cavigneaux 1996, text 170) are closely related to the versions from Isin and Nippur, but differ in the order of the first few sections:

<table>
<thead>
<tr>
<th>Larsa/Uruk (Early O.B.)</th>
<th>Nippur/Isin (Middle O.B.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>na₄ ka-gi-na</td>
<td>na₄ ka-gi-na</td>
</tr>
<tr>
<td>na₄ esi</td>
<td>na₄ esi</td>
</tr>
<tr>
<td>na₄ ū₄u₁₁-gal</td>
<td>na₄ (giš)-u₁₁-gal</td>
</tr>
<tr>
<td>na₄ du₈-si-a</td>
<td>na₄ a₂-šuba</td>
</tr>
<tr>
<td>na₄ algames(SAL-HUB₂)</td>
<td>na₄ algames(UD-SAL-HUB₂)</td>
</tr>
<tr>
<td>na₄ a₂-šuba</td>
<td>na₄ du₈-si-a</td>
</tr>
</tbody>
</table>

In detail the four versions all differ from each other. In the following table the best preserved versions, Larsa, Isin, and Nippur, are compared:

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29 For the political career of Rim-Sîn and his significance see Van de Mieroop 1993.
30 School texts are found scattered through Arnaud BBVOT 3. They include lists of names, Proto-ki-ulutin-bi-še₃ Syllable Alphabet A (84 rev.), ur₅-ra (stones), mathematical tables, and literary texts.
31 Kienast, FAOS 2. School texts include thematic lists (among them an Old Babylonian ED LU A), a mathematical table, and a literary text.
32 The corpus of Uruk lexical texts published by Cavigneaux is most remarkable and deserves a thorough analysis. It contains a number of elementary exercises (including Syllable Alphabet A; see §2.4.1.1) and many advanced lists (Diri and Ugu-mu see §2.4.1.3), but relatively little that falls in between. Similarly, the lentil-shaped tablets (see §2.3.3.4) contain mostly either Syllable Alphabet A or literary extracts, the two ends of the curricular phase in which lentils were used (see §2.4.2).
33 For a comparison between the Larsa and the Uruk versions see Cavigneaux 1996, p.83.
<table>
<thead>
<tr>
<th>Larsa(^{34}) (early O.B.)</th>
<th>Isin(^{35}) (middle O.B.)</th>
<th>Nippur(^{36}) (middle O.B.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (\text{n}a\text{ka-gi-na})</td>
<td>1. (\text{n}a\text{ka-gi-[na]})</td>
<td>1. (\text{n}a\text{ka-gi-na})</td>
</tr>
<tr>
<td>2. (\text{n}a\text{ka-gi-na-ti}-\text{la})</td>
<td>2. (\text{n}a\text{ka-gi-na-t[i-l]}\text{a})</td>
<td></td>
</tr>
<tr>
<td>3. (\text{n}a\text{ka-gi-na-kal-\text{ga}})</td>
<td></td>
<td>3. (\text{n}a\text{ka-gi-na-kal-\text{ga}})</td>
</tr>
<tr>
<td>4. (\text{n}a\text{k[a]-gi-na-zalag2-\text{ga}})</td>
<td></td>
<td>4. (\text{n}a\text{k[a]-gi-na-zalag2-\text{ga}})</td>
</tr>
<tr>
<td>5. (\text{n}a\text{k[a]-gi-n[a]})</td>
<td></td>
<td>5. (\text{n}a\text{k[a]-gi-n[a]})</td>
</tr>
<tr>
<td>6. (\text{n}a\text{[ka-gi-na-d]ib-ba}?)</td>
<td></td>
<td>6. (\text{n}a\text{[ka-gi-na-d]ib-ba}?)</td>
</tr>
<tr>
<td>3. (\text{n}a\text{ki\text{\text{s}i}b-ka-gi-na})</td>
<td>7. (\text{n}a\text{[ki\text{\text{s}i}b]-ka-gi-na})</td>
<td>2. (\text{n}a\text{ki\text{\text{s}i}b-ka-gi-na})</td>
</tr>
<tr>
<td>4. (\text{n}a\text{lagab-ka-gi-na})</td>
<td>8. (\text{n}a\text{[lagab]-ka-gi-na})</td>
<td>3. (\text{n}a\text{lagab-ka-gi-na})</td>
</tr>
<tr>
<td>5. (\text{n}a\text{ellag2-ka-gi-na})</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. (\text{n}a\text{esi})</td>
<td>9. (\text{n}a\text{esi})</td>
<td>4. (\text{n}a\text{esi})</td>
</tr>
<tr>
<td>7. (\text{n}a\text{nu11-gal})</td>
<td>10. (\text{n}a\text{[gi\text{\text{s}-n[u]}11]-g[al]}?)</td>
<td>5. (\text{n}a\text{gi\text{\text{s}-nu11-gal})</td>
</tr>
<tr>
<td>8. (\text{n}a\text{ki\text{\text{s}i}b-nu11-gal})</td>
<td>11. (\text{n}a\text{[ki\text{\text{s}i}b-gi\text{\text{s}-nu]}11-gal})</td>
<td>6. (\text{n}a\text{ki\text{\text{s}i}b-gi\text{\text{s}-nu11-gal})</td>
</tr>
<tr>
<td>9. (\text{n}a\text{lagab-nu11-gal})</td>
<td>12. (\text{n}a\text{[lagab-gi\text{\text{s}-nu]}11-gal})</td>
<td>7. (\text{n}a\text{lagab-gi\text{\text{s}-nu11-gal})</td>
</tr>
<tr>
<td>10. (\text{n}a\text{ellag2-lagab-nu11-gal})</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The writing \(\text{n}a\text{nu11-gal}\) in the Larsa text for \(\text{n}a\text{gi\text{\text{s}-nu11-gal}\) in the other two versions is not a distinctive trait. The same variant appears in two of the Nippur sources used in the reconstruction of the text in MSL 10. Compared to the Isin and Nippur versions, the most important difference in this opening section is the addition in the Larsa text of the ellag\(^2\) items (lines 5 and 10).\(^{37}\) Throughout the stone list ki\text{\text{s}i}b (seal), lagab (block), and ellag\(^2\) (bead) recur as a stock triad for nearly every kind of stone. If we were to see these versions as stages in historical transmission, we would expect to find such systematic features growing in importance. It is surprising, therefore, to see that the ellag\(^2\) items are omitted by the later texts. The Middle Babylonian Ugarit version (MSL 10, p.38) reinserted the items, followed in this by the first millennium recension. The example merely illustrates that a one-way chronological picture of textual transmission will not do. There is no way of deciding whether the differences are due to a

\(^{34}\) Arnaud, BBVOT 3,1.

\(^{35}\) IB 1624, unpublished.

\(^{36}\) MSL 10, p.54f.

\(^{37}\) The ellag\(^2\) items are missing in the early Old Babylonian Uruk text, which otherwise is very similar to the Larsa version.
diachronic development of the stone list, to the peculiarities of the local tradition in Larsa, or to mere chance.

Among the Kisurra school texts there is a prism (FAOS 2/1, 181) which lists stones immediately followed by geographical names. This sequence differs from the tradition observed in Nippur and in all post-Old Babylonian versions. There the stones are followed by plants, fish, birds, and clothing, and only then the geographical names. Despite these differences the Kisurra list clearly represents an ur-s-ra recension.

From Sippar, in Northern Babylonia, we have an early Old Babylonian list of birds. Significantly, this list is in Akkadian, whereas Southern Babylonian thematic lists are invariably in Sumerian. The Sippar text bears no resemblance whatsoever to any earlier or later lists of birds. Sumerian was at home in literate circles in the south, but was not so firmly rooted in the north. It is possible that in the early part of the second millennium the northern lexical tradition was relatively independent, with less emphasis on the Sumerian heritage. For the time being, however, the Sippar bird list is an isolated piece, and this interpretation must remain speculative.

2.2.2 Middle Old Babylonian Period

In Babylon, formerly an insignificant city in Northern Babylonia, an Amorite dynasty had come to power. Hammurapi, the most successful king of this dynasty who reigned for over 40 years, defeated Rim-Sîn of Larsa in 1763, moving the centre of political power to the north. This event is taken as the beginning of the middle Old Babylonian period. Hammurapi united Northern and Southern Babylonia under his rule. After his death in 1750 he was succeeded by Samsuiluna. Initially this succession did not cause any major political troubles. From Samsuiluna’s ninth year onwards, however, southern cities acknowledged the rule of Rim-Sîn II of Larsa. Only two years later, in 1739, important cities such as Ur and Larsa completely disappear from the record. Apparently a crisis had hit the area. Nippur and Isin in the northern part of Southern Babylonia were affected but survived. In his 29th year (1721) Samsuiluna lost control over Nippur to Iluma-Ilu, king of the Sealand. Shortly afterwards the city was abandoned. Isin had met the same fate a few years earlier. Stone (1977), who describes the Nippur evidence in detail, attributes the crisis to a number of social, economic, and political factors. Armstrong and Brandt (1994), arguing from archaeological data, demonstrate that the de-urbanisation of the area is better explained by an interruption in the water supply.

The great mass of the extant Old Babylonian lexical tablets derive from Nippur. This city never had any political power. It was both a religious centre and a centre of learning. Its school was

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38 The stones section is edited in MSL 10, p.62.
40 See the summaries of the excavation results in Hrouda 1977, pp.147-148; and Hrouda 1981, pp.199-201. The latest dated tablet is Samsuiluna 26.
regarded as the most important school. The first excavation campaigns in Nippur took place in the nineteenth century. To present standards the reports of these excavations are very poor. They do not allow us to reconstruct a stratigraphy, or to associate tablets with architectural remains. Since Nippur school tablets are undated, the only method to assign dates to tablets is palaeography. For this corpus, however, palaeography is notoriously unreliable. Differences between early, middle, and late Old Babylonian sign forms are often slight, and such differences that do exist may be obliterated by teachers using archaic sign forms, or by the inexperienced hands of schoolboys. After World War II archaeologists returned to Nippur. The school texts that were found in these campaigns could be related to the crisis of Samsuiluna's eleventh year in 1739 BC (Stone 1987, p.36; Civil MSL 14, pp.7-8). The tablets found in earlier campaigns are similar enough to justify the assumption that they are from roughly the same period. Texts from Isin are contemporaneous. One of the lexical tablets from Isin is dated Samsuiluna 12. School tablets from Ur, Quiet Street 7, may be slightly earlier (see Charpin 1986, p.433). The lexical tradition of Ur differed considerably from the one in Nippur. UET 7, 92 lists leather objects, birds, fish, plants, and clothing. All these subjects are treated in Nippur urš-ra as well, but are never found together on a single tablet (see §2.4.4.2. for Nippur urš-ra).

2.2.3 Late Old Babylonian Period

The period following the abandonment of the south will be referred to as late Old Babylonian. In this period textual finds are restricted to a narrow band stretching from Dilbat in the south to the Diyala in the north, with the city of Babylon in the centre (see Gasche 1989, Plan 8). Towns in the southern part of the country, including Nippur and Isin, only reappear in the late Kassite period, around 1350 BC.

In the late Old Babylonian period the lexical tradition was kept alive in northern centres. Texts are known to have come from Babylon, Tell Harmal, Sippar, Sippar-Amnānum, Meturan, Kiš, and some other places. Unfortunately, texts from these sites are either few or

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42 Van Dijk 1989.
43 IB 1547. See Wilcke 1987, p.84 and p.103.
44 LTBA I, 80; MSL 10, pp.117-119 text B.
45 IM 51144, partly published in MSL 5-7; and a number of lentils in TIM 10/1.
46 See Scheil SFS, Chapitre III; CT 16, 11-14.
49 Listed by De Genouillac in PRAK II in the catalogue of Série A. Only a few of these pieces were published. Other Kiš texts were (re-)published in MSL SS 1.
50 Al-Fouadi 1976: a Proto ki-ulutin-bi-šē text from Dhibāṭ, near Baghdad.
unpublished. From the evidence we have, the lexical traditions of Northern and Southern Babylonia seem to have been rather different. The Tell Harmal text IM 51144 was partially published in bits and pieces at various places in MSL. It shows an urṣ-ra redaction much shorter than comparable southern texts, and in a different arrangement. It has the sequence trees and wooden objects, reed, containers, birds. This is the same order of topics as found in Nippur, but with many omissions between the containers and the birds. The unpublished lexical tablets from Metur n belong to the same tradition. The Oriental Institute in Chicago houses two lexical cylinders from the Diyala region, probably from Ishchali. The first (A 7895) has col. I rivers; col. II snakes; col. III domestic animals; col. IV ?; col. V-X foodstuffs. The second (A 7896) has col. I-II plants, in col. III followed by wild animals; col. IV-VI domestic animals; col. VII hides. The two cylinders closely resemble each other in outward appearance, but they differ somewhat in the order of the sections. Perhaps this tradition did not recognize a standard sequence of topics. The order of both cylinders differs considerably from the Nippur tradition (see §2.4.1.2). The subjects treated, however, are shared by the two traditions.

The destruction of southern cities during the reign of Samsuiluna brought about a mixture of northern and southern traditions in the late Old Babylonian period. Finkelstein demonstrated the existence of a group of refugees from the southern city of Uruk in late Old Babylonian Kiš in the north. Among them was a group of priests who had brought with them the cult of important Urukean deities. It is possible to find similar displacements in the lexical tradition. The list of wooden objects MLC 1454+1455 (= BRM 4, 29+30) is dated Samsuiluna 28. Unfortunately the tablet is unprovenanced, but the year name proves that it must derive from a northern site. The text bears some striking resemblances to a text from Ur in the south. The unprovenanced tablet is probably an example of a text written or dictated by a southern scribe after his flight to Northern Babylonia.

2.3 The Old Babylonian School

Old Babylonian lexical tablets were used as teaching instruments in the scribal school or eduba.

51 Personal communication by A. Cavigneaux.

52 The cylinders, together with a third exemplar, belong to the 'Frankfort Collection'. Many of the Old Babylonian tablets from this collection can be shown on prosopographic grounds to derive from Ishchali. See Neugebauer and Sachs 1945, p.24 n. 87 and 88; Greengus 1979, p.2 n.7; Ellis 1986, p.761 n.13.

53 A 7895 was partly published in MSL 11, p.147 and p.160f. (forerunners 12 and 17). See also Civil apud Hallo 1982, p.88 n.33.

54 See Charpin 1986, pp.403-415, with references to earlier studies on the subject.

55 Edited in §5.6.2 as NP I-03.

56 The text in question is edited in §5.6.2 as Ur I-01.

57 The Sumerian é-dub-ba-a is literally 'tablet house'.

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A description of this eduba, its curriculum and teaching methods is necessary to place the lexical texts in their proper context. Evidence for the school may be found in literary compositions, in archaeological data, and in the exercise tablets themselves.

2.3.1 School life: The Picture in Literary Texts

The classic study of the Old Babylonian eduba is Sjöberg 1975. His description is mainly based on a variety of Old Babylonian literary texts. Most important among these is a group of compositions in which the life of a schoolboy is evoked in dialogues of a usually ungracious and no doubt satirical kind. These texts are commonly called eduba compositions. Further evidence is found in a number of royal hymns which extol the extraordinary achievements and righteousness of the king. One of the recurrent themes in these hymns is the description and glorification of the scholarly and literary accomplishments of the king and his special concern for the eduba. The most famous of these is commonly called Šulgi B. The beginning of this hymn has a biographical arrangement. After mentioning the glorious destiny bestowed upon him at the time of his birth, Šulgi goes on to describe his childhood (lines 13-20):

When I was young I learned at school
the scribal art on the tablets of Sumer and Akkad.
Among the highborn no one could write like me.
Where people go for instruction in the scribal art
there I mastered completely subtraction, addition, calculating, and accounting.
The fair Nanibgal Nisaba provided me lavishly with knowledge and understanding.
I am a meticulous scribe who does not miss a thing!

Throughout the hymn Šulgi boasts about his knowledge and understanding of various disciplines. He is perfectly at home in divination (131-153) as well as in music (154-174). Later in the text Šulgi claims to have founded scribal schools in Ur and Nippur, where the hymns glorifying his extraordinary wisdom must be recited for ever.

The eduba themes are found in a less elaborate way in several hymns; among them Lipit-Eštar B (Vanstiphout 1978 and 1979), Išmedagan V (Ludwig 1990, Chapter 8), and Enlil-bani A (Kapp

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58 Summaries of the data found there have often been studied. In addition to Sjöberg 1975, see Charpin 1986, pp.420-423; Waetzoldt 1989; Volk 1996. A number of Eduba compositions are now available in German translation by Römer in Römer and von Soden 1990, pp.68-102 with references to earlier literature.

59 Geerd Haayer generously allowed me to use his unpublished edition and translation of this hymn, on which the following is based. I would like to thank him here for his permission, and for the valuable insights he shared with me during our discussion of the text.

60 The goddess of writing and the patroness of the eduba.

61 On this passage see Krispijn 1990.
The attention paid to matters of schooling and writing in these hymns served to depict the rulers as learned scholars. The same compositions were used as exercises in the scribal schools, so that there is a degree of self-reference involved. The scribal themes were of interest to the very people who were responsible for the transmission of the texts.

The literary texts were not devised to transmit the true organization of an Old Babylonian school. Civil (1980) has discussed a number of factors which prohibit the easy identification of the literal meaning of a text with historical reality. The eduba dialogues may depict an ideal school, rather than an actual school. An example of misinterpretation is the passage in Schooldays (29-41)\(^62\), where various school employees play their part in the story. There is an overseer of the courtyard (31), a keeper of silence (35), a teacher of Sumerian (40), and so on, all in all ten different functionaries. Each of these ten finds some reason to punish the poor pupil, the hero of the story. One might be tempted to find here a complete list of the eduba personnel, if it were not that all other evidence points to extremely small schools, where this short-tempered staff would easily outnumber the pupils. A more plausible explanation, therefore, is that all designations refer to one and the same person, the last in the list: the teacher or ummia.

The word ummia is used in Sumerian in a more general sense as 'craftsman' or 'expert'. It suggests that the work of a scribal teacher was regarded as parallel to that of the carpenter with his trainee. An advanced pupil was called šeš-gal, or 'big brother.' He assisted the teacher with his younger classmates. This person is not only known from the eduba texts but also from some proverbs. A pupil is called either dumu-eduba (son of the tablet house) or dub-sar-tur (junior scribe). The latter is found in colophons, the former in literary texts.

2.3.2 Archaeology and the Organization of the School

Another source of information on Old Babylonian schools is archaeology. Typically, large groups of Old Babylonian exercise texts are found in domestic areas. By far the largest number of school tablets in Nippur section TA was found in one house (house F)\(^64\). The rooms in this house are rather small; it does not distinguish itself architecturally from other houses in the area. Among the inventory of this school was a large vessel filled with pots, perhaps to be used for keeping the clay wet. In an adjacent room lots of unformed clay was recovered. Remains in Isin\(^65\) and Sippar-Amn_num (Tell ed-D_r)\(^66\) show a basin in connection with school tablets. The basin in Tell ed-D_r was filled with refined clay and a number of exercise tablets. It was used

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\(^{62}\) Kapp's edition was based on the single exemplar known then (OECL 1, 10-12). Since then, a number of duplicates have been identified. The published pieces are listed in Wilcke 1976, p.84. See also Falkowitz 1984: 3N-T745.

\(^{63}\) See Kramer 1949, and the new translation by Römer in Römer and von Soden 1990, pp.68-77.

\(^{64}\) Stone 1987, p.37. But see the important reviews by Charpin (1989 and 1990) and Van Driel (1990).

\(^{65}\) Isin Nordost-Abschnitt III, südlicher Teil, Raum 4 (see Haussperger 1987, p.32 with Plan 10). This room and the adjacent one yielded most of the Isin school texts.

both for the storage and recycling of clay. The modern observer cannot help imagining an eduba as a formal, and relatively large, institution, where several generations of pupils were instructed. The question is whether this picture is based upon any reality. The school houses identified at these three sites do not seem suitable for an academy of any size. The excavation reports of Isin and Nippur show that large non-domestic buildings such as temples did not yield Old Babylonian exercise texts. Arguing from different kinds of evidence Waetzoldt (1989, p.39) concludes that a single class may have had no more than two to four pupils.

Recently, Charpin and Diakonov have discussed the organizational framework of school and teacher. Charpin (1986, p.485f.) argues that the only scribal school in Ur that can be identified with some certainty, No7 Quiet Street, was a private school where a priest named Ku-Ningal primarily taught his own sons. This picture differs considerably from the traditional view that holds that the Old Babylonian eduba was an official institution, replaced only in later times by private education at home (Sjöberg 1975). The context of school texts found in Nippur , Mari and Sippar-Amnānum basically confirms Charpin's conclusions. Arguing from the same body of evidence Diakonov (1990) comes to radically different conclusions. According to this author scribal education was centrally organized by the state. This centre was Nippur. For Diakonov there are two reasons to come to this conclusion. Firstly, writing was of vital importance to the state, and it is difficult to imagine a state leaving a matter of such importance to private initiative. In the second place the uniformity of the schooling system points, according to Diakonov (1990, p.128), to interference from the central government. An unorganized kind of family education would lead to a wide variety of curricula. Diakonov further emphasizes that the relation between education and clergy, as it is found in Ur, Mari, and Sippar-Amnānum, is not an essential one. The cult did not depend on written texts. Literacy was of prime importance to the administration. In a period of relatively weak state control, as the Old Babylonian period was, most of the administration was done by temple personnel. From these ranks the teachers were recruited, but this does not change the eduba into a temple school.

The school curriculum indeed shows very little that would suit a clerical education. Moreover, such an education would more probably be located within a temple, as was the case in Neo-Babylonian times. Diakonov's arguments that the school was state organized are less convincing. A centralized state of any extent existed only for a relatively short period of time during the reign of Hammurapi. The uniformity of the school texts and the school curriculum is a relative one. By any standards the third millennium lexical texts are much more uniform, without any central organization guaranteeing their faithful transmission. The kind of variation that is found between local Old Babylonian traditions is comparable to what is known for oral traditions

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69 See Tanret 1982 and Gasche 1989, p.20

70 I would like to express my sincere thanks to Gerame Wouters, who translated for me the relevant passages from the Russian.

71 See the Neo-Babylonian exercises from the Nabû temple in Cavigneaux 1981.
such as ballads and counting-out rhymes (Rubin 1995; see §3.6). The stability of such genres is explained by their mnemo-technical qualities, rather than by state control. The rules of the genre can be shown to be helpful in memorizing and stabilizing a song or rhyme. Rubin demonstrated that the kind of variation that is found in oral genres usually leaves the basic character of the piece transmitted untouched. The performer who is familiar with the genre may change a song considerably, but will typically do so within the confines of the rules of the genre, and without basically altering its portent. This kind of transmission may account for widely differing local traditions, which are still basically recognizable as 'the same'. This is a description appropriate to the lexical traditions of the Old Babylonian period. There is no reason to explain the relative uniformity of Old Babylonian education by state control. Furthermore, the strict division between private and public is a fairly recent one. The archives of officials tend to mix what we would call private and professional affairs. A private school, therefore, may still have a semi-official character. The eduba was no doubt an institution. An institution, in the sociological sense of the word, is not so much an official organization, located in a building, but a pattern of social behaviour that follows conventional rules, and is provided with moral authority. Through the concept institution we can think of an eduba as a private enterprise, without expecting every teacher to invent his own private curriculum. Roman education of upper-class children depended for a considerable degree on the private enterprise of former slaves (Bonner 1977), without departing from traditional lines.

Diakonov (1990, p.128f.) further argues that the eduba had open access. Admission was not restricted to members of clerical families. This is shown, according to this author, by two kinds of evidence. First, the teacher was not paid by state or temple, but by the parents of the pupil. Payment by the parents is attested in the literary text called Schooldays. Payment by state or temple, according to Diakonov, would have left traces in official documents, which is not the case. Second, a few girls attended school. Both points are presented by the author as indications of a certain freedom of choice, and a non-mechanistic procedure for admission. One must admit, however, that this freedom of choice must have been restricted to the happy few. Charpin (1986) demonstrated the hereditary character of priestly professions which implied literacy. Even though literacy seems to have been relatively widespread in the Old Babylonian period, the picture of an ummia who with the assistance of a šeš-gal tries to keep a crowd of pupils under control (Diakonov 1990, 130f.) is almost certainly exaggerated. The evidence for female scribes and pupils, moreover, is restricted to northern areas, in Mari, Sippar, Me-Turan, and Tell Zettler (1992, p.209), described the relation of the Ur-me-me family with the Inanna temple of Ur III Nippur as follows: 'The family treated the temple as if it were, in effect, its private preserve.' See also Zettler 1991, p.261, and Van Driel 1994, p.192.

Thus we can speak about language or gift-giving as institutions. Berger and Berger 1972, Chapter 4.


See Harris 1975, p.196f. Probably from Sippar are a lexical text (P-Aa MSL 9, p.148f. = MSL 14, p.p.135f.) and a literary text (VAS 10, 207) written by a female scribe. References courtesy M. Stol. See also Durand: Documents Cunéiformes I, 495 (ur-ṣa clothing section, dated to Samsuiluna; colophon: šu munus-dub-sar; provenance unknown). F. Al-Rawi informs me (personal communication) that exercises by female scribes have also been found in Tell Haddad and Tell Harmal.
2.3.3. Educational Tools: The Typology of Lexical Exercise Tablets

Old Babylonian lexical texts are inscribed on several characteristic tablet types. These tablet types can tell us much about the way lexical texts were actually used in class. The labels used for the types are basically those proposed by Civil in *MSL* 12, p.27f. The following discussion of this typology is based upon the Nippur evidence, where the sources flow most abundantly. However, the typology seems to work for most Old Babylonian centres.

2.3.3.1 Type I: Prisms and Large Tablets

Type I texts contain either a complete lexical composition, or a considerable part of such a text. A type I text has several hundred lines; the total may amount to more than 800. From the material point of view, type I texts may be found in two forms: prisms and large tablets.

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77 The relevant texts from Me-Turan and Tell Harmal are unpublished. Personal communications by F. Al-Rawi and J. Black.

78 A much earlier description of the main types may already be found in Chiera's introduction to *PBS* 11/1 (1916). This is still the most extensive and informative discussion of the formal characteristics of Nippur school tablets.
Prisms are large clay objects, commonly with four or six faces on which a text is inscribed. They are found for nearly all major lexical texts. Syllable Alphabet B, the first list to be copied in the Nippur curriculum, is, as far as I know, not attested on prisms, but the Hilprecht Sammlung in Jena houses a cylinder fragment that contains part of the text. Some of the smallest Nippur prisms contain the elementary exercise TU-TA-TI. The Hilprecht collection has two examples. Both are six-sided, with only one column per side, and relatively small writing. Each side measures somewhat more than 3 cm. The colophon of one of them (HS 1801) gives a total of 208 lines, which amounts to an average number of about 34.5 lines per side. Each line takes approximately 0.35 cm, bringing the total height of the complete prism to about 12 cm (maximum preserved height is 8 cm). The prisms known for the major lexical series are much larger, and commonly have two to four columns per side. A six-sided prism, again from the Jena collection, contains a thematic list with the sections stones, plants, fish, birds, and clothing. It has 2 columns per side, each side measuring about 5 cm, and must have contained well over 600 lines. Four-sided exemplars mostly have three, or even four...
columns per side\textsuperscript{83}. All prisms show a hole, pierced from bottom to top, apparently for turning the object mounted on a stick. Prisms usually cover an entire composition\textsuperscript{84}.

Type I tablets typically have five or six columns per side, and are often written in minute script. Some lexical texts may be divided over two or more tablets. In such cases each tablet ends with a catch-line referring to the first line of the next section. The last tablet ends with the conventional invocation of Nisaba, the goddess of writing: 

\begin{equation}
^d \text{nisa}- \text{za}-\text{mi}: '\text{Nisaba be praised!}'.
\end{equation}

Large tablets are more common than prisms. Among the Nippur lexical texts I have now counted 67 prisms or prism fragments as against 209 type I tablets\textsuperscript{85}. Type I tablets are known for all main lexical series.

Type I texts, both prisms and large tablets, may have a colophon. This colophon generally contains the name of the scribe, and sometimes the number of lines. Occasionally, the colophon includes a date, but no examples from Nippur have been found so far\textsuperscript{86}.

Discussing the quality of the sources of a Nippur sign list, Civil (\textit{MSL} 14, p.7) argues that none of them would qualify as a standard reference copy\textsuperscript{87}. He maintains that all available copies are student's exercises. Teachers simply did not need a written copy since they knew the text by heart. Type I tablets may have as many deviations from the standard text as extract tablets, even

\begin{itemize}
\item \textsuperscript{83} Examples are HS 1699, \textit{ur}-\textit{ra} animals and meat cuts: three columns per side; and HS 1765 + HS 1930 + HS 2699 (joins Oelsner), \textit{ur}-\textit{ra} wild animals: four columns per side.
\item \textsuperscript{84} I am not sure whether this holds true for the numerous prisms and prism fragments listed for Proto-Izi I and II. Some of them may have contained only one of the two tablets. The Jena prism HS 1802 contained the complete composition (Proto-Izi I and II).
\item \textsuperscript{85} In both categories there are probably joining pieces. On the other hand, there must be additional ones, particularly in Baghdad and Istanbul. The figures, therefore, should not be taken in an absolute sense, but rather give an indication of the numerical proportions of the two types.
\item \textsuperscript{86} Isin: IB 1547 (\textit{ur}-\textit{ra}: giš edited as Is I-02 in §5.6.1): Samsuiluna 12 (see Wilcke 1987, p.84 and p.103). Unprovenanced examples are \textit{BRM} IV 29 + 30 (\textit{ur}-\textit{ra}: giš; edited as NP I-03 in §5.6.2): Samsuiluna 28; Durand, \textit{Documents Cuneiformes de la IVeme Section I}, Plate 123 no. 495 (\textit{ur}-\textit{ra}: lists of clothing, written by a munus-dub-sar): Samsuiluna; year name broken.
\item \textsuperscript{87} See now the proto-Aa prism from Tell Hammām published by Van Soldt 1995a. According to Van Soldt (p.286 n.45) the mistakes show that the prism was written by a student. The lines on the upper side (see p.285) may be part of the colophon.
\end{itemize}
though the quality of writing is usually superior to other school texts. As far as literary texts are
concerned, a six-column tablet which contains the complete text of the 'Curse of Agade' has
been shown to be textually greatly inferior to extract tablets of the same composition (Cooper
1983, p.46). Similarly, Klein demonstrated that for the hymn Šulgi A the prisms are not necessarily
to be better than other sources (Klein 1981, p.170). In some Type I tablets the colophon explicitly
indicates that the tablet was written by a dub-sar-tur or scribal apprentice. Regrettably, no such
elementary exercises, such as TU-TA-TI (see above).

Prisms must have been fairly difficult to produce and inscribe. It is not clear to me why objects
of such a prestigious design were used for exercises. They may have been produced for special
occasions, for instance as a kind of examination, which would also account for their relative
rarity. Prisms and type I tablets were inscribed by advanced students. This may be concluded
from the writing, which is usually careful. This is even true of those prisms which contain
elementary exercises, such as TU-TA-TI (see above).

2.3.3.2 Type II: Teacher-Student Exercises

Type II tablets are of medium size. Common measurements are approximately 13x8x3.5cm. The
most characteristic feature of these tablets is that obverse and reverse carry different exercises,
both in a well-defined format. On the left side of the obverse the teacher has written an extract
from some school text. The extract is usually written in large and elaborate script. It may be as
long as 30 lines, but 8-15 lines is a more regular length. In most cases the lines do not fill the
available column space. The last entry is followed by a double horizontal line and the rest of the

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88 In Nippur the prism format was used for a restricted group of literary texts. Examples are known for the
'Curse of Agade', royal hymns, literary letters, and Eduba dialogues, for instance, but not for the Enmerkar
stories. A complete inventory of Nippur prisms and the texts inscribed on them might further elucidate the
function of these objects.

UET 7, 114 a small type I tablet with a metrological list: ti-la / nisaba / ha-la / en-ki / Šu é-a-šar-i-li / dub-
sar-tu-ra / in-sar.

90 Four Nippur examples are known to me. HS 1617 is a type I tablet, with a list of stones, plants, and fish,
followed by the catch-line for the section birds (see §2.4.1.2). The last column is partly filled with month
names. PBS 11/3, 70 (CBS 7836) is a prism with name list C, followed by the conventional subscript
nisaba za-mi and then by a list of month names. Ni 10524 is a prism with name list B 'Second Part'. It is
partly edited by Çığ and Kizilyay 1965, p.43f and p.46f. According to the editors 'another topic' is treated
after the subscript, but which topic is not stated (p.47: n.11). A 30145 (3N-T105) is a prism fragment
which contains the end of the list of geographical names. The last column is filled with numerals (MSL
11, p.96: B2). An example of unknown provenance is the bilingual Nig-ga prism YBC 13524 (see MSL
13, p.92).

91 A few prisms written in a beginners hand are known. For A 30286 (Syllable Alphabet B) see above note
79. Another example is published by Waetzoldt 1986a, p.5 no. 3 (probably Old Babylonian Uruk): sign
list.
column is left empty. To the right there is space for one to three more columns. Here the teacher's example was copied by a pupil. Few examples survive where the pupil's copy or copies are still extant. The regular procedure was that the pupil's side was erased, so that he could recopy his teacher's model. This process could be repeated several times. As a result the right side of the obverse of a type II tablet is usually blank, and much thinner than the left side. Such tablets are rather weak and are nearly always broken between the left and the right sides. In other cases the tablet has been cut in two on purpose, so as to preserve the model text on the left side.

92 To my knowledge Oelsner 1989 was the first to remark that type II tablets may have room for more than one pupil's copy. Scrutiny of Nippur type II tablets that survive more or less complete shows that this was the regular make-up. Even when the obverse is carefully effaced, as is usually the case, traces of column dividers can often be detected. A well-preserved example with two pupil's columns (CBS 6599+ HS 1616 + HS 1844; obverse O.B. Proto-Lu; reverse ur-ra giš = Ni II-137) will be published in Veldhuis and Oelsner forthcoming. Another published example is Ni 5152 (Çiğ, Kizilyay, and Landsberger 1959, p.51, where obverse and reverse must be exchanged). On this tablet the lines 266-272 of Syllable Alphabet B are repeated in two pupil's columns. Perhaps this layout of the obverse of a type II tablet is reflected in Eduba D, where the pupil says that the teacher gave him an extract to be copied four times in a single day (Civil 1985, p.76 commentary to line 26).
The reverse of a type II tablet is usually divided into four or five columns and carries a second extract from a school text. The reverse extract is often taken from a different composition than the obverse, but a type II tablet with two extracts from the same list is not exceptional. First, the layout of the reverse was prepared by drawing vertical lines to separate the columns. Then the first column was divided into boxes by adding horizontal lines. Next this column was inscribed. The exercises were not usually written line by line. If there is a constant element, a sign or a word with which each line begins, this element was written first as many times as necessary. Then the column was finished by adding the qualifications to each line. Then the second column
was prepared by drawing the horizontal lines; and so on.

The order of the various stages of inscription may be deduced from some unfinished exemplars. The reverse of UM 29-15-314+ has an extract from the list of trees\(^\text{93}\). Halfway through the third column the exercise was interrupted. The rest of the third and the whole of the fourth column were left uninscribed. In the uninscribed part of the text an extra vertical line is visible, designed to facilitate the correct placement of the first sign, which in this case is always GIŠ. In the inscribed columns this second vertical line disappears under the writing. The fourth column, which is completely empty, has no horizontal lines. Perhaps this tablet was actually written line by line. The third column is inscribed with about ten lines. These lines are completed. The rest of the column is completely empty except for the vertical lines. Apparently this pupil did not begin by repeating GIŠ first. Another unfinished tablet is CBS 4866 (SLT 128)\(^\text{94}\), which has the beginning of the list of trees. The last column ends with a number of lines inscribed only with the determinative GIŠ. In some cases the pupil who had filled his column with constant elements ran into trouble, because a long item unexpectedly proved to fill two lines\(^\text{95}\). A published example is CBS 8298 (SLT 137)\(^\text{96}\). The reverse of this tablet has an exercise listing types of chairs. The last two lines read:

\[
\begin{align*}
\text{giš} & \text{gu-za-giš} \quad \text{mes} \quad \text{chair of mēsu wood} \\
\text{giš} & \text{gu-za-ma₂-gan} \text{ki} \quad \text{Magan chair}
\end{align*}
\]

From context and parallel texts it is clear that the two lines are intended to be one, reading \(\text{giš} \text{gu-za-giš-mes-ma₂-gan-na}_k\text{i}\), chair of Magan mēsu wood (line 193 in the composite text). In this case the word \(\text{giš} \text{gu-za}\) was first repeated a number of times before the qualifications were added.

The writing on the reverse is usually smaller, less elaborate, and more cursive than the teacher's example on the obverse. The exercise may be about 60 to more than 150 lines long. The reverse

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\(^{93}\) Ni II-140.

\(^{94}\) Ni II-001.

\(^{95}\) See Chiera 1916, pp.20-21.

\(^{96}\) Ni II-156.
of HS 1745+ is an example of a relatively long exercise. It has five columns, each of over 30 lines, and has an extract from the list of wooden objects. HS 1629+, on the other hand, had no more than about 65 lines with names of trees. The text is divided over four columns, written in largish script. As a rule the columns on the reverse run, as they should, from right to left. In a significant number of cases the columns run from left to right. This is usually the case for the elementary exercise Syllable Alphabet B. There are, however, numerous other examples as well. One of them is CBS 14158, which carries proverbs on its obverse, and a list of birds and fish on the reverse. Left-to-right reverses are found throughout the corpus of lexical school texts, but appear more frequently for elementary exercises, and gradually disappear in the course of the school career. Writing from right to left is more difficult for a right-handed scribe, which explains this distribution. Other deviations from the common format are rare. A cuneiform tablet should be turned along the horizontal axis. The rare cases where a type II tablet has been turned along the vertical axis may be attributed to carelessness. An example is CBS 6407 with a list of trees on both sides. In a few cases the teacher’s example is inscribed on the right half of the obverse.

The reverse exercise of a type II tablet was generally a repetition of a school text previously studied. That this was the case may be concluded from an analysis of obverse/reverse correlations. Nippur type II tablets carrying an extract from a thematic list on the obverse often carry an elementary exercise on the reverse. Advanced exercises such as proverbs or model contracts on the obverse often go with a thematic list on the reverse. This corresponds to a rough curricular order: elementary exercises - thematic lists - advanced exercises. In §2.4 we will demonstrate this obverse/reverse correlation in more detail, and put it to use for a reconstruction of the eduba curriculum. Most instructive are those examples where obverse and reverse partly duplicate each other. In such cases the obverse extract coincides with the end of the reverse extract. CBS 11322 has a list of trees on both sides. The obverse has lines 48-58 and 63 of the composite text. The reverse has the beginning of the tree list, starting with line 1: taskarin, and continues to line 57. After line 57, in the last column, two lines are broken (supposedly 58 and 63), and then lines 1-6 are repeated. A similar example is CBS 14156. This tablet has trees on

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97 Ni II-173.
98 Ni II-162.
100 Gordon 1968, plate 54 = SLT 69.
101 At present this claim cannot be substantiated with statistical evidence. It appears as a strong impression from my first-hand experience with Nippur lexical tablets.
102 Ni II-058. The obverse of this tablet is copied in SLT 140. Another example is PBS 11/3, no.46. See Chiera 1916, p.43f.
103 PBS 11/1, 33; PBS 11/2, 67 (reverse giš = Ni II-013); see Chiera 1916, p.41 n.2.
104 Ni II-110. The obverse is published as SLT 141.
105 Ni II-085.
obverse and reverse, and also starts with iplinaš taskarin on the reverse. At the point where the obverse exercise ends (line 86) the reverse continues with the list of proper names Enannu-tēšē. The latter exercise demonstrably precedes the tree list in the curriculum. The same feature may be observed in two non-Nippur texts. A Mari type II tablet (Lambert 1985) has a god list on both sides. The reverse ends with the 7 line section that was studied on the obverse. Then it continues with a kind of syllabary. BRM IV, 31 (unprovenanced) has a list of trees on both sides. When the reverse extract reached the item with which the obverse ended, the scribe continued with a metrological list.

For the time being these examples may suffice to support the hypothesis that the reverse is used as a repetition of a school text studied at a point earlier in the curriculum. A relatively large proportion of reverse extracts are inscribed with the beginning of the list of trees. This was a section from early in the curriculum and well known, and which could nearly always serve as a reverse assignment.

The great majority of Nippur school tablets belong to type II. Thousands of type II tablets - or fragments of such tablets- have been found. Only a fraction of this material has been published. Outside Nippur, type II tablets are less frequent. An example from Mari has been published by W.G. Lambert. Since other Mari lexical texts from the House of Asqudum and the Royal Palace still await publication, we have no evidence to decide whether this exercise is typical for Mari or not. Other examples derive from Larsa, Isin(?), Uruk, Kiš, Sippar, Sippar-Amnānum (Tell ed-Dēr), Susa, and from unknown origins. No examples are

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106 In a note in N.A.B.U. Waetzoldt already suggested a similar interpretation of the Mari school tablet, and used a number of Nippur Syllable Alphabet B examples to substantiate his point (Waetzoldt 1990).

107 NP II-01; edited in §5.6.4.


110 Arnaud BBVOT 3,84: Obverse names, reverse Syllable Alphabet A. A possible second example is no. 34 of the same volume: Obverse model contract(?), reverse Proto ki-ulutin-bi-še3.

111 IB 351 ab 'rechteckige Übungstafel' (Edzard and Wilcke 1977, p.87).


113 For instance PRAK I B397 (Pl.28): obverse list of trees (repeated), reverse a list of foodstuffs. See also MSL 14, p.111: Ki A 117 and 118. The catalogue of Série A in PRAK II contains numerous examples which might belong to the same category.

114 Si 205, and probably Si 500 and Si 504. See Tanret 1989, p.167. His descriptions of the latter two pieces are somewhat confusing. Obverse and reverse are probably to be inverted, so that the columns on the reverse run from right to left. Apparently the obverse is inscribed in these cases on the convex side.

115 A photograph of one example was published in De Meyer, Gasche, and Tanret 1984, p.23.

116 MDP 28, 1 and 176. Both have the same syllabary on both sides. The Susa pieces differ in some respects
known to me from Ur. The Uruk texts differ from the typical Nippur type II texts in that some of them carry literary texts on both sides. In general the number of published non-Nippur texts is too low for a fruitful comparison with the Nippur conventions. There may be several reasons why non-Nippur examples are so rare. This type of exercise is meant for recycling. The examples from Sippar-Amnānum were found in and around a basin filled with clay. The basin was used to keep the clay wet. Old tablets were thrown in, and the clay was re-used. In the second place, type II tablets are unattractive. They are usually broken or mutilated, full of erasures and deformed signs. Tellingly, two of the three unprovenanced examples listed in the note above are exceptionally complete. Type II tablets compare unfavourably with the often well-formed lentils (type IV; see below) or with type I tablets and prisms. Type II pieces that escaped recycling in their own time may have been regarded as unfit for commercial purposes, and thus dismissed at illicit excavations. Moreover, those deriving from regular excavations may belong to the unattractive rest portion that remains unpublished. This is certainly the case for tablets from Nippur and Kiš. Numerous type II texts are listed in Genouillac's catalogue of Série A in *PRAK* II (pp.45-58). The series counts 590 numbers, nearly all school tablets. Only a few of them were published in copy. Genouillac actually found them so uninteresting that he apologized for bothering the reader with so lengthy an inventory.

2.3.3.3 Type III: Single Column Tablets

from the Babylonian pieces, but agree in having a teacher/pupil exercise on the obverse, and a longer exercise on the reverse.

117 *BRM* IV, 31 (NP II-01) has a list of trees on the obverse (repeated), and a list of trees on the reverse, followed by metrological list. YBC 11118 (unpublished) has a list of dogs on the obverse (left col.; right col. erased, except for one UR sign.), and sheep on the reverse. The tablet published as no. 79 in Dalley 1979 has a passage from some version of Proto-Lu; on the obverse. It parallels a passage from the Nippur text, but is not a duplicate of that version (see *MSL* 12, p.53f., 572-584; see also the Isin version in Wilcke 1987, p.100 column 11). The reverse has a metrological table. According to the Edinburgh acquisition records the tablet derives from Sippar. The reliability of this indication cannot be established, but the relative proximity to the Nippur text does not favour it.
Type III texts are one-column tablets with a single extract from some school text. The length of the extract is between 10 and 15 lines. The same exercise continues from obverse to reverse. Type III tablets are relatively rare. The length of the extract approximately corresponds to the length of a type II obverse extract. The quality of writing clearly points to pupils' copies. These may have been copied from the teacher's example on the obverse of an old type II tablet. As noted above, the model on the left half of a type II tablet was occasionally deliberately cut off for later use. The only tablets which can qualify as being the result of such secondary use are these single column tablets.

2.3.3.4 Type IV: Lentils

Type IV texts are lentil-shaped tablets, typically 6 to 8 centimeters in diameter, with a teacher's example and a pupil's copy. The example is taken from one of the school texts: a lexical list, a mathematical text \(^\text{118}\), a proverb, or hymn. Lentils were called im-šu, or hand-sized tablet (George 1993, p.70f.; Civil 1985, p.75f.). Mathematical problems are sometimes called im-šu. In YBC 4657 \(^\text{119}\), for instance, the total number of problems is indicated as 31 im-šu ki-la₂: 31 problems on excavations. Robson (forthcoming) argues that this use of the term im-šu is secondary, and is derived from the custom of making calculations on the back of a lentil. Such calculations are found on the unpublished reverses of a number of lentils from Ur with proverbs on the obverse \(^\text{120}\). Other possible examples are TLB 1, 134 and 135. No such use of the reverse of lentils is known to me from Nippur.

In his article on Nippur lentils Falkowitz (1984) lists 356 examples \(^\text{121}\). In Nippur the most common type is a two-line model text, immediately followed - on the same side - by the pupil's

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\(^{118}\) No mathematical lentils were included in Falkowitz 1984. The only Nippur example I know of is Ni 2265. A copy of this tablet by Hilprecht is kept in the University Museum in Philadelphia. I was not able to identify the kind of exercise. See further Civil 1985, p.76 n.13.

\(^{119}\) Neugebauer and Sachs 1945 text G.

\(^{120}\) The obverses are published in UET 6. Eleanor Robson kindly sent me her unpublished hand copies of the reverse exercises, and explained their contents to me. I would like to thank her here for her generosity.

\(^{121}\) Additional examples in the Hilprecht Sammlung, Jena are very few, probably no more than three (information based on notes by Oelsner), but there are no doubt more in Istanbul.
copy, with the reverse left empty. Occasionally we have an unfinished lentil, without pupil's copy (e.g. *TIM* X/1 129; Nippur). There are numerous variant types (see Falkowitz 1984, p.20). One Nippur lentil is assimilated to a type II text, in that it has a longer extract in three columns on the reverse (2N-T730 = IM 58046)\(^{122}\).

A type common outside Nippur is a three-line inscription on the obverse, repeated by a pupil on the reverse. In Isin both types are found side by side\(^{123}\). A lentil from Tell Asmar in the Diyala has a two-line exercise in Sumerian on the obverse. The reverse contains the same text in syllabic Sumerian, with Akkadian translation (Civil 1975). The type is well known from Susa\(^{124}\), but apart from this one example not attested in Mesopotamia proper. The relation with Susian scribal tradition is understandable because the route between Babylonia and Elam went through the Diyala region (see Civil 1976b).

Unlike type II tablets Nippur lentils do not regularly show traces of erasure and rewriting\(^{125}\). The pupil's writing varies from bad to excellent (Falkowitz 1984, p.21). In one sense the function of the lentils is sufficiently apparent: the pupil learns a few lines from a school text by copying the teacher's model. But it remains unclear how they fit into the system of school texts, or what the functional difference with the type II obverse exercise is. One possibility is that these were the tablets that were brought home to demonstrate progress at school to the parents. Lentils are found at almost every Old Babylonian site, but their use may have differed locally. This is demonstrated by the utilization of the reverse for calculations, which is attested in Ur but not in Nippur.

Lentils are frequently found complete or nearly complete, they often bear beautiful and clear writing, and they are nearly always well shaped. For this reason lentils are the most common

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\(^{122}\) See Falkowitz 1984, p.41 with n.23, and *TIM* X/1, p.9. The obverse is copied as *TIM* X/1, 130. The text is edited as Ni IV-12 in §5.5.

\(^{123}\) IB 1663 and 1664 have two lines, repeated on the obverse. IB 1701 has three lines, repeated on the reverse. These lentils were published by Krebernik 1992, p.110.

\(^{124}\) See *MDP* 18 and 27; M. Lambert 1975; Tanret 1986.

\(^{125}\) Faiivre maintains that lentils were regularly remoulded after being inscribed, and that they sometimes still show traces of earlier use (Faiivre 1995, p.60). This is not evident from the Nippur material. Faiivre's claim that lentils are more common than type II tablets is clearly incorrect for Nippur, though it is true, for instance, for Isin. This difference between the two cities is not necessarily correlated to local differences in the use of exercise types. Type II tablets were usually recycled. Their absence may merely indicate that the Isin school came to an end in a more orderly way.
type of exercises in collections acquired on the market. Lentils are not only attractive for dealers; as they are more photogenic than type II tablets lentils invariably figure as the prime example of school texts in popular literature.

2.4 The Nippur Curriculum

Thematic lexical lists have their place among other school texts in the Nippur scribal curriculum. Waetzoldt (1989) has argued for the existence of levels of scribal training. Not every scribe, so he maintains, would necessarily go through all levels. The existence of two clearly distinguished stages of education may be demonstrated in the extant practice tablets. Nippur exercise compositions may be divided into two major groups. The first group includes lexical lists, model contracts and proverbs. The second group contains literary texts. The distinction in subject matter coincides with a distinction in tablet types used. The first phase is characterized by the use of the tablet types II, III\(^{126}\), and IV. These types do not generally appear in the second phase. Type II tablets and lentils (type IV) are the two formats that have a model text by a teacher. Type III tablets do not have a teacher's example, but were probably copied from an old type II model. Literary exercises regularly have no teacher's model. In the second phase the student was required to copy in a more autonomous way, concomitant with the more advanced stage of his education. The lexical exercises, the model contracts and proverbs represent an earlier stage in the learning process, where the student was still closely supervised.

Perhaps we may see a reflection of the first phase of the curriculum in the literary composition Eduba D (Civil 1985). In this text a student boasts about his achievements at school. The exercises he refers to all belong to the first phase, including an elementary sign list, a name list, a thematic list, mathematical and metrological tables, model contracts, and proverbs. It seems that the student depicted here is describing the abilities obtained at primary school.

A further reason to postulate these two phases is comparative evidence. To take just one example, primary education in classical Rome, as described by Stanley Bonner (1977), follows very much the same pattern. The writing of single letters is followed by the writing of syllables. Next came the writing of personal names, followed by nouns and proverbs\(^{127}\). Last but not least the pupils were made familiar with mathematics. Study of literature belonged to secondary education.

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\(^{126}\) Literary extracts are often found on one-column tablets, which somewhat resemble the type III tablets described in §2.3.3.3. These literary extract tablets are usually longer than lexical type III texts, and may carry a text of between 30 and 60 lines. In practice, the types can hardly be confused.

\(^{127}\) See now Cribiore 1996, especially Chapters 3 and 4. The importance of this book lies in a reversal of priorities in the study of ancient education. Older studies, such as Marrou (1948) and Bonner (1977), describe the school from the evidence in literary texts from Plato to St. Augustine, and use extant school exercises as mere illustrations. Cribiore takes her point of departure in the exercises, such as are found on papyrus, ostraca and writing boards, and refers to literary texts to complete the picture. This approach reveals a number of important parallels with Mesopotamian evidence. Cribiore further emphasizes the importance of the distinction between learning how to read and learning how to write (in particular Chapter 10). This distinction has so far been neglected in studies of Mesopotamian education (including my own), but may be fruitful for further investigations. Unfortunately Cribiore's book came too late for a thorough evaluation of its results.
Type II tablets provide the opportunity to analyze the order in which compositions were taught in phase 1. As discussed in §2.3.3.2 the obverse of these tablets has a 'teacher-student' exercise, that is, a model by the teacher on the left-hand side, to be copied by a student on the right-hand side. The reverse has a repetition of material treated earlier. With a sufficient number of type II tablets we can reconstruct the order of the first part of the curriculum, the part in which urs-ra was used. The main tool for this analysis is the Catalogue of Nippur Lexical Texts. This catalogue is a database in which data from published and unpublished lexical texts of all kinds have been collected. The catalogue is by no means complete\textsuperscript{128}, but includes a large proportion of the Nippur type II exercises in the collections of Philadelphia, Jena, and Chicago. The database and its contents are described in Appendix I.

In the reconstruction of the curriculum we have to keep in mind that we only have what was put into writing. Musical exercises, to take an obvious example, fall outside our scope since they leave no traces in the archaeological record\textsuperscript{129}. Furthermore, doing a lexical exercise consisted only partly of copying a text on clay. As we will argue more fully in Chapter 3, such exercises were accompanied by oral explanations. These explanations form an essential part of the exercise, but are lost to us.

2.4.1 Phase 1: Lists, Models, and Proverbs

2.4.1.1 Basics: Sign elements, Syllable Alphabet, TU-TA-TI, and Name Lists

The first things an apprentice scribe had to learn how to do were making a tablet and holding a stylus. Preparatory writing exercises consisted of repeating one of the basic elements of the cuneiform sign: vertical (DIŠ), horizontal (AŠ), or the oblique wedge (U)\textsuperscript{130}. Other exercises repeat all three basic elements: DIŠ-AŠ-U\textsuperscript{131}. This was followed by repetitions of signs which consist of the simplest stroke combinations, such as A (one large and two small verticals) or BAD (a horizontal and an oblique wedge).

The first real list with which a Nippurian would-be scribe was confronted is Syllable Alphabet B. This is a list of simple signs, in different combinations, and with frequent repetitions\textsuperscript{132}. The entries do not seem to have a meaning in any regular sense. The list is basically a drill for mastering the correct sign forms. The interest in syllabographic value or logographic meaning is minimal. Typical sequences are:

\begin{itemize}
\item[128] The most important omission is the group of unpublished lexical tablets in Istanbul.
\item[129] For music in the eduba see Sjöberg 1975 and Kilmer 1992.
\item[130] An exercise tablet filled with U signs may be found in Hilprecht 1903, p.57 Abb. 38.
\item[131] Illustrated in Hilprecht 1903, p.57 Abb. 39. The type is also found in Sippar-Amnānum; see Tanret 1982.
\item[132] Syllable Alphabet B was edited by Çiğ, Kizilyay, and Landsberger 1959. See further Michalowski 1983a.
\end{itemize}
The entries were interpreted by Landsberger as elements of personal names. As a matter of fact, there are some clear relations with actual name lists. The prime example is lines 121-125, a section which contains meaningful Sumerian entries:

This section is actually duplicated in one of the name lists (see Landsberger in Çığ, Kizilyay, and Landsberger 1959, pp.104-105). Landsberger was able to connect a number of items, such as ba-ba-a, ba-za-za, and i\textsuperscript{3}-li\textsubscript{2} (‘my god’ in Akkadian) with names or name elements found in business tablets dating before the Old Babylonian period. He assumed that the list had a long history, and that its real nature had already been forgotten by Old Babylonian times. Entries which have no clear relation with a known name were explained as ‘Lallnamen’, or by errors, crept in as a result of the ignorance of the scribes. Even if many individual lines may be interpreted this way, Landsberger’s theory does not account for the overall structure and sequence of the text. The play with syllables, and the clear selection of easy sign forms at the beginning of the list (A, KU, ME, PAP\textsuperscript{133}, BAR, etc), indicate that the first function was mastering the execution of common signs. This interpretation is consistent with the oversized writing found in most exemplars. Large signs enable the pupil to exercise minutely every detail of the sign. This is not to deny that relations with the onomasticon exist. Such relations, however,

\textsuperscript{133} Read PAP (or kur\textsubscript{3}) in line 8-9, not kur. The PAP is clear on the photograph of Ni 3237 (Çığ, Kizilyay, and Landsberger 1959, pl. XI) and in numerous unpublished exemplars in Jena and Philadelphia.
are not decisive for the true nature of the text and its use in the curriculum.

Syllable Alphabet B is mentioned in the literary text Eduba D (Civil 1985) and in a proverb (SP 2.48). In both cases it is clear from the context that a very elementary exercise is meant.

Outside Nippur, Syllable Alphabet B is unknown. A related text, commonly called Syllable Alphabet A, has been found almost everywhere else. The oldest datable exemplars (early Old Babylonian) were found in Susa (Tanret 1986). In detail Syllable Alphabet A is quite different from the Nippur version, but it has the same basic function. Curiously, the textual history of Syllable Alphabet A is much more complicated and interesting. Whereas Syllable Alphabet B disappeared with the Nippur eduba, Syllable Alphabet A survived and is attested in Middle Babylonian and first millennium sources. Most astonishingly, variants are relatively rare. From the Old Babylonian period onwards it is occasionally provided with one, or even two Akkadian columns. These multi-column versions are called 'Syllable Vocabulary A'. Some of the Akkadian items represent real translations of the entries, understood as Sumerian words. Usually the association is rather fanciful. It is probably the relative 'emptiness' with respect to semantics that made the list susceptible to this kind of playful or mystical association. An ineluctable parallel is the Hebrew alphabet and its use in Kabbalistic speculation.

The second list of which the pupils in Nippur took cognizance was TU-TA-TI. It consists of sets of three syllables with permutations of the vowel, in the order u-a-i. Curiously, the /e/ is missing. In a number of cases an /e/ syllable is written by the same sign as the /i/ syllable (for instance the sign LI may be used for the syllables /li/ and /le/). This may have led to a kind of generalization that /e/ syllables are not necessary for the basic repertory. In most versions the syllables are first given one by one, and then as a triad. Each entry is preceded by a vertical wedge (here represented by ¶):

| ¶ tu |
| ¶ ta |
| ¶ ti |
| ¶ tu-ta-ti |
| ¶ nu |
| ¶ na |
| ¶ ni |
| ¶ nu-na-ni |

Old Babylonian examples have been found in Ur, Uruk (Cavigneaux 1996, texts 188-192 and 255-257), Larsa (BBVOT 3,84 reverse), Isin, Kiš, Sippur, Tell Harmal (TIM 10/1, 144 and 168), Ishchali (Greengus 1979 no. 293), and other places. The main bibliography may be found in Landsberger 1933; Çığ, Kizillyay, and Landsberger 1959, p.98 n.4; Tanret 1986, p.144; Cavigneaux 1983, p.619. Isin texts are unpublished: IB 441 (see Tanret 1986, p.144); IB 1562 (see Wilcke 1987, p.104; the piece contains the beginnings of 100-109). The Kiš texts are also unpublished, but numerous exemplars may be identified from the catalogue of Série A in PRAK II. Two Nippur pieces are known: CBS 14150 and UM 29-15-460. These two do not represent elementary exercises. See the discussion in §3.6.

Landsberger 1933; Nougayrol 1965; Sollberger 1965; Emar 6/4, pp.194-198; Edzard and Wilcke 1977, p.86; Beaulieu 1995. In some exemplars Syllable Vocabulary A is associated with a creation myth (Edzard and Wilcke 1977, p.86 with previous literature).
At present three different versions of TU-TA-TI have been identified in Nippur\textsuperscript{136}. The great majority of exemplars follow ‘version a’. This version can be reconstructed in its entirety and numbers 116 lines, followed by the traditional subscript \textit{nisaba za₃-mi₂}: ‘Praise to Nisaba’. The other two versions are known only from a few duplicates each. Further, there are some exemplars which cannot be attributed to any of these versions. In a few TU-TA-TI texts Akkadian words and phrases are included in the following style\textsuperscript{137}:

\begin{verbatim}
\textit{a}  
\textit{na}  
\textit{ša}  
\textit{ši}  
\textit{im}  
\textit{a-na ša-ši-im} 'to him/her'
\end{verbatim}

The distribution of TU-TA-TI in the Old Babylonian period is remarkable. In Nippur the exercise is not found among the 3N-T school texts, even though other elementary texts such as Syllable Alphabet B and name lists are abundantly represented. One could speculate that the text was used by some teachers, and omitted by others. Outside Nippur TU-TA-TI is rare. Two pieces are known from Uruk (Cavigneaux 1982, p.29 nos.10 and 11), two other tablets derive from unknown sites (\textit{TIM} 9, 85 and \textit{RA} 9, p.80)\textsuperscript{138}. Otherwise TU-TA-TI is only attested in Middle Babylonian Amarna and Ugarit\textsuperscript{139}. This paucity of evidence outside Nippur may be partly due to chance. In Northern Babylonia a related exercise is attested\textsuperscript{140}.

TU-TA-TI seems at first sight to be directed at learning how to write Akkadian. This impression is caused by the emphasis on syllabic values and the Akkadian words in some exemplars. However, at least one of the syllable sets in standard TU-TA-TI can only be explained from typically Sumerian sign values: gu₁₀-ga₂-gi₆ (version a: 61-64). Other sets, necessary for Akkadian, are missing, especially the emphatics. Syllable Alphabet B, on the other hand, was called the ‘Sumerian Primer’ by Chiera\textsuperscript{141}. This text does contain a number of good Sumerian forms, such as i₃-ba (‘he gave’). However, entries which are simply not Sumerian abound. The Sumerian look

\textsuperscript{136} Exemplar a’ was edited by Çiğ, Kizilyay, and Landsberger (1959). New duplicates in the University Museum in Philadelphia provide the last few lines. The edition of ‘exemplar b’ in the same volume is erroneous. The text begins in the same way as version a (tu-ta-ti; nu-na-ni). Some new duplicates have been identified. The third version is found on a Louvre tablet (Thureau-Dangin 1912, p.80; unprovenanced) and on a few unpublished Nippur prisms and tablets.

\textsuperscript{137} The example is from the six-sided prism fragment HS 1801, side 6, lines 6’-11’. For other examples see Çiğ, Kizilyay, and Landsberger 1959, p.65; and §2.5.3 of the present study.

\textsuperscript{138} The Kish text A 371 (Genouillac \textit{PRAK} II, p.54) may be another example, but the description is not entirely clear.

\textsuperscript{139} Curiously the exercise seems to be absent in Emar.

\textsuperscript{140} Tanret 1989. The relation between this list and TU-TA-TI is discussed in §2.5.3.

\textsuperscript{141} See the catalogues in Chiera 1916.
of Syllable Alphabet B is more apparent than real. It is merely based upon the absence of specifically Akkadian characteristics. In the form as we know them Syllable Alphabet B and TU-TA-TI are not defined by either Akkadian or Sumerian. The former is primarily directed at sign forms, the latter at syllabic values. They are used to teach cuneiform, relatively independent of language.

The next element of basic scribal training consisted of lists of personal names. Various lists have been identified: Akkadian names, Sumerian names, and a list that orders names in groups of three. At present three or four lists are distinguished (see Çiğ and Kizilyay 1965 and Cavigneaux 1983, p.618f.). It is possible that these name lists occupied different places in the curriculum. Until all the lists of personal names have been reconstructed in an adequate way, it is difficult to judge. Provisionally, the lists of personal names will be treated here as a single category. Syllable Alphabet B was probably followed by one list of personal names. The list of Akkadian names (commonly called list C) perhaps followed TU-TA-TI. Occasionally, name lists may have been treated at a later stage in the curriculum.

Lists of names fulfilled different functions. The list of Akkadian names contains numerous Akkadian words and verbal phrases, in some way continuing the kind of training found in TU-TA-TI. The list is repetitive, giving the same set of words in combination with various divine names to produce personal names. For this reason, apart from training and memorizing the names, the list may also have functioned as training in elementary literacy in Akkadian. If there was a category of scribes who were trained exclusively in Akkadian writing, the lists of Sumerian and foreign names would be of prime importance. Without understanding Sumerian such scribes had to be able to write Sumerian names correctly, and also names in other languages such as Amorite. Without these skills, even simple documents might well pose insurmountable problems. The existence of such semi-literate scribes cannot be proven, but cannot be excluded either.

The curricular order of the elementary exercises may be demonstrated by analyzing the contents of type II tablets. The following table comprises the type II texts presently included in the catalogue. Tablets which are either broken or unidentified on one side are excluded. For the other tablets five categories are distinguished for both obverse and reverse:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sign Elements</td>
</tr>
<tr>
<td>2</td>
<td>Syllable Alphabet B</td>
</tr>
<tr>
<td>3</td>
<td>TU-TA-TI</td>
</tr>
<tr>
<td>4</td>
<td>Name lists</td>
</tr>
<tr>
<td>5</td>
<td>All other exercises</td>
</tr>
</tbody>
</table>
A number of conclusions may be drawn from this table. First, the Sign Elements exercise is found occasionally on type II tablets. In all six cases it appears on the reverse, with Syllable Alphabet B on the obverse. The Sign Elements otherwise appear on tablets that fall outside the common typology; usually large and rather flat tablets without a teacher's model. Excluding the Sign Elements, the upper-right half of the above table is better filled than the lower-left half. There are, for instance, 27 type II tablets with names on the obverse and Syllable Alphabet B on the reverse, and only one tablet with an inverse distribution. This indicates that Syllable Alphabet B precedes the names in the curriculum. Similarly, there are 5 tablets with TU-TA-TI on the obverse and Syllable Alphabet B on the reverse, but none the other way round. The exceptions, located in the bottom-left half of the table, are few and invariably due to the lists of names. In general, the analysis confirms the order Sign Elements - Syllable Alphabet B - TU-TA-TI - Name lists - Other exercises.

2.4.1.2 Lexical Lists: Ur₅-ra

The curriculum continued with ur₅-ra, the thematic lists of objects. Old Babylonian tablets with an ur₅-ra exercise are always unilingual Sumerian in format. It is assumed with good reason that the correct pronunciation of each Sumerian word and its Akkadian translation were provided.

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142 In all examples found so far the obverse has the first few lines of Syllable Alphabet B.
orally by the teacher. The pupil is only starting his course in Sumerian. Without a translation the Sumerian words would make no sense to him. In one of the eduba dialogues (Eduba D), a lexical text which has come down to us in unilingual copies only is referred to by its bilingual incipit\textsuperscript{143} lu₂ = ṣ. This list does not belong to ur₅-ra, it is a list of of terms referring to human beings (see §2.4.1.3), but it proves that a unilingual written format for an essentially bilingual text is conceivable in this period. Similarly, the sign list Proto-Ea (see §2.4.1.3) is found in two formats: a format with, and one without glosses\textsuperscript{144}. The format without glosses is used by relatively advanced pupils. In the absence of glosses the text makes little sense, so we must assume that the pupils who used this format had learned the glosses by heart.

In the case of ur₅-ra, the existence of Akkadian translations provided orally is further indicated by a few sections in the list, whose organization can only be explained with the help of these translations (see §3.3). Sumerian pronunciation and Akkadian translation were probably learned by heart by the pupils. The ur₅-ra we have is therefore only part of the ur₅-ra as it was used in class. We will come back to this point and several of its implications in subsequent chapters.

Nippur ur₅-ra was divided into six divisions. In the following table the contents of each division are presented, as well as the approximate correspondence to the tablet division in the first millennium series.

<table>
<thead>
<tr>
<th>Division</th>
<th>Contents</th>
<th>Corresponding tablets in late ur₅-ra</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>trees and wooden objects</td>
<td>3-7</td>
</tr>
<tr>
<td>2</td>
<td>reed and reed objects; vessels and clay; hides and leather objects; metals and metal objects</td>
<td>8-12</td>
</tr>
<tr>
<td>3</td>
<td>domestic animals; wild animals; meat cuts.</td>
<td>13-15</td>
</tr>
<tr>
<td>4</td>
<td>stones and plants; fish and birds; clothing.</td>
<td>16-19</td>
</tr>
<tr>
<td>5</td>
<td>geographical names and terms; stars.</td>
<td>20-22</td>
</tr>
<tr>
<td>6</td>
<td>foodstuffs</td>
<td>23-24</td>
</tr>
</tbody>
</table>

This division is first of all indicated by subscripts. Nippur school compositions generally end with a za₃-mi₂ ('praise!') subscript\textsuperscript{145}. In lexical texts it has the form 'nisaba za₃-mi₂\textsuperscript{146}'. This

\textsuperscript{143} See Civil 1985, p.74 (commentary to line 14).

\textsuperscript{144} See Civil in MSL 14, p.4. Similarly for Proto-Diri.

\textsuperscript{145} In Assyriological literature these subscripts are generally referred to as 'Doxologies' (see in general Wicke 1975, pp.246-248). I prefer the more neutral term subscript.
subscript is only found at the end of the divisions indicated above. The phrase is not only found on large tablets and prisms, but also on Type II tablets which happen to contain the end of a division. The phrase, therefore, constitutes an inherent part of the text.

Prisms commonly contain a complete division. The following ur₃-ra prisms and prism fragments are known to me:

<table>
<thead>
<tr>
<th>Division</th>
<th>Museum no.</th>
<th>Publication</th>
<th>Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CBS 12486</td>
<td>SLFN 73¹⁴⁷</td>
<td>Ni P-04</td>
</tr>
<tr>
<td></td>
<td>N 5260</td>
<td></td>
<td>Ni P-03</td>
</tr>
<tr>
<td></td>
<td>N 6766 + N 6960</td>
<td></td>
<td>Ni P-01</td>
</tr>
<tr>
<td></td>
<td>3N-T905,211</td>
<td></td>
<td>Ni P-02</td>
</tr>
<tr>
<td></td>
<td>A 30187 (3N-T259)</td>
<td></td>
<td>Ni P-06</td>
</tr>
<tr>
<td></td>
<td>IM 58599 (3N-T655)</td>
<td></td>
<td>Ni P-05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SLT 191 + HS pieces (+) SLT 89</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MSL 7, p.178 V7; p.211 V25; p.229 V1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MSL 7, p.211: V24</td>
</tr>
<tr>
<td>2</td>
<td>CBS 7844 + HS 1796 + HS 1869 (+) CBS 7855¹⁴⁸</td>
<td>SLT 191 + HS pieces (+) SLT 89</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3N-T649</td>
<td></td>
<td>Ni P-04</td>
</tr>
<tr>
<td></td>
<td>HS 1686</td>
<td></td>
<td>Ni P-03</td>
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<tr>
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<td></td>
<td></td>
<td>Ni P-01</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ni P-02</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ni P-06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ni P-05</td>
</tr>
<tr>
<td>3</td>
<td>UM 29-13-260¹⁴⁹</td>
<td></td>
<td>MSL 9, p.41: V3</td>
</tr>
<tr>
<td></td>
<td>HS 1765¹⁵⁰</td>
<td></td>
<td>Ni P-04</td>
</tr>
<tr>
<td></td>
<td>HS 1799</td>
<td></td>
<td>Ni P-03</td>
</tr>
<tr>
<td>4</td>
<td>UM 55-21-407 (3N-T911p)</td>
<td>SLT 212 + unpubl.</td>
<td>MSL 10, p.120: I</td>
</tr>
<tr>
<td></td>
<td>HS 1659 + 1760 + 1761 + 1813 + 1864¹⁵¹</td>
<td>SLT 213</td>
<td>Ni P-01</td>
</tr>
<tr>
<td>5</td>
<td>CBS 7827 (+?) Ni 2340</td>
<td></td>
<td>MSL 11, p.93: C and p.95: J1</td>
</tr>
<tr>
<td></td>
<td>CBS 11034</td>
<td></td>
<td>MSL 11, p.93: H</td>
</tr>
<tr>
<td></td>
<td>UM 29-16-206 + N 6249 A 30145 (3N-T105)</td>
<td>SLT 212 + unpubl.</td>
<td>MSL 11, p.93: G</td>
</tr>
<tr>
<td></td>
<td>HS 1789</td>
<td></td>
<td>MSL 11, p.96: B2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SLT 15</td>
<td>MSL 11, p.110: B</td>
</tr>
</tbody>
</table>

¹⁴⁶ Nisaba is the goddess of writing.

¹⁴⁷ The piece was not described as a prism fragment in SLFN.

¹⁴⁸ The identification of the HS pieces as belonging to the same prism as the CBS fragments was made by Oelsner.

¹⁴⁹ Small fragment, may be a type I tablet.

¹⁵⁰ The section wild animals has an independent recension.

¹⁵¹ All joins Oelsner.
Some of the listed pieces are rather small, and do not allow conclusions about the length of the text the entire prism once contained. The pieces which do allow conclusions always had one of the six divisions in its entirety. None of the pieces contains parts of more than one division. A nice example is N 6766+. This is a small fragment of a six-sided prism with a list of trees and wooden objects. It is included in the edition in §5.4 as Ni P-01. The legible lines on the best preserved side contain lines 614-622 in column 1 and 688-696 in column 2. This is very close to the end of division 1; the last line in the composite text is numbered 707. This side, therefore, is side 6, and the next side must be side 1. Only some traces of this side remain, but enough to identify the beginnings of lines 37-39 of the composite text. The fragment, therefore, derives from a prism that once had division 1 in its entirety.

Entire divisions are not only found on prisms but also on some type I tablets. An example is UM 55-21-314+ which contained division 1\(^{152}\). Sometimes a division is split into two or three parts, the parts connected by catch-lines. In all cases the text is broken up at a meaningful point. Thus CBS 13935 (SLT 179) has a list of stones, the beginning of division 4, with a catch-line to the section plants. HS 1617 also has the beginning of division 4. It includes the sections stones, plants, and fish, followed by the catch-line to the section birds: us namšen\(^{153}\). Interestingly, the last column of this tablet is not used. Apparently the scribe foresaw that this column would not suffice to complete the next section, the list of birds, and he preferred to break off at a meaningful place. Instead the last column is partly inscribed with a list of month names\(^{154}\). Two tablets are known which have the second half of division 2, beginning with the hides (CBS 6522 = SLT 201\(^{155}\) and CBS 10067 = SLT 41\(^{156}\)). This is interesting because the same break-up is known from Old Babylonian Isin and Middle Babylonian Ugarit and Emar\(^{157}\). In Nippur this break-up was not standardized. CBS 13867 is a fragment of a relatively small Type I tablet which had only the section reed and reed objects. N 5625 (MSL 7, p.210: V8) begins with the section hides and ends with the section copper, followed by a catch-line to the section bronze. The latter piece shows that division 2 could be distributed over at least three type I tablets.

The only natural point for a break-up of division 1 is between the trees and the wooden objects. There are two tablets which probably had the list of trees only\(^{158}\). This is a very uneven

\(^{152}\) Edited below as Ni I-05.

\(^{153}\) None of the tablets published so far has the beginning of the Nippur bird list. The end of the fish list and the beginning of the bird list (us namšen) are extant on the prism HS 1659+.

\(^{154}\) All 13 lines of the list are preserved. It is placed in the middle of the column, the rest of the space being anepigraphic. The month list ends with iti še-kin-kud; iti diši-bi. The list may be taken as an extract from Proto-ki-ulutin-bi-še\(_2\), but since the list is so very self-contained, it probably does not make much sense to do so. For other examples of blank-space fillers see §2.3.3.1.

\(^{155}\) See MSL 7, p.230: V5.

\(^{156}\) Only the obverse was published in SLT. See MSL 7, p.212 V31 and p.230: V12.

\(^{157}\) Isin: IB 1546+1622a (reed, reed objects, vessels); IB 1612b (hides, etc.); see Wilecke 1987, p.103f. For Ugarit and Emar see Van Soldt 1995 and §2.5.1.2.

\(^{158}\) N 4983 (Ni I-03) and N 5881 (Ni I-09).
distribution since the trees occupy lines 1-141 whereas the wooden objects cover over 550 lines. Instead the text was commonly divided between the section wagons and the section doors. The second half begins at line 374. There are two type I tablets which have the first half of division 1: CBS 6068 (= SLT 170) and N 1361+; both end with the catch-line to the section doors. CBS 5931+ has the text from the section doors to the end, followed by the subscript “nisaba za3-mi2”\(^{159}\). The same break-up is attested in Isin\(^{160}\) and in the Middle Babylonian versions from the Western periphery (see §2.5.1.2).

The conventions used for prisms and type I tablets are also found in other lexical series. An example is Proto-Izi, a more advanced lexical exercise (see §2.4.1.3). Type I tablets either have the whole text of Izi, or one half, but the praise to Nisaba is only found at the very end. Type I tablets which contain the first half of Izi have a catch-line to part 2 (MSL 13, p.7). Accordingly, one division of ur₃-ra was treated on the same level as the lexical composition Proto-Izi. The six divisions were regarded as more or less independent units. Only one example of an exercise tablet that crosses the borders between two divisions is known to me\(^{161}\). It is a type II tablet with proverbs on the obverse. The reverse has an extract from the last section of division 4 (MSL 10, p.144 G), and continues with the beginning of division 5 (MSL 11, 93 F)\(^{162}\). The importance of the division's borders is illustrated by the reverse of the exercise tablet CBS 11342+ (SLT 194)\(^{163}\). The reverse has an extract from the list of wooden objects. When the junior scribe came to the end of division 1 he wrote the conventional subscript. He did not continue with the beginning of division 2, but started again with the beginning of division 1.

Nippur ur₃-ra as presented above follows the same general order of the topics treated as the first millennium series. This, however, is by no means a matter of course. Other Old Babylonian traditions kept to an entirely different order. The Nippur version was one among many. In §2.2 we discussed lexical texts from Ur, Kisurra, and Tell Harmal which demonstrated divergent arrangements of basically the same topics as those found in Nippur ur₃-ra. By way of example we can compare the order of the topics in the two Diyala region cylinders (Ishchali' see §2.2.3) with the Nippur tradition:

<table>
<thead>
<tr>
<th>A 7895</th>
<th>Nippur division:</th>
</tr>
</thead>
<tbody>
<tr>
<td>rivers</td>
<td>5</td>
</tr>
<tr>
<td>snakes</td>
<td>3</td>
</tr>
<tr>
<td>domestic animals</td>
<td>3</td>
</tr>
<tr>
<td>?</td>
<td></td>
</tr>
<tr>
<td>foodstuffs</td>
<td>6</td>
</tr>
</tbody>
</table>

\(^{159}\) Edited as Ni I-01; Ni I-08; and Ni I-10 respectively. Fragments belonging to CBS 5931+ (Ni I-10) are published as SLT 132; 159; and 165 (A-E).

\(^{160}\) IB 1535+ (first half; edited in §5.6.1 as Is I-01) and IB 1512c+ (second half; edited in §5.6.1 as Is I-03). See Wilcke 1987, p.102f.

\(^{161}\) N 5084 = Gordon 1968, Plate 56.

\(^{162}\) The obverse has a multiplication table and a Proverbs exercise. This rare sub-type is described in §2.4.1.4..

\(^{163}\) Ni II-002.
A 7896
plants 4
wild animals 3
domestic animals 3
hides 2

The astonishing fact is not so much that the order of the topics treated differs from the Nippur tradition, but rather that the cylinders differ among themselves. Apparently the idea of a fixed order did not exist in Ishchali.

Type I tablets and prisms yield the units into which Nippur urš-ra was divided. There is no example of a catch-line connecting two divisions. Therefore, the order of the divisions cannot be known on the evidence of type I tablets and prisms. The only way to establish the Nippur order is by an analysis of type II tablets. In the following table the exercises are divided over elementary exercises (the exercises discussed in §2.4.1.1), the six urš-ra divisions, and other exercises. The last group contains all exercises treated after urš-ra.

<table>
<thead>
<tr>
<th>OBVERSE</th>
<th>Count</th>
<th>Elementary</th>
<th>Urra 1</th>
<th>Urra 2</th>
<th>Urra 3</th>
<th>Urra 4</th>
<th>Urra 5</th>
<th>Urra 6</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.00</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
<td>8.00</td>
<td>9.00</td>
<td>10.00</td>
<td>11.00</td>
</tr>
<tr>
<td>REVERSE--------+--------+--------+--------+--------+--------+--------+--------+--------+--------</td>
<td></td>
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</tr>
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<td>7</td>
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<td>1</td>
<td>1</td>
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<td>320</td>
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<td>9</td>
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<tr>
<td>Other</td>
<td></td>
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<table>
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<td>44.2</td>
</tr>
<tr>
<td>797</td>
<td>100.0</td>
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</tbody>
</table>

51
The bottom-left part of the table is almost empty, in the upper-right half most slots are filled. Most of the exceptions are due to the exercises treated after urš-ra. A type II tablet with, for instance, division 2 on the obverse, may have on the reverse division 1, division 2, or an elementary exercise, but not divisions 3-6. The order of the urš-ra divisions is confirmed with no more than two exceptions: there are two tablets with division 3 on the obverse, and division 4 on the reverse.

An Old Babylonian catalogue text from the Yale collection (YBC 13617), published by Hallo (1982, p.82), is a rare example of a catalogue text listing lexical compositions. The tablet is of unknown provenance. The first column gives a list of abbreviated literary incipits. The second column runs as follows:

<table>
<thead>
<tr>
<th>Col II</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DIŠ A</td>
</tr>
<tr>
<td>2</td>
<td>DIŠ AN</td>
</tr>
<tr>
<td>3</td>
<td>giš taskarin</td>
</tr>
<tr>
<td>4</td>
<td>gi-gašam</td>
</tr>
<tr>
<td>5</td>
<td>udu</td>
</tr>
<tr>
<td>6</td>
<td>naška-gi-na</td>
</tr>
<tr>
<td>7</td>
<td>ZI?-duš?</td>
</tr>
<tr>
<td>8</td>
<td>lu₂-X</td>
</tr>
<tr>
<td>9</td>
<td>T NE ṣa-bi</td>
</tr>
<tr>
<td>10-11</td>
<td>traces</td>
</tr>
</tbody>
</table>

There can be little doubt that lines 3-8 list the main divisions of Old Babylonian urš-ra, followed by an Old Babylonian list of human beings (Lu₂). We may compare the items with the incipits of the Nippur divisions.

<table>
<thead>
<tr>
<th>Yale catalogue:</th>
<th>Incipits of the Nippur Divisions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 giš taskarin</td>
<td>1 giš taskarin</td>
</tr>
<tr>
<td>4 gi-gašam</td>
<td>2 gi-gašam</td>
</tr>
<tr>
<td>5 udu</td>
<td>3 udu-niga</td>
</tr>
</tbody>
</table>

Actually some slots in this part are empty. This may be due to several factors. Some parts of urš-ra have been excerpted on type II tablets more often than other parts. Some parts have been better edited than other parts. This implies that more tablets have been identified. Both factors mean that the probability of finding and identifying a certain combination of obverse and reverse exercises is not evenly spread.

The only other example is UET 5, 86 (see Charpin 1986, p.453ff. with previous literature). For catalogue texts see Weitemeyer 1990. The Yale catalogue was omitted from his discussion.

The traces as copied allow for lu₂-šu, which was the title of Proto-Lu₂ (Civil 1985, p.74: commentary at line 14). Another possibility is lu₂-azlag₂(TUG₂), which is the incipit of the Old Babylonian Lu₂ (MSL 12, p.151). Line 1 represents an Old Babylonian sign list. Sign lists almost invariably begin with the sign A (see the discussion of Proto-Ea, §2.4.1.3). Line 2 is probably an abbreviation of a name list, for instance the list 𒀀Inanna-teš₂ (see Civil 1985, p.74 commentary at line 13, with references). That it is not a god list may be argued from the initial single vertical (DIŠ). Line 9 might be Proto-Izi, but judging from the copy the reading NE is very uncertain.
The catalogue is not from Nippur but the differences from the list of Nippur incipits are very small indeed. The most important ones are found at the end. Line 7 is difficult to read and interpret but probably indicates the list of geographical names and terms (division 5 in Nippur). There is no entry in the catalogue corresponding to Nippur division 6 (foodstuffs). Perhaps the geographical names and the foodstuffs are taken together as one division. Such a tradition existed in Old Babylonian Larsa, as exemplified by AO 6447167. The incipit udu for the domestic animals (as against Nippur udu-niga) is known from later versions of the same list.

Division 1 numbers over 700 lines. Division 5 is reconstructed with 431 lines (MSL 11, pp.97-109). If we take an average of 550, the series had approximately 3300 lines. These 3300 lines cannot be regarded as one indistinctive string of words. There are differences between sections. The proportions between the various tablet types are not the same for all divisions. The list of geographical names (division 5) has numerous type I tablets and prisms. For the foodstuffs (division 6) only one prism has been identified so far. The beginning of the tree list (division 1) is frequently copied on the reverse of type II tablets. Dozens of examples are known. The last section of division 4 (wool and clothing), on the other hand, is rarely copied on the reverse of a type II tablet. The total number of tablets of all types used in the reconstruction of this passage in MSL 10, pp.144-149 is only 14, and a number of lacunae and uncertain reconstructions remain. The textual stability of the Nippur ur-š-ra is uneven as well. Some sections are fairly well standardized, with occasional variants, additions or omissions. Examples are the list of reed objects (beginning of division 2) and the list of stones (beginning of division 4). The list of herbs (SAR), on the other hand, is notorious for showing a different redaction in almost every source168. The list of birds, part of the same division, is also poorly standardized169. The list of domestic animals (beginning of division 3) may be found in its entirety on the back of a type II tablet, with the catch-line to the section muš (snake) after a horizontal line170. For the other sections, catch-lines on a type II tablet are unknown to me.

The differences between various sections of urš-ra may be explained by at least two factors. Firstly, some sections of urš-ra have a textual history that goes back to third millennium lexical lists, whereas others do not. The relations with these earlier lists are still largely unclarified. Secondly, the distribution of urš-ra over types of exercise tablets shows that the custom was not to start with division 1 line 1 and continue to the end of division 6. Generally, the beginning of each division is found more frequently than later parts of the text. An in-depth study of the use of

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168 See the edition in MSL 10, p.119ff. The Jena prism HS 1659 + has a version of the section u₂ on face C, col. I, generally corresponding to 'Section A'. Col. II (SAR) has sequences from the sections C, C' and C", in an order that cannot be reconciled with any of the pieces edited in MSL.

169 Personal communication M. Civil. No edition of this text is available.

170 Examples are CBS 6463 + N 5763 and CBS 6418 + N 4072 (edited as V19 and V20 respectively in MSL 8/1, p.81ff.).
these lists in the eduba will require a thorough investigation of all divisions and their sources, an undertaking that goes beyond the limits and scope of this study, and requires much more preparatory work.

2.4.1.3 Advanced Lists

Urš-ra is succeeded by a variety of other compositions: metrological tables, sign lists, so-called acrographic lists, and mathematical tables. A metrological table gives the correct writing for different kinds of measures: surface, capacity, weight. These lists have a standard sequence. An important sign list is Proto-Ea. Proto-Ea provides for each sign the available Sumerian readings, or pronunciation glosses. Each line is preceded by the single vertical wedge as item indicator. The list begins:

1 ¶ a₂ A
2 ¶ ia A
3 ¶ du-ru A
4 ¶ e A
5 ¶ a A
6 ¶ sa-ah HA.A
7 ¶ am A.AN
8 ¶ še-em A.AN

The sign A was probably considered the most basic or simple sign. The first five lines give different possible readings of this sign in Sumerian. This is followed by some complex signs, combining A with another sign. In principle complex signs are treated in Proto-Diri, to be discussed presently. We must assume that complexes like A.AN were considered as one sign, or that the distinction between simple signs and complex signs is not a very strict one. Different Sumerian values represent either allophones of the same Sumerian word, or different Sumerian words. Thus the first value of the sign A is: a, meaning water, another value is duru, meaning wet. Old Babylonian Proto-Ea has no translations into Akkadian. Probably, such explanations were added orally by the teacher. In first millennium versions Akkadian translations are an inextricable part of the text.

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171 Some examples are found in Neugebauer 1937, Band 1, pp.88-90.

172 MSL 14, p.30. A detailed description of Proto-Ea by Civil is found in MSL 14, p.3ff.

173 Sign lists usually begin with A, and use the single vertical wedge (DIŠ) as item indicator. Examples are S² (late Old Babylonian examples attested in Tell ed-Dēr, Tanret 1982), the Uruk sign list (Cavigneaux 1982: W20248, 3; Waetzoldt 1986, pp.5-7), the Susa sign list (MDP 27, 1; 4; and 175-177), and a sign list from Isin (IB 1621). All these lists may in fact be related somehow to Proto-Ea (see MSL 14, p.167).

174 A bilingual version of Proto-Ea with a number of Akkadian translations for each of the Sumerian values is known as Proto-Aa. This list was occasionally used at a more advanced stage of the curriculum. See MSL 14, pp.85-86.
Advanced students regularly omitted the glosses and only wrote the Sumerian column. The glosses and Akkadian translations were no doubt learned by heart. Edzard (1982) and Michalowski (1983a) both comment on the organization of the series, which is based on pedagogical considerations. One of the main ordering principles is the 'Gestalt' (Michalowski 1983a, p.152) of the signs listed. The composition has frequently been grouped by modern scholars with the elementary exercises TU-TA-TI and Syllable Alphabet B\(^{175}\). The analysis of obverse-reverse correlations of the relevant type II tablets reveals another order. Ea was commonly introduced after ur\(5\)-ra, though a few exceptions exist.

Proto-Ea was followed by a thematic list, Proto-Lu\(_2\). This is a list of titles and professions, kinship terms, and other designations for human beings. It includes a number of entries which do not refer to human beings, but are attracted by graphic or thematic similarity. Thus the section on singers includes a section on songs. The section on farmers is followed by a section for furrows. The word for furrow has several spellings. Some of these spellings include the sign APIN which is identical with the sign for engar: farmer\(^{176}\). Proto-Lu\(_2\) begins with the relative personal pronoun lu\(_2\)\(^{177}\). The list then continues with high members of the court hierarchy:

1. lu\(_2\) who
2. lugal king
3. nam-dumu-na status of crown prince
4. sukkal a court official
5. sukkal-mah chief court official
6. sukkal-ša\(_3\)-e\(_2\)-a overseer of the palace
7. sukkal-i\(_3\)-du\(_8\) overseer of the doorkeepers

Proto-Lu\(_2\) was followed by Proto-Izi. This composition belongs to the acrographic lists. Acrographic lists are ordered by the first or main sign of each entry. Civil has demonstrated that the organization of Proto-Izi also depends on semantic, graphic, and phonetic association\(^{178}\). In general, words already treated in ur\(5\)-ra are omitted. Some sources of Proto-Izi add pronunciation glosses and/or Akkadian translations to selected items but most tablets record the Sumerian word only. The list begins as follows\(^{179}\):

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\(^{175}\) The reconstruction of the initial exercises as TU-TA-TI - Syllable Alphabet B - Proto Ea was originally proposed by Landsberger in Çığ, Kizilyay, and Landsberger 1959, p.97 and then followed by most authors (e.g. Sjöberg 1975, p.162; Hallo 1989, p.237).

\(^{176}\) This description of Proto-Lu\(_2\) depends on Civil's introduction to the text in MSL 12, p.25, where a more thorough discussion may be found. See also Civil 1994, p.173.

\(^{177}\) The word lu\(_2\) usually means man, but is also used as relative personal pronoun. From later bilingual parallels it appears that it is listed here in the latter sense.

\(^{178}\) Proto-Izi has been described by Civil in MSL 13, pp.7-10.

\(^{179}\) MSL 13, p.41f.
Most items in this opening section contain the sign NE read izi, ne, de₃, bi₂, or bar⁷, or as a part of the complex sign ganzer₂ (NE.SI.A). Lines 14 and 15 use the reading bar⁷, but at the same time introduce a new section, with lines beginning with the sign AN. Lines 10 and 13, which do not contain a NE sign, are spelling variants of 9 and 12 respectively. Line 11, u₃-dub₂: charcoal may have been attracted by the semantic similarity with the rest of the section. Moreover, this word has an alternative spelling NE.SI.A, which is a homograph of the next line, ganzer₂.

In addition to Proto-Izi, the group of acrographic exercises includes Proto-Kagal and Nigga. These three lists were probably treated during the same curricular phase. The series are best attested in Nippur, but for all of them there is some evidence for their existence elsewhere. Proto-Izi, for instance, is now known from Ur, Isin, Sippar, and unknown places. Old Babylonian bilingual versions of Proto-Izi and the other acrographic lists exist but they are rare.

Proto-Diri is a very important sign list. In Diri, complex signs composed of two or more basic signs are listed. These complexes are accompanied by their Sumerian reading and one or more Akkadian translations. The list is ordered by various criteria. There is a section with reduplicated signs, listing such combinations as TAK₄.TAK₄; TUR.TUR; and LAGAB.LAGAB. Other sections are ordered by first sign, such as IGI and GIŠ. There is a passage with personal pronouns. The following example is taken from the unpublished edition by M. Civil. The first column gives the Sumerian pronunciation gloss. It is followed by the sign complex (in capitals) and by one or more Akkadian translations (in italics).

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181 I would like to thank Prof. Civil here for his generous permission to use his hypertext version of Diri.
Among the Old Babylonian school texts, Proto-Diri is one of the few compositions which is regularly copied in bilingual form. The pronunciation glosses in the first column are often omitted. In the post-Old Babylonian tradition, however, the glosses are an essential part of the text.

Approximately at this stage of the curriculum mathematical tables were introduced. They contain either multiplication tables or tables of reciprocals. In content they are rather different from the exercises treated above. They deal with numbers rather than with words or signs and they display a degree of systematics and predictability not found in the lexical series. In format, however, they are similar to bilingual lists. In a bilingual list each entry expresses a relation between two words. In a multiplication table a line represents a relation between two numbers. One type of mathematical list looks like this:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>(etc.)</td>
</tr>
</tbody>
</table>

The multiples included are 1-20; 30; 40; and 50\(^\text{182}\).

In many cases we find mathematical tables on both sides of a Type II tablet. Another common combination is proverbs or model contracts on the obverse, and a mathematical table on the reverse.

In the following table the evidence of the type II tablets for the compositions discussed in this section is summarized. The category 'Elem/Urra' contains the elementary exercises discussed in §2.4.1.1 and the ur\(_3\)-ra divisions (§2.4.1.2). 'Other' combines the Model Contracts and Proverbs (to be discussed in §2.4.1.4). The table shows the position of the exercises relative to each other.

\(^{182}\) See Chapter 2 in Neugebauer and Sachs 1945 for a comprehensive description of mathematical tables and their typology.
The table demonstrates that the curricular sequence for the advanced exercises is less strict than it was for the divisions of urs-ra. The upper-right half of the table is better filled than the lower-left half, but exceptions are not unusual. There are twelve examples with Proto-Ea on the obverse and a metrological table on the reverse, suggesting that the tables were introduced before Proto-Ea. Nevertheless, there are still 4 examples where we find the opposite distribution. On the basis of this evidence, the relative location of a number of exercises cannot be decided. We know that the regular sequence was Proto-Lu₂ > Proto-Izi, because there is a Proto-Lu₂ source with a catch-line to Izi. This order is confirmed by the existence of extracts in which the two series are
combined (MSL 12, p.27). From Ugarit we have a catch-line connecting Proto-Izi with Proto-Diri (see Van Soldt 1995). From Old Babylonian Isin there is a prism fragment of Proto-Kagal with a catch-line to Nigga (IB 813, unpublished; see Wilcke 1987, p.93). These catch-lines may well reflect the order of the compositions in Nippur. It is not contradicted by the evidence from type II tablets.

The first two exercises in the table, metrological tables and Proto-Ea, are occasionally found on the reverse of an early exercise (elementary exercise or urš-ra). On closer examination it appears that in 8 of the 9 cases the obverse exercise is from the second half of urš-ra (divisions 3-6). Again, this shows that there was not one linear curricular order strictly applied, but rather a general sequence where different compositions occupy approximately the same place. Apparent exceptions, such as Metrological tables or Ea being introduced before the last tablets of urš-ra, are therefore regular in the sense that the exercises involved are adjacent in the curriculum. A single irregular example has a list of personal names on the obverse and Proto-Ea on the reverse.183

A number of thematic lexical lists are found less frequently. These include a list of body parts (ugu-mu)184, a list of legal phrases, the Nippur God list, a bilingual list of professions (lu₂-azlag₂ = ašlāku; also called Old Babylonian Lu₂), and a list of diseases185. The list of legal phrases is an early version of the first millennium compendium ki-ulutin-bi-še₃ = ana ittišu (MSL 1). A few pieces of the beginning of the Old Babylonian version were published by Roth (1979, pp.291-301)186. The list contains words and phrases relevant for writing contracts. Since very little has been published from this series, a small passage is quoted here187:

018 in-sum he gave
019 in-na-an-sum he gave to him
020 in-na-an-sum-me-eš they gave to him
021 in-dab₅ he took
022 in-na-an-dab₅ he took for him
023 [in-na-an-dab₅-eš] [they took for him]
024 in-la₂ he paid
025 in-na-an-la₂ he paid him
026 in-na-an-la₂-me-eš they paid him

The passage shows that Proto-ki-ulutin-bi-še₃ contains among other things short grammatical paradigms. A strange feature of this section is the plural ending -me-eš, which is used for

183 UM 55-21-396 (3N-T911c); MSL 14, p.28: Ks.
184 A bilingual ugu-mu exercise from Uruk is published in Cavigneaux 1996, text 179.
185 The Nippur God list is unedited. The list of diseases and ugu-mu are edited in MSL 9. The bilingual list of professions is edited in MSL 12, p.151ff.
186 In Eduba D there is an indirect reference to this composition. See Civil 1985, p.77 commentary to line 36.
187 Sources are partly published in Roth 1979. Additional sources for this passage: N 5938 + N 5975 (+) N 6151 (probably a type I tablet) and N 5858.
Sumerograms in Akkadian texts but not in Sumerian\(^{188}\). In addition to these verbal forms the composition treats the terminology for interest, prices, etc. It is possible that the 'Laws about Rented Oxen' (Roth 1980) also belong to the same composition.

2.4.1.4 Model Texts and Proverbs

In the curriculum the lists were followed by exercises in the writing of Sumerian contracts and business documents. Model contracts follow the common patterns of Sumerian contract types, omitting the list of witnesses and the date. Occasionally, witnesses and date are indicated as: its witnesses, its year, its month\(^{189}\). Such exercises are referred to in one of the eduba texts (Eduba D, Civil 1985, p.77f.). This was the first serious encounter with Sumerian sentences. The model contracts were arranged in collections. Extracts from these collections are found on type II tablets, and additionally on type I tablets and prisms. So far no model contracts on type III tablets or lentils are known to me. Since the edition of all model contracts announced by Lieberman has never appeared, model contracts have remained little known\(^{190}\). The example edited below is found on the obverse of CBS 6098. It contains two model contracts concerning the sale of a house. Little is left of the teacher's example, but the pupil's text is largely preserved. The reverse has a long extract from the list of trees and wooden objects\(^{191}\). The first four lines are missing. They are restored from \(PBS\) 12/1, 23 which parallels the first contract\(^{192}\). Other gaps in the text may be reconstructed from our knowledge of the formulary for house-sale contracts\(^{193}\).

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\(^{188}\) See Waetzoldt 1989 and his commentary on the lentil TIM X/1, 8 (p.42). This lentil, like many lentils in TIM X/1, has an extract from some version of Proto-ki-ulutin-bi-še₃ or ur₃-ra I-II. In the Old Babylonian period, Proto-ki-ulutin-bi-še₃ and 'forerunner of ur₃-ra I-II' are not two different compositions but rather geographically determined variants of the same text. See §2.5.3.

\(^{189}\) See Roth 1979, pp.101-102 and Civil 1975b, pp.129-130. An example of this expression is found on the reverse of CBS 6750 lines 4-5: lu₂-ki-[mim-ma-bi] ; iti-bi mu-[bi].

\(^{190}\) Some idea of the content of model contracts may be gained from the examples in Roth 1995, pp.46-54. This text of unknown provenance is a mixture of ki-ulutin-bi-še₃, model texts and related material. Another example of unknown provenance was edited in Roth 1979, p.109f. Published model contracts from Nippur include Civil 1975b, p.129 no.14 (11 NT 32); PBS 8/1, 101 and 102; PBS 8/2, 173; PBS 12/1, 21, 22, and 33; PBS 13, 39; SLFN Plate 73-76; SLT 148; STVC 86. A collection of model contracts from Isin was published by Wileke 1987, pp.102-108 (with various unpublished examples). \(BBVOT\) 3, 34 is probably a Larsa example (reverse Proto-ki-ulutin-bi-še₃). Lieberman discussed some aspects of the model contracts in several articles (most importantly Lieberman 1992).

\(^{191}\) Ni II-053.

\(^{192}\) Other parallels are CBS 6527; CBS 13934 obv. column I; N 4073 column II; N 5334. All parallels have variants in names and numbers.

\(^{193}\) The text exhibits a number of mistakes. PBS 12/1, 23 line 1 has du₁-a instead of e₂-du₁-a. CBS 6098 has errors in the personal names: Amar-ZU instead of Amar-abzu in line 2' and Dingir-da-nu-a instead of Dingir-da-nu-me-a in line 4'. The name Lugal-ezen in line 2' has been restored from PBS 12/1, 23.
A built-up <house> plot of $\frac{1}{2}$ sar
with a second floor and a wooden roof;
the door and the bar are there
its exit is on the broad street,
next to the house of Lugal-a-[...]
the house of Amarabzu son of Lu[gal-ezen]
from Amarabzu
Dingirdanumea
bought;
its full price
2/3 mine silver he paid him.
In the future Amarabzu
and his heirs, as many as there will be
will not raise a claim to this house;
thus he swore in the name of the king.

A built-up house plot of $1\frac{1}{2}$ sar
at the main street to the Abulmah
next to the house of Uršubula,
the house of Ilakšuqir
from Ilakšuqir
Nurilišu
bought.
Its full price
2/3 mana and 5 shekels silver
he paid him.
In the future Ilakšuqir
and his heirs, as many as there will be
will not raise a claim to this house;
thus he swore in the name of the king.

A built-up house plot of 2 sar.

A few points in this text are worth noting. The contracts are ordered by the size of the plot that is sold. Line 26' is the last line on the tablet, but the first line of the next contract. It is the catch-line to the next paragraph. The name Dingirdanumea, the buyer in the first contract, is also found in a model contract concerning a loan of grain. The main street which leads to the Abulmah (lofty gate) is probably one of the most important streets in Nippur. These are features which may have been used to enhance the interest of the pupils and to catch their attention.

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194 CBS 6542. The reverse has a list of trees and is included in Chapter 5 as Ni II-067. The name further appears in the short story 'The Slave and the Scoundrel' (Roth 1983, p.276, 17). For names with nu-me-a preceded by a divine name see Stol 1979, p.181; Roth 1983, p.278; and Stol 1991, p.198 (references courtesy M. Stol).

195 The same street appears in a comic story, located in Nippur, edited by George 1993. In this text the Sumerian name of the street is misunderstood, which is part of its comic effect. The text is post-Old Babylonian.
The last subject in the first phase of scribal education was Proverbs. Most proverbs are short sayings, commonly arranged in thematically organized collections. Some of the animal proverbs are expanded into short stories, not unlike Aesop's fables. In modern studies some 27 collections of proverbs have been identified. Not all of these are attested on type II tablets. The only collections found so far as reverse exercises are 1 and 2196. Obverse extracts may contain proverbs from collections 1 or 2, or from one of a few other collections (among them 5, 6, and 8). The collections are rather different in character. Some are standardized. They can be found in numerous duplicates, or in extract tablets. Other collections appear to be ad hoc compilations. An example is Proverb collection 4. This collection is found on only one tablet. Some of the proverbs contained therein have duplicates in other collections (see Gordon 1957).

In the following table the evidence of the type II tablets with model contracts and proverbs is summarized. Mathematical tables are added to the table because they are the last exercises of the preceding group. Earlier exercises are grouped together under the label El(ementary)/Urra/Advan(ced).

<table>
<thead>
<tr>
<th>REVERSE</th>
<th>OBVERSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>El/Urra/ Math tab Model-c Proverbs</td>
</tr>
<tr>
<td></td>
<td>Advan 1e Row</td>
</tr>
<tr>
<td>1.00</td>
<td>18.00 19.00 20.00 Total</td>
</tr>
<tr>
<td>REVERSE</td>
<td>---------------</td>
</tr>
<tr>
<td>1.00</td>
<td>642 3 48 44 737</td>
</tr>
<tr>
<td>El/Urra/Advan</td>
<td>92.5</td>
</tr>
<tr>
<td>18.00</td>
<td>5 17 3 14 39</td>
</tr>
<tr>
<td>Math table</td>
<td>4.9</td>
</tr>
<tr>
<td>19.00</td>
<td>3 6 6 15</td>
</tr>
<tr>
<td>Model-c</td>
<td>1.9</td>
</tr>
<tr>
<td>20.00</td>
<td>2 2 2 6</td>
</tr>
<tr>
<td>Proverbs</td>
<td>.8</td>
</tr>
<tr>
<td>Column 652 22 57 66 797</td>
<td></td>
</tr>
<tr>
<td>Total 81.8 2.8 7.2 8.3 100.0</td>
<td></td>
</tr>
</tbody>
</table>

A combination of mathematical tables and proverbs or model contracts is further found on a special tablet type, only attested for this group. These are type II tablets with three columns on the obverse. The first column is a mathematical table. The second column has the teacher's

196 Gordon 1968 is an edition of the collections 1 and 2. Since that time a number of publications, particularly by Gordon, Falkowitz, and Alster, have expanded our knowledge of this genre. Alster is preparing a new edition of all proverb collections.
example of the model contract or proverb collection. The third column has the same text in a pupil's hand. The reverses of these tablets have an extract from urs-ra. Curiously, the columns on the reverse run from left to right\(^\text{197}\).

With the proverb collections the first phase of the education ended and evolved into the second phase: literary texts. The proverbs are couched in a literary language and include short stories. Some of the collections, indeed, are never found on tablets typical of the first stage: types II and IV. The proverb collections straddle both phases.

2.4.1.5 Summary of Phase 1

To summarize the results of our discussion of this first phase at the eduba, we have distinguished four groups of exercises. The clusters coincide with those used in our discussion above: 1 elementary exercises (Sign elements; Syllable Alphabet B, TU-TA-TI and lists of names); 2 urs-ra; 3 advanced lists (including the metrological and mathematical lists); and 4 Model Contracts and Proverbs. Tablets containing little-used lists such as ugu-mu, Proto-ki-ulutin-bi-še, and Proto-Aa (a bilingual version of Proto-Ea) are not included. At this level of analysis the obverse-reverse correlations in type II tablets exhibit a very regular pattern:

\[\text{REVERSE by OBVERSE}\]

<table>
<thead>
<tr>
<th>Count</th>
<th>Elementa Urra</th>
<th>Advanced Model/Pr</th>
<th>1.00</th>
<th>2.00</th>
<th>3.00</th>
<th>4.00</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVERSE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.00</td>
<td>212</td>
<td>96</td>
<td>10</td>
<td>2</td>
<td>320</td>
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<tr>
<td>Elementary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40.2</td>
</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.00</td>
<td>2</td>
<td>123</td>
<td>73</td>
<td>23</td>
<td>221</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27.7</td>
</tr>
<tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.00</td>
<td>1</td>
<td>10</td>
<td>140</td>
<td>84</td>
<td>235</td>
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<td>29.5</td>
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<td></td>
<td></td>
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<tr>
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<td>6</td>
<td>14</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Model/Prov</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Column 215</td>
<td>230</td>
<td>229</td>
<td>123</td>
<td>797</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27.0</td>
<td>28.9</td>
<td>28.7</td>
<td>15.4</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{197}\) A number of examples with proverbs are published in Gordon 1968: CBS 14159+ (Plate 51); CBS 14158+ (Plate 53); N 5084 (Plate 56). Examples with model contracts are CBS 6098 (obverse edited above; reverse urs-ra trees and wooden objects, included in Chapter 5 as Ni II-053) and N 3956 (rev. broken).
The upper-right half of the table is much better filled than the lower-left half. More than 60% of the tablets have an exercise from the same group on both obverse and reverse. In theory an elementary exercise (group 1) on the reverse may go with any other exercise on the obverse. But the obverse exercises in this category are not evenly spread. The more advanced an obverse exercise is, the less likely that it will be combined with an elementary exercise on the reverse. There are 212 cases of a group 1 exercise combined with an elementary exercise. There are only two cases where a model contract or a proverb collection on the obverse goes with an elementary exercise on the reverse. The numbers in the top row decrease from left to right. In curricular terms: the practice is to repeat on the reverse of a type II tablet an exercise that has been introduced not too long before.

2.4.2 Phase 2: Literature

In the second phase of their scribal education the pupils copied literary compositions. These texts vary from short hymns of no more than 60 lines, to complex and lengthy epics, such as 'Enmerkar and the Lord of Aratta' (Cohen 1973), which numbers over 600 lines. Literary compositions differ in their complexity with respect to vocabulary, syntax, or rhetoric. This may correlate with the educational goals of their inclusion in the curriculum. Very little work has been done so far on investigating the implications of this corpus as a didactic corpus.

The incipits of a number of literary compositions have been found on so-called catalogue tablets. Civil (1975a, p.145 n.36.) has argued that some of the catalogue texts follow the curricular order in which the compositions were treated. His thesis has found support in a tablet from Isin, where several literary texts are copied onto one relatively small tablet (Wilcke 1987, pp.85-89). The order of the compositions follows the order of the catalogues.

Tablet formats typical for the literary phase of the eduba are the oblong single-column tablet, and the two-column tablet, with two columns on each side. Oblong single-column extracts contain

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198 These are found in upper-left to lower-right diagonal. The diagonal includes 489 tablets, which is 61% of the total of 797 tablets.

199 On the length of Sumerian literary works see Vanstiphout 1986.

200 An important exception is Vanstiphout's studies on Lipit-Eštar B, which proved to be a beginners' exercise (Vanstiphout 1978 and 1979). Vanstiphout's thesis finds additional support in the fact that several lentils from Uruk, recently published by Cavigenaux (1996) carry an extract from this hymn (204+ 205; 206; and 223). Marcel Sigrist generously allowed me to utilize his copies of lentils kept in the Andrew University Museum. One of these again proved to belong to Lipit-Eštar B (to be published as AUCT 5, 235).

201 A strange feature of this text is that it simply apocopates lines which are too long to fit a column. Obviously, it is used as a mnemonic device. Such texts were also known in Nippur; see Civil 1985a, pp.37-45.

202 On the typology of literary tablets see Civil 1994, p.12.
about 30 lines of some literary composition, but may be considerably shorter, or longer. In the case of shorter compositions (up to ±200 lines), a two-column tablet generally contains the whole composition. Larger compositions may be divided over the appropriate number of two-column tablets. For some compositions the partitions may have been standardized, but this is certainly not always the case. A longer composition could be inscribed in its entirety on a multi-column tablet. Occasionally a number of shorter compositions were combined on a large tablet, or on a prism.

A thorough discussion of tablet typology in literary compositions goes far beyond the confines of this study, and is premature until we possess reliable editions of the complete corpus of Sumerian literary texts. Moreover, those editions that are available do not always provide adequate information on the physical aspects of the sources. The examples above may suffice to demonstrate the differences in this respect with the corpus of texts used in the first phase. Lentils and type II texts are not usually employed for literary compositions. A few exceptions exist. There are some type II tablets with a hymn or another literary composition on the obverse and a list on the reverse. Similarly there are lentils with literary extracts. In all cases these belong to the earliest literary texts studied in the eduba (see Civil 1975a).

Two literary compositions occur more than once on the obverse of a type II tablet: the hymn Lipit-Eštar B, and the short story Enlil and Namzitarra. A few other texts occur only once, or are not identified.

**Lipit-Eštar B**

<table>
<thead>
<tr>
<th>Tablet</th>
<th>Reverse</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBS 6668</td>
<td>rev. PBS 11/3, 64: list of names.</td>
<td></td>
</tr>
<tr>
<td>CBS 6943</td>
<td>rev. broken; may not be type II.</td>
<td></td>
</tr>
<tr>
<td>N 4960</td>
<td>rev. Nig₂-ga (MSL 13, p.95: L2).</td>
<td></td>
</tr>
<tr>
<td>N 5824+N 5828</td>
<td>rev. unidentified.</td>
<td></td>
</tr>
</tbody>
</table>

**Enlil and Namzitarra**

<table>
<thead>
<tr>
<th>Tablet</th>
<th>Reverse</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBS 7917+N 4784</td>
<td>rev. list of domestic animals (gud and amar)</td>
<td></td>
</tr>
<tr>
<td>N 5149</td>
<td>rev. Nig₂-ga (MSL 13, p.94: Q1)</td>
<td></td>
</tr>
</tbody>
</table>

203 See, for instance, Gilgameš and Huwawa A, where one-column texts vary between 15 and 66+ lines (Edzard 1990, p.172).

204 Vanstiphout 1986. The two-column tablets demonstrably contain different partitions in the case of the 'Curse of Agade' (Cooper 1983, see p.45 and the catalogue of sources).

205 The prism fragments Ni 4092 + Ni 4243 (ISET 2, 84 + SLTN 114) combine Eduba A (Schooldays) and Eduba C (Ugula and Scribe). Similarly, three eduba dialogues were collected on one tablet now in the Hilprecht collection in Jena (see Wilcke 1976, p.36ff.).


207 For literary lentils see Falkowitz 1984.


209 Civil 1977.
Fable of the Crane and the Raven

CBS 6559+  rev. Ugu-mu (*MSL* 9, p.51: S1)

Emesal lament me-e i-li ga-am₃-dug₄

CBS 4828  rev. domestic animals (*MSL* 8/1, p.82: V31)

Akkadian Sargon letter

CBS 15217  rev. Proto-Lu₂ (*MSL* 12, p.32: D3)

Unidentified

CBS 14233  rev. mathematical (*PBS* 13, 22)
N 3884  rev. metrological
N 4951  rev. metrological

In a few other cases a literary text is found on the reverse. Three tablets have been found so far, each with a different composition:

**Lipit-Eštar A**

CBS 10988  Obv. Proto-Aa (*PBS* 5, 110; *MSL* 14, p.87: J)

**Song of the Hoe**

CBS 9856  Obv. Proto-Aa (*MSL* 14, p.87: C)

**Schooldays**

UM 29-13-591²¹³  Obv. unidentified

The literary Type II tablets testify to an intermediate stage in the curriculum between the lexical and the literary phases. In two of the three cases where a literary text is found on the reverse the obverse exercise is Proto-Aa, a bilingual list closely related to Proto-Ea. This exercise belongs to the most advanced of the lexical corpus. The exceptions show that the relation of lexical lists and proverbs to special tablet types is not natural or based upon practical or textual reasons. It was


²¹¹ This is the only Akkadian composition on a Nippur type II tablet that has come to my knowledge. The (fictitious) letter is published by Joan Goodnick-Westenholz (1997).

²¹² The obverse of HS 1607 (*MSL* 14, p.29: Lf) has a model contract.

²¹³ According to the UM catalogue there is an indirect join with UM 29-15-362, but this piece could not be located.
perfectly possible to use lentils and type II tablets for literary compositions; the Nippur teachers chose not to do so.

2.5 The Transmission of Urš-ra to the First Millennium

2.5.1 The Middle Babylonian Period

The Old Babylonian period ended with the Hittite raid on Babylon in 1595. The Hittites did not establish a permanent rule in the region. Instead, Kassite kings came to reign in Babylonia. The Kassite period marks the beginning of a standardization process that went on for several centuries, and eventually affected almost all of the genres that belong to the stream of tradition. Around the fourteenth century Akkadian was used all over the ancient Near East as an international language. The Mesopotamian lexical and literary tradition was exported to western areas, to be used in the education of local scribes.

Middle Babylonian lexical texts therefore belong to two historically and geographically distinguished traditions: the Kassite tradition in Babylonia proper and the western peripheral tradition. Western lexical texts are closely related to Old Babylonian traditions. The majority of texts derive from Ugarit and Emar in Syria, and from Hattuša in present-day Turkey. Kassite lexical texts carry some early version of the tradition known from first millennium sources. Therefore we will treat this group with the late version in §2.5.2.

2.5.1.1 The Middle Babylonian Peripheral tradition.

Various students have explored the possible ways in which cuneiform writing and the Mesopotamian school texts may have spread to foreign parts. Van Soldt has demonstrated that writing in Ugarit coincides with Hittite rule (1991, p.522). The Ugaritic lexical texts may, therefore, derive from the Hattuša tradition. The political background of the spread of literacy to Emar is comparable to the situation in Ugarit. The origin of the Hittite tradition is disputed. Generally, Hittite literacy is assumed to be mediated by Hurrians (Van Soldt 1991, p.522; see Beckman 1983; p.98 n.8 and 9). Beckman (1983), basing himself on palaeographical and grammatical evidence, makes a distinction between those traditional Mesopotamian texts that were imported directly, and those which came through Hurrian mediation. He concludes that the

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214 The bibliography for Middle Babylonian peripheral lexical texts may be found in Cavigneaux 1983, pp.617. To be added are: Ugarit: André-Salvini 1991; Arnaud, 1982; Veldhuis 1996; Emar: Arnaud Emar: VI/4 (editions; see the important review by Civil 1989); Watanabe 1987; Van Soldt 1993 (Emar?); Boghazköy: KBo 26, 1-57; and KBo 36, 1-8. Hazor: Tadmor 1977. Haft-Tepe: Herrero and Glassner 1996, nos. 270-287. Various Middle Babylonian texts (mostly grammatical exercises) are published and/or edited in MSL SS1. Van Soldt 1991, Appendix C is devoted to the peripheral MB lexical texts, in particular those from Ugarit. An overview of all (published and unpublished) Ugaritic school texts (lexical and non-lexical) is found in Van Soldt 1995.
lexical tradition of Hattuša showed no Hurrian imprint and was thus imported directly from Babylonia. He further demonstrates that in the Middle Babylonian period there was direct contact between the Hittite capital and Babylonia, and that at least one Babylonian teacher was working in Hattuša. However, according to Beckman the lexical traditions from Ugarit and Emar are 'Hurrian-derived' (Beckman 1983, p.103). They are used to make the foreign tradition intelligible. Apart from the Ugarit S vocabularies with a column in Hurrian evidence for this claim is lacking.215

The most important innovation of Middle Babylonian ur5-ra is the development of the two-dimensional format. The unilingual Old Babylonian texts were, at least in their written form, one-dimensional collections of Sumerian words strung together in long lists. Most of the Middle Babylonian texts still adhere to this format, but in a sizable proportion a second or even a third explanatory column is added. In Emar and Ugarit ur5-ra is found on two different tablet types:216 large multi-column tablets, containing a complete lexical text, and one-column extracts. The large tablets are mostly unilingual (Sumerian), but sometimes bilingual (Sumerian - Akkadian). In a very few cases multi-lingual versions occur (Sumerian - Babylonian and a local language). The one-column extracts are usually divided into three sub-columns: 1: Sumerian, 2: pronunciation glosses, and 3: Akkadian. The extracts contain about 30 lines of text.

Interestingly, the development parallels the development in Ebla, more than a millennium before. In both cases Sumerian lexical lists were exported to regions where the language had no roots. In both cases, in addition to the traditional unilingual texts, new formats were developed to adjust to local needs. At both sites we thus find translations and pronunciation aids.217

In Ugarit the unilingual format of lexical lists was still standard. In his reconstruction of the educational practice at Ugarit, Van Soldt (1991, p.752; 1995) has demonstrated that the extract tablets belong to an earlier stage of scribal training. The more experienced scribe did not need to write out the translation or pronunciation columns. The unilingual texts, according to Van Soldt, give the most professional impression.

2.5.1.2 The Structure of Middle Babylonian Peripheral Ur5-ra

The Middle Babylonian peripheral version of ur5-ra is divided over 15 tablets. The order of these tablets has been established by Van Soldt.218 The first two are devoted to phrases used in

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215 For these vocabularies see Huehnergard 1987, Part I. The Akkadian syllabary used in bilinguals has many of the peculiarities which, as demonstrated by Van Soldt (1989), are related to Hurrian orthography. This, however, is part of the general conventions for writing Akkadian and does not prove the Hurrian origin of the lexical tradition.


217 Similarly, lentils from Old Babylonian Susa are often provided with pronunciation glosses and Akkadian translations.

218 For the Ugarit version see Van Soldt 1995 Appendix I; and 1991 Appendix C. There is a possibility that one of the tablets was divided into two, giving a total of 16 tablets (Van Soldt 1995, Appendix I at Harra-Hubullu 13). The same division probably existed in Emar, though in the higher tablet numbers the
business documents. The subject is alien to the ur5-ra style. In Nippur a comparable exercise, ki-ulutin-bi-še3, was not connected with ur5-ra. The problem of the origin of these two tablets, their connections with ki-ulutin-bi-še3 on the one hand and with ur5-ra on the other, will be treated separately (§2.5.3) because of its relevance for the history of the scribal curriculum.

<table>
<thead>
<tr>
<th>Tablet No.</th>
<th>Ugarit Contents</th>
<th>O.B. Nippur</th>
<th>Late ur5-ra</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Business terminology</td>
<td>not included</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Business terminology</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Trees and wooden objects</td>
<td>1</td>
<td>3-5a</td>
</tr>
<tr>
<td>4</td>
<td>Wooden objects</td>
<td></td>
<td>5b-7</td>
</tr>
<tr>
<td>5</td>
<td>Reeds and reed objects</td>
<td>2</td>
<td>8-9</td>
</tr>
<tr>
<td>6</td>
<td>Vessels</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>Leather and leather objects; metal and metal objects</td>
<td></td>
<td>11-12</td>
</tr>
<tr>
<td>8</td>
<td>Domestic animals</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>9</td>
<td>Wild animals; meat cuts</td>
<td>14-15</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Stones and plants</td>
<td>4</td>
<td>16-17</td>
</tr>
<tr>
<td>11</td>
<td>Fish and birds; clothing.</td>
<td></td>
<td>18-19</td>
</tr>
<tr>
<td>12</td>
<td>Geographical names and terms</td>
<td>5</td>
<td>20-21a</td>
</tr>
<tr>
<td>13</td>
<td>Geographical names and terms; stars</td>
<td></td>
<td>21b-22</td>
</tr>
<tr>
<td>14</td>
<td>Foodstuffs</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>15</td>
<td>Foodstuffs</td>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

The order of the subjects is clearly related to the version of Old Babylonian Nippur. Each of the evidence is not always sufficient to decide. Arnaud's presentation of the texts in Emar VI/4 is most confusing. The transliteration of one tablet is sometimes divided over several publication numbers. Thus Msk 731030 is found under the numbers 543 (HAR-ra-hubullu III), 544 (HAR-ra-hubullu IV), 545 (HAR-ra-hubullu V-VII), 737 ('Une incantation annexe'), and 604.7.2 (Colophon). Arnaud's arrangement suggests that there are three giš tablets in Emar, whereas there are only two (see Civil 1989). Similarly, the Emar forerunner of ur5-ra 15 (N° 552) does not exist. The section UZU and the section wild animals (N° 551) belong to the same tablet.

For Middle Babylonian forerunners of ur5-ra I-II see Krecher 1969, p.137f (Ugarit); Van Soldt 1991 Appendix C (Ugarit; see the table on p.751, demonstrating the place of these tablets in the ur5-ra series); Emar VI/4 541 and 542; and Tadmor 1977 (Hazor).
Nippur divisions is divided over two or three tablets, and two tablets are added in front. In no case does an Ugarit tablet cross the border of a Nippur division. Tablets 3-7 of the Ugarit version follow the subdivisions known from Nippur and Isin (see §2.4.1.2).

Exactly how the Middle Babylonian tradition is related to the Old Babylonian one is a question which can hardly be settled at this moment in time, since the majority of lexical texts from Ugarit are still unpublished. We can get an idea of the problems involved from three examples derived from the geographical list, the wood list, and the list of stones and plants (Ugarit tablets 12, 4, and 10, respectively).

1) Van Soldt (1993, p.441) has demonstrated that the Middle Babylonian peripheral forerunner of ur₃-ra 20-21a (geographical names; tablet 12 in the scheme above) is close to the Old Babylonian text edited in MSL XI, p.129ff. According to its first editor this text was found in Larsa (Jean 1935, p.161). The Ugarit text by no means duplicates the Larsa version but the general order of the sections is virtually the same, and differs considerably from the Old Babylonian Nippur version. The Middle Babylonian version has the complete list of Old Babylonian kings who gave their names to cities, dikes, and canals. Van Soldt concluded that the version exported must have been post-Old Babylonian.

2) In Middle Babylonian sources the subject 'trees and wooden objects' is divided over two tablets (tablets 3 and 4 in the table above). Tablet 4 is known from various Middle Babylonian sources: Ugarit, Emar, and an extract from Nuzi. All texts seem to derive from the same tradition.

We may take as an example the passage beginning with gi₃ apin: plough. In Emar the order of the sections is:

| gi₃ apin | plough | Nippur   |
|.........|--------|----------|
| gi₃(nig₂)-gan₂-ur₃ | harrow | 468-473  |
| gi₃ al | hoe | 477-482  |
| gi₃ u₃-šub | brick-mould | 483-486  |
| gi₃ kak-sum-ba-la₂ | stick for uprooting onions | 487-490 |
| gi₃ zi-ri-kum | irrigation device | 491-493 |
| gi₃ dur₂ | bottom board | 508-514  |
| gi₃ ba-riz₂-ga, etc. | measuring vessels | 515-526  |
| gi₃ sa | hunting net | 527-535  |
| gi₃ har-mušen-na | trap | 536-540  |

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220 See also Civil 1994, pp.112-114.
221 Published and unpublished sources may be found in Van Soldt 1995; see Veldhuis 1996.
222 See Arnaud Emar VI/4 no. 545, with the review by Civil (1989).
223 Published by Lachemann 1939: no.7 (SMN 2559). This text has aroused much discussion; see most recently Civil 1987.
On the one hand there is a close relation between the versions from Emar and Nippur in this part of the text. There is only one place where the Nippur tradition has a major difference. The section $\text{giš} \text{tukul}$ (mace) in Nippur immediately precedes the 'bottom boards' ($\text{giš} \text{dur}_2$), a passage which is found considerably later in the Emar text (see §3.1). On the other hand this Emar passage differs significantly from the late version. Corresponding sections in first millennium urs-\(\text{ra}\) are found dispersed over tablets 5, 6, and 7A.

3) The Middle Babylonian list of stones and plants edited in MSL 10, p.37ff. and p.107ff. (tablet 10 in the scheme above) is reconstructed from duplicating sources from Ugarit and Alalakh. The Emar text is based on the same tradition. There is one late Old Babylonian list of plants from Babylon which is clearly related (MSL 10, p.117ff, source B). The first 12 preserved lines (lines 6a-6l) display an independent order, but then the text follows the peripheral version closely$^{224}$. The section stones does not have a clear predecessor. All Old Babylonian lists of stones are somehow related (see §2.2.1), but there is no one text which is undoubtedly the sole ancestor of the Middle Babylonian version.

In conclusion, the three examples show that the inheritance of the Old Babylonian lexical tradition is a complex matter. The geographical lists from Larsa (example 1) can only have influenced the Middle Babylonian versions indirectly. Larsa had ceased to exist as a scribal centre several centuries before (see §2.2). We must assume that refugees from the south brought this, or a closely related tradition, to Northern Babylonia. The Emar list of wooden objects (example 2) shares its global organization with the Nippur version. Again, no direct influence may be assumed because Nippur had been abandoned at the end of the eighteenth century. Babylon (example 3) is a plausible centre for the export of school compositions to the west, particularly because of the well-attested relations between Babylon and Hattuša (Beckman 1983). Extant lexical texts from Babylon, however, are so few that there is no way of proceeding beyond conjecture.

2.5.2 First Millennium Standarized Urs-\(\text{ra}=\) *hubullu*

The first millennium so-called canonical series treats the same topics as the Middle Babylonian peripheral versions discussed in §2.5.1 in the same order. It is divided over 24 tablets$^{225}$. Late urs-\(\text{ra}\) differs significantly from earlier versions in two respects. First of all, after the turn of the millennium the bilingual format of urs-\(\text{ra}\) is normative for all tablet types. In the second place, from the Middle Assyrian to the late Hellenistic period, and from Uruk to Sultantepe, urs-\(\text{ra}=\) *hubullu* basically shows the same text, with the same division over tablets.

2.5.2.1 Early Canonical Texts

$^{224}$ No copy is available and it is not possible to estimate the length of the missing portions of the text.

$^{225}$ For this division, and the contents of each tablet, see Cavigneaux 1983, p.627.
The earliest dated sources for this tradition are Middle Assyrian, from the so-called library of Tiglath-Pileser I (1100 BC). A number of Middle Babylonian, i.e. Kassite, sources, especially from Nippur, may be one or two centuries earlier. A tablet type used for lexical exercises in the Kassite period has on one side a short literary citation, and on the other side a lexical excerpt of five to ten lines. The tablet is oblong in shape. The literary text is written parallel to the longer side; on the other side the lines run parallel to the shorter side. In some cases only one side of the tablet has been inscribed. Two examples carry a line from the 'Marriage of Sud' and were published by Civil (1983a). The lexical extracts found on these tablets are unilingual and follow a version very close to the canonical first millennium text. Few examples have been published. SLT 143 (CBS 6405) is inscribed on one side only. It has a short passage from the list of trees (urs-ra 3: 205-209; MSL 5, p.109f.) without the Akkadian translation. The main variant as compared to the version edited in MSL is $gish$ mes-dub (SLT 143) as against $gish$ mes-dub-ra-an. An unpublished example is UM 29-13-771 (Nippur). On one side it has two lines in Akkadian. The composition is unknown but might be taken from an incantation, a text type known to be used in school texts in the Neo-Babylonian period.

1. $li-ib-bi\;u3$ [My heart and [ ]
2. $u-e-e-bi-ka\;ma^{+}\;ri^{+}$-[I will drown you, son of [ ]

The other side has an extract from urs-ra 1: 100-104

1. [ibija]l
2. dumu-gaba
3. dumu-munu-gaba
4. dumu

heir
infant
female infant
child

---

226 Weidner 1952 and Pedersén 1985, pp.31-42.
227 See Civil in MSL 14, p.156 on the Middle Babylonian Ea sources.
228 See Civil 1995, p.2308: Type V. In MSL SS1 the same type is labelled MB II (see p.89). All examples but one known to me are from Nippur. The exception is unprovenanced (NBC 7834; unpublished). Perhaps IS 24, 75 belongs to this type (Babylon: Sargon legend; see Goodnick-Westenholz 1997, pp.52-55 and 382).
229 I would like to thank Leo Sassmannshausen for collating this text and related ones in the University Museum, Philadelphia.
230 See MSL 5, p.16.
A further example is UM 29-16-383 (Nippur). This text has a one-line quotation from a Sumerian literary text: [giš-bur₂]-mah-ga₂ bar ba-an-ku-[...]. 'He entered my lofty giš-bur₂ from outside'. The line has not been identified. The other side has ur₅-ra 3: 85-91. Line 90 is omitted, and 87-88 are inverted:

1(=85) giš numun-u₃-suh₅ seed of the fir
2(=86) giš an-na-u₃-suh₅ ? of the fir
3(=88) giš pa-u₃-suh₅ idem
4(=87) giš še-u₃-suh₅ idem
5(=89) giš pa-u₃-suh₅ twig of a fir
6(=91) giš bir-GAM-ŠIM-u₃-suh₅ ?

In the standardized version line 91 reads giš bir-GAM-ma-u₃-suh₅. It is followed by the item giš šim-gig. It is possible that the ŠIM in line 6 of our tablet is an insertion from the next line. This would prove that, unlike Old Babylonian practice, this exercise was copied or dictated from a master text. Otherwise the confusion is difficult to explain. The use of a master text in this period is probable because the list is much more standardized than it was in the Old Babylonian period. Before further conclusions may be drawn, however, we will need more examples of errors like this one.

A variant of this type of exercise tablet is lentil-shaped. Physically they are similar to the Old Babylonian type IV, but textually they are equivalent to the type described above.

Another Kassite-period type is a large oblong tablet with a list that continues from the obverse to...
the reverse. A few examples have been published, including \textit{SLT} 241 (\textit{urs}-ra 2) and \textit{PBS} 12/1, 17 (\textit{urs}-ra 4), both from Nippur. Both are unilingual Sumerian. What the copy in \textit{PBS} 12/1 does not show is that the tablet has been deliberately cut in two. What is preserved is the left half of a two-column tablet. The column divider, a double vertical line, is still visible, and a few useless traces of the right column remain. The right column probably contained Akkadian translations. The list includes over eighty items from the list of furniture. It is a short version of canonical \textit{urs}-ra 4: 59-173. A number of items are omitted, others are put in a slightly different order. The most important variation is the displacement of the section \textit{gिस} (stool). All in all the Kassite tradition may be defined as an early version of the canonical text.

Kassite-period \textit{urs}-ra is further found on large tablets containing the text of an entire canonical tablet. A bilingual example from Nippur was used in the reconstruction of the list of reed and reed objects \textit{urs}-ra = \textit{hubullu} 8 (HS 1928 + HS 1929; \textit{MSL} 7, p.4 source J). Two unilingual examples of unknown origin are known to me. Very probably Kassite in date is NBC 10915, which has the Sumerian text of \textit{urs}-ra 6. The tablet measures no more than 3x6cm, carrying about 240 lines of text. CBS 1862 is from the Khabaza collection and may therefore be from Sippar. What remains is somewhat less than the left half of a large tablet which contained the Sumerian text of \textit{urs}-ra 1 and 2. The colophon reads:

\begin{verbatim}
gिस 42 taskarin  boxwood 42  
al-til  finished  
[ m]u-šid-bi  [N] lines  
traces
\end{verbatim}

The number 42 refers to the number of lines in the last column. It is inserted in the catch-line to \textit{urs}-ra 3.

2.5.2.2 First Millennium \textit{urs}-ra

\footnote{\textsuperscript{236} A similar example is CBS 4599 = \textit{PBS} 12/1, 16: \textit{urs}-ra 2 (see \textit{MSL} 5, p.49).}

\footnote{\textsuperscript{237} See \textit{MSL} 5, pp.154-166.}

\footnote{\textsuperscript{238} Prof. J. Oelsner has made some additional joins since the text was used for \textit{MSL}.}

\footnote{\textsuperscript{239} For the Khabaza collection and its relation with Sippar see Michalowski 1981a, p.386.}
First millennium lexical texts may be divided into school texts and library texts. School texts are known primarily from the Neo- or Late Babylonian periods. Library texts are known from a variety of sites in both Assyria and Babylonia. The canonical version of urs-ra was used over a time span of about a millennium, and in a large geographical area. Now that we possess editions of all tablets - though for some tablets the available evidence is rather fragmentary - the next step will be to study local differentiations, tablet types, changes in archaeological and curricular context, and so on in more detail. Since these matters are peripheral to this study, I will confine myself here to a few remarks on the process of standardization.

Most lexical texts from Nippur are standardized at least to some degree. The standardization of the first millennium is of quite another kind. This process was not restricted to urs-ra = hubullu, or even lexical texts, but affected almost every genre. In addition to official editions (iškaru) there were texts called ahu, extraneous. Further, we find references to ša pī ummānī: the oral tradition of experts. These distinctions, whatever their exact meaning and dynamics might have been, reflect a scholarly need for a reliable and generally accepted body of knowledge. This same need is visible in colophons, guaranteeing that the copy is a faithful one, and indicating the provenance of the original. The standardization in this period is a much more conscious and more literate process than it was in Old Babylonian times. Lexical lists were no longer adapted to linguistic or other developments. After some time a number of the Akkadian translations in urs-ra became obsolete. The solution was not to replace these words by current ones but to create three-column texts, in which the Sumerian was translated twice: first into the obsolete Akkadian word, and then into a better understood synonym. The living Old Babylonian traditions turned into monuments of learning.

2.5.3 The Transmission of the Curriculum

Even though urs-ra changed considerably in character over the centuries, it still functioned as an exercise in Neo-Babylonian schools. Not all school texts survived after the Old Babylonian period. Some compositions were abandoned, others were transmitted but ceased to be used in the curriculum. In this section the transmission of the scribal curriculum will be studied by means of the history of three compositions known from the Nippur Eduba: TU-TA-TI, Proto-ki-ulutin-bi-še, and Proto-Ea.

TU-TA-TI is almost exclusively attested in Old Babylonian Nippur (see §2.4.1.1). At least one of the TU-TA-TI versions included a number of Akkadian words. The six-sided prism fragment HS 1801 has regular TU-TA-TI items on side A. Side F reads as follows:

\[ 01' \quad [\quad [g]t_4^{242} \]

---


241 This commentary is called mur-gud. See Cavigneaux 1983, p.628.

242 Perhaps the line is to be reconstructed \[ [\!] la tej-\!g\!t\!\_4, as in HS 1625 side E line 9'. For this text see below.

75
Let me see

To him/her

To you

He is great

He helped me

He gave me

He bestowed on me

Nisaba be praised!

After line 17' the scribe saw that he would not be able to finish his text in the space available and he stopped analyzing each word in graphemes. HS 1801 is not an isolated aberration. Another six-sided TU-TA-TI prism, HS 1625, duplicates the last few lines of HS 1801244. It preserves another portion of this version of TU-TA-TI on its side E which has the expressions245:

Please

Do not be careless

The prism fragment Ni 3180a has a similar text (Çiğ, Kizilyay, and Landsberger 1959, p.65). In column I it preserves a series of words which all appear in the onomasticon:

My pride

________________________

243 Line 6' was inserted after line 7' had been written. It does not have the single vertical wedge which regularly indicates the individual items in TU-TA-TI.

244 Legible are the words i-di[n-nam] and i-qi2-ša-am (both analyzed in graphemes) and the subscript dnisaba-za3-mi2.

245 The lines 1'-3' have the syllables ap; pu; and tum. The text is presented here in an abbreviated way. Additional examples of Nippur TU-TA-TI texts with Akkadian expressions are UM 29-13-179 + UM 29-13-518, a type I tablet including regular TU-TA-TI items and the expression um-ma a-na-ku (reverse III 1'-7') and CBS 7860, a square prism fragment, including the expressions um-ma-{ / and tu-kulz-ti (side A 1'-5') and unidentified words on side B.
The first three are known as a standard set in the list of Akkadian names in *PBS* 11/2, where they are combined with various divine names. The same prism, however, also has an entry which has nothing to do with personal names (column II 2-9):

\[ \text{ba-la-} \text{šu-še-ha} \]  
Sit and rest

The relation with the onomasticon is, therefore, not central to the idea behind the text. The type II tablet CBS 5870 (*PBS* 11/2, 65) is related:

<table>
<thead>
<tr>
<th>01</th>
<th>i-[ ]</th>
<th>02</th>
<th>i-[di]-n</th>
<th>03</th>
<th>i-din-nam</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>i-q[2]-ša-am</td>
<td>05</td>
<td>i-ri-ba-am</td>
<td>06</td>
<td>e-ri-a-am</td>
</tr>
<tr>
<td>07</td>
<td>i-tu-[a-am]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The association of exercises in Akkadian words with TU-TA-TI is also found in *TIM* 9, 85, a text most probably from Tell Harmal\(^{246}\). The first column of this tablet has a TU-TA-TI version. The other columns (2-7) contain Akkadian words, ordered by first sign. The sections preserved are i-, a-, na-, nu-, ma-, li-, and mu-. Each section has dozens of entries.

The first few lines of column 2 are almost identical to the beginning of a list edited from Sippar texts by Tanret (1989)\(^ {247}\). Two Tell Harmal lentils have the opening lines of the same text.

<table>
<thead>
<tr>
<th>Sippar (Tanret 1989)(^ {248})</th>
<th>Tell Harmal (A = <em>TIM</em> 9, 85; B = lentils(^ {249}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>1</td>
<td>i</td>
</tr>
<tr>
<td>2</td>
<td>i-[a]</td>
</tr>
<tr>
<td>3</td>
<td>i-din-nam</td>
</tr>
<tr>
<td>4</td>
<td>i-tu-[a-am]</td>
</tr>
</tbody>
</table>

\(^{246}\) See Ellis 1987, p.246 n. 54.

\(^{247}\) I do not understand why Si 503 and 510 (both *SFS* p.40) were not included by Tanret. Si 510, 1 (\[ na-aw-ra-am \]) parallels *TIM* 9, 85 IV 19. The other items (beginning with KUR) are anomalous, since no logograms are used otherwise. Scheil's edition, however, is unreliable, as Tanret has shown. Si 503 is completely similar in style to the other Sippur pieces, except for the repetition of the same item in 1-2. Line 4 (I ma-gir) probably parallels *TIM* 9, 85 V 12'.

\(^{248}\) The initial vertical wedge in each line is not indicated by Tanret, but see the original editions in Scheil *SFS*.

\(^{249}\) *TIM* 10/1, 136 and 142.
As far as it is preserved, the Sippar list mainly consists of Akkadian words, most of which are well known from the Old Babylonian onomasticon. It is not as systematically arranged as TIM 9, 85, but the two texts have many items in common. Most of the words attested in Nippur TU-TA-TI recur here. This is particularly true for those words which regularly appear in names and not, for instance, for expressions such as ana kâšim, or lā teggi. All these lists are of little interest in themselves. Their significance lies in the relations between Nippur TU-TA-TI, the Tell Harmal text and the Sippar list of Akkadian words. The lists have too much in common to be explained by chance. All have the tendency to group lines which share the same first sign. The list of Akkadian words appears to be a northern counterpart of TU-TA-TI.

Interesting for our present purposes is the relation with the so-called acrographic exercises of the Neo-Babylonian period. These exercises have nothing to do with the Old Babylonian acrographic lists such as Proto-Izi. They consist of strings of Akkadian words, primarily verbal forms, ordered by first sign. A characteristic of these lists is that a word is often repeated in an alternative spelling. A Consonant-Vowel-Consonant sign is broken up into a Consonant-Vowel and a Vowel-Consonant sign: a-lam-mad; a-lam-ma-ad (I learn). These lists are not standardized, they seem to have been improvised in class. The exercise belongs to an elementary stage of the education. It appears that over the course of time the southern variant, TU-TA-TI, was abandoned, whereas the northern variant, the list of Akkadian words, was transformed into its typical Neo-Babylonian format.

This pattern of transmission is not restricted to this one exercise. Another elementary exercise well known from Neo-Babylonian sources is the sign list S. The name S is an abbreviation for Syllabary A. The text has nothing to do with Syllable Alphabet A. S is in origin a northern text. It is attested in late Old Babylonian Sippar-Amnānum (Tanret 1982). S may be regarded as a simplified version of Proto-Ea (see Civil in MSL 14, pp.165-167). In Nippur Proto-Ea was studied after ur5-ra, by students with some experience in cuneiform writing. In the north S was probably treated as an elementary exercise before ur5-ra. Again, the northern variant survived and was transmitted to the first millennium as a standard element of scribal education. Unlike TU-TA-TI, Ea was not abandoned. It survived but took on another role. First millennium exercise tablets with Ea are rare. The text was copied and preserved as a learned reference work.

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250 See also the two Uruk exercises edited by Cavigneaux 1996, p.91 (text 202 with parallel).
251 See §2.4.1.3.
253 The example is taken from Maul 1991, p.859 (= OECT 11, 137 col. II).
254 See §2.4.1.1.
255 Eight school tablets are listed in MSL 14, p.157; six from Babylon and two from Sippar.
Ki-ulutin-bi-še₃ has a similar history. In the first millennium this list of business terminology and grammatical paradigms is not attested as an exercise. The only sources we have are library copies. In the late version of ur₅-ra, tablets 1 and 2 represent a text that is very close in style and content to ki-ulutin-bi-še₃. These two tablets were added in front of ur₅-ra in the Middle Babylonian period. They belong to the most frequently attested exercises on Neo-Babylonian school tablets. In the first millennium the two cognate compositions are clearly distinguished. The one is transmitted as an elementary exercise, the other as a learned reference work. In the Old Babylonian period, however, the two texts are merely variants of the same. In Nippur Proto-ki-ulutin-bi-še₃ is occasionally used as a relatively advanced exercise that was treated in the phase after ur₅-ra (see §2.4.1.3). From Sippar we have a number of late Old Babylonian tablets which clearly represent a predecessor of first millennium ur₅-ra 1-2²⁵⁶. The existence of a variety of similar traditions is further demonstrated by the lexical text from Dhibāṭī published by Al-Fouadi (1976). This tablet duplicates neither the Sippar version, nor the Nippur text, but is related to both²⁵⁷.

With the abandonment of the southern cities the scribes brought their knowledge and their traditions to the north. The Neo-Babylonian curriculum, with Sᵃ, ur₅-ra 1-2 and the acrographic lists of Akkadian verbal forms, is related to the late Old Babylonian curriculum as it was known in Sippar. This tradition may well have been influenced by southern refugees; at present there is no way of knowing. The Nippur exercises Ea and ki-ulutin-bi-še₃ were somehow transmitted and developed, even though they were no longer used in education in that form. We do not know who was responsible for this transmission process; we may speculate that it was a group of Nippur refugees who wanted to keep to their own traditions. The standardization process that started in the Kassite period was apparently aimed at preserving as much as possible. This worked out in two ways. Some compositions, such as the main part of ur₅-ra, show a thorough mix of all traditions that had survived into the Kassite period. In other cases the process led to a secondary distinction between two versions of one composition, thus creating two independent texts. This is the case with Sᵃ and Ea, and ur₅-ra 1-2 and ki-ulutin-bi-še₃, respectively. The prestige of Nippur as a centre of Sumerian learning is still tangible in the transmission process. The Nippur variants of both compositions came to be the most prestigious ones. Ur₅-ra 1-2 and Sᵃ became elementary exercises. Ea and ki-ulutin-bi-še₃ were transmitted as reference works.

2.6 Some Conclusions

The aim of this chapter was to provide a context for the Old Babylonian list of trees and wooden objects. The series ur₅-ra was located within the corpus of contemporary scholastic exercises, and allotted its place in the chronologically distinguishable phases of the lexical tradition.

²⁵⁶ *MSL* 5, p.7: Si 207, Si 489, Si 659, Si 699; and two Sippar fragments with unknown numbers. Si 207, Si 489, and Si 659 were briefly inspected from a photograph in the Lieberman collection, now in the University Museum, Philadelphia. Similar texts are found in Metūrān (personal letter by A. Cavigneaux).

²⁵⁷ Related texts: *TIM* 10/1, 8; 38; 61; 72; 138 (Tell Harmal lentils); *YOS* 1, 28 (see Roth 1995, pp.42-45); Greengus 1979, no.279 (Ishchali); Arnaud *BBVOT* 3, 34 (Larsa); FLP 1287 (Roth 1995, pp.46-54); AO 7796 (provenance unknown; *RA* 33, pp.87-90); Cavigneaux 1996, texts 181-184 (Uruk). Unpublished: AO 7012; YBC 4745; and MLC 1960, all of unknown provenance.
The main feature that separates the Old Babylonian lexical tradition from both earlier and later ones is its textual flexibility. Each Old Babylonian school used its own version of a common lexical corpus. When studying the Nippur version of the list of trees and wooden objects (Chapter 3), we will see that even the exercises from this one single site exhibit some variation among themselves. The contrast with third millennium lexical sources could not be greater. Archaic lexical compilations, devised at the conception of writing in Uruk, were transmitted virtually unchanged over the centuries. Copies of these texts from third-millennium Fāra and Abū ṣalābīkh are not elementary exercises by apprentice scribes. They are generally well (even very well) written, and they are not usually extracts but tend to cover a complete composition. The difference in flexibility between the Old Babylonian and earlier lists coincides with a difference in use. The early texts belonged to advanced, academic knowledge, which may explain their extreme conservatism or traditionality. Pupils and teachers were probably well aware that this knowledge was antiquarian, putting the copyist in a line of tradition all the way back to the very beginnings of writing. Elementary teaching in the third millennium is represented by exercise business documents (Foster 1982) rather than by lexical texts.

The flexibility of the lexical corpus is lost again after the Old Babylonian period. The process of canonization transformed a body of school texts into a collection of scholarly tools. Writing itself had undergone profound changes. The lexical tradition of the first millennium has a different place in the cultural system. Lexical lists were still used in exercises but at the same time these lists functioned as learned exegetical handbooks. They reflect the world of scribes to whom writing itself had become a prime source of knowledge. The need for reliable knowledge explains the textual stability which makes the later tradition so different from Old Babylonian 'forerunners'.

Old Babylonian urṣ-ra is part of a corpus of educational texts. This corpus is not a random collection of traditional compositions. The scribal curriculum approaches the Sumerian writing system from various angles, each list elaborating one aspect. The lists may be characterized as follows:

| Syllable Alphabet B | sign forms |
| TU-TA-TI          | syllabic values |
| Name lists        | name writing |
| Urṣ-ra            | vocabulary |
| Proto-Ea          | polyvalency |
| Acrographic lists | ? (perhaps simply remainders) |
| Proto-Diri        | complex signs |
| Mathematical tables | number writing |
| Models and Proverbs | sentences |

Syllable Alphabet B, TU-TA-TI, and the thematic lists approach the writing system from three basic elements: form, sound, and meaning. From an educational point of view it makes sense to treat names before nouns. Names are nouns of a special type: they are not translated. Akkadian names appear in Akkadian in Sumerian texts and vice versa. Name lists are one dimensional.

258 For a short characterization of first millennium literate circles see Michalowski 1990, in particular p.395.
They are, therefore, less complex than urš-ra, where the pupils had to learn both how to write and pronounce a Sumerian word, and how to translate it into Akkadian. Mathematical tables are often interpreted as exercises in multiplication and division. However, multiplication may be learned without the use of writing, simply by recitation. For computation it is more useful to know a table by heart than to have it written on a clay tablet. Mathematical tables are primarily exercises in writing. The numerical system is relatively independent of the rest of the writing system. A separate treatment of how to handle the sixty-based numbers is more than justified. The so-called acrographic series (Proto-Izi, Proto-Kagal, and Nigga) do not seem to concentrate on one particular aspect of literacy in Sumerian. Being organized by first sign, they create the opportunity to teach whatever had found no place elsewhere.

Most interesting is the position of Proto-Ea and Proto-Diri in the curriculum. The two lists elaborate two specific aspects of the writing system: polyvalency and complex signs. When pupils started to study Proto-Ea and Proto-Diri they had already encountered numerous examples of polyvalent and complex signs in the lists of names and in urš-ra. For the modern scholar Ea and Diri are reference works of fundamental importance. They are almost the only entrance available to elementary aspects of the Sumerian writing system. For a pupil of the Nippur eduba things were different. When copying his list of trees and wooden objects he encountered the line GIŠ.KU three times. He did not need another specialized list to learn that these signs had to be read giš taskarin, boxwood, the first time; giš tukul, mace, the second time; and giš dur₂, board, only a few lines further on. He had a teacher to tell him. Pronunciation and translation belonged to the oral explanation provided in class. Proto-Ea and Proto-Diri, therefore, do not introduce polyvalency or complex signs to beginning students. They systematize something long familiar from practice and put it on a higher level of abstraction.

The teaching of the writing system cannot be split up into various aspects without producing an overlap. It is not surprising, therefore, that modern dictionaries often give several ancient sources for one and the same lexical entry. The systematic character of the lexical corpus is demonstrated in citations which link one list to another. In §3.5 we will discuss some such links between urš-ra and Proto-Diri. The standardization of the lexical lists in and after the Kassite period included an increase in and systematization of such cross references.

This overview of the Old Babylonian curriculum raises the question of the goals of education at the eduba. In the absence of contemporary reflective statements we cannot hope to recover specific information about the educational goals pursued by this programme. What we can do, however, is to compare the programme with the skills needed in scribal practice. We will see that a would-be scribe learned both too little and too much. A trained scribe had to be able to produce both Sumerian and Akkadian texts. The majority of letters and lawsuit protocols were written in Akkadian. Written Akkadian is all but neglected in the eduba. Those bilingual lists that do exist call for advanced scribes, such as Proto-Diri or Proto-Aa, or are relatively rare (such as the bilingual versions of the acrographic lists and ugu-mu). The exercises Syllable Alphabet B, TU-TA-TI, and the name lists all have their relevance for Akkadian syllabic writing in various ways, but they cannot be interpreted as a systematic introduction to Akkadian writing. TU-TA-TI leaves out important sets of syllables (the emphatics) and introduces other sets which are not relevant for Akkadian at all. Some form of instruction in Akkadian letter-writing did exist. Several letters may be identified as exercises because they duplicate each other but for address
and sender\textsuperscript{259}. However, those excavations that clearly hit an eduba, in Nippur, Ur, and Isin, yielded no more than one or two Akkadian exercise letters\textsuperscript{260}. These texts, in other words, may either belong to another educational tradition, or were used as on-the-job training.

Comparing the training in Sumerian with the skills needed to be a competent scribe shows that the pupils learned far too much. The Sumerian business documents a trained scribe had to produce are relatively simple and straightforward. They mainly consist of a standard set of formulas to be filled in with numbers and names. Moreover, for non-standard formulas the scribe could fall back on Akkadian. The point may be illustrated by two Nippur examples. Stone and Owen 1991 no. 10 is a contract of multiple adoption\textsuperscript{261}. The final phrase (21-23) reads: ‘\textit{Ip-qu-\textsuperscript{d}da-mu ad-d[\textit{a-\textit{ni]} u3 ibila-a-ni a-na-me-a-bi še-ga-ne-ne u2-pa-am iš-\textit{\textsuperscript{-\textit{ru}}]}}. ‘Ipqu-Damu, his father, and all his heirs, have written this tablet in mutual agreement\textsuperscript{262}.’ For a reason unknown to me line 23 replaces the formula found in all other comparable texts: ‘In mutual agreement they swore in the name of the king (še-ga-ne-ne-ta mu lugal-bi in-pad-\textit{eş}). In order to formulate the irregular phrase, the scribe switched to Akkadian. Similarly, in another adoption contract, edited as no. 31 of the same volume\textsuperscript{263}, in order to include direct speech in a document an introductory formula from Akkadian letters is borrowed (\textit{kīam iqbi umma ūma}).

For a future scribe of business documents by far the most relevant exercises are \textit{Proto-ki-ulutin-bi-še\textsubscript{3}}, which is comparatively rarely used, and the model contracts. Lists such as \textit{urs-ra} contain many words which a scribe would never need again. Literary Sumerian, exercised in proverbs and literary texts, had no practical application at all. To sum up, I strongly disagree with Alster (1990, p.11) and Waetzoldt (1986, p.41) who emphasize the practical character of the scribal education. The corpus of lexical lists is well structured, providing various approaches, in rising degree of complexity, to the Sumerian writing system. As to its contents, however, it can hardly count as a practical preparation for the scribal profession. Right from the beginning of the history of writing the archaic lexical texts contain much that is superfluous from a purely utilitarian point of view. And this continues to be the case throughout the history of the Mesopotamian lexical tradition.

The teaching of Sumerian in the Nippur eduba was not guided by the list of skills a future scribe had to master. The lack of attention to Akkadian and the overdose of high-brow Sumerian point in another direction. It seems that handing down the Sumerian language and tradition as

\textsuperscript{259} See for such exercise letters: Kraus 1964; Michalowski 1983. An additional example is found in Greengus 1979, no. 20 (Stol 1996).

\textsuperscript{260} In addition to the letters discussed by Kraus there are two fictitious Sargon letters. One is from Nippur (unpublished; see §2.4.2) and one from Ur (\textit{UET} 7, 73; the letter is followed by a list of professions; see Sjöberg 1996). Both will be edited by Joan Goodnick-Westenholz in her forthcoming book on Sargon legends. Content and style of the Sargon letters are unlike the more ordinary topics treated in the exercise letters studied by Kraus (see previous note).

\textsuperscript{261} \textit{SAOC} 44, 15

\textsuperscript{262} See for this text, and the translation ‘his father’ rather than ‘their father’, Van de Mieroop 1993a, p.126.

\textsuperscript{263} \textit{OECT} 8, 11. Republished in photograph in Stone and Owen 1991, Pls. 50-51.
completely as possible was considered to be all important. A pupil of the scribal school was introduced to the technique of writing, but more importantly he was introduced to the heritage of Sumerian writing and Sumerian poetics.