TOWARDS A PEDAGOGY OF ANCIENT EGYPTIAN LANGUAGE AND HIEROGLYPHS

Maiken Mosleth King
University of Bristol
mm17686@bristol.ac.uk

Abstract:

This paper discusses the challenges of teaching the Middle Egyptian language and Egyptian hieroglyphs to adult anglophone learners outside university settings. These challenges include the lack of L1 speakers; the large volume of signs in the script; the difficulty in reconstructing pronunciation due to the paucity of written vowels; and the lack of accessible learning tools such as readers and textbooks for the intermediate stage. As spoken proficiency in this extinct language is not a feasible goal, it is argued here that teaching should revolve around achieving reading competence.

The paper advocates for a pedagogical approach that centres on using vocabulary, including variant spellings, as the fundamental building blocks of learning. This entails reading words, sentences and paragraphs of increasing complexity, which over time aids memorisation of vocabulary and builds confidence. Grammar and syntax can be gradually introduced and contextualised by reading practice sentences. It is also argued here that producing digitised versions of ancient Egyptian texts using hieroglyphic font software such as JSesh allows for the creation of practice texts in a standardised and legible format. This, in turn, makes it possible to use pedagogical aids such as adding spaces between words and adding signs omitted by the ancient scribes.

Finally, it is argued that learning vocabulary and grammar is enhanced by discussions of the wider semantic and cultural meaning(s) of the ancient text in question.

Keywords: Middle Egyptian, hieroglyphs, language pedagogy, vocabulary building

1. Introduction

The ancient Egyptian language occupies an unusual position with regards to language pedagogy, for several reasons. Firstly, the language, which belongs to

the Afroasiatic language family[1], consists of five distinct stages, and was written with several scripts: hieroglyphs, hieratic and Demotic. Hieratic likely evolved in Egypt during the early 3rd millennium BC from cursive hieroglyphs, and was favoured for documentary texts such as contracts and personal letters. Egyptian Demotic evolved much later in the 7th century BC as a cursive script used for a wide range of textual genres.[2] The most famous of the Egyptian scripts, however, is the hieroglyphic script, which is attested[3] up to AD 394 and remained undeciphered until 1822 following its obsolescence.[4] Egyptian hieroglyphs have at times been assumed to be a type of symbolic and non-phonetic 'code'.[5] As the spoken Egyptian language has been extinct for centuries,[6] no L1 speakers currently exist; furthermore, the hieroglyphic, hieratic and Demotic scripts all omit short vowels, leaving the pronunciation of many words uncertain.[7] These scripts do not operate with a punctuation system, and there is no gap between individual words. Pronunciation can, to a certain degree, be reconstructed based on other scripts such as Coptic, i.e. Egyptian written in a Greek-derived script, although such a method by necessity largely ignores the significant sound changes that the Egyptian language underwent over time.[8] Due to these factors, achieving conversational proficiency in the ancient Egyptian language is not feasible, and methods commonly employed in modern language teaching such as singing songs, taking dictation and practising conversation are not suitable.[9] The

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[1] Cf. Allen (2014: 1).

[2] Cf. Vleeming (1981).

[3] Cf. Baines (2007: 140–2).

[4] Cf., for example, Parkinson (1999: 12–45). The script was deciphered by Jean-François Champollion and described in his monograph *Précis du système hiéroglyphique des anciens égyptiens* published in 1824. The attempts by mediaeval Arabic-speaking scholars to decipher the script have been largely overlooked in modern scholarship; cf. El Daly (2005: 57–74).

[5] This idea can be traced back to ancient Greek and Roman authors such as Diodorus Siculus (*Bibliotheca Historia* III.4), who claimed that Egyptian hieroglyphs were figurative rather than phonetic in function. As these authors were neither conversationally neither proficient nor even literate in Egyptian, their explanations for how the hieroglyphic script works range from the improbable to the bizarre; cf. Assmann & Ebeling (2020: 23–8); Taylor Westerfeld (2019: 68–97).

[6] The latest stage of the Egyptian language, Coptic, is usually considered to have been replaced by Arabic as a spoken language by the 17th century AD; cf. Brankaer (2010: 2). However, anecdotes recorded by European travellers to Egypt suggest that L1 or L2 Coptic-speakers still existed well into the 19th century; cf. Vycichl & Worrell (1942). The validity of such anecdotes is not universally accepted; Layton (2011: 2), for instance, has dismissed the notion of Coptic-speakers in modern times as 'unsubstantiated and unlikely'.

[7] Cf. Allen (2014: 15).

[8] Cf. Junge (2005: 35–7).

[9] Hearing songs improves L2 listening skills, whilst singing songs facilitates the memorisation of correct pronunciation; cf. Toscano-Fuentes (2016).

pedagogy of teaching ancient Egyptian language and hieroglyphs should instead revolve around achieving reading proficiency and the ability to translate the ancient texts into idiomatic English.

The purpose of this article is to discuss some of the significant challenges in learning and teaching the ancient Egyptian language and the hieroglyphic script, with particular focus on anglophone learners, and to propose a foundation for the development of an applicable pedagogy for this language. This is important because no universal or standard pedagogical approach, defined broadly here as philosophy of language and language learning,[10] to teaching ancient Egyptian as a foreign language has ever been developed, and scholarship on the subject is scarce.[11] In a paper on the subject published in 2011, Jean Winand identified ignorance of Classical languages and grammatical terminology as a significant obstacle for students of the ancient Egyptian language; he also identified the existence of multiple competing theoretical models of Egyptian linguistics, rather than a standard and unified theory, as another significant barrier to learning.[12]

In this paper, I demonstrate that the hieroglyphic script and Egyptian grammar both present significant challenges to contemporary anglophone learners, which are exacerbated by a scarcity of accessible learning tools for the intermediate stage: the lexicon and grammatical system display many similarities to Semitic languages, which tend to be unfamiliar to English-speakers; the lack of standardised writing means that individual signs may be difficult to identify in practice; the translation process involves transliterating the phonetic values into a Latin-derived transliteration alphabet, which must be memorised; the phonetic values of a large corpus of hieroglyphic signs must also be memorised; and individual hieroglyphic signs may carry different phonetic values depending on how they are used.

In this article I advocate for a pedagogy of teaching ancient Egyptian language and hieroglyphs that revolves around using vocabulary and variation spellings of individual words as the basic building blocks of learning; grammatical rules and syntax should be gradually explained and contextualised by means of introducing practice sentences and passages of increasing

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[10] Cf. Richards & Rodgers (2014: 22).

[11] The ongoing research project *The Pedagogy of Hieroglyphic Egyptian* at Macquarie University shows some promising potential in this regard; https://researchers.mq.edu.au/en/projects/the-pedagogy-of-hieroglyphic-egyptian-new-approaches-for-a-brave-; retrieved on 19/3/2023.

[12] The lack of a unified theory can make grammar hard to decipher; cf. Winand (2011).

complexity. The obstacles posed by the lack of standardised hieroglyphic writing can be overcome through the use of digital hieroglyphic fonts such as the open-source software JSesh, which facilitates the creation of sentences and texts in a standardised, legible font for teaching purposes; this software also shows much potential for future uses, e.g. the creation of intermediate-level textbooks and hieroglyphic text editions for pedagogical rather than scholarly uses.

2. Who wants to study Egyptian hieroglyphs? And why does it matter?

Having taught ancient Egyptian language and hieroglyphs to adult anglophone learners for six years,[13] usually through online Zoom-based classes, I have found that there is no average or typical student of the ancient Egyptian language. As the language is not taught at school level in any country, except for perhaps a brief introduction to the simple 'alphabet signs' consisting of a single phonetic value, many learners first encounter it as part of university studies in Egyptology, archaeology, ancient history and similar disciplines. Outside university contexts, the hieroglyphic script attracts large numbers of so-called 'Egyptophiles', i.e. enthusiasts of ancient Egypt and Egyptology, without formal degrees in the subject. The emergence of online teaching modes in recent years has made the subject much more accessible for non-academics. Due to its extinct status, the study of the ancient Egyptian language is rarely an end in itself; instead, learners may instead be motivated by factors such as their fascination for ancient Egyptian culture.[14]

Apart from Sumerian, Egyptian represents one of the oldest written languages in the world:[15] Egyptian hieroglyphs emerged as a medium of writing around 3300 BC, with the earliest surviving inscriptions representing short words such as personal names, toponyms and the names of commodities.[16] The script had evolved to record continuous language, and thus fully legible texts, by ca.

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[13] The students include both L1 and L2 English-speakers; the majority are residents of anglophone countries.

[14] For scholarship on the cultural phenomenon of 'Egyptomania', cf. Humbert (1994); Moser (2015).

[15] Sumerian cuneiform writing emerged in Iraq during the latter half of the 4th millennium BC; cf. Krispijn (2012: 181).

[16] Some of the earliest known Egyptian writings come in the form of ivory labels from tomb U-j at Abydos, dating to ca. 3300 BC; cf. Wengrow (2006: 200–3).

2600 BC;[17] the enormous corpus of surviving texts from ancient Egypt includes religious texts such as the *Pyramid Texts* and the *Book of the Dead*, tomb 'autobiographies', literary narratives, didactic texts, myths, hymns, prayers, and discourses such as *The Dispute between a Man and His Soul*.[18] The hieroglyphic script gave rise to the proto-Canaanite alphabet in the early 2nd millennium BC, and is thus an ancestor of the Phoenician, Hebrew and Greek alphabets.[19] The ability to read the ancient Egyptian language provides us with access to an enormous corpus of literature that would otherwise be lost. Furthermore, reading the ancient texts allows us to understand ancient Egyptian culture on its own terms, rather than through the biased lenses of ancient Greek and Roman authors.[20] By making the subject more accessible to non-academics, we can ensure that knowledge about ancient Egypt becomes normalised as an important part of the global cultural heritage, instead of remaining the sole prerogative of a small group of specialist scholars or being exploited as a political tool.[21]

Making the subject more accessible can also contribute to decreasing the influence of the pseudo-archaeological discourse and conspiracy theories promoted by contemporary authors and media, which are often fuelled by Eurocentric narratives and anti-indigenous biases.[22] Erich von Däniken's influential pseudoscientific work *Chariots of the Gods* (1969), for example, centres on the notion of extraterrestrials having influenced ancient cultures, while Graham Hancock has published a number of books proposing an unknown, lost 'proto-civilisation' shaping all subsequent civilisations.[23] Ancient Egyptian monuments such as the temple of Seti at Abydos have also received much attention from proponents of pseudo-archaeology: a hieroglyphic inscription superimposed upon an existing inscription, i.e. a palimpsest, can be seen on one of the walls of the Seti temple, and some of the resulting signs have the unfortunate consequence of looking like spacecraft. A contrived conspiracy theory regarding the so-called 'Abydos Helicopter', which proposes that the

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[17] Cf. Baines (2007: 59).
[18] Cf. Allen (2011: 137–60); Loprieno (1996); Parkinson (1997); Strudwick (2005: 209–400).
[19] Cf. Goldwasser (2012).
[20] Cf. Assmann & Ebeling (2020); Moyer (2011: 1–83).
[21] The modern discipline of Egyptology was born in an imperialist context, and Egypt's ancient past has been used to promote Western colonialist aims and notions of European/Caucasian superiority; cf. Colla (2007: 72–6); Rocha da Silva (2019: 127–8).
[22] Cf. Andersson (2012); Moshenska (2017).
[23] Cf. Anderson & Card (2016); Fagan (2006). The much-publicised Netflix series *Ancient Apocalypse* (2022) draws heavily on Hancock's ideas.

hieroglyphs depict extraterrestrial spaceships, has circulated online for at least two decades and been promoted by several books.[24] The study of ancient Egyptian hieroglyphs serves to demystify the ancient script and provides insight into the ancient culture; in turn, a familiarity with the ancient Egyptians and their world can make pseudoscientific discourse less appealing. If the past is a foreign country,[25] knowledge about its languages is our passport.

3. The challenges of Egyptian hieroglyphs: the learning tools

The ancient Egyptian language consists of multiple chronological stages, and any prospective student must first choose the appropriate stage on which to focus their studies. The chronological stages, in their respective order, are labelled Old Egyptian, Middle Egyptian, Late Egyptian, Demotic and Coptic. The latter represents the last stage of the Egyptian language, with a large Greek lexicon,[26] written in a script derived from the Greek alphabet, with some Demotic-derived letters. Coptic remains in use together with Arabic as a liturgical language in the Coptic-Orthodox church.[27] Late Egyptian was predominantly written in the hieratic script; at the same time, scholars have long been in the habit of transcribing hieratic texts into hieroglyphs, and hieroglyphic versions of Late Egyptian texts are therefore available for learning purposes. However, Late Egyptian writing poses many orthographic challenges, such as the tendency to add superfluous signs.[28] By contrast, Middle Egyptian represents the 'classical' stage of the language, and was used for a variety of textual genres, such as documentary, religious, and literary texts from the early second millennium BC until the 4th century AD.[29] Hieroglyphic texts written in Middle Egyptian, particularly those produced during the Middle Kingdom, are typically neither overly abbreviated nor riddled with superfluous signs; for this reason, it

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[24] Cf., for example, Grant Hutton (2014: 649–50); Lewis (2012: 46–7).

[25] Cf. Lowenthal (2015: 3).

[26] Cf., for example, the project *Database and Dictionary of Greek Loanwords in Coptic*; https://www.geschkult.fu-berlin.de/en/e/ddglc/index.html.

[27] No L1 Coptic speakers currently exist, and contemporary Copts are typically L1 speakers of Arabic or English; cf. Wahba (2004: 990).

[28] This includes the tendency to add redundant and erroneous T-endings, which in Middle Egyptian grammar signify the feminine gender of nouns, to word stems. Such errors were due to scribal confusion resulting from the loss of the feminine T-ending in pronunciation; cf. Junge (2005: 33–45).

[29] Cf. Allen (2013: 3).

represents the ideal stage of the language for beginners, and published textbooks aimed at beginners focus on this stage. Finally, Old Egyptian is well attested in hieroglyphic writing, particularly through the religious corpus of *Pyramid Texts* used in royal funerary contexts.[30] At the same time, their orthography has a tendency to omit signs such as determinatives and the 1st singular suffix pronoun[31]; this renders Old Egyptian difficult to read for beginners. An illustrative example of the orthographic difficulties of Old Egyptian comes from the autobiography of the court official Harkhuf, carved into the walls of his tomb near Aswan ca. 2200 BC:[32]

This can be transliterated and translated as:

iỉ.n(=ỉ) min m niwt(=ỉ)	'(I) went out today from (my) city,
hȝ.n(=ỉ) m spȝt(=ỉ)	and (I) descended from (my) district,
ḳd.n(=ỉ) pr(=ỉ)	after (I) had built (my) house
sꜥḥꜥ(=ỉ) ꜥȝw	and erected wooden doors.'

The orthography consistently omits the 1st person singular suffix pronoun *ỉ,* which acts both as the subject of verbs and as a possessive marker in nouns. As

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[30] Cf. Allen (2020: 59).
[31] Cf. Strudwick (2005: 22–3).
[32] Cf. Sethe (1933: 121).

such, the Old Egyptian orthography requires the reader to infer the missing suffix pronoun , the determinative ☉ in the word *mìn*, 'today'. For this reason, Old Egyptian is more suitable for students who already have a good grasp on vocabulary and grammar.

A seminal textbook for ancient Egyptian hieroglyphs and Middle Egyptian grammar is Alan Gardiner's *Egyptian Grammar*, originally published in 1927, with a revised edition published in 1957. In this work, Gardiner presented a comprehensive overview of the grammatical system and assembled the corpus of hieroglyphic signs into distinct categories; this sign categorisation was adopted as standard across the discipline. From a pedagogical perspective, however, Gardiner's academic writing style, linguistic explanations and technical terminology are largely impenetrable to non-specialists and beginners; for this reason, this work is better suited for experienced learners with a firm grasp of linguistic terms and concepts. Gardiner's sign list was re-published by Bill Petty as a pocket edition in 2012, serving as a concise self-study tool for beginners. A more concise and digestible textbook, despite its heavy use of technical terminology, is James Allen's comprehensive work *Middle Egyptian*, published in 2000, with a third edition published in 2014. Raymond Faulkner's handwritten hieroglyphic dictionary *A Concise Dictionary of Middle Egyptian*, published in 1962, provides a representative vocabulary list.

There are several published textbooks aimed at anglophone beginners and designed for self-study. Barbara Watterson published *More About Egyptian Hieroglyphs* in 1985; in 1992, Karl-Theodor Zauzich published *Discovering Egyptian Hieroglyphs: A Practical Guide*; in 1995, Hilary Wilson published *Understanding Hieroglyphs: A Quick and Simple Guide*; in 1998, Mark Collier and Bill Manley published their textbook *How to Read Egyptian Hieroglyphs*, intended to be a self-study guide for non-specialists; Bill Manley published another beginner's textbook titled *Ancient Egyptian Hieroglyphs for Complete Beginners* in 2012; and in 2013**,** Daniel Selden published *Hieroglyphic Egyptian*. Watterson's book consists of brief chapters introducing basic grammatical concepts and paradigms, illustrated by hand-drawn hieroglyphic words and phrases. Zauzich's book is designed to allow non-specialists to read simple words, names and phrases from monumental inscriptions; he therefore primarily

focuses on vocabulary and only dedicates nine pages to grammar.[33] The two textbooks published by Collier and Manley are similarly designed to equip the student with the proficiency required to read simple monumental inscriptions. The first book introduces a basic overview of the grammatical system, illustrated by examples from monumental inscriptions; the second book, authored by Manley, avoids grammar explanations and technical terminology altogether, and instead focuses on introducing vocabulary as the basic building blocks of language acquisition. For students who wish to increase their level of proficiency to an intermediate stage and read more complex narrative texts, published intermediate-level textbooks are scarce. To a certain extent, Selden's textbook bridges this gap, and the book is structured around introducing learners to the vocabulary and grammar necessary to read the literary narrative *Tale of the Shipwrecked Sailor*.[34] At the same time, Selden's hieroglyphic text edition of *Shipwrecked Sailor* is a word-for-word hieroglyphic transcription of the original hieratic script, and thus lacks pedagogical aids such as spaces between words and sentence division.

There is an overall scarcity of accessible text editions, including digital formats, with edited or abridged versions aimed at students and non-specialists. Published editions, e.g. Aylward Blackman's *Middle Egyptian Stories* (1972), are typically handwritten and aimed at specialists who already possess a high level of reading ability; such editions therefore do not employ pedagogical aids such as adding spaces between words, sentence division and accompanying vocabulary lists. Online dictionaries for translating Egyptian hieroglyphs into English do exist, although they are fairly limited in scope;[35] at the same time, their use of a standardised digital hieroglyphic font allows for a more user-friendly experience for beginners. By contrast, there are numerous published text editions aimed at students of ancient Greek and Latin, ranging from the beginner stage to advanced;[36] there is also a wide selection of digital resources such as

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[33] Cf. Zauzich (1992: 35–43).

[34] The extant manuscript of this text is the unprovenanced and anonymously written Papyrus Hermitage 1115, dated on palaeographical grounds to ca. 2000–1900 BC; cf. Allen (2015: 9).

[35] http://hieroglyphs.net/cgi/pager.pl?p=01; retrieved on 22/3/2023. By contrast, *Thesaurus Linguae Aegyptiae* is an excellent online resource for German-speakers.

[36] Examples of this include the *Latin Cambridge Course* series; the *Oxford Latin Course* series; the *Lingua Latina per se Illustra* series; the JACT *Reading Greek* series; and Bloomsbury's *Greek to GCSE* and *Latin to GCSE*.

dictionaries, grammatical aids and adapted texts in digital formats.[37] For ardent Latin-enthusiasts, reading practice is also available in the form of translations of modern texts into Latin, e.g. the *Asterix* comics and *Harry Potter* novels; the only comparable example of this for the Egyptian language is the hieroglyphic edition of Beatrix Potter's *Tale of Peter Rabbit* (2005), intended primarily as a novelty gift for visitors to the British Museum rather than a pedagogical tool for students of the Egyptian language. As I will demonstrate below, the scarcity of available learning tools poses a pedagogical challenge, as both the ancient Egyptian language and the hieroglyphic script each present modern learners with significant obstacles.

4. The challenges of Egyptian hieroglyphs: The language and the script

As an Afroasiatic language and a 'sister branch' to the Semitic languages, Egyptian possesses grammatical features found both in African languages such as Berber and Cushitic, and in Semitic languages, e.g. Hebrew and Ugaritic.[38] Such languages rarely form part of the school curriculum in the anglophone world[39], and anglophone speakers therefore tend to lack experience with Semitic languages and their syntactical features such as the Verb-Subject-Object (VSO) word order found in Middle Egyptian, Biblical Hebrew and Classical Arabic.[40] The Egyptian language also operates with phonemes not found in English, such as the voiceless velar fricative /x/ and the voiceless uvular fricative /χ/[41]; this can render the pronunciation and memorisation of Egyptian words challenging for anglophone learners.

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[37] Cf. for example Geoffrey Steadman's website, which provides students of Greek and Latin with adapted readings of ancient texts, with accompanying aids such as flashcards and vocabulary lists; https://geoffreysteadman.com/; retrieved on 21/3/2023.

[38] Cf. Allen (2014: 1).

[39] In the UK, Arabic holds the status of 'heritage language' and thus does not form part of the national school curriculum; cf. Bengsch *et al.* (2020). Biblical Hebrew is available in the UK as a Key Stage 4 exam, although student numbers are generally low, and only 562 exam entries were registered for the academic year 2021/22; https://explore-education-statistics.service.gov.uk/data-tables/permalink/4a974abf-129f-49b7-9529-08db08498a11; retrieved on 22/3/2023.

[40] Cf. Loprieno (1995: 184). The VSO word order is hypothesised to be a feature of Proto-Semitic, an ancestor of the Egyptian language; cf. Tsarfaty (2014: 77).

[41] Cf. Allen (2020: 83–4).

The Middle Egyptian verbal system also poses a challenge to anglophone learners because it does not operate with tenses corresponding precisely to English tenses like the perfect, imperfect and the pluperfect. The verb construction *sḏm.n=f*, a type of suffix conjugation that expresses completed action, can be variously translated into English as a simple past tense ('he heard'), the perfect tense ('he has heard') or the pluperfect tense ('he had heard').[42] The subject-stative construction expresses a state resulting from a completed action, and acquires the passive voice when the verb is transitive; as this verb construction has no direct equivalent in English and is essentially tenseless, translation involves using judgement.[43] For example, the sentence

s�=f ꜥḳ.w r ꜥḥ

carries the literal meaning 'his son is in the state of having entered the palace'; this can be translated into idiomatic English as 'his son entered the palace', 'his son has entered the palace' or 'his son had entered the palace' depending on context. The Middle Egyptian verbal system also operates with verb constructions that look identical or near-identical in writing, although such forms were presumably distinguished in pronunciation. Examples of this includes the suffix conjugation, also known as the *sḏm=f* construction, which can be used to express the past, present and future tenses;[44] the masculine singular participle and subject-stative can also look identical both in form and syntax when the characteristic stative endings are dropped due to the orthographic tendency of ancient scribes to omit grammatical markers.[45] The verbal form, and thus the correct tense in English translation, must frequently be inferred from context and by using judgement; this renders accurate translation challenging, and learning to identify the correct English tense in translation represents a significant element in the development of good reading comprehension and translation skills. As such, learning to correctly identify and parse verb forms based on word order and

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[42] Cf. Allen (2014: 245–8).
[43] Cf. Allen 2014: 227.
[44] Cf. Allen 2014: (265–88).
[45] Cf. Allen (2014: 382–3). Coptic spellings of stative verbs, which survive as fossilised forms, suggest that they were distinguished in pronunciation by altering the vowel of the first syllable; cf. Brankaer (2010: 38–9).

context represents a learning challenge for students and a pedagogical challenge for the teacher.

Learning to read and translate ancient Egyptian texts into modern languages also involves transliterating the Egyptian signs into words written with a Latin-derived transliteration alphabet.[46] This requires students to familiarise themselves with this alphabet in addition to the hieroglyphic signs; the process also involves learning to recognise when a hieroglyphic sign carries a phonetic value that must be transliterated, as opposed to acting as a silent determinative or a phonetic complement silently 'reinforcing' the sound of a previous sign.[47] The hieroglyphic script is not an alphabet; only a small number of easily memorised hieroglyphs function as 'alphabet signs' that correspond to single letters or phonetic values, e.g. ⨼ *b* (Gardiner's D58), which represents the voiced bilabial plosive /b/.[48] Many hieroglyphic signs are so-called biliteral signs that represent two letters or sounds combined, e.g. 𓇓 (F31) *ms*;[49] furthermore, hieroglyphic signs can also be triliteral and carry three sounds combined, e.g. 𓄤 (F35) *nfr*.[50] Different types of signs can be put together to form complete words. As such, the Egyptian word for the noun 'life' can be written simply with the triliteral sign 𓋹 (S34) *ꜥnḫ*; it can also be written as a fuller form by adding the phonetic complements 𓈖 (N35) *n* and 𓎛 (AA1) *ḫ* as 𓋹𓈖𓎛 .[51] It is also possible for hieroglyphic signs to act as logograms for entire words, e.g. 𓃥 (E16) as a logogram for the theonym *inpw*, Anubis.[52] Finally, hieroglyphic signs can also function as determinatives that have no phonetic value. They are placed at the end of words and serve to indicate the semantic category of the word, e.g. 𓀀 for human beings and personal names, 𓅆 for divine names and concepts, 𓈐 for

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[46] Cf. Allen (2014: 15–7).
[47] Cf. Allen (2014: 32, 35).
[48] Cf. Gardiner (1957: 457).
[49] Cf. Gardiner (1957: 465).
[50] Cf. Gardiner (1957: 465); the vocalisation of this word is uncertain due to the omission of the vowels, and is typically rendered *nefer* in English.
[51] Cf. Faulkner (1962: 43). The choice to write the shorter or fuller forms was evidently entirely up to the individual scribe, but abbreviated forms were likely favoured when lack of space was an issue.
[52] Cf. Gardiner (1957: 459).

movement, ⊗ for toponyms, etc. Determinatives have the ability to change the meaning of the word because the Egyptian lexicon, as in Semitic languages, is structured around word stems, also called roots or bases.[53] Many such stems may look similar in transliteration, although they were presumably distinguished in pronunciation. As such, the words ⷍ and ⷍ are both transliterated as *kꜣ* and thus appear at first glance to be identical; however, the first example denotes a person's vital essence and procreative power, which can be translated as 'soul' or simply as 'Ka', whilst the second example means 'bull'.[54] The words ⷍ and ⷍ, which are both transliterated as *sbi*, mean 'to travel' and 'to be faint', respectively;[55] only the determinatives make the distinction clear. Identical stems of this kind can mislead learners, particularly when the determinative is omitted by the ancient scribe, and result in erroneous translation.

The transliteration process is further complicated by the fact that some hieroglyphic signs can have different phonetic values depending on how they are used, e.g. ⷍ (F20) can act as a biliteral sign carrying the phonetic value *ns*, or as a logograms for the title *imy-r*, 'overseer';[56] ✶ (N14) is a triliteral sign carrying the phonetic values *sbꜣ* or *dwꜣ* depending on how it is used, e.g. ✶ⷍ *dwꜣ* ('to worship') or ⷍ✶ⷍ *sbꜣ* ('to teach');[57] and ⷍ (Y1) can act as a determinative for abstract concepts or as a logogram for the noun *mḏꜣt*, 'papyrus scroll'.[58] Learning to identify the correct transliteration in such cases requires both memorisation of vocabulary and extensive reading practice, and the introduction of a wide range of words and variation spellings should therefore form the basis for any pedagogical approach to teaching ancient the Egyptian language and hieroglyphs.

The hieroglyphic script operates with a number of signs that can be difficult to distinguish from each other, particularly when the signs are written with ink and brush rather than carved. A notable example of this is Gardiner's sign

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[53] Cf. Allen (2014: 43); Gray (2007: 34–5); Weninger (2011: 152–5).
[54] Cf. Faulkner (1962: 283).
[55] Cf. Faulkner (1962: 219).
[56] Cf. Gardiner (1957: 463).
[57] Cf. Faulkner (1962: 219, 310); Gardiner (1957: 487).
[58] Cf. Gardiner (1957: 533).

category G (birds): 🦅 (G1), transliterated as the long vowel *ꜣ*, can often in practice look identical to 🦅 (G4), which carries the phonetic value *tiw*;[59] both of these signs can also look very similar to 🦅 (G21), a biliteral sign carrying the phonetic value *nḥ*.[60] The sign 🦆 (G38) *gb*, can in practice look indistinguishable from 🦆 (G39) *sꜣ*;[61] and 🦆 (G37), frequently used as a determinative in words denoting negative terms and concepts, can look identical to 🦆 (G36), which carries the phonetic value *wr*.[62] Some signs can also look similar when handwritten, particularly the category of small, round signs: ◎ (O50), which carries the phonetic value *sp*, can look indistinguishable from ⊖ (AA1) *ḫ*, and ☉ (N5); the latter can act as a biliteral sign carrying the phonetic value *rꜥ*, or as a determinative in words relating to the sun and the passing of time.[63]

Learning to distinguish between similar-looking signs also requires ample reading practice and the extensive memorisation of vocabulary. To learn vocabulary, students must learn to recognise where a word ends and the next one begins; this can itself be challenging because the hieroglyphic script does not operate with spaces between words. Finally, an additional challenge comes from the lack of 'standardised' orthography: carved hieroglyphic signs can look very different from handwritten forms, which may be crude and simple, or ornate and detailed, depending on the individual scribe's hand; becoming accustomed to different orthographic styles requires significant reading practice. While these challenges are significant, they are not insurmountable obstacles from a pedagogical perspective. As I will demonstrate below, they can be overcome through a combination of patient instruction and level-appropriate study materials. The advent of digital resources also brings with it great potential for the creation of new pedagogical tools and self-study aids.

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[59] Cf. Gardiner (1957: 467).
[60] Cf. Gardiner (1957: 469).
[61] Cf. Gardiner (1957: 471).
[62] Cf. Gardiner (1957: 471).
[63] Cf. Gardiner (1957: 485).

5. Towards a pedagogy of Egyptian language and hieroglyphs

Given the lack of any formal or standardised pedagogy for the ancient Egyptian language, individual teachers therefore vary in their approaches and methods. The approaches of Gardiner and Allen are centred around grammatical rules and paradigms, introduced in distinct chapters and illustrated by practice sentences; Allen also provides cultural contextualisation through essays on ancient Egyptian cultural concepts and ideas. Gardiner took the view that translating from English into Egyptian hieroglyphs forms an indispensable element in gaining reading proficiency;[64] however, this approach is predicated on the premise that the students are already familiar with grammatical concepts and intuitively know how to identify and translate elements such as nouns, prepositions and verbs. Keiko Koda has argued that L2 reading is inherently crosslinguistic and involves continuous interaction between the reader's native language and the second language, and that the transfer of competencies from the L1 languages is easily facilitated when the L2 language is similar in both structure and orthography.[65] There is a great linguistic distance between Middle Egyptian and Germanic languages such as English, both in terms of linguistic structure and orthography, which means that competencies from English are not readily transferred when reading hieroglyphs. Furthermore, in my experience, adult anglophone learners frequently only possess a rudimentary conscious understanding of English grammar and thus limited metalinguistic awareness, i.e. the ability to identify and reflect upon language forms and linguistic features;[66] for this reason, explaining, comparing and contrasting English with Middle Egyptian grammar has proven to be a more fruitful teaching method than translating from English into Egyptian. An example of this would be examining different combinations of the noun 'son', the pronoun 'he/his/him', and the verb 'to love':

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[64] Cf. Gardiner (1957: xiii).

[65] Cf. Koda (2007: 1).

[66] Cf. Koda (2007: 2). The national curriculum for the UK was reformed in 2014, resulting in a renewed focus on English grammar after decades of neglect; https://www.gov.uk/government/publications/national-curriculum-in-england-english-programmes-of-study/national-curriculum-in-england-english-programmes-of-study; retrieved on 22/3/2023. English grammar has not occupied any significant position in the US national curriculum since the 1960s; cf. Hancock & Kolln (2005).

𓅓𓂋𓅭𓀜   *mr=f s3=f*   'He loves his son'

𓅓𓂋𓅱𓅭𓀜   *mr sw s3=f*   'His son loves him'

𓅭𓀜𓅓𓂋𓏭   *s3=f mrr=f*   'His son, whom he loves'

𓅭𓀜𓅓𓂋𓅱   *s3=f mr sw*   'His son, who loves him'

Constructing such examples for comparison introduces the students to the grammatical concepts of verbs, nouns and pronouns; the examples also demonstrate how nouns and pronouns can be used as subjects and objects in sentences. The examples illustrate the importance of word order in both English and Middle Egyptian, and highlight some important differences between these languages.

The first example employs the Egyptian verbal suffix conjugation with a so-called suffix pronoun acting as subject, and follows the Verb-Subject-Object word order; this stands in contrast to the Subject-Verb-Object word order found in English. This sentence also illustrates how Middle Egyptian produces the possessive meaning by attaching a suffix pronoun to a noun; by contrast, English produces the possessive meaning through the genitive pronoun *his*.[67] The second example also employs the Egyptian suffix conjugation; however, the word order in this example is Verb-Object-Subject because Middle Egyptian syntax requires pronouns to be placed before nouns.[68] The third example employs the so-called relative form of the suffix conjugation, which modifies the preceding noun clause 'his son'; this form has no direct grammatical equivalent in English and therefore requires the insertion of a relative pronoun like 'whom' before the subject in the English translation. The final example employs the masculine present participle of the verb 'to love', with the Subject-Verb-Object word order, which like the

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[67] Cf. Payne (2010: 124).
[68] Cf. Allen (2014: 184).

previous example has no direct English equivalent and requires the insertion of a relative pronoun like 'who' or 'which' before the verb in the English translation. Grammatical comparison of this kind also allows students to gradually become more comfortable with the grammatical and linguistic terms and concepts used in published textbooks. The approach of comparing and contrasting in this manner allows the students to make sense of their own use of English vocabulary and grammar, which over time increases their metalinguistic awareness and serves to improve their understanding and translation skills. This approach simultaneously introduces a number of different verb constructions, centred on the same blocks of vocabulary; by contrast, the textbooks published by Allen and Gardiner are designed around introducing verbal paradigms and sentence types separately in distinct chapters/sessions.

A core principle in my teaching philosophy is that anyone can learn another language given suitable learning tools, although the pace of language acquisition may vary significantly between individuals. My students are encouraged to join a Facebook group specifically dedicated to the discussion of Egyptian grammar and texts; this allows the students to help each other and feel like part of a learning community. Classroom learning should be an active process of discovery by the individual student; the primary role of the teacher is to encourage and facilitate learning through the provision of level-appropriate study materials and translation exercises.[69] My pedagogical approach for the beginner level is to focus on teaching vocabulary as a basic building block, with repeated exposure to individual words.[70] Rules for grammar and syntax are gradually introduced and contextualised through practice sentences, written in a legible and standardised font using digital hieroglyphic fonts such as the software JSesh;[71] we will return to this point below. Such practice sentences are read and discussed during the classroom sessions; contrary to Allen's approach, the focus remains on identifying distinct words rather than memorising and analysing grammatical paradigms. The students are provided with vocabulary lists for self-study and memorisation between sessions.

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[69] Cf. Willis (1990: 131); Richards & Rodgers (2014: 222).

[70] A number of studies have demonstrated high correlations between knowledge of vocabulary and good reading comprehension, and that inefficient word recognition results in major obstacles for L2 readers; cf. Alderson & Urquhart (1985); Anderson & Freebody (1983); Carroll (1971: 97–156); Grabe & Yamashita (2022: 26); Koda (1988).

[71] https://jsesh.qenherkhopeshef.org/; retrieved on 22/3/2023.

Due to the pictorial nature of the hieroglyphic script, beginners tend to erroneously assume that there must always be a correlation between what the sign

depicts and the phonetic sound/word it represents. For example, the sign ⟨⊙⟩ (D4) *ir* depicts a human eye, and it therefore seems logical to assume that it denotes the noun 'eye'; however, this word in fact denotes the verb 'to do/act/make/create'.[72] The noun 'eye' is instead written as ⟨⊙⟩ *irt*, produced by adding a feminine T-ending onto the stem;[73] the vertical stroke acts as a determinative signifying ideogrammatic nouns.[74] Attempting to identify and memorise what each hieroglyphic sign depicts tends to be a common preoccupation for inexperienced learners; this, however, can be detrimental to the learning process as it takes focus away from learning vocabulary and familiarising oneself with variation spellings. As such, classroom-based teaching should ideally not involve any significant focus on what the hieroglyphs themselves depict; instead, students should be referred to Gardiner's sign categorisation as part of their self-study between sessions. Learning vocabulary through a combination of guided in-class translation exercises and homework between sessions helps to solidify the internal workings of the hieroglyphic script itself; it also tends to feel less intimidating for students than starting the learning process with grammatical rules and syntax. Rote memorisation of grammar rules and declensions does not form part of my pedagogical approach at any stage, as doing so would take the focus away from learning vocabulary;[75] furthermore, such mechanical grammar memorisation would not adequately prepare students for any variation spellings and abbreviated orthography they may encounter when reading ancient Egyptian texts.

As students progress from the beginner stage to the intermediate level, they face the abovementioned scarcity of accessible textbooks and text editions; to compensate for this, I have created a digital primer in PDF format with an array of grammatical examples and explanations written in jargon-free English, which the students can consult between sessions as a self-study tool. The in-class

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[72] Cf. Gardiner (1957: 450).
[73] Cf. Faulkner (1962: 25).
[74] Cf. Gardiner (1957: 534–5).
[75] Such memorisation is frequently associated with the Grammar-Translation Method of the 19th and early 20th century, which involves mechanical translation of artificial practice sentences both from and into the target language; cf. Richards & Rodgers (2014: 5–6).

teaching for the intermediate level builds on my beginner-level approach of learning vocabulary through examining practice sentences and short text excerpts; in addition, my teaching at this level focuses more on reading longer segments of texts in order to solidify metalinguistic awareness and increase the students' confidence in their own ability to read independently. This is achieved by reading a mix of pre-selected text excerpts given to students as homework between sessions, and by reading unseen passages in class; the latter is an indispensable element in building confidence and translation skills. This in-class translation process should be a student-led and active process, during which students volunteer to read out loud their transliteration and translation; students are not required to produce output until they feel ready to do so. It is important during this activity for the teacher to be prepared to answer questions from students regarding any aspects of the grammar and text; the teacher should also be prepared to engage in error treatment. In my experience, the most effective forms of corrective feedback for Egyptian hieroglyphs at all levels are elicitation and metalinguistic comment;[76] this involves asking leading questions (e.g. 'How do we identify the infinitive form of the verb?') and explaining grammatical rules and paradigms without providing the student with the correct answer to their mistake. This approach allows the students to build on their existing knowledge to self-correct, and also serves to create a supportive environment in which mistakes are treated as paths to learning rather than 'sins' to be avoided.[77] Classroom teaching, which includes online classrooms, also provides an excellent opportunity to contextualise the vocabulary by discussing the wider cultural and historical setting of the text(s) in question. Students should be encouraged to evaluate their translation options and choices through comparison with both fellow students and published scholarly translations;[78] they should also be encouraged to consider and interpret the wider semantic and cultural meaning of the text and its vocabulary, which in turn may influence their translation decisions.

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[76] The effectiveness of these methods is supported by the findings of Lyster & Ranta (1997).

[77] The 'affective filter hypothesis' treats negative emotional states such as anxiety and low confidence as blocks to second language learning, and confidence-building should therefore be a priority in the classroom; cf. Krashen (1985: 81). For teaching the intermediate stage, I have also found it fruitful to identify and discuss ancient scribal errors during class, as this has the effect of reducing the students' anxiety around their own errors.

[78] Evaluation forms an important part of so-called task involvement in L2 vocabulary learning, with a high degree of task involvement by the student resulting in more effective learning; cf. Hulstijn & Laufer (2001).

The text excerpts used in class and as homework, which represent a mix of handwritten scholarly editions and my own editions adapted with the JSesh software, provide a solid foundation for explaining and analysing vocabulary, grammar and syntax. The use of JSesh facilitates the adaptation of ancient Egyptian texts, including complex narrative texts, into beginner-friendly text passages with pedagogical aids such as spaces, sentence division and the addition of complementary phonetic signs, determinatives and grammatical markers omitted by the ancient scribes. In addition to being a highly valuable pedagogical tool for classroom-based teaching, the JSesh software also has the potential to be used for creating textbooks and text editions for the intermediate stage. It can also be used to re-publish Egyptian texts that are currently only published in handwritten format, and these texts can be edited and adapted as pedagogical reading editions aimed at non-specialists.

In addition to textbooks, the software can also be used to create fictional hieroglyphic texts designed specifically for pedagogy; we may take inspiration from the approach employed by the *Cambridge Latin Course* series, designed for self-study and accompanied by digital resources for enhanced learning.[79] This series of illustrated books, which is designed around reading chunks of texts of increasing complexity, follows the daily business of Roman characters living in Roman towns, with accompanying vocabulary lists, level-appropriate grammatical explanations and pages dedicated to contextualising the texts within Roman culture and history. The software JSesh has the potential to be used to create similar types of illustrated textbooks for Egyptian hieroglyphs, with fictional Egyptian characters living in Pharaonic Egypt, accompanied by pedagogical aids such as vocabulary lists and basic grammatical explanations. These aids could also be offered in digital formats. Such books would undoubtedly be beneficial from a pedagogical perspective, as they could be used for both classroom-based teaching and independent self-study; the students would also benefit from the cultural and historical contextualisation of the material.[80]

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[79] https://www.clc.cambridgescp.com/; retrieved on 21/3/2023.
[80] Cf. Meyer, this volume.

6. Conclusion

As I have demonstrated in this article, learning to read Egyptian hieroglyphs comes with many challenges. As Egyptian is extinct as a spoken language, and its pronunciation is to a great extent uncertain, teaching and learning by necessity revolve around achieving reading competence rather than conversational proficiency. Some of the challenges in gaining reading proficiency are related to the learning tools available, e.g. textbooks, text editions for reading practice, and digital resources. Such resources are lamentably scarce for the intermediate level, which represents a stark contrast to the numerous resources available for the study of ancient Greek and Latin. This scarcity forms a significant obstacle for learners who wish to progress beyond the beginner stage, as it results in limited opportunities for reading more complex texts.

The grammatical system of Middle Egyptian, which represents the ideal stage of the Egyptian language for the beginner and intermediate levels, displays similarities to Semitic languages such as Hebrew and Arabic. Anglophone learners tend to be unfamiliar with such languages and their syntactical features, such as the Verb-Subject-Object word order. The Middle Egyptian verbal system lacks tenses that correspond precisely to English tenses, and the correct English translation must often be inferred from context and by using nuanced judgement; furthermore, some Middle Egyptian verb constructions tend to look similar in writing and thus be difficult distinguish from each other. For these reasons, the correct identification and parsing of Egyptian verbs often represent significant barriers for anglophone learners.

The process of translating Egyptian hieroglyphs into modern languages also involves transliterating the signs into a Latin-derived transliteration alphabet; this process is not intuitive, and the alphabet must be memorised. This also involves learning the phonetic values of individual hieroglyphic signs, which may not correspond to a single letter; instead, signs can be biliteral or triliteral, carrying two or three phonetic values, respectively. Signs can also function as logograms for entire words, or act as silent determinatives expressing the semantic categories of the words to which they are attached. In addition, some signs may carry different phonetic values depending on how they are used; the matter is also complicated by the fact that some signs look similar and can thus be difficult to distinguish from each other. The lack of standardised writing results

in significant variations across different scribal hands and types of media; an inscription carved into a stone surface, for instance, may look vastly different from a handwritten text on papyrus.

The key factor in overcoming these challenges is the learning and memorising of vocabulary, including variant spellings; this is best achieved through reading practice, which can take place as a guided exercise in-class, and independently as self-study. Reading sentences and passages of increasing complexity allows the students to familiarise themselves with Egyptian vocabulary through exposure and repetition, which over time builds their confidence, and provides a good foundation for reading longer texts. The translation process should never be mechanical or rigid; instead, students should be encouraged to continuously evaluate their translation options and choices. Rather than inducing the students to engage in rote memorisation of grammatical rules, the teacher should gradually introduce and contextualise grammar and syntax through guided in-class reading practice; this process should also involve explaining English grammar for the purpose of comparison and contrast, which over time increases metalinguistic awareness. The classroom-based teaching must be supplemented by homework for self-study purposes, in the form of level-appropriate translation exercises and text excerpts. As students progress to the intermediate level and are able to read longer texts, the classroom-based teaching should be structured around reading more complex texts of different genres; this should also involve student-led discussion and analysis of the text's linguistic content and wider cultural context in order to deepen their comprehension of the vocabulary.

The open-source software JSesh is ideal for creating hieroglyphic practice sentences and text excerpts in a standardised, legible font; it also facilitates the use of pedagogical aids such as adding spaces between words, adding grammatical markers omitted by the ancient scribes, and adding determinatives to assist with the correct identification and translation of individual words. This type of software is also ideal for creating digital study materials such as vocabulary lists and grammar examples with accompanying explanations; it also has the potential to be used for creating intermediate-level textbooks, with level-appropriate examples, vocabulary lists and grammatical explanations. JSesh may also be used to re-publish Egyptian texts that are currently only available in handwritten format, and such texts can in this way be edited, formatted and abridged for use in both classroom-based teaching and independent self-study.

While the ability to read Egyptian hieroglyphs does not have wide practical application in today's world, it provides access to a vast body of literature produced by a remarkably long-lived ancient culture, whose language is the longest recorded in history.[81]

Understanding ancient Egypt increases our understanding of human history and how today's world came to be; for this reason, the ancient Egyptian texts should neither be dismissed as the curious relics of a lost world nor promoted as the mysterious remnants of intergalactic travellers in a remote and unknowable past. Ancient Egypt and its corpus of texts represent a legacy for all of humanity.

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[81] Cf. Winand (2011: 181) argues that the Egyptian language should form part of mainstream general linguistics because its long-recorded history allows it to contribute much to typologically-oriented studies.

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