Handbook of Arabic Literacy
Insights and Perspectives
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While language defines humanity, literacy defines civilization. Understandably, illiteracy or difficulties in acquiring literacy skills have become a major concern of our technological society. A conservative estimate of the prevalence of literacy problems would put the figure at more than a billion people in the world. Because of the seriousness of the problem, research in literacy acquisition and its breakdown is pursued with enormous vigor and persistence by experts from diverse backgrounds such as cognitive psychology, neuroscience, linguistics and education. This, of course, has resulted in a plethora of data, and consequently it has become difficult to integrate this abundance of information into a coherent body because of the artificial barriers that exist among different professional specialties. The purpose of this series is to bring together the available research studies into a coherent body of knowledge. Publications in this series are of interest to educators, clinicians and research scientists in the above-mentioned specialties. Some of the titles suitable for the Series are: fMRI, brain imaging techniques and reading skills, orthography and literacy; and research based techniques for improving decoding, vocabulary, spelling, and comprehension skills.

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Handbook of Arabic Literacy

Insights and Perspectives

Volume 9
Language defines humankind; writing defines civilization (Daniels 1996). Modern civilization was then redefined by the printing press and paper. And today, writing technology is again transforming our world as the electronic media turn the world on paper (Olson 1994) into a paperless world. Yet the key to the world of print, whether on a computer screen, paper, clay or stone remains unchanged; the near-instantaneous access to the meanings locked in the symbol strings of the written text. Around half of humanity, however, does not hold this key. The illiterate and semi-literate are excluded. In most parts of Asia and Africa, illiteracy and poverty go hand in hand. Curiously, in the Arabic-speaking world, literacy levels are uniformly and alarmingly low in wealthy and impoverished societies alike. Even highly educated and skilled readers of Arabic read their native Arabic more slowly than they read non-native languages such as English, Hindi or Arabic’s Semitic cousin Hebrew which shares the same highly synthetic poly-morphemic structure as Arabic. Why is literacy learning so difficult in Arabic?

In addressing this quandary, the present volume offers no quick-fix remedies, but it does offer a first-generation infrastructure of scientific theory and research that can inform decision-making by policy-formulators, educators and practitioners confronting the literacy challenge in Arabic on a daily basis. Saiegh-Haddad and Joshi have rendered an outstanding service to the field in this ground-breaking volume which brings together a panoply of leading scholars from the Middle East, North America, and Europe, representing a wealth of disciplinary perspectives. The depth and breadth of the scholarship will no doubt earn this handbook benchmark status for future work in this field.

Arabic is the fourth most common language in the world, and the Arabic script is the second most widely used segmental (phonemic) script after Roman. The scholarship embodied in this volume will not only inform practitioners and researchers of the Arabic language and literacy but any theory aspiring beyond language-specific status. For too long, the language and literacy research agenda has been a captive of Anglo-American concerns, overwhelmingly dominated by English. Today, the world is finally waking up to the fact that most of the world’s languages are not English-like. This Anglo-centrism is ever more poignant in the literacy domain given that English orthography is an outlier even among European alphabets (Share
Most of the world’s literacy learners are learning to read in languages and writing systems that are neither alphabetic (i.e., full and equal status is given to consonant and vowel signs) nor European. It therefore behooves researchers to keep informed of literacy studies across a range of languages and writing systems and avoid the scientific solipsism of the past in which literacy studies in languages other than English were regarded as mere exotic curiosa. This volume will become a landmark not merely because it is a world first, but because it offers all literacy scholars a wider angle lens on their own work.

September, 2013
Haifa University, Israel

David L. Share
Preface

It is customary in promoting a book to talk about an existing lacuna in the field to which the book belongs. This may or may not in fact be the case, but this tradition does indeed match the reality in the field of Arabic linguistic studies as far as this volume is concerned. Studies of Arabic literacy are meagre and they remain marginal in Arabic linguistics, in spite of the undisputed importance of this topic in understanding the language at the crossroads of psycholinguistics and language acquisition, educational linguistics, sociolinguistics and cultural studies. The multifaceted nature of this topic is reflected in the content of this volume of essays which report the findings of new research, or bring together the major insights of existing work to map aspects of Arabic literacy studies for use as a platform for future research. The net result is a volume of great reach, depth and interest. It describes, explains and offers empirical and quantitative conclusions which can help interested scholars reflect, comparatively, on literacy in Arabic and other languages from theoretically-informed perspectives.

In recent years, Arabic literacy has emerged as an issue of great educational importance in the Arabic speaking world. PIRLS results during the past few years have consistently placed participating Arab countries at the bottom of international achievement levels. Arab policy-makers and pedagogy experts have been exercised by this and are on the look-out for ways to understand the problem and to devise solutions. Arabic language teaching reforms in Arab countries during the last decade are an expression of this endeavour (I know this to be the case from my long experience in this field). Although the essays in this volume are not offered as a solution to this problem, they nevertheless provide a basis from which an understanding of it can be developed. This understanding is bound to be complex and may speak in different inflections, depending on disciplinary perspective.

This is an excellent volume and the first of its kind. It will be the first port of call for those who wish to learn about Arabic literacy. The editors and contributors are to be congratulated on this achievement.

April 2013
King’s College
Cambridge University
U.K.

Yasir Suleiman
Introduction

Among the various reasons for literacy problems that have been postulated, Vellutino et al. (2003) cite instruction and environment as being the two most fundamental factors. Instructional factors include the lack of a suitable literacy environment in schools, ineffective instructional methods, and the teachers’ lack of knowledge about language and structure (Cunningham et al. 2004; Joshi et al. 2009; McCutchen et al. 2002; Moats and Foorman 2003; Piasta et al. 2009). Environmental reasons include poor oral language development (Piasta and Wagner 2010), number of books available at home, parental attitudes, and parental models (Chiu and McBride-Chang 2006).

In addition to these factors, orthography may also influence literacy acquisition. In a seminal study, Seymour et al. (2003), examined word reading of children in grades 1 and 2 in 13 European orthographies and found that children who were learning to read in transparent orthographies such as Finnish, German, and Spanish read words faster and more accurately than children who were learning to read in opaque orthographies such as English and French. However, the majority of the studies conducted on literacy acquisition have been conducted on children speaking English, which, according to Share (2008), is an ‘outlier’ orthography.

There are very few studies on literacy acquisition among speakers of Arabic, even though it is the fourth most spoken language in the world. Further, Arabic orthography depicts interesting linguistic and orthographic features and hence offers an excellent testing ground for various competing theories of language and reading acquisition. These features include diglossia, double-script, vowelization/vocalization, root-based morphological structure and morpho-syntactic marking, to mention a few.

The chapters included in this book address linguistic, orthographic, cognitive, as well as environmental and socio-cultural factors in literacy development in Arabic. Besides being the first edited book of empirical research into language and literacy development in Arabic, it provides a representation of recent approaches to the study of Arabic literacy as well as a demonstration of the theoretical models, methods, and tools that have been recently employed in addressing literacy-related questions in Arabic. The handbook brings together a range of perspectives on the topic of literacy acquisition in Arabic and offers a discussion of the theoretical frameworks as well as the practical implications of the questions investigated. Rather than provide definitive
answers to questions regarding processing, instruction or intervention, the aim of the handbook is to offer a synthesis of contemporary research insights and perspectives on the study of Arabic literacy in the hope of generating more research interest in a hitherto neglected area of investigation. Here, we would like to thank the contributors as well as the anonymous reviewers for their invaluable contribution to this project.

Because an understanding of literacy development in any language requires first and foremost an accurate and explicit understanding of the linguistic and orthographic structure of that language, the handbook opens with an introductory descriptive chapter, co-authored by Saïegh-Haddad and Henkin-Roiffar, that provides an outline of the structure of Arabic language and orthography with specific focus on aspects of Arabic linguistic structure that have direct implications for literacy development. The chapter provides a linguistic description of Arabic, yet care was taken to ensure that its content is accessible to readers with no background in Linguistics or knowledge of the Arabic language.

The remaining chapters in this collection are clustered into five thematic parts. Part two focuses on morphological structure and orthographic complexity and features psycholinguistic research into the representation and processing of Arabic words—how information moves from the page into the lexicon of the readers—and it includes four chapters. Chapter 2, by Boudelaa, addresses the nature of the Arabic lexicon and uses evidence from spoken and written word recognition in order to probe whether the Arabic mental lexicon is morpheme-based or stem-based. In Chap. 3, Funder-Hansen addresses word recognition in root-based Arabic and uses the unique features of Arabic script and Semitic morphology to propose a language-specific model of reading. Chapter 4 also addresses orthographic features in word reading in Arabic. The authors, Eviatar and Ibrahim, synthesize the insights they have gained from a series of recent examinations of word reading in Arabic and discuss the factors that they believe contribute to difficulty in developing this ability.

Part three focuses on reading and spelling development and disorders in Arabic. In Chap. 5, Mohamed, Landerl and Elbert report an epidemiological survey of specific reading and spelling disorders in Arabic speaking children in Egypt. This study reveals a less than expected dissociation between reading and spelling in vowelized Arabic compared to other shallow orthographies, as well as a high incidence of specific reading and spelling disorders in Arabic speaking children in Egypt. In Chap. 6, Friedmann and Haddad-Hanna discuss evidence demonstrating various types of developmental dyslexias in Arabic and present new research directions that utilize orthographic features of Arabic in understanding reading breakdown. In Chap. 7, Ravid, Naoum and Nasser report a study of narrative text production in Arabic in an attempt to shed light on the developing language basis of literacy. Abu Ahmad, Ibrahim and Share report a longitudinal study from kindergarten to grade 2 of the cognitive predictors of early reading ability in Arabic in Chap. 8. Using modularity as a framework, they show that while early word recognition depends primarily on phonological abilities, reading comprehension still relies heavily on decoding as well as higher-order linguistic and cognitive abilities.

Part four, which contains five chapters, addresses various aspects of Arabic diglossia. In Chap. 9, Myhill reports comparative data on literacy rates in a number
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of countries and shows that basic literacy rates in Arabic-speaking countries are far lower than would be expected based upon their relative wealth. Using comparative evidence, he argues that much of the explanation for this lies in their usage of a standard language which is based upon an earlier version of the language which no one speaks anymore, and that the best policy for addressing this problem in initial literacy instruction would appear to be to use a strategy parallel to that adopted for languages such as Chinese, Japanese, and Sinhala in which early literacy is based on written phonological representations of the different spoken dialects. In the wake of this latter proposal, in Chap. 10, Saiegh-Haddad and Spolsky discuss some of the problems, ideological and others, in basing initial literacy in a diglossic context on the spoken vernacular. Then, the authors describe a pioneering attempt to address these problems in literacy development in Arabic. Chapter 11, authored by Laks and Berman, describes a novel approach to studying the linguistic manifestation of diglossia by analysing the linguistic structure of oral and written narrative text productions in spoken and standard Arabic, respectively, by Jordanian native speakers. This examination qualifies the linguistic distance between spoken Arabic and standard Arabic as reflected in the actual use of the two language varieties in oral and written text production. In Chap. 12, Rosenhouse examines another reflection of diglossia in the language used in textbooks in Israeli Arabic-speaking schools. The study analyses the language used in the textbooks and its proximity/distance from the language of speakers in an attempt to gain insight into the consistency, or lack thereof, in the linguistic elements that are covered in these textbooks, as well as of the suitability of the texts to the young learners and their effectiveness in promoting language acquisition. Chapter 13, authored by Khamis-Dakwar and Makhoul describes the rationale and research evidence behind the construction of a novel language assessment tool—ADAT (Arabic Diglossic knowledge and Awareness Test) that aims at measuring diglossic knowledge development in typically developing native Arabic-speaking children.

Part five addresses socio-cultural aspects of literacy development in Arabic. Chapter 14, authored by Tibi and McLeod, reports a study of the acquisition of emergent literacy in the Emirate of Abu Dhabi in the United Arab Emirates. In particular, it examines the language and literacy acquisition consequences of a newly implemented bilingual educational plan in the country—the “New School Model”, which entails bilingual education (Arabic & English) from kindergarten through the years of compulsory schooling. Chapter 15, authored by Korat, Aram, Hassunha-Arafat, Hag-Yehiyalaraki, and Saiegh-Haddad, is a study of the quality of storybook reading and joint word writing by Arabic speaking mothers with their young children. The study tested the influence of these activities, as well as socio-economic status and home literacy environment, on children’s literacy attainment and provided insights into the design of family intervention programs so as to maximize children’s literacy growth within the Arabic-speaking family.

Part six includes three chapters that address literacy development in special populations. These populations include bilingual English-Arabic speakers in the U.S.A., Arabic foreign language learners in Israel, and Braille reading of Arabic native speaking blind individuals. Chapter 16, authored by Farran, Bingham and
Matthews, reports a study of the role of environmental variables (parent education, beliefs, and home language use and literacy practices) in language and literacy outcomes among English-Arabic bilingual children in the US, and reveals a strong relationship between parent home language use and the development of various language and literacy skills in Arabic in this population. Chapter 17 describes two studies of the acquisition of grapho-phonemic representations among native Hebrew speakers learning Arabic as a foreign language. Based on quantitative and qualitative analyses of spelling errors among eighth graders during the second year of exposure to the written form of Arabic, and an examination of the developmental trajectory of grapho-phonemic knowledge among eighth, ninth, and tenth graders, Russak and Fragman demonstrate slow progress in spelling accuracy in this population and suggest that the phonological distance between Arabic and Hebrew may be one important cause. The last chapter in this collection, Chap. 18, authored by Jarjoura and Karni is unique in testing Braille reading in blind and sighted Arabic native speakers. The study reports the findings from Braille reading tasks of vowelized and unvowelized words and texts in Arabic. It shows, inter alia, that Arabic Braille readers, children and adults, are pervasively slower compared to English Braille readers. On the basis of these results, as well as the analysis of errors, the authors argue that specific characteristics of Arabic, including diglossia and vowelization may be responsible for the observed slowness in Braille reading.

### Transcription Conventions

All chapters included in this collection follow uniform phonemic transcription and indexing conventions. The transcription of Arabic words follows a broad phonemic transcription system, unless in cases where a phonetic transcription was required. The phonetic symbols used are a combined modified version of the IPA (International Phonetic Alphabet) and the APA system used by American linguists. An index to the phonetic symbols used in representing Arabic sounds is provided in the tables below (Tables 1 and 2). Slant lines are used to enclose phonemes presented in an italicized font (e.g., /b/, /m/). No slant lines are used to enclose the transcrip-

<table>
<thead>
<tr>
<th>Sound symbol</th>
<th>Sound description</th>
<th>Arabic grapheme and name</th>
</tr>
</thead>
<tbody>
<tr>
<td>/a/</td>
<td>short low vowel</td>
<td>ﻋُمْلَةٌ&lt;sub&gt;أَلْفٍ&lt;/sub&gt;</td>
</tr>
<tr>
<td>/a:/</td>
<td>long low vowel</td>
<td>ﻋُمْلَةٌ&lt;sub&gt;أَلْفٍ&lt;/sub&gt;</td>
</tr>
<tr>
<td>/u/</td>
<td>short high back vowel</td>
<td>ﻋُمْلَةٌ&lt;sub&gt;وُؤُوْزٌ&lt;/sub&gt;</td>
</tr>
<tr>
<td>/u:/</td>
<td>long high back vowel</td>
<td>ﻋُمْلَةٌ&lt;sub&gt;وُؤُوْزٌ&lt;/sub&gt;</td>
</tr>
<tr>
<td>/i/</td>
<td>short high front vowel</td>
<td>ﻋُمْلَةٌ&lt;sub&gt;كُسَـرَةٌ&lt;/sub&gt;</td>
</tr>
<tr>
<td>/i:/</td>
<td>long high front vowel</td>
<td>ﻋُمْلَةٌ&lt;sub&gt;يِـاءٌ&lt;/sub&gt;</td>
</tr>
</tbody>
</table>
tion of full words, however (e.g., \textit{walad}). Square brackets \([\ ]\) are used for phonetic transcription and quotes are used for English glossing (e.g., \textit{walad} ‘boy’); where necessary, the actual Arabic word is also provided. A hyphen—is used to mark morpheme boundaries (e.g., \textit{l-walad} ‘the boy’; \textit{bi-bayt-	extit{i} ‘in my house’) and dots are used to mark syllable boundaries (e.g., \textit{mak.ta.bu.na:} ‘our desk’). Where internal morphological structure is relevant, capital letters are used for root consonants (e.g., KTB) and capital C for the consonant slots of word patterns (e.g., CaCaCa). Capital letters are also used to represent the letters of written words, (e.g., KTB, KATB, MKTUB).

### References


