e-ISSN 2385-3042
ISSN 1125-3789

Annali di Ca' Foscari. Serie orientale
Vol. 56 – Giugno 2020

Whole-Part-Whole Reading Instruction in the Teaching and Learning of Arabic as a Foreign Language at Beginner Level

Andrea Facchin
Università Ca' Foscari Venezia, Italia

Abstract The neurological bimodality theory, espousing the principles of directionality and cerebral hemisphericity, has led to a series of expedients in the field of foreign language teaching, like the use of inductive strategies. Accordingly, this contribution focuses on a methodological proposal stemming from the aforementioned theoretical perspectives and tackles the question of reading in the early phase of Arabic as Foreign Language learning. In doing so it questions how to teach Modern Standard Arabic at beginner level and proposes solutions to it through the use of new technological tools in the service of languages. Specifically, the focus is set on Pre-A1 and A1 levels of the recently issued *Companion Volume* to the *Common European Framework of Reference for Languages*. As a result of theoretical reasoning, the 'Whole-Part-Whole' method teaching philosophy is presented, theorized and verified in relation to the study of Arabic by non-Arab beginner learners.

Keywords Teaching Arabic as a Foreign Language. Whole-Part-Whole Method. Reading. Phonological Awareness. Morphological Structure Awareness. Vocabulary.

Edizioni Ca'Foscari

Peer review

Submitted	2020-02-06
Accepted	2020-04-25
Published	2020-06-30

Open access

Citation Facchin, Andrea (2020). "Whole-Part-Whole Reading Instruction in the Teaching and Learning of Arabic as a Foreign Language at Beginner Level". *Annali di Ca' Foscari. Serie orientale*, 56, 171-190.

DOI 10.30687/AnnOr/2385-3042/2020/56/007

1 Introduction

The neurological bimodality theory has been rarely put in connection with the teaching and learning of Arabic as a Foreign Language (henceforth AFL). Such investigations have been documented in non-Arab research environments for several years (Froud, Khamis-Dakwar 2017; Della Puppa 2018; Brichese, Facchin 2019), while Arab AFL scholars have remained faithful to the method notion, albeit defined by Danesi (1988, 14) as a fundamentally flawed approach, since it seeks out a single factor to devise a finite set of instructional operations. In fact, as in the case of other foreign languages, the Teaching of Arabic as a Foreign Language (TAFL) philosophies that succeeded one another over time were not based on any bimodal awareness, but were instead unimodal, favoring either the Right or Left-Hemisphere Mode of learning (Danesi 1988). As already demonstrated, even the communicative approach – representing a turning point in the history of TAFL – has proven to be inefficient in regards to bimodality theory classroom applications for it focuses on Right-Hemisphere teaching techniques to the detriment of Left-Hemisphere ones (Danesi 1988, 25; Della Puppa 2018, 431).

The purpose of this contribution is to link the TAFL field to the neurological bimodality theory and provide useful examples that might empirically substantiate the convenience of this view. With this in mind, the research tackles the question of reading in the early phase of AFL learning. In doing so, the focus is set on Pre-A1 and A1 levels of the recently issued *Companion Volume* to the *Common European Framework of Reference for Languages* (CoE 2018), henceforth shortened to CEFR-CV. On the basis of field tests, the study shows how receptive development activities like global and analytic reading, as well as word processing are stimulated from the early phases of language learning by creating vocabulary lists and using innovative technological tools for language learning. The 'alphabetic method' (*al-qāʿida al-baġdādiyya*) – widely used today in AFL beginner courses and textbooks – is forgone in favor of the 'Whole-Part-Whole method', a teaching philosophy currently applied to other languages and learning environments (e.g. Trupke-Bastidas, Poulos 2007; Evans 2008; Hokeness 2010) hence, presented, implemented, theorized and verified in relation to applied linguistics foundations and the study of Arabic by non-Arab beginner learners.

Last but not least, another point to be clarified before proceeding is the variety of Arabic taken into account for the research. Since the study focuses on reading abilities, the Modern Standard variety (abbreviated MSA, SA or simply Arabic), namely *al-ʿarabiyya al-fuṣḥà*, is the choice dictated by the sociolinguistic realities of the Arabic lan-

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

guage.[1] The discussion on colloquial varieties and oral skills is therefore deferred to a further study.

2 Theoretical Framework

Since research in TAFL has been rarely connected to applied neurolinguistics, it is necessary to provide definitions of selected important concepts that would help to clearly understand research and the methodological proposal put forth below.

First and foremost, since the present study is devoted to receptive language activities like global and analytic reading, one should specify that Arabic uses a Semitic alphabetic writing system characterized by connectivity between letters combining linearly, full mode of writing (*scriptio plena*), where both consonants and vowels are represented by characters, and its opposite (*scriptio defectiva*), where only consonants are annotated. The coexistence of these two systems has led scholars to consider Arabic orthography shallow or transparent when written words are vowelized, by contrast deep or non-transparent when these are non-vowelized (Abu-Rabia 2001; Taha, Ibrahim, Khateb 2013).

As explained in Chen et al. (2009, 161-2), for transparent orthographies, phonological access is achieved by way of "assembled phonology", in which regular mapping exists between letters and phonemes, thus visual words are transformed into phonology through the grapheme-to-phoneme correspondences rules; while for non-transparent orthographies, phonological access typically relies on "addressed phonology" (Chen et al. 2009, 161-2), namely the elicitation of word sounds that are stored in memory, as in the case of Chinese logographs or non-vowelized words in Arabic. Although scholars generally describe Arabic orthography shallow and deep at the same time, we incline towards the terminological choice made by Chen et al. (2009, 162) in relation to English language orthography specification; according to them, "quasi-transparent". In the case of English, in fact, assembled and addressed phonologies are used to read regular and irregular words, respectively (Chen et al. 2009, 162). As

1 In their seminal work, Giolfo and Salvaggio (2018b, 103-4) affirm that in lower levels – besides the use of Standard Arabic (SA) – the resort to Colloquial Arabic for writing purposes, i.e. short messages exchanged via SMS, Facebook, Twitter or WhatsApp, has not to be regarded as exceptional as it represents the most common linguistic practice adopted by native speakers when dealing with these specific means of communication. Although we totally agree with this viewpoint, this article instead considers SA in association with written skills, thus specific activities like global and analytic reading, in line with the final choice made by the same authors in their explanatory "Written socio-communicative tasks at CEFR level A1" grid (Giolfo, Salvaggio 2018b, 104).

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

a whole, Arabic orthography could be termed 'quasi-transparent' as well, by cause of the coexistence of two writing modes.[2]

Beyond the sign, when dealing with receptive abilities like reading, one has to consider an array of lower-level rapid, automatic identification skills as well as a range of higher-level comprehension skills (Grabe 1991, 383). Among the first group, an important element is represented by phonological awareness, namely learners' knowledge of the phonological, or sound, structure of words predicting reading itself. While with transparent orthographic systems phonological awareness allows the detection and manipulation of sounds by virtue of the grapheme-to-phoneme correspondences rules, this is not the case with non-transparent ones. In fact, according to McBride-Chang et al.'s (2005) findings, due to the absence of these rules, Chinese children reading logographs tend to rely on morphological structure rather than on phonological awareness. As for visual word processing in Arabic, significance of morphological structure has also been established, bearing in mind that this is anchored in the lexical root as a discrete morphological unit and that Arabic is largely a non-concatenative language where morphemes are interwoven rather than linearly clustered (Idrissi, Kehayia 2004). According to Gwilliams and Marantz, comprehending a visual word[3]

> entails decomposition into constituent morphemes, which are linked to abstract representations in the [mental] lexicon for processing. (Gwilliams, Marantz 2015, 1)

Therefore, as a hypothesis to be verified, knowledge of morphological patterns could underpin good reading of non-vowelized Arabic texts. Such reasoning implies that in a certain stage, AFL learners – as well as L1 ones – are subjected to a 'programmed transition' where they start relying on morphological awareness useful in codifying non-vowelized texts, while abandoning vowelized ones, thus partly phonological awareness.

Scholars dealing with literacy acquisition have pointed out that awareness of phonemes needs to be explicitly taught (Kruidenier 2002; McShane 2005), mostly when L1 and L2 writing systems differ and letter-sound knowledge is not easily transferred, as in the case

2 Alternatively, al-Mannai (2006, 72-3) terms Arabic and Hebrew "quasi-transparent" languages, since they basically use transparent orthographies, which however are characterized differently.

3 From the auditory point of view, findings suggest that the Arabic language roots form a principal unit through which spoken words are recognized (Gwilliams, Marantz 2015, 1).

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

of AFL learners whose mother tongues use non-Semitic scripts.[4] In this sense, Vinogradov (2001) affirms that teachers tend to assume that such learners are able to read in their native language, and, therefore, do not need to be taught phonological awareness and decoding skills (Hokeness 2010, 4). Research has demonstrated that phonological awareness and decoding instruction, like the Whole-Part-Whole method (see below), have had positive results on both L1-literate and L1-illiterate students, who have improved their abilities to read (Trupke-Bastidas, Poulos 2007; Evans 2008; Hokeness 2010).

In addition to that, it should be pointed out that in the Arabic written language, different types of written words exist, since an orthographic rule implies that 6 out of 29 letters connect only with preceding and not subsequent letters. For this reason, Taha, Ibrahim and Khateb (2013) grouped them in three categories: fully connected, partially connected and non-connected words, to be considered in greater detail subsequently.

For a full comprehension of this study, Arabic language script and orthography should be paired with essential concepts and theories relating to the field of applied neurolinguistics, particularly neurological bimodality. As explained by Danesi, this concept posits that

> the two sides of the brain work in a complementary fashion in higher cognitive functioning, each possessing clearly distinct modes of perception that interact in a cooperative fashion. (Danesi 1988, 15-16)

These differentiated modes of knowing are the Right and Left Hemisphere Modes of learning, respectively R-Mode and L-Mode. Their functions were schematized by Danesi (1988) as follows:

Table 1 Left- and Right-Hemisphere functions (Danesi 1988, 17)

Left-Hemisphere Functions	Right-Hemisphere Functions
most language functions	comprehension of metaphor and
verbal memory	prosodic features
intellectual activity	visual memory
convergent thought	intuitive activity
abstraction	divergent thought
analysis	concretization
	synthesis

4 Like illiterates, AFL beginner students need to decode a new writing system by learning a different manual skill in the blank page, eye movements from right to left and a new phonological awareness.

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

In this instance, it must be stressed that neurological bimodality has been contested as a concept by hemispheric dominance, as it has weighed conflicting substantiation, namely the specialization of some neural functions or cognitive processes to one hemisphere or the other would be in contrast to bimodality. As neuroscience nowadays confirms,[5] brain lateralization – allegedly the result of hemispheric dominance processes –, is a fundamental aspect of brain organization, to which one should add directionality, a fundamental brain feature postulating that information is processed from right to left. It could therefore be assumed that such neurological findings confound the teaching practice within the foreign language classroom, AFL included. In this regard, Balboni (2008, 30) affirms that the choice of teaching techniques ought not to privilege certain kinds of learners, expressly selected combinations of hemispheric dominance, cognitive styles, or intelligence types, to the detriment of others.[6] By far and large, as demonstrated by Danesi (1988, 23-4), the traditional inductive and deductive language teaching approaches (e.g. grammar-translation, direct method, communicative approach, etc.) have been focusing implicitly on Left-Hemisphere functions, thus developing an instructional philosophy that is basically a unimodal, L-Mode one; simply put, training half a brain. Nonetheless, research evidence has empirically documented that global language processing is bimodal in nature (Danesi 1988, 18), as it makes the two hemispheres work in a complementary fashion.

3 The Teaching Practice. A Balanced Interplay Between the Two Sides of the Brain

The fact that the traditional language teaching approaches were neurologically ineffective led scholars to adopt eclectic attitudes, also in TAFL. According to its proponents (al-Qāsimī 1979; al-Nāqa 1985b), the eclectic method (*ṭarīqa intiqāʾiyya*) in practice had to combine motley approaches in consonance with training needs and language specific particularities and, since each way of teaching had its pros and cons, no best method existed; a stance in line with Danesi's (1988, 15) vision of "the complex nature of classroom language learning", where a versatile pedagogical response is required. As reported by the same scholar, a number of teaching techniques ascribing to traditional methods have survived because they involve both Right and Left-Mode of learning; adding that

5 See e.g. the publication dedicated to Cerebral Lateralization and Cognition by Forrester et al. (2018).

6 Unless otherwise indicated, all translations are by the Author.

e-ISSN 2385-3042
ISSN 1125-3789

> it can be claimed tentatively that the survivability of a specific technique would seem to be proportional to the degree of its bimodality. (Danesi 1988, 24)

In this light, another solution precluding unimodal learning is provided by the affective humanistic approach – generally called in Arabic *madḫal insānī* –, originating from the humanistic psychology of Carl Rogers (1902-87), through which learners are put at the center stage of the teaching/learning process as individuals, and to which the methodology proposed in this article is ascribed. In this sense, attention is definitively shifted from any cognitive learning machine to the learner (cf. Danesi 1988). Humanistic teaching practices such as the Silent Way of Caleb Gattegno (1911-88), Total Physical Response by James Asher, Community Counseling and Learner-Centred Orientation – all discussed in TAFL (cf. Ṭuʿayma 1982; al-Nāqa 1985a; Ṣīnī, ʿAbd al-ʿAzīz, Ḥusayn 1985) – emphasize the affective-based, and therefore R-Mode, techniques, which get students

> physically involved in the learning process, letting […] [them] feel comfortable and at ease in the classroom, and [allowing them] […] to acquire skills much more easily. (Danesi 1988, 25-6)

Embracing this approach, however, does not disregard the centrality of the neurological concepts discussed above, notably bimodality, essential in the teaching practice of modern foreign languages, and further examined below.

Balboni describes the teaching unit formulated in the 1960s by the illustrious Italian educator Giovanni Freddi (1930-2012), who drew inspiration from the Gestalt theory, as a "balanced interplay between the two sides of the brain" (Balboni 2015, 68), shifting from globalization (R-Mode) to synthesis, passing through analytic activities (L-Mode). Theory postulates in fact that communicative events, thus texts, are perceived globally, involving initially the R-Mode of learning. As already known in applied linguistics, a profound acquisition of language has to be pursued by way of a learning process that goes from global to specific in accordance with the principles of bimodality and directionality outlined above. Operationally, language needs to be read, listened or observed to the extent that learners shift from superficial comprehension to in-depth understanding (Balboni 2015, 104). To the detriment of deductive schemes, the use of inductive strategies is also preferred. Despite the high regard of Lado's (1964, 35) viewpoint that language learning cannot be understood only through such theories, as it requires a more comprehensive explanation involving the widest range of human activity, bimodality and directionality continue to be cornerstones of language acquisition.

e-ISSN 2385-3042
ISSN 1125-3789

For this reason, the said cognitive theoretical aspects have been integrated in the affective-humanistic approach harmoniously and presented here as one possible procedural realization, namely Whole-Part-Whole reading instruction, a method applied to other languages and learning environments (e.g. Trupke-Bastidas, Poulos 2007; Evans 2008; Hokeness 2010), which is used to teach words in context, break them down into their smaller parts like phonemes or letters, and then re-read the words in context (cf. Trupke 2007), therefore going from global to analytic and back again. In Arabic the method could be translated as *ṭarīqa kulliyya-ǧuzʾiyya-kulliyya* (Whole-Part-Whole method) taking inspiration from two well-known methods, widely diffused in Arabic L1 education environments, expressly the global (*kulliyya*)[7] and analytical methods (*ǧuzʾiyya*),[8] which are based on similar theoretical foundations. Nonetheless, the Whole-Part-Whole method applied to the teaching of Arabic as a Foreign Language merges them in a single operative model integrating neurological knowledge and modern developments in the field of applied linguistics and TAFL, i.e. the pre-elementary level discussion and the use of new technologies in the AFL classroom (Alhawary 2001; Ditters 2006; Facchin 2016; El Essawi 2018; Giolfo, Salvaggio 2018a). Like the global method, Whole-Part-Whole reading instruction takes the word as the smallest chunk of meaning in the language acquisition process rather than the isolated sounds or letters, favoring global, R-Mode of learning, then it shifts to analytic reading of single sounds or letters focusing on L-Mode activities, and ends with a final synthesis. Accordingly, it moves in the opposite direction from the 'alphabetic method', known in Arabic with the expression *ṭarīqa* or *qāʿida baġdādiyya*, the 'Baghdad method', which goes from analytic to global, ideally first reading the smallest unit, the letter (*ḥarf*), then words, small sentences, paragraphs and finally texts, thus ignoring the neurological principle of directionality.

7 The use of this method was reported by scholars such as Muḥammad Fāḍil al-Ǧamālī, Mattà ʿAqrāwī, Sumaya Fahmī and Muḥammad Saʿīd Qadrī, who dealt with the teaching of Arabic as L1 either in Iraq or Egypt. The method also influenced the early developments of TAFL in Egypt, where the Egyptian Broadcasting Corporation programme for the propagation of the Arabic language on air used this particular teaching orientation. See Bakr 1975 (Facchin 2019, 70, 254).

8 As in the case of the global method, the analytical one was reported as well by scholars who dealt with the teaching of Arabic as L1, e.g. the Syrian writer and educator Sāṭiʿ al-Ḥuṣrī (1882-1968) in Iraq until the late 1930s (Facchin 2019, 254).

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

4 Methodological Proposal

The methodology put forth in this article is the result of the considerations outlined above and stemming from various scientific areas, principally neurological applied linguistics, which has rarely been linked with the teaching and learning of Arabic as a Foreign Language. Furthermore, as it is strongly held that learners play a key role in the learning process, the proposal is ascribed to the affective-humanistic teaching philosophy,[9] which integrates neurological and AFL modern teaching advancement through a possible realization, Whole-Part-Whole reading instruction in the class of Arabic as a Foreign Language to beginner learners. Notably, this methodological proposal is inspired by an experimental project conducted in 2017, and already accounted[10] (Brichese, Facchin 2019), in which Italian AFL absolute beginners aimed at reaching level A1 of the *Common European Framework of Reference for Languages* (CEFR) (CoE 2001), in Modern Standard Arabic within a total of 80 hours of lessons, partly fulfilled. However, instead of merely describing it, the project is now further analyzed and elaborated with important implementations and corrections concerning the teaching practice. Given this, the Whole-Part-Whole method is presented to demonstrate how valuable it is as effective teaching practice within the AFL classroom.

Before discussing technicalities specifically regarding reading instructions, it is essential to stress that vocabulary selection is always to be incorporated in the planning phase of each language course. Vocabulary is to be introduced primarily through authentic texts consistent with language learning objectives and the expected attainment level. As suggested by Chamsine during a recent conference held at the Université du Québec à Montréal,[11] the lexical choice in this preliminary planning phase can be thematic, thus represent a specific word selection, like the slogans of the revolution. This proposal is to be read above all in connection to Content and Language Integrated Learning (CLIL) environments, where the learning purpose is to obtain a specific knowledge of the language. That being said, as per the project focus, mastering reading ability at elementary level in Standard Arabic, the suggested selection can be that of

9 For application of this teaching philosophy, see the dedicated activities created for the experimental project described below.

10 The experimental project grouped 12 Italian AFL absolute beginner learners, all adults (age range 24-70), both males and females. The group aimed at reaching level A1 of the CEFR in Modern Standard Arabic within a total of 80 lesson hours, partly fulfilled. Among their training needs were to learn Arabic for cultural interests (75%), but also for travel (50%) and work purposes (25%). Lessons were inserted in a non-academic, non-formal education context and were delivered on a weekly basis.

11 Chamsine (unpublished).

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

CEFR-CV descriptors: simple, familiar short texts on subjects of personal interest or information on a letter, card, e-mail or flyer and restaurant menu, as well as everyday signs such as 'Parking,' 'Station,' 'Dining room,' 'No smoking,' etc. (CoE 2018, 60-5).

Through inductive strategies, the project employed Whole-Part-Whole reading instructions and presented selected words as semantic units, taken as wholes, thus favoring globalization (R-Mode). Ideally, the process started with global reading, then shifted to analytic activities (L-Mode) and went back to global. The alphabet was not presented as a first single topic or split into sections as language courses generally tend to do, but instead introduced in the context of analytic reading activities. In this way we tried to abandon the traditional alphabetic method, which conducts AFL learners to proceed from analytic to global, in contrast to brain functioning, namely the directionality principle. In essence, this uncommon didactic choice was affected both by neurolinguistic awareness and by a fundamental question: is the Whole-Part-Whole method more efficient and effective than the alphabetic one in the productivity of the AFL learning process?

To respond to this question, dedicated activities were created and used in class.[12] As explained in Brichese and Facchin (2019) the project started from oral texts, since the course aimed to instruct learners on language abilities, all-round.[13] Then, key vocabulary was obtained through brainstorming activities and the written-word forms were provided for learners to copy, thus linked to their sound presented orally. However, in order to develop reading ability – at least in the earliest phase of AFL learning – utilizing authentic written texts[14] **[figs. 1-2]** may represent the most valuable choice, which therefore should be implemented. In keeping with the experimental project, specific words are also selected and used as wholes in activities

12 Beyond specific activities, among those ascribed to the affective-humanistic teaching philosophy, one should point out that at the beginning of the Standard Arabic language course participants were requested to fill in an aptitude test, which aimed at investigating their disposition towards foreign language learning. The test based on the multiple intelligences theory by Howard Gardner (2006); its results were discussed in class, and then merged to create working groups. For instance, those learners with visual-spatial intelligence type were paired and contended with the verbal-linguistic intelligence group during classroom activities.

13 As Giolfo and Salvaggio (2018b, 105) later stressed "an initial period exclusively dedicated to oral skills not only fosters the development of implicit competence […] but also provides learners with the initial vocabulary they need for the acquisition of writing skills. Many studies emphasize the importance of lexical competence as a prerequisite for the development of writing skills". In this sense Cardona (2008, 10) adds that a great number of studies in the fields of psycholinguistics and language teaching highlight the critical relation between lexical competence and reading ability.

14 I thank my colleague Patrizia Zanelli for allowing me to use photos from her archive in this article **[figs. 2, 8 and 9]**.

e-ISSN 2385-3042
ISSN 1125-3789

Figures 1-2 Examples of an authentic written text

where learners try to separate and reassemble them. The study of letters is gradually introduced by working either on the grapheme-to-phoneme or phoneme-to-grapheme correspondences rules so that learners can progressively acquire phonological awareness. Clearly, in this first phase, analytic reading is to be conducted through the use of short vowels, without which phonological awareness cannot be acquired simply by virtue of the orthographic transparency principle previously described. Moreover, as already specified, the word selection can regard simple texts such as everyday signs.

Since AFL learners involved in the experimental project were all Italian absolute beginners unfamiliar with the Semitic writing system, it was decided to present non-connected words (e.g. Figure 1,

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

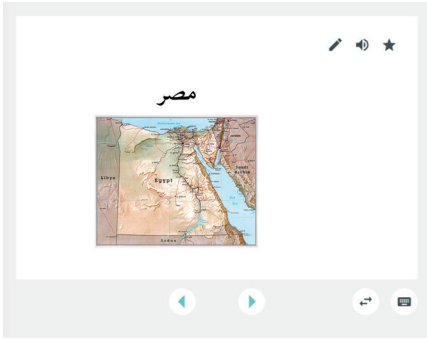

Figure 3 Global reading through `Quizlet.com` flashcards (word *Miṣr*, 'Egypt')

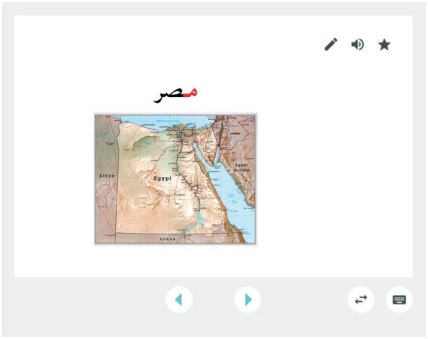

Figure 4 Analytic reading of a single letter (*m* in *Miṣr*, 'Egypt')

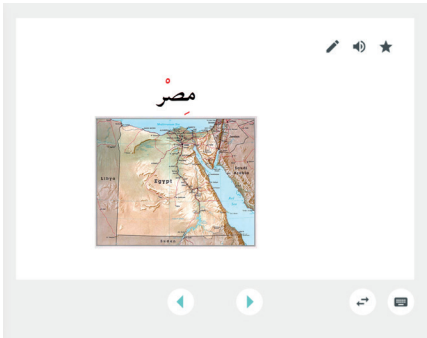

Figure 5 Analytic reading of short vowels (*kasra* and *sukūn* in *Miṣr*, 'Egypt')

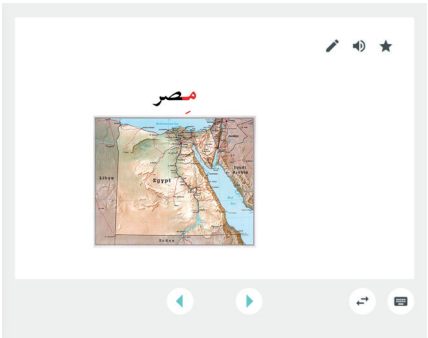

Figure 6 Analytic reading combined (*mi* in *Miṣr*, 'Egypt')

dār) first, followed by partially connected vocabulary, and lastly fully connected words (fig. 1, *Miṣr*), in line with the reflections made by Taha, Ibrahim and Khateb (2013). Although the scholars refuted the Arabic orthographic complexity assumption (Ibrahim, Eviatar, Aharon-Peretz 2002) in relation to Arab adult skilled readers, they also affirmed that in the very first stages of literacy acquisition, Arab children – who are more used and exposed to the basic forms of the letter – perform more accurately with non-connected than with fully connected words, contrarily to the adult counterpart (Taha, Ibrahim, Khateb 2013, 300). Analogously, as a hypothesis to be verified empirically, AFL learners whose mother tongues use non-Semitic scripts are expected to perform in similar ways, provided that the writing systems of their mother tongues prevalently display non-connective use.

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

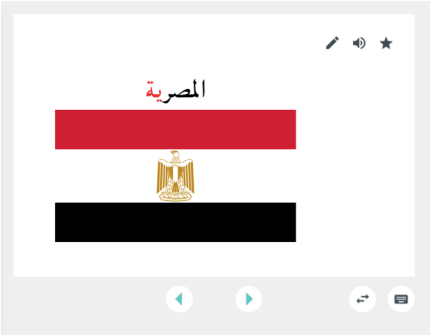

Figure 7 Analytic reading of morphological constituents (feminine *nisba* form *-iyya* in *miṣriyya*, 'Egyptian')

As previously indicated, the first step of the Whole-Part-Whole method was therefore to carry out global reading activities through words selected from authentic texts presented **[fig. 2]**. To this end, there was extensive use of new technological tools in the service of foreign language learning like `Quizlet.com`, e.g. its flashcards, in order to introduce word recognition through global reading **[fig. 3]**. The word-image combination was also an essential criterion, which aimed at facilitating learners to link the sign to its semantic meaning. Redundancy activating the R-Mode of learning was strategic as well, for instance through successive occurrence of studied vocabulary, words repetition or focus on oral texts, when considered as pre-reading activities followed by words reiteration in written tasks. Once the word recognition exercise was carried out, analytic reading (L-Mode) was focused on by highlighting single letters in different positions **[fig. 4]** in concomitance with short vowels **[figs. 5-6]**, thus stressing the reading of syllables, e.g. *Sū-ri-yā*, *Lub-nān*, etc. Letter recognition exercises made it possible to gradually introduce the alphabet, fulfilling the neurological principles of directionality and bimodality. Furthermore, in light of Gwilliams and Marantz's (2015) findings, which posit that complex words are read by cutting them into morphological constituents, analytic reading activities may represent the right didactic moment to prepare AFL learners for the 'programmed transition' mentioned above, where students start relying on morphological structure awareness useful in codifying non-vowelized texts, rather than depending on phonological awareness, which is eventually left

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

Figures 8-9 Global reading activity of styles/typefaces

out.[15] If such reasoning were deemed correct, analytic reading exercises could also concentrate on simple morphological constituent recognition, e.g. masculine and feminine *nisba* forms, *-iyy* and *-iyya* **[fig. 7]**, sound plurals, etc., expressly concatenative morphemes linearly clustered (e.g. *Miṣr*, *miṣr-iyy*, *miṣr-iyya*) rather than non-concatenative ones. Analogously, during the analytic reading phase, syllable recognition can be carried out through tailored classroom exercises

15 By referring to Arab school grades, Bourisly et al. – citing Abu-Rabia (1997, 2006) – state that "the use of diacritics is limited to educational materials for primary grade levels, and for whatever length of time deemed sufficient to learn to read without them. Typically, around [the] third grade, students are expected to be able to read texts without diacritics. Once diacritics are dropped, readers must employ vocabulary, syntax, and sometimes world knowledge to recognize words and to attribute correct semantic meaning to devowelized text" (2013, 196).

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

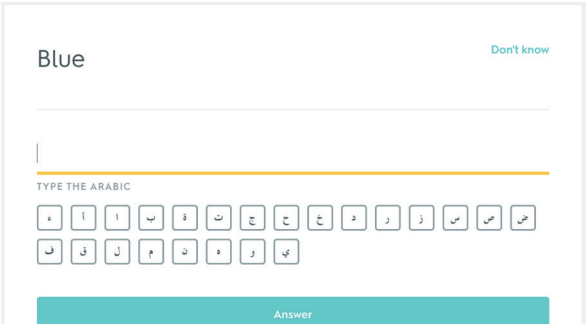

Figure 10 Example of typewriting function on

displaying learned syllables in new vocabulary, which students have to trace back, for instance *sū* in *sū-riyy* and *mu-dar-ri-sū-na*. In line with inductive strategies, analytic reading was followed by grammar explanations and fixation. Subsequently, the word was read globally again (R-Mode) in the phase of synthesis **[fig. 3]**.

Even though the project activities came to an end with this last phase; as an implementation to be introduced soon after, recognition of different script styles (e.g. *nasḫ*, *riqʿa*, etc.) or modern typefaces **[figs. 8-9]** is to be considered of paramount importance, in order to train learners to read different text types. Last but not least, it is worth noting that `Quizlet.com` flashcards did represent a valuable teaching and learning tool in the productiveness of the aforementioned project, which is the result of the change in traditional training settings, already predicted by Freddi (1994). In fact, while Whole-Part-Whole reading instruction deconstructs the traditional alphabetic method largely diffused in early AFL teaching, it introduces the use of new technological tools in the service of languages. As already stressed in Brichese and Facchin (2019), `Quizlet.com` – if wisely introduced by teachers – gives learners opportunities: to enrich their lexical knowledge through global reading activities; to acquire both phonological and morphological structure awareness through analytic reading; to annotate and memorize new vocabulary by way of computers, tablets or smartphones, besides training how to typewrite moving from receptive to productive activities **[fig. 10]**. The evidence of its success, combined with Whole-Part-Whole reading instruction and the focus on oral texts, lies in the level of vocabulary retention among Italian absolute beginners participating in the experimental project, reaching more than 350 terms by the end of 40 lesson hours.

e-ISSN 2385-3042
ISSN 1125-3789

5 Conclusions

By drawing upon an experimental project conducted in 2017 (Brichese, Facchin 2019), the present contribution concretely evinces how Whole-Part-Whole reading instruction – namely a possible neurological theory procedural realization – can train both sides of the brain (R- and L-Mode) through receptive activities development during early AFL learning, moving in the opposite direction from the alphabetic method. In this context, the research investigated whether Whole-Part-Whole reading instruction was more efficient than the alphabetic method in the regards to the productiveness of the AFL learning progress.

Throughout the study, elements of applied neurolinguistics, explicitly the concepts of neurological bimodality and directionality, were oriented with the practice of Teaching Arabic as a Foreign Language. Recent neurolinguistic findings were connected to Arabic language specificity, expressly its 'quasi-transparent' orthography, phonology – both assembled and addressed – and morphology, which all pose numerous challenges to AFL instructors. From this perspective, the study elucidated how awareness of phonological and morphological structures is fundamental to early AFL learning and teaching. Although this area, particularly early reading and writing, has been notably examined by Arab TAFL (Ḥassān 1983; al-Duḫayl 1992; al-ʿUṣaylī 2002) and other scholars (Abu-Rabia 1997, 2006) over the last thirty years, further attention needs to be drawn to such aspects. This issue becomes even more central if we consider the particular status of AFL absolute beginner learners, who – like illiterates – need to be guided in the study of a new writing system, different manual skills and eye movement from right to left, in addition to phonological and morphological structure awareness. Accordingly, an issue that needs to be addressed in the very near future is to what extent these aspects can effectively be included in the AFL syllabus alongside general reading ability, and at what level.

Thus far, theories along with concrete results have evidenced that Whole-Part-Whole reading instruction, based on neurolinguistic knowledge and the affective-humanistic approach, ensures both learners and their teacher favorable achievements in the learning progress within the classroom of Arabic as a Foreign Language. Even though the experimental project, and its derived methodological proposal presented above, substantiated the convenience of the reading instruction, its impact on the teaching and learning process still needs to be further discussed and analyzed by means of tailored research. Hence, further probing should include testing – from a psycholinguistic stance – the validity of the Whole-Part-Whole method in early AFL learning through control groups, where the first learns to read in Arabic using reading instruction, while the second with the

Annali di Ca' Foscari. Serie orientale
56, 2020, 171-190
e-ISSN 2385-3042
ISSN 1125-3789

traditional alphabetic method. Suitably, the objective of the study is to be the initial theoretical groundwork encouraging scholars to further discuss the virtues and limits of the aforementioned Whole-Part-Whole reading instruction as compared to the traditional alphabetic method, while also promoting empirical studies to verify the efficacy of one over the other.

Bibliography

Abu-Rabia, Salim (1997). "Reading in Arabic Orthography. The Effect of Vowels and Context on Reading Accuracy of Poor and Skilled Native Arabic Readers in Reading Paragraphs, Sentences, and Isolated Words". *Journal of Psycholinguistic Research*, 26, 465-82. DOI https://doi.org/10.24297/jal.v5i2.2848.

Abu-Rabia, Salim (2001). "The Role of Vowels in Reading Semitic Scripts. Data from Arabic and Hebrew". *Reading and Writing. An Interdisciplinary Journal*, 14, 39-59.

Abu-Rabia, Salim (2006). "Reading in Arabic Orthography. Characteristics, Research Findings, and Assessment". Malatesha Joshi, R.; Aaron, P.G. (eds), *Handbook of Orthography and Literacy*. Mahwah, NJ: Lawrence Erlbaum Associates, 321-38. DOI https://doi.org/10.4324/9780203824719.

Alhawary, Mohammad T. (2001). "Computer-Assisted Language Learning as a Reinforced and Remedial Tool for Proficiency-Oriented Syllabi". *Al-ʿArabiyya*, 33, 55-100.

Bakr al-Sayyid Yaʿqūb; Šafīq ʿAṭā, Muḥammad; al-Sayyid Muḥammad al-ʿAzzāwī (1975). *Taʿlīm al-ʿarabiyya bi-l-rādyū*. al-Qāhira: Hayʾat al-iḏāʿa al-miṣriyya.

Balboni, Paolo E. (2008). *Fare educazione linguistica. Attività didattiche per italiano L1 e L2, lingue straniere e classiche*. Torino: UTET.

Balboni, Paolo E. (2015). *Le sfide di Babele. Insegnare le lingue nelle società complesse*. Torino: UTET.

Brichese, Annalisa; Facchin, Andrea (2019). "Quizlet.com. Imparare a leggere e scrivere in arabo attraverso le glottotecnologie. Una proposta di progetto didattico". *Revista de Humanidades Digitais*, 1. DOI https://doi.org/10.21814/h2d.234.

Bourisly, Ali K. et al. (2013). "Neural Correlates of Diacritics in Arabic. An fMRI Study". *Journal of Neurolinguistics*, 26, 195-206. DOI https://doi.org/10.1016/j.jneuroling.2012.07.004.

Cardona, Mario (2008). "L'abilità di lettura e lo sviluppo della competenza lessicale". *Studi di Glottodidattica*, 2, 10-36.

Chamsine, Chirine (unpublished). "La dimension socioculturelle dans la didactisation du vocabulaire politique médiatique". International Conference 'Le CECRL et la didactique de l'arabe: bilan et horizons' (Montréal, 30 October 2014).

Chen Chansheng et al. (2009). "Cultural Neurolinguistics". *Progress in Brain Research*, 178, 159-71. DOI https://doi.org/10.1016/s0079-6123(09)17811-1.

CoE, Council of Europe (2001). *Common European Framework of Reference for Languages*. Cambridge: Cambridge University Press.

e-ISSN 2385-3042
ISSN 1125-3789

CoE, Council of Europe (2018). *Common European Framework of Reference for Languages. Learning, Teaching, Assessment. Companion Volume with new Descriptors*. Strasbourg: Council of Europe.

Danesi, Marcel (1988). "Neurological Bimodality and Theories of Language Teaching". *Studies in Second Language Acquisition*, 10, 13-31. DOI https://doi.org/10.1017/s0272263100006938.

Della Puppa, Francesca (2018). "Lingua araba a scuola. Nuove prospettive glottodidattiche". Coonan, Carmel Mary; Bier, Ada; Ballarin, Elena (a cura di), *La didattica delle lingue nel nuovo millennio. Le sfide dell'internazionalizzazione*. Venezia: Edizioni Ca' Foscari Digital Publishing, 429-40. DOI https://doi.org/10.30687/978-88-6969-227-7/026.

Ditters, Everhard (2006). "Technologies for Arabic Language Teaching and Learning". Wahba, Kassem M.; England, Liz; Taha, Zeinab A. (eds), *Handbook for Arabic Language Teaching Professionals in the 21st Century*, vol. 1. Mahwah (NJ): Lawrence Erlbaum Associates, 239-52.

al-Duḥayl, Ḥamad ibn Nāṣir (1992). "Tağribat maʿhad taʿlīm al-luġa al-ʿarabiyya bi-Ğāmiʿat al-imām Muḥammad ibn Saʿūd al-islāmiyya fī mağāl taʿlīm al-luġa al-ʿarabiyya li-ġayr al-nāṭiqīn bi-hā". al-Munaẓẓama al-ʿarabiyya li-l-tarbiya wa-l-ṯaqāfa wa-l-ʿulūm, *Taʿlīm al-luġa al-ʿarabiyya li-ġayr al-nāṭiqīn bi-hā: Qaḍāyā wa-taǧārib*. Tūnis: al-Munaẓẓama al-ʿarabiyya li-l-tarbiya wa-l-ṯaqāfa wa-l-ʿulūm, 69-91.

El Essawi, Raghda (2018). "Importance of Collaborative Tech-Based Learning Model for Teacher Education". Wahba, England, Taha 2018, 385-98. DOI https://doi.org/10.4324/9781315676111.

Evans, Erin G. (2008). *Onset and Rime Instruction in a Low Level ABE ESOL Reading Classroom* [Capstone for Master's in ESL]. Saint Paul (MN): Hamline University.

Facchin, Andrea (2016). "Studenti registi: realizzazione di un videoclip per stimolare il progresso linguistico nella classe di arabo LS di livello intermedio". Ghia, Elisa; Marcucci, Giulia; Di Stefano, Fiorella (a cura di), *Dallo schermo alla didattica di lingua e traduzione: otto lingue a confronto*. Pisa: Edizioni ETS, 207-24.

Facchin, Andrea (2019). *Teaching Arabic as a Foreign Language. Origins, Developments and Current Directions*. Amsterdam: Amsterdam University Press.

Forrester, Gillian S. et al. (eds) (2018). *Cerebral Lateralization and Cognition. Evolutionary and Developmental Investigations of Behavioral Biases*. *Progress in Brain Research*, vol. 238. Amsterdam: Elsevier.

Freddi, Giovanni (1994). *Glottodidattica. Fondamenti, metodi e tecniche*. Torino: UTET.

Froud, Karen; Khamis-Dakwar, Reem (2017). "Neurophysiological Investigations in Studies of Arabic Linguistics. The Case of Arabic Diglossia". Benmamoun, Elabbas; Bassiouney, Reem (eds), *Handbook of Arabic Linguistics*. London; New York: Routledge, 249-62. DOI https://doi.org/10.4324/9781315147062–13.

Gardner, Howard (2006). *Multiple Intelligences. New Horizons in Theory and Practice*. New York: Basic Books.

Giolfo, Manuela E.B.; Salvaggio, Federico (2018a). "A Digitally Assisted Model of Integration of Standard and Colloquial Arabic Based on the Common European Framework". al-Batal, Mahmoud (ed.), *Arabic as One Language. Integrating Dialect in the Arabic Language Curriculum*. Washington: Georgetown University Press, 93-113.

e-ISSN 2385-3042
ISSN 1125-3789

Giolfo, Manuela E.B.; Salvaggio, Federico (2018b). *Mastering Arabic Variation. A Common European Framework of Reference Integrated Model*. Roma: Aracne Editrice.

Grabe, William (1991). "Current Developments in Second Language Reading Research". *TESOL Quarterly*, 325(3), 375-406. DOI https://doi.org/10.2307/3586977.

Gwilliams, Laura; Marantz, Alec (2015). "Non-Linear Processing of a Linear Speech Stream. The Influence of Morphological Structure on the Recognition of Spoken Arabic Words". *Brain & Language*, 147, 1-13. DOI https://doi.org/10.1016/j.bandl.2015.04.006.

Ḥassān, Tammām (1983). *al-Tamhīd fī iktisāb al-luġa al-ʿarabiyya li-ġayr al-nāṭiqīn bi-hā*. Makka al-Mukarrama: Maʿhad al-luġa al-ʿarabiyya, Ǧāmiʿat Umm al-Qurà.

Hokeness, Andrea P. (2010). *Improving Phonemic Awareness Using Whole-Part-Whole Reading Instruction and the Language Experience Approach with Semi-Literate and Non-Literate Karen-Speaking Adults* [MA Dissertation]. Saint Paul, MN: Hamline University.

Ibrahim, Raphiq; Eviatar, Zohar; Aharon-Peretz, Judith (2002). "The Characteristics of Arabic Orthography Slow Its Processing". *Neuropsychology*, 16, 322-6. DOI https://doi.org/10.1037/0894-4105.16.3.322.

Idrissi, Ali; Kehayia, Eva (2004). "Morphological Units in the Arabic Mental Lexicon. Evidence from an Individual with Deep Dyslexia". *Brain & Language*, 90, 183-97. DOI https://doi.org/10.1016/s0093-934x(03)00431-0.

Kruidenier, John (2002). *Research-Based Principles for Adult Basic Education Reading Instruction*. Washington, DC: National Institute for Literacy and Partnership for Reading.

Lado, Robert (1964). *Language Teaching. A Scientific Approach*. New York: McGrow-Hill.

al-Mannai, Haya (2006). *Cognitive Predictors of Early Arabic Literacy. Informing the Development of Dyslexia Assessment in Bahrain* [PhD Dissertation]. Guildford: University of Surrey.

McBride-Chang, Catherine et al. (2005). "Changing Models across Cultures. Associations of Phonological Awareness and Morphological Structure Awareness with Vocabulary and Word Recognition in Second Graders from Beijing, Hong Kong, Korea, and the United States". *Journal of Experimental Child Psychology*, 92, 140-60. DOI https://doi.org/10.1016/j.jecp.2005.03.009.

McShane, Susan (2005). *Applying Research in Reading Instruction for Adults. First Steps for Teachers*. Washington, DC: National Institute for Literacy and National Center for Family Literacy.

al-Nāqa, Maḥmūd Kāmil (1985a). *Barāmiǧ taʿlīm al-ʿarabiyya li-l-muslimīn al-nāṭiqīn bi-luġāt uḫrà fī ḍawʾ dawāfiʿi-him*. Makka al-Mukarrama: Maʿhad al-luġa al-ʿarabiyya, Ǧāmiʿat Umm al-Qurà.

al-Nāqa, Maḥmūd Kāmil (1985b). *Taʿlīm al-luġa al-ʿarabiyya li-l-nāṭiqīn bi-luġāt uḫrà*. Makka al-Mukarrama: Maʿhad al-luġa al-ʿarabiyya, Ǧāmiʿat Umm al-Qurà.

al-Qāsimī, ʿAlī Muḥammad (1979). *Ittiǧāhāt ḥadīta fī taʿlīm al-ʿarabiyya li-l-nāṭiqīn bi-luġāt uḫrà*. al-Riyāḍ: ʿImādat šuʾūn al-maktabāt, Ǧāmiʿat al-Riyāḍ.

Ṣīnī, Maḥmūd Ismāʿīl; ʿAbd al-ʿAzīz, Nāṣif Muṣṭafà; Ḥusayn, Muḫtār al-Ṭāhir (1985). *Muršid al-muʿallim fī tadrīs al-luġa al-ʿarabiyya li-ġayr al-nāṭiqīn bi-*

hā. Taṭbīqāt ʿamaliyya li-taqdīm al-durūs wa-iǧrāʾ al-tadrībāt. al-Riyāḍ: Maktab al-tarbiya al-ʿarabī li-duwal al-Ḫalīǧ.

Taha, Haitham; Ibrahim, Raphiq; Khateb, Asaid (2013). "How Does Arabic Orthographic Connectivity Modulate Brain Activity During Visual Word Recognition. An ERP Study". *Brain Topography*, 26, 292-302. DOI https://doi.org/10.1007/s10548-012-0241-2.

Ṭuʿayma, Rušdī Aḥmad (1982). *al-Usus al-muʿǧamiyya wa-l-taqāfiyya li-taʿlīm al-luġa al-ʿarabiyya li-ġayr al-nāṭiqīn bi-hā*. Makka al-Mukarrama: Maʿhad al-luġa al-ʿarabiyya, Ǧāmiʿat Umm al-Qurà.

Trupke, Julie (2007). *Improving literacy of L1-non-Literate and L1-Literate Adult English as a Second Language Learners. Using Whole-Part-Whole Reading Instruction* [Master's Plan B Paper]. Twin Cities, MN: University of Minnesota.

Trupke-Bastidas, Julie; Poulos, Andrea (2007). "Improving Literacy of L1-non-Literate and L1-Literate Adult English as a Second Language Learners". *MinneWITESOL Journal*, 24.

al-ʿUṣaylī, ʿAbd al-ʿAzīz ibn Ibrāhīm (2002). *Asāsiyyāt taʿlīm al-luġa al-ʿarabiyya li-l-nāṭiqīn bi-luġāt uḫrà*. al-Riyāḍ: Maʿhad taʿlīm al-luġa al-ʿarabiyya, Ǧāmiʿat al-imām Muḥammad ibn Saʿūd al-islāmiyya.

Vinogradov, Patsy (2001). "A Look at ESL Instruction for Literacy-Level Adults". *MinneTESOL/WITESOL Journal*, 18, 23-41.

e-ISSN 2385-3042
ISSN 1125-3789