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▶ **To cite this version:**

Najia Abdallaoui Maan. A woman Post-Literacy Experience: Challenges and Impact. 2019. hal-02282345

HAL Id: hal-02282345

https://univ-tlse2.hal.science/hal-02282345

Preprint submitted on 9 Sep 2019

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A woman Post- Literacy Experience: Challenges and Impact

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Abstract

The study enables the subject to have ownership of her own experience of a post-literacy intervention in a Moroccan context where illiteracy rates are still dismally high and where the rural population and women are the most affected. The approach has allowed the investigation to provide deep insight and a vivid holistic picture of an eager learner who has a sharp awareness of her needs and who wants to acquire literacy to understand the world surrounding her and be autonomous, far from the stereotypical image of the "low-literate and ignorant person", interested only in daily life matters. The subject has managed to clearly express her aspirations, struggles, successes, challenges and indirectly show the interdependence of the factors involved. Likewise, she has expressed her emotional link with Modern Standard Arabic and her preference for it, rather than the vernacular, as the language of literacy and the lingua franca with a wider world than the Moroccan restricted context. The study has also revealed the liberating role of using ICTS for general purposes and the usefulness of relying on a critical schematic- interactive approach to reading comprehension. Nonetheless, the flawless fluency achieved in reading the Quran has been indicated not to transfer to other general texts. Further research is required to explain the non- correspondence between fluency and reading comprehension in Arabic and the fitting reading instruction models. Likewise, multidisciplinary independent academic teams working simultaneously would contribute to confronting the issue of illiteracy and empowering men and women to take charge of their own lives.

Introduction

It is common knowledge now that literacy is a basic human right and a prerequisite for any nation' sustainable development, peace and democracy. It is central in achieving the goals of "eradicating" poverty, improving healthcare, promoting gender equality, and empowering men and women.

In fact, at the turn of the Century, the United Nations set reducing the rate of illiteracy by half by 2015 as the fourth of its Millennium development goals. Immense efforts and budgets were deployed but of little or no avail. Even the minor improvements noted in the rate of literacy are attributed by UNESCO (2015), not to the efficacy of the programmes' implementation, but to the replacement of the older less educated generation by a younger and better educated

one[1]. UNESCO (ibid.) concludes that four factors caused the failure of diverse campaigns: ambiguous political commitment to the question, faulty interpretation of literacy definition, non- use of the mother tongue in instruction, and finally, lack of demand for literacy in daily life and the consequent lack of opportunities to utilize it and maintain it.

Later, inadequate pedagogical approaches have been pointed out as additional setbacks to literacy interventions, e.g. reliance on "one size fits-all" programs unsuitable to the wide diversity of learners, the gap between classroom teaching and real life needs, lack of training for instructors, lack of flexibility and provision for learners' personal, family, social or work constraints (UNESCO, 2017a; 2017b).

Not all implicated in adult basic literacy may agree on the causes mentioned above and therefore any assertion should be taken with caution. First, more than 781 million people are illiterate and more than 100 countries are concerned (UNESCO, 2015) and any generalization about these could be flawed and contradictory[2]. Second, in developing countries, different stakeholders (national governments, different governmental bodies, non-governmental and international organizations) are involved in literacy campaigns in the same country. Their ideological, instructional agenda and recommendations may be conflicting and should be reviewed in relation to the learners' and the individual country's national interests. Last, methodologies and learning assessments, used in low-income countries and devised in richer countries by international organisations, may be "problematic" and even misleading to policy makers (Benavot, 2015; Wagner, 2015).

As a consequence of the last argument, the United Nations Development Programme (UNDP) dropped adult literacy rate as a human development index (HDI). It considers that, first, literacy cannot be measured in a reliable way, which makes it an inadequate and "useless" indicator of development, and second, it cannot discriminate among countries since the level of education across the world is high now (Kovacevic, 2011; UNESCO/UIS, 2015). This decision can have serious negative consequences on illiterate people in general and on vulnerable and poor women in particular because illiteracy is one of the major barriers to their economic progress, empowerment and emancipation (Stromquist, 2016).

The solution to illiteracy is not belittling or ignoring it, but deepening our knowledge through qualitative research, academically independent and culturally contextualized, far from generalizations and stereotypes.

Within this perspective, the present paper reports on a longitudinal case study which enables the subject to engage actively in a post-literacy intervention in a Moroccan Arabic speaking context. The subject, in teamwork with the researcher, manages to examine and communicate

[1] To illustrate this, we can refer to the example of Malawi where "the literacy rate of women aged 20–34 years was 49% in 2000 and 63% in 2010. However, the literacy rate of the cohort of women who were aged 20–34 years in 2000 and 30–44 years in 2010 remained constant at 49%", UNESCO (2015, p.144).

[2] For example, UNESCO two reports about illiteracy, "EFA National Report 2013-2015, Morocco", published in 2014, and the second one, "Education for All 2000-2015: Achievements and Challenges", published in 2015, hold very different conclusions about literacy programs. While the first one (UNESCO, 2014, p.82) talks about governmental commitment and successful literacy programs, the second report (UNESCO, 2015) talks about "almost no real gain", limited progress (p.143), and ambiguity of global commitment (p.145).

her perceptions of her purposes for learning, her linguistic and instructional choices, processes of acquiring reading and ICTs skills, her progression at learning, strengths and challenges, and the impact of literacy acquisition on raising awareness, autonomy and empowerment.

In other words, the contribution of the paper resides in:

1. enabling the subject to have ownership of her learning, actively participate in the study and reveal that her needs and views may differ from top-down governmental decisions or international organizations' recommendations.

2. constructing a whole picture, from the ground up, of beginning and post-literacy experience in its political, ideological and socio-cultural context, and highlighting that literacy is worth the effort even if basic skills are not fully acquired. Literacy is manifold, and above all it is about raising awareness, building-up self-confidence, autonomy and empowerment;

3. pointing out that the language (s) of instruction should open horizons, not close them down and that reading instruction in Arabic (as a Semitic language) should be handled differently from English or other European languages;

4. showing that general (rather than specific to a narrow employability purpose) e-skills acquisition provides liberating potentials if the learner has adequate access;

5. indicating that acquiring fluency at reading the Quran does not transfer to general reading performance.

The following section sets up the conceptual framework which has formed the basis of the research at hand. It defines literacy, explores the major orientations of the reading process, surveys controversies related to the use of Arabic as the language of instruction, reviews research about adult learners' andragogy and covers the use of ICTs as a means to improve reading ability, to enhance autonomy and allow engagement in broad-range literacy activities. The last section of the paper presents the questions of the research, procedures, materials, a detailed account of the learner's experience, analysis and discussion of the data obtained.

Conceptual Framework

Defining Literacy

Many people and national governments still equate literacy with the ability to read and write (simple statements) and describe people as either literate or "illiterate". Yet, research has exposed the complexity of the concept and its essential features (Wagner, 1993; 2003; 2015). The difficulty mainly lies in grasping the slippery nature of literacy and determining relevant contents, standards, levels, and efficient measurements of achievements. In fact, literacy's forms and functions have always changed with the changing social dynamics and the tools and technologies which have been produced. Literacy does not involve only a set of skills but knowledge and social practices which enable people to develop their personal potential and to function efficiently in their own lives, their communities and societies. Literacy is not therefore an abstract or universal concept, to be offered to masses within standardized and large scale programmes (Mellard et al, 2015; Benavot, 2015). Nevertheless, in an attempt to determine a working definition, UNESCO (2017a) recognizes some of its essential features.

Literacy is about the purposes it serves as a means of communication and expression in whatever media it is carried out. It is learner-specific and context-specific; and finally, it is not an-all or nothing skill but an ongoing process where individual performance is placed along a continuum measured by a series of tests.

It is noteworthy that this broad perspective does not depart from the early definitions of literacy which focus on reading and writing skills. Instead, it builds on them since writing and reading are indispensable to any engagement with literate activities. Likewise, in an online-based world, digital skills have become essential to engagement in all aspects of life and to the prevention of social marginalization and exclusion both in the physical and virtual spheres (UNESCO, 2018).

Bearing in mind the above, literacy is regarded here as an ongoing process which builds on previous knowledge of the individual and is acquired, practiced and applied to enable learners pursue their personal and social purposes, develop their potential, and achieve autonomy and empowerment. Nevertheless, to obtain deep understanding of the issue, the current study focusses on basic reading improvement, with Arabic, as the language of instruction and on the impact of digital skills acquisition on advancing literacy, enabling learners to meet their needs and achieve autonomy and empowerment.

Understanding the Reading Process and Instructional Implication

While not all learning depends on written texts, reading ability remains central in the modern times in allowing the learner to have access to knowledge, engage in the wide-range implicated literacy activities and cope with the plethora of formats in which they are presented. Research, however, has demonstrated the complexity of the reading process and many of the unresolved issues related to reading instruction (Alexander & Fox, 2013; Pearson & Cervetti, 2015).

The early research on reading was, concurrently with other related disciplines, shaped by Behaviourism. This theory assumes that reading is a bottom-up process which relies on decoding perceptual stimuli. The learner approaches reading in a linear fashion, recognizes visual signals and associates them with sounds, then with letters, and assembles them into words, phrases and sentences. Reading occurs, not as growth or development, but as the learning of discrete skills through repetition and controlled stimulation (Gough, 1976). This approach fell out of favour with the advent of the cognitive theory only to regain force later (especially in the US) with an emphasis on phonics, vocabulary and decontextualized texts in reading (Cassidy et al, 2016; 2017).

The next major orientation was the cognitive model which highlighted the significance of meaning and internal mental operations involved in processing information during the reading act. Reading is accordingly assumed to be an inherent ability and meaning is not data-driven or text-based but reader-based. The reader processes information in a top-down manner and uses his prior knowledge and expectations to make sense of the text (Goodman, 1968).

Embedded in cognitive theory, schema theory provided more insight into human cognition and the organization of knowledge in the mind. Reading is regarded as an interaction between the text and the reader's schematic knowledge: i.e. the content and rhetorical structures

knowledge which the reader has about the text, the reader's knowledge of personal abilities, goals, knowledge about procedures, and successful meaning construction. Reading consists of "bridging the gaps" between the reader's and the writer's schematic worlds (Anderson & Pearson, 1984; Wilson and Anderson, 1986). Alongside the above, vast research investigated the text's characteristics (e.g. story grammar, cohesion, coherence, structure) and has shed light on their role in enhancing construction of meaning (Meyer, 1975; Kintsch & Van Dijk, 1978).

Within this framework, the reader holds a central position. Focus is placed on the cognitive strategies utilized to identity the relevant cues in the text, to organize and comprehend them, to activate related concepts in memory, to reconstruct the incoming information and integrate it within existing prior knowledge. Metacognitive strategies, or self-management and planning (Wenden, 1991) are also essential in that learners are in charge of their learning to read, know their strengths and weaknesses, set goals, plan, monitor and evaluate their reading. Instruction in the use of successful strategies to approach reading can enhance performance. Strategies alone, however, do not explain what happens during the reading act. Other factors are engaged. Motivation in reading, purpose, self-confidence, beliefs about what reading is have been demonstrated to affect readers' behavior, strategy use and reading performance more than linguistic proficiency (Abdallaoui Maan, 2001).

In parallel, sociocultural perspectives assume that reading always interacts with social relations, references, cultural ideals, values, power and politics. Moreover, knowledge occurs, not only in individual minds, but also in social and contextual interchanges and in collaborative and shared learning. Both formal, "schooled", and informal, "unschooled", "knowledge(s)" are salient in learning. Nevertheless, informal knowledge, which is a significant and dynamic force in learning, may prove negative when it obstructs conceptual change through misconceptions and strong opinion (Alexander & Fox, 2013).

The ever- developing theories about the reading process described above and the diversity of perspectives and disciplines in which research has been grounded, e.g. psychology, education, linguistics, social studies, information processing, etc. have generally been reflected in reading instruction.

Nonetheless, reading instruction has also periodically been responsive to major "external" or "internal" forces which have caused lasting transformations to the field (Alexander & Fox, 2013; Cassidy et al, 2017). Actually, trends in the field may reflect the interests of academics, their institutions or some emergent social needs they may have to address; e.g. to review reading instruction to keep up with the new era of new technologies, digital reading and fake news phenomena.

Trends may also respond to the concerns of external bodies/authorities, State policies and political ideologies. For example, the revival of focus on phonics in the US classrooms has been brought about by the National Reading Panel, a State body formed at the request of Congress. Other researchers and educators decry governmental interference into education and claim that decades of research and insights into reading have been ignored as well as the topics which require more attention, e.g. critical reading, literacy coaches, reading specialists, and programmes for struggling readers (Cassidy et al, 2016; 2017).

In sum, whatever the diversity and controversies prevailing in the domain, a sort of consensus exists about, first, the interaction between text, reader, and context- and their corresponding connected factors- during the act of reading, second the ever-changing nature of reading, especially now with the advent of new technologies and digital texts and formats; and last the ideological and political involvement in the instructional orientation.

In view of the above, a cognitive schema-interactive model seems to be an adequate theoretical basis for the present research. It allows for both top-down and bottom up processing, strategies and metacognitive processes use, and the implication of the reader's individual factors, e.g. language proficiency, prior knowledge, purposes, and beliefs.

Arabic and Reading Acquisition

As a follow up of the preceding, this part would normally focus on the different methods used to teach low-literate people reading in Arabic, the language of concern in this study. Unfortunately, research on the subject is rather scarce and most of it is concerned with children or people with speech disabilities. Actually, the question of what language to use in instruction is still time and energy-consuming even at the formal school level.

One would think that many decades after the colonial era, and after the establishment of Modern Standard Arabic as the first language of instruction, surviving the competition of European languages, the focus would be placed on practical issues like contents, methods, teacher training, funding, learning materials, easy access to schools, pre-school exposure, family environment, etc. In other words, educational policies' focal point should have been redressing the failure within the educational system to ensure its strength and continuity instead of engaging in a debate driven by baffling politico-ideological reasons.

Arabic is one of the six official languages of the United Nations, fourth of the ten top list of languages used in the Web[3], the first language of over 400 million people, and used as the language of the Quran by more than a billion people across the world[4]. The spread of Islam from Persia to Spain resulted in having vast numbers of speakers of other languages adopt Arabic and participate in its evolution[5]. Arabic, in its turn, had a large impact on the languages with which it came into contact, especially as a source of vocabulary (e.g. Amazigh, Amharic, Swahili, Portuguese, Spanish, Sicilian, Persian, Bosnian, Uzbek, Turkish, etc.).

For many centuries, Arabic expressed a rich and dynamic culture and was the language of politics, science, mathematics and literature (Beeston, 1970). Later, in the middle of the nineteenth century, during the renaissance movement ("Nahda"), the Arab countries had to face the challenge of expressing thoughts and developments of the modern world, European culture and sciences. They had recourse to Arabic partly because of its links to Islam but also because of its "excellence as a tool of expression" (Ibid. p.15). As a result, Arabic lexicon

[3] https://www.internetworldstats.com/stats7.htm
[4] https://unesdoc.unesco.org/ark:/48223/pf0000217912

[5] After the death of the prophet in the 7th C. A.D., with a view to preserve the Quran from being misread and distorted by non- native speakers, his followers codified Arabic and introduced the vowel marks (or diacritics) placed above or below the consonant which they follow in speech (Beeston, 1970).

underwent tremendous change, but very little was altered in its structural and morphological features. In the twentieth Century, Arabic also served as the unifying means to assert people's identity and support the fight against the European colonizers and their linguistic and civilizational dominance (Ashford, 1964).

Despite this long literacy history and its capacity to adapt to new demands, Arabic is supposed to be one of the main barriers to literacy acquisition. This assumption is based on two claims:

1. The complexity of Arabic characteristics, script, orthography, vowel system (or lack of voweling), syntax and morphology underlie Arab World learners' low performance in reading comprehension.
2. Arabic dialects (vernacular) are distant from Modern Standard Arabic (the language used in education and in formal and written discourse), and therefore, learners' performance would be better off if they used their "mother tongue" (i.e. vernacular Arabic) as the language of instruction.

In fact, Arabic is grouped with alphabetic languages and compared with European languages, but its intrinsic features put them poles apart. Arabic is a Semitic language (like Hebrew and Amharic) and its alphabet consists of 28 letters, all consonants, and three vowels, which may be long or short. Vowels are signs (diacritics) usually added to consonants in texts for beginning readers but dropped out in more advanced texts and in other authentic writing for competent readers.

The main contrast between Arabic and many European languages is the buildup of Arabic words. They are formed from (or analyzed down into) a combination of two morphemes, roots and abstract patterns intertwined in a non- linear way. The root or morpheme consists of three or four consonants. The consonant root, to which prefixes, infixes and suffixes are added according to definite patterns, is used as the basis of the formation of new words. For example, the root [K T B] is used to produce the verb /kataba/ (write), or /ka:tib/ (writer), or /maktaba/ (library), etc. The root [D R S] produces the verb /darasa /(study), /da:ris/ (the one studying), or /madrasa/ (school). Thus, the lexicon items derived from the same root have a semantic relatedness and each abstract pattern also denotes a meaning: the pattern shared by /kataba/ and /darasa/ denotes a verb (to do something), the pattern /katib/ and /da:ris/ refers to a doer, and that of /maktaba/ and /madrasa/ denotes a place where the action occurs. Unlike most European languages, Arabic is also inflectional and synthetic, i.e. word forms change according to their place in the sentence and their grammatical function[6].

Teaching reading in Arabic or measuring readers' performance by relying on a phonics/decoding approach could be questionable. Nobody, for example, would think about dealing with Chinese or Japanese in terms of letter and corresponding sound. Unfortunately, during the last decades, one of the most visible and prolific line of research (among others, Wagner, 1993; Ayari, 1996; Abu Rabia, 1998, 2012; Maamouri, 1998; Saiegh-Haddad, 2003,

[6] For further description, see Ziadeh F.J. & Winder R.B. (1957); An Introduction to Modern Arabic. Princeton: Princeton University Press.

2007; Abadzi and Martelli, 2014) which has shaped the field of reading acquisition in Arabic[7], has mainly been carried out from a Western language perspective. It focuses, for example, on the relationship between voweling and reading accuracy, fluency and phonemic recognition, or uses words isolated from the context in the experiments; i.e. procedures and concepts related to decoding in terms of English. Wagner (2014) points out that "languages and scripts vary in important ways around the world. We can be less sure of our experimental interventions or statistical analyses when contexts vary so dramatically" (p.7). Yet, he does not include Arabic within this category of languages, but others do.

Indeed, another line of research (e.g. Badry, 2005; Hansen, 2008; Boudelaa & Marslen-Wilson, 2011; Abu Leil et al, 2014; Alamri & Zamuner, 2015 among others) has demonstrated the difference between some Western European languages (notably English) and Arabic and Semitic languages in general. Semitic languages, for example, depend more on root and morphology patterns than on phonology processing to decode their deep orthography, and their information-dense words require more and longer eye- fixations. The context is paramount in reading comprehension. Nonetheless, this kind of research and the described differences tend to be ignored in influential international organizations' reports (e.g. The World Bank, 2019; USAID, 2014; UNESCO, 2015, etc.).

At the same time, Arabic is described as complex, difficult to learn and accordingly its structures should be simplified and its script modified (Ayari, 1996; Abadzi & Martelli, 2014). The argument is rather tenuous since, first, it is accepted knowledge that the difficulty of a script, phonetics or structures of a language is relative to learners and their familiarity with or exposure to the language to be acquired. Speakers of Chinese, Japanese or Russian would find it easier to learn their own languages than say a British born to a family speaking only English and living in Britain and vice-versa. Second, if structures are simplified and the script modified, the wholeness and logic of the language may be disrupted. Of course languages evolve and change with time, but their changes come from within, not through an imposed manner. Similar debates are quite common in major Western languages. Bentolila[8], responding to a question about changing an old French grammatical rule, stated that:

> *« Cette proposition de modifier la règle entre dans une perspective plus large qui pose la question suivante : faut-il, quand l'apprentissage est difficile, supprimer les difficultés, ou plutôt faire un effort particulier sur cet apprentissage ? Si certains élèves ont plus de difficultés à apprendre une règle, je préfère améliorer la pédagogie et avoir de l'ambition pour tous les élèves, plutôt que de supprimer cette règle. Car c'est une*

[7] Hansen (2008) shows methodological errors and doubts the findings of a highly cited research by Abu Rabia and Awwad (Morphological structures in visual word recognition: the case of Arabic. Journal of Research on Reading, 27/3, August, 2004).

[8] Alain Bentolila is a French linguist, professor at the University Paris-Descartes. He is an influencer and staunch advocate of the use of the vernacular in the Moroccan educational system instead MSA. The basis of his argument is the difficulty children meet when they have to learn this different, formal variety of Arabic (See Bentolila, 2013).

> *difficulté qui fait partie intégrante de la langue française, et qui n'est pas sans pertinence*[9] ». (Bentolila, 2018)

Achieving fluent and efficient reading in Arabic then may require different learning programmes and instructional methods more adapted to Arabic distinct features. Placing more emphasis, for example, on morphology awareness than on phoneme/ letter correspondence could be useful in reading instruction and in assessment tools (Hansen, 2008, Makhoul and Ibrahim, 2014). Better trained instructors and more pre- literacy exposure to Modern Standard Arabic[10], are other determining factors in literacy acquisition (Chauffour, 2017; The World Bank, 2019).

In conjunction with the above, the gap between Modern Standard Arabic (MSA) and Arabic vernaculars is usually pointed out as one of the major causes of low literacy rates in the Arab World. Instructing in a different language than the mother tongue is believed to result in psychological and pedagogical hurdles. Learners cannot then have the tools to express themselves and consequently lack confidence and self-esteem. Literacy acquisition becomes doubly demanding as they do not only have to master a new script but must also learn new lexicon and structures, and thus spend more time adjusting to the novel situation than learning contents. This increases the risk of failure, dropping out and subsequent high illiteracy rates (Ayari,1996; Maamouri, 1998, Wagner, 1993; Saiegh-Haddad, 2003; Bentolila, 2013; USAID, 2014, UNESCO, 2015). In any case, the commended positive results of the use of Arabic dialects in instruction are only hypothetical. As pointed by the USAID report,

> *"Of note: the literature did not suggest that teaching children to read or write in colloquial Arabic would or could be a solution to addressing some of the challenges emanating from diglossia in the Arab world. This topic might deserve some exploration, based on the well documented effectiveness of (and thus preference for) learning to read in the mother tongue. In the literature review there were no studies that looked directly at either the feasibility or the effectiveness of teaching children to read in dialect as opposed to MSA in the early grades of school."* (USAID report, 2014, p. 24)

It is true that the argument presented seems to concur with the UN resolution A/RES/61/266 which calls upon all Member States to "promote the preservation and protection of all languages used by peoples of the world"[11], and with the recommendations of UNESCO, the World Bank, USAID and other international organisations which favour the use of the mother

[9] "This proposal to modify the rule is part of a broader perspective that asks the following question: if learning presents difficulties, should we remove them, or rather make a special effort on learning? If some students have more difficulty learning a rule, I would rather improve the pedagogy and have ambition for all students, rather than delete this rule. It is a difficulty that is an integral part of the French language, and which is not irrelevant"

[10] The World Bank, for example, in its 2017 report about Morocco, points out the damaging absence of early literacy tools in Moroccan homes: "Although reading and play are critical to development in the early years, only 21 percent of young Moroccan children live in households with at least three books and 34 percent have no toys in the home" (Chauffour, 2017, p.51). This factor alone may largely explain the difficulties Moroccan children face in acquiring literacy and yet the focus is placed on a controversial and highly divisive debate.

[11] http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/61/266

tongue as the language of instruction. These recommendations, however, have to be placed in their historical, political and economic contexts and therefore to be taken with caution.[12].

Indeed, while the resolution holds for many cases where the dominant language(s) and the mother tongue are separate languages (e.g. the difference between Arabic and Amazigh languages), it loses ground when the case in question is a dialect of a major language like Arabic. It would be pertinent therefore to ask whether the gap between MSA and the different vernaculars is as wide as it is presented and, whether MSA should be considered a different language which can cause pedagogical and psychological learning obstacles to its dialects' speakers (Miller, 2016).

Moreover, Arabic diaglossic situation is not unique to Arab countries, but the way it is tackled in other countries (especially in the West) makes the whole difference. While it is beyond the scope of this paper to analyze the varieties of Arabic vernaculars and the standard language (MSA) and compare Arabic diaglossic situations with others of languages with a similar geographical and ethnic wide stretch, it is worth mentioning that, for example, some regional and national varieties of English (Scottish English, Cockney, Ebonics, Pennsylvania Dutch English, etc.) can be unintelligible to other English native speakers from other regions. Yet, the introduction of the vernacular as a vehicle of instruction is either rejected or limited to pre- or first grades to facilitate the acquisition of the standard language[13].

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[12] My conclusions in an MA paper I wrote in 1979 at the University of Essex were based on the then accepted view about the positive impact of use of the Mother Tongue in Education. Later, however, after teaching in Morocco and discovering more about the subject, I came to realize that concept of Mother Tongue cannot be blindly generalized to diaglossic situations. Recommendations about the language of instruction in Arabic have to be examined in an independent scientific manner within the historical, cultural, civilizational and socio-economic context where they are to be applied, otherwise, they may be detrimental to the interests of the very people they are supposed to help.

[13] Two examples are worth mentioning here: One from the USA and the second from France:

a. In 1996-1997, as a result of the low performance of Afro- American learners, the Oakland School Board in California, USA, wanted to use Ebonics, the English vernacular of Afro-Americans, as the language of instruction to facilitate reading and writing acquisition. But the ensuing controversy was so strong that the Senate had to intervene and agreed on one issue: that all Afro-American students should learn proper English. Ebonics would be used to facilitate the acquisition and mastery of standard English. To avoid any possible misunderstanding, the Oakland Unified School District issued the following statement: "1. The Oakland Unified School District is not replacing the teaching of Standard American English with any other language. 2. The District is not teaching Ebonics. 3. The District emphasizes teaching Standard American English and has set a high standard of excellence for all its students…." (John R. Rickford, Education, and the Ebonics Firestorm. Digital Georgetown, and. the Department of Languages and Linguistics. Stanford University, p.33). https://www.researchgate.net/publication/267377627_Linguistics_education_and_the_Ebonics_firestorm

b. Alain Bentolila acted as the scientific director of the "medersat.com" project which created more than 500 rural schools in all regions of Morocco. As said in note 6 above, he propagandizes for the use of the vernacular instead of MSA in the Moroccan educational system. Nevertheless, his attitude towards teaching the mother tongue in France makes one wonder whether his recommendations concerning Morocco emanate from a "scientific" attitude or only from a politico-ideological one.
In fact, he rejects the use of the Mother Tongue in instruction in France : "*Quelles transformations concrètes peut-on en effet attendre de l'enseignement* ***en*** *breton, en basque ou en corse ? L'avenir des élèves en sera-t-il changé ? Non, bien sûr …. pour des élèves qui parlent français,* ***utiliser les langues régionales comme langues d'enseignement n'est justifié ni d'un point de vue politique ni d'un point de vue cognitif.*** *C'est confondre, au nom d'une diversité linguistique sublimée, une nécessité pédagogique et un respect légitime des identités culturelles. »*

As long established, language policies and planning are basically ideological and political (Ashford, 1964; Wallwork, 1978). Consequently, it would not only be democratic and ethical but also constructive to take into account what native vernacular speakers think of their dialect and the prospect of making it the language of instruction. In Morocco, for example, Arabic dialect (Darija) is usually regarded as the intimate language used in informal situations whereas MSA, the "Fusha[14]", or the standard form of that dialect, is used in work, in formal situations, in education, and in religious settings (Abdallaoui Maan,1979). The popular explosive reaction in September 2018, when some dialectal items of vocabulary appeared in primary schools' textbooks, shows that people regard MSA as their own language and do not want to lose it. Speaking a language involves more than using a syntax, a script or a morphology but rather assumes a people's identity, beliefs, culture, civilization, and history. Moreover, "a threat to language may be seen as a threat to political freedom; conversely a threat to political freedom may be fought through a language battle" (Wallwork, 1978, p. 90).

But confrontation with the people is avoided, and the introduction of the vernacular into the formal context is taking place in an insidious way: the use of the vernacular in television formal programmes, in films and in cartoons' dubbing instead of MSA, in the written newspapers and magazines, novels and political speeches, formal social media, etc. Exposure to MSA which was a useful tool to adult literacy and formal schooling is drastically diminishing (Miller, 2016). In fact, "L'éducation est le nerf de la guerre"[15](Ibid. p.107). Modern Standard Arabic, even if it is a major language, spoken and supported by millions of people, is being endangered on the basis of unproven assumptions.

Finally, it is worthwhile to highlight the paradox which results from using the vernacular as the language of instruction, especially when it concerns one major language like Arabic. Using the vernacular in instruction is supposed to increase the prospects of educational success, economic well- being, and opening- up on the world. But vernaculars are by their very nature local and of limited reach. They therefore cannot achieve the purposes initially set for them: employability, communication with the external world and empowerment. Similarly, the international instances, notably, USAID[16] and the World Bank, recommend to developing and Arab countries to encourage the private sector break the State monopoly and take the provision of public education in charge starting from secondary, or even earlier, schooling (Patrinos &

« *What concrete changes can we expect from teaching in Breton, Basque or Corsican? Will the future of students be changed? No, of course … But for students who speak French,* ***using regional languages as languages of instruction is not justified from a political or a cognitive point of view.***
It is mistaking, in the name of a sublimated linguistic diversity, an educational necessity and a legitimate respect for cultural identities." (Bentolila, 2011. Lorsque l'école ne parle pas la langue de ses élèves. Paris: Colloque « Enseigner l'Outremer, Enseigner en Outremer ». 17 Mai.)

[14] Literally meaning "eloquent", well spoken.

[15] « Education is the nerve of the war ».
Miller (2016) points out a contradiction in the inflexible and blind adherence to the "Mother Tongue" guidelines in Morocco. While researchers are trying to set a standard language for the different varieties of Amazigh (the language of the Amazigh people, the first inhabitants of Morocco) to be used in instruction, MSA, the standard variety used by Arabic vernacular speakers, is being deconstructed to be replaced by another standard language which is the mother tongue of none!!

[16] https://www.edu-links.org/learning/usaids-approach-private-sector-engagement-education

Sosale, 2007; Chauffour, 2017; The World Bank, 2019). Consequently, an expensive and flourishing market of private schools, usually instructing in foreign languages, grows in parallel and offers its services to the wealthier population who seeks a stable, open and sound instruction, lacking in the public sector (Miller, 2016; Pellegrini, 2017). In the Arab World, it is precisely the vulnerable classes who, instead of being helped by the vernacular lose a larger horizon offered MSA, may become even more alienated and confined in their limited local world.

In sum, though Modern Standard Arabic has been used for many decades as the language of instruction, the debate about what language to use in instruction is far from being settled and derails research on reading acquisition in Arabic from the right course. Likewise, no definite answer to what approach to follow in reading instruction in Arabic is available now, but an overemphasis on phonics seems to be unsuitable. Moreover, research on the subject is quite scarce and mostly concerned with school children. Low- literate adults receive but scant attention. A more balanced, interactive cognitive approach is not to be overlooked in adult literacy acquisition, especially that adult learners bring with them experiences, prior knowledge of the world, beliefs and expectations towards their own learning.

Low-Literate Adult Readers

In light of the above, it is clear that considering diverse reading concepts, related debates and language issues is essential in developing relevant and efficient instructional approaches and programmes, but no less important is knowing about the learner's characteristics and specific requirements. Of concern here is the low-literacy adult learner.

Research on adult learners with basic literacy skills is rather limited and mainly headed by policy makers and international organizations. The varied reports and papers produced show that these learners do not achieve the literacy level which enables them to function autonomously and efficiently in real life contexts. As mentioned in the introduction, several factors are advanced to explain this underachievement: e.g. sociopolitical issues, individual States' commitment, linguistic barriers, budgetary monitoring, and organizational dimensions (See introduction). Nevertheless, insufficient attention, especially in developing countries, is devoted to the instructional practices utilized and the interaction between learners and instructors. The relational factor is critical for an adult learner with basic literacy who is susceptible to social pressure and may suffer from feelings of anxiety, awkwardness and low self-esteem (Benavot, 2015).

This brings to mind andragogy, an adult educational approach which goes back to the nineteenth Century with Alexander Kapp and developed later by Malcolm S. Knowles. Its principles, widely adopted now, assume that adults, regardless of their settings, field of study or level of education, learn differently from children (McCall et al, 2018). According to this model, adults:

- are self-directed: they can assume the responsibility of their learning and instructors should encourage this tendency and reduce hierarchy, show respect, patience and understanding;
- are problem-oriented rather than subject -oriented: they seek educational solutions to current situations and instruction should be concrete and practical;

- are result- oriented: they have specific educational expectations which should be taken into account;
- have prior experience and life knowledge to utilize in instruction;
- are internally motivated: instruction should make sense to them;
- show readiness to learn when instructional tasks meet their immediate perceived needs.

In other words, teaching adults requires instructional methods suitable to their age, meaningful and goal oriented. Prior experiences, personal and sociocultural dimensions of the adult learner are essential. Educational procedures and materials, have to be relevant to ensure engaging learners' motivation.

ICTS and Adult Literacy

As noted above (see Defining Literacy), one of the main targets of literacy is to enable people to function efficiently in their societies. In today's world, information and communication technologies are permeating every aspect of our daily lives and the internet, computers, tablets and smart phones are omnipresent and have changed the way we learn, work, interact and lead our private lives. To be connected and to be able to use the ever –evolving technology are no longer an "added extra" but indispensable to participate fully in the contemporary society and to achieve social and economic integration, otherwise, people face marginalization and exclusion from both the physical and virtual worlds (European Commission, 2012; UNESCO, 2016; 2018).

Moreover, ICTs are assumed to provide a wide range of possibilities to access to knowledge. They also hold the promise to support the acquisition of basic literacy skills and enhance the quality and effectiveness of learning, allow the flexibility of programmes' scheduling and delivery to large numbers of people in remote regions (Wagner & Kozma, 2005; UNESCO, 2016).

Nonetheless, this technology presents new challenges and requires abilities besides the traditional literacy skills. They range from technical skills (e.g. operate efficiently the computer, the mobile phone, the tablet, etc.), to cognitive skills, to media and information literacy competencies: e.g. solve problems, interpret symbols, manipulate images, select relevant texts, synthesize information from different digital sources, and evaluate information critically, engage in knowledge creating and sharing, etc. (Leu et al, 2

011; 2017).

Numerous studies have been carried out, in various countries and groups of populations, about the effects of digital programmes' implementation on low-literacy/illiterate adults' learning and economic and social inclusion. While the different interventions are proved to somehow increase motivation and engagement, the findings related to the effectiveness of the outcomes are either inconclusive, difficult to interpret, or hard to verify or apply (e.g. Dighe & Reddi, 2006; Dodson et al 2013; UNESCO, 2016, 2018; Adelore & Itasanmi, 2016).

Deen-Swarray (2016), for example, explored the role of basic literacy, English language and e-skills in the adoption and use of the internet and e-mobiles in twelve African countries. She

came up with the conclusion that people owned mobile phones whatever their literacy levels were but used them in a very limited way. The sophisticated use of mobile phones and the internet increased in correlation with the literacy level, the presence of e-skills and knowledge of English. She concludes that policy makers should firmly support basic literacy and e-skills acquisition otherwise the full digital inclusion could become an overwhelming issue in sub-Saharan Africa.

In another report, Schaefer Davis (2007) ran a project which enabled illiterate rural women weavers in Morocco earn income selling their textiles on the internet through the help of assistants and the project manager. She makes the case that ICTS are valuable tools for empowering women despite diverse barriers, and that a more accurate picture, than the prevailing stereotypes about the role and power of Moroccan women, in particular, and Muslim women in general, is required to determine the different ways in which ICTs can lead to empowerment of both men and women. Nonetheless, the "empowerment" described is limited since these rural women depend on "intermediaries" and on the initiator of the project for its durability.

Along these lines, UNESCO (2018), utilized thirty-two projects in twenty-five countries to explore the links between digital solutions, skills expansion, livelihood improvement of low-literate and low-skilled adults. It tried to determine, outside the education sector, what skills were required and how digital solutions could make technology easily accessible, usable and inclusive to facilitate training and skills enhancement in relation to users' immediate needs. Several digital solutions were determined, e.g. a voice-based computing interface, simple user interfaces, local content generated by the users or by people familiar with the community, integration of elements which allow users to share technologies' experiences and solutions, etc. Some of the digital solutions proposed, however, are costly and all the reviewed solutions require adequate literacy and digital capabilities.

In sum, most studies show the complexity of the issue and its interdependence with economic, social, political and technical dimensions (Wagner & Kozma, 2005; Dighe &Reddi, 2006; Dodson et al 2013; Schmida, et al. 2017; UNESCO, 2018). The main barriers to skills' acquisition and use of ICTs in adult literacy programmes can be divided in four groups:

- lack of infrastructure, electricity and internet access;
- poverty and high cost of devices and internet connexion;
- lack of coordination among the different stakeholders involved in ICTs instruction; lack of sustainability of projects; lack of trained instructors; lack of relevance of contents;
- users' lack of minimal basic literacy; linguistic, social and cultural barriers, especially for women (e.g. lack of time due to family/work constraints, lack of mobility, safety and ease of access to the venue of programmes, etc.)

It is worth noting that the studies reported above focused on ICTs programmes' outcomes in relation to skills and employment opportunities and not sufficiently enough on the long-term goals of developing general cognitive and critical thinking ability, autonomy, self-confidence and personal empowerment described as goals for literacy (e.g. Dighe & Reddi, 2006; Stromquist, 2006; Wetheridge, 2016). Low-literate learners seem to be regarded as sharing the same purposes and expectations, and cannot be exposed to complex new concepts. This

could reinforce stereotypes about this category of learners and set aside all the insights obtained about literacy: e.g. the dichotomy literate/illiterate is flawed, literacy is plural, literacy is an ongoing process which builds on the learner's knowledge, knowledge has different forms and can be obtained in formal, non- formal and in informal social contexts, etc.

Further understanding is therefore required about adult basic literacy learners' perceptions of ICTs and the challenges faced not only from the technical point of view, or as a support for literacy acquisition, but also from the perspectives of actual use, e-safety, and critical evaluation of contents.

The Case study

Context and questions of the research

When Fatna (pseudo name of the subject of the study) asked for assistance with reciting the Quran, the researcher (the author of the present paper) had no intention of carrying out a study about basic literacy for low -skilled adults. Instead of responding to Fatna's immediate request, the researcher proposed reading comprehension lessons instead. She thought that she could help Fatna's differently and that her long experience in both reading research and in teaching reading comprehension to adult Moroccan English learners were sufficient for that task.

Nevertheless, when the researcher started inquiring about Fatna's former experience, planning for the lessons and reading the literature, she realized that the issue presented major complexities, unsettled questions, and serious paucity in research, especially, about a post-literacy intervention which closely traces the learner's evolution and builds up a whole picture of the multiple aspects involved (e.g. personal, contextual, social, and gender-linked factors, prior –literacy lessons, reading in Arabic, ICTs use, and reciting the Quran). Hence, the beginning of the idea of the project.

Indeed, Morocco has been carrying out nearly six decades-long campaigns of "fighting against illiteracy". Several programmes have been set by diverse operators from the public sector (e.g. the Ministry of National and Higher Education, the Ministry of Islamic affairs and the Habous, institutions related to Youth and Sports Ministry, Maritime fishing, Agriculture, Justice, Royal Armed forces, etc.), and by non-governmental organisations, associations, and private companies' (Ait Daoud et al, 2014; UNESCO, 2014). The latest addition to fight illiteracy is the Moroccan Agency against Illiteracy (ANLCA) which promises more forceful involvement.

Yet, despite the efforts deployed and the authorities' triumphant claims of successful programmes' outcomes, illiteracy rates are still alarmingly high. According to the last national census of 2014, 32% of the population aged 10 and older are illiterate, with a significant gap between the rural and urban population, who respectively hold the rates of 47.7% and 22.2%. Women are the most affected with an illiteracy rate of 41.9% compared to the men's 22%. (HCP, 2017).

These figures, however, convey only one side of the story and could even be misleading. Emphasis is placed on how many have benefited from literacy programmes, but not on how efficient and relevant the learning acquired is and how literacy can actually be sustained (UNESCO, 2017a; Bouguidou et al. 2017). In other words, more knowledge is required about who can be considered literate, how the "new-literate" learner copes, whether learning has a personal impact, and what post- literacy schemes can prevent relapsing in non-literacy.

Within this framework, the present study involves twenty-eight months (from October 2014 to February 2017) longitudinal, in-depth and holistic examination of the case at hand, in an attempt to address the following questions:

1. What perceptions does a low-literate learner have about her literacy experience (purpose of seeking literacy, prior literacy instruction, and beliefs about developing literacy)?

2. Does the use of a participatory, learner-centred and a schematic -interactive approach to reading in Arabic enhance reading ability of an adult learner?

3. What challenges does a low- literate adult face when adopting ICTs? What impact does the integration of ICTs and media literacy initiation in instruction have on the learner's reading ability, autonomy and empowerment?

4. Can successful learning to read the Quran enhance general reading performance?

The Participant

The subject of the study is Fatna, a low-literate housekeeper in her late forties, married and childless. She was born to a large, poor family who sent the boys to school and kept the girls at home. Still a child, she was sent to another city to work as a live-in domestic helper for a wealthy family. The housewife, though well-disposed, did not send her to school or enabled her to acquire literacy basic skills through another alternative. At puberty, Fatna got married and wanted to attend literacy classes but faced her husband's refusal. She could attend literacy classes only in her forties. When she contacted the researcher, she had already taken literacy lessons (for two years, on and off), within the national programme for eradicating illiteracy, provided by the Moroccan ministry of religious affairs (Ministry of Habous and Islamic Affairs). At the beginning of the present study, the learner had no writing skills, and showed a limited level of reading comprehension and knowledge of Arabic alphabets and vocabulary.

She was attending the Mosque's Quranic classes in her neighbourhood, but was unable to cope with reading and memorizing the Quran and sought help. Her husband was not literate too but had learnt the Quran at the Msid (Quranic school) and could still recite it. He could not help his wife because he worked as a night watchman and their schedules mismatched.

The Quranic classes involved instruction about the precepts of Islam, explanations of Quranic verses, memorizing and reciting the Quran using the rules of Tajweed (the rules of pronunciation during the recitation of the Quran). When women had memorized some Quranic Surahs (chapters), they would recite them publicly during an assigned day. An informal, cordial celebration was usually held when one of the women managed to memorize and recite

all the Surahs (60 Hizbs). Classes were attended by low- literate women from disadvantaged backgrounds like herself and by others, more educated and from higher socio-economic backgrounds. Though the atmosphere at the Mosque was casual, Fatna was apprehensive. Learning the Quran was not only a test of her faith and memory capacity, but also a test to her self-esteem and her capacity to be integrated within another social environment. She was highly motivated and ready for any amount of work to achieve her goal.

Methods and Procedure

As with any investigation involving one subject, the aim of the research is not to measure or provide quantifiable data but to have a whole picture, to observe, to describe, to gain better understanding of nuances, factors' interactions and complexities, to note the progression of the participant and of the learning process. The conclusions, of course, have to be interpreted with caution because of their reliance on an individual' single experience. This very experience, however, can also be a valuable and a rich source of information which may not be obtained otherwise (Walliman, 2011; Creswell, 2007; Cohen et al, 2007).

To collect data, the study had recourse to observation, informal discussions, instruction materials, reading documents selected by the subject, informal learning assessments (of reading and computer use), recall and reflections, researcher notes and transcripts and a post-study interview. The project comprised different stages:

Preparation Period

- Obtaining information about the participant: prior literacy experience, purposes, needs and interests.
- Deciding with the participant on the project procedure, language of instruction, lessons' planning, methods, passages' sources and themes. This required explanations about reading instruction approaches, sources' institutional/ political affiliations or sponsors, relevance and challenges of topics. The aim of this stage was to enable Fatna have ownership of her learning, engage in critical reflection about the different aspects of the project, gain self-confidence and autonomy.

Reading Intervention

In a similar way to the views related to texts' selection for English foreign learners, expressed in Abdallaoui Maan (2001; 2007), the materials used were print authentic short passages, written in Modern Standard Arabic, downloaded from a variety of online newspapers. Passages were reader –friendly; i.e. well-structured, coherent, of moderate density and presenting sufficient cohesive cues. The topics were chosen by Fatna, and were mainly related to health, family issues, and current Moroccan political and current affairs.

Though the instruction utilized several methods (suggested by Fatna), it mainly relied on a schematic-interactive strategies approach, text structures, and evaluation of both form and contents. Comprehension and evaluation were carried out through active discussions and critical thinking skills; e.g. analyzing, using logical reasoning, recognizing similarities and

differences, facts and assumptions, ensuring credibility of sources, etc. (Abdallaoui Maan, 2007).

In addition, the lessons used regular oral reading by both the reader and researcher as a model, occasional explicit instruction in understanding and recognizing Arabic morphological patterns, and decoding (words and letters, when needed). Dictation was also introduced at the beginning but it had to be discontinued because of Fatna's daunting difficulties in writing. On the whole, the lessons involved nearly 160 hours (1h30mns daily sessions from November 2014_ April 2015, five days per week). Fatna thought that copying down new vocabulary and parts of the text was beneficial. She therefore would spend a considerable amount of time at home rereading and writing passages of the text.

Extensive reading (books of varying literacy levels)

When Fatna was capable of reading an authentic passage (about a familiar subject) and could grasp the main idea and supporting details, intensive reading lessons ended. She was then provided with a set of books from which she selected simplified voweled stories for children as well as authentic, non-voweled short stories from teenagers' textbooks, short stories from known Arab authors like "*A handful of Dates*" of Tayeb Saleh[17], passages from Abdelmajid Benjelloun's "*In Childhood*" [18], Abdelkrim Ghellab's "*We Have Buried the Past*"[19], and Taha Hussein's "*The Days*"[20]. She would read them at home, at her own pace, and in the sequence which suited her. Later, she would check her comprehension by giving a brief account of the story to the researcher, and a discussion would usually ensue about the message, the events and even the vocabulary or structures. Extensive reading continued until the end of the project. During the pause stage (described below), Fatna did not discuss the stories with the researcher.

Instruction in basic computer and internet skills

The aim of this instruction was twofold: first, to demystify the new technology and the digital world to Fatna, and second to enable her have access to a wide range of reading materials and literacy lessons from a variety of sources. In other words, instruction of basic computer and e-skills was conceived as a means to advance literacy but also to empower her to make choices, and pave the way to autonomy and self-confidence.

The lessons, mostly carried out by a volunteer[21], were held in a naturalistic setting and in an informal way; i.e. one- on -one explanations in Moroccan Arabic of concepts and skills through simple analogies from daily life (for example drawers and cupboards, to explain the organization of files and folders). Modern Standard Arabic was used for technical vocabulary.

[17] حفنة تمر
[18] في الطفولة
[19] دفنا الماضي
[20] الايام

[21] The instruction was performed by Dr. Ghita Berrada, engineer in Computer Sciences and PhD holder in data bases. She is currently a research associate at the School of Informatics at the University of Edinburgh.

The sessions took place three times a week during two months and most of them lasted for about 30-45 minutes. A topic was introduced based on Fatna's specific needs and practiced until she demonstrated a decent mastery of the subject.

The programme consisted of five parts:

Familiarization with the computer parts and basic skills: turn on an off the computer, use the mouse, desktop, taskbar, icons, type words on keyboard, move the cursor, and scroll.

Introduction to word processing: start menu, locate and open programme, minimize, restore and close a window, create document, edit, save text, and retrieve it on hard disk and on USB stick.

***Introduction to the file system*:** organize documents, files and folders, retrieve, rename, copy, move a file or delete it, understand the differences among files and their extensions.

***Introduction to the general principles and use of the internet*:** get connected, recognize homepage, use menus, navigate websites, hyperlinks, open new windows, understand and use address bar, do some basic searches using a website's search functionality, download a document/ picture or video, save it, retrieve it or delete it.

***Initiation to safety, privacy and intellectual property rights*:** the aim was limited to drawing Fatna's attention to the issue, especially when downloading some file or video from the internet.

Practice Period and Use of the Quran Digital Format

Use of ICTS, reading practice and initiation to information literacy

This period lasted from June 2015 until April 2016 (with a pause in August 2015). Fatna used the computer and the internet on a daily basis to select reading materials with the support of the researcher. At the beginning, Fatna was not capable of locating relevant websites. She and the researcher discussed the matter and decided together on a few websites (Moroccan and international Arabic online newspapers and the Moroccan Ministry of Islamic affairs' website) which the researcher helped Fatna bookmark. She would afterwards perform the whole procedure alone from switching on the computer, getting connected, to browsing websites, selecting texts, downloading and saving them for later use at home (where she had no internet connection).

During this period, Fatna still wanted to read some passages aloud and check her comprehension in front of the researcher. The latter took the opportunity to familiarize Fatna with issues related to information literacy; e.g. veracity, reliability, biases, timeliness of information/ images/ videos on websites. A demonstration of the question was made through fake websites, fake news videos about Moroccan celebrities, duplicitous or harmful contents.

Use of a digital application to read and recite (Tajweed) the Quran

The researcher managed to locate a free- cost application (which Fatna could save on her computer), developed by the University King Saud[22] to assist with reciting and memorizing

[22] http://quran.ksu.edu.sa/index.php?l=en#aya=8_65&m=hafs&qaree=husary&trans=en_sh

the Quran. It includes very advanced features; e.g. indices of Quranic divisions (Ayats, Surahs, Juz), matching audio recitations with corresponding highlighted texts, pauses which allow the user to repeat the verse after the reciter, tests for memorization, the different reciting styles (Tajweed) and a list of known reciters, and diverse explanations of acknowledged Islamic scholars from varied countries.

A brief presentation of the different features of the application was made, and Fatna would practice at home and obtain help with technical aspects if required the following day.

Subject' Self-Directed Period

Over this period, Fatna had a pause of eight months (from May 2016 until January 2017), during which she had total control of her learning without any supervision or coaching from the researcher. She had extensive reading materials, access to her computer (but limited access to the internet), the previously downloaded passages and the Quranic digital format.

The final stage of the project

Assessment of the internet use, competence at reading comprehension, fluency and sustainability: were carried out in an informal manner. Fatna was asked to open a website, select a text, read it and give a brief synthesis of its contents. She was also given questions about the text's implied meaning, details, evaluate content in comparison to prior knowledge and Morocco's current context, talk about the website and potential biases or integrity, etc. Reading fluency and accuracy were noted.

The subject's progress at reading the Quran (notably accuracy and fluency): was also recorded. For that purpose, Fatna was given a print copy of the Quran and a Surah she had not learnt yet and was asked to read it aloud.

Interview: The last part of the project consisted of administering a structured interview about her perception about the whole experience.

Findings and Discussion

The data collected through the different stages of the project were recorded, analyzed separately. The emerging patterns were then grouped in such a way as to provide answers to the questions of the study.

What perceptions does a low-literate learner have about her literacy experience?

Purposes of learning

Several purposes are revealed and could be grouped into four categories: religious, psychological, educational and functional reasons.

- Religious Purposes

Fatna believes in the tenet that "knowledge is a (religious) duty"[23] and that it is imperative for her, as a Muslim, to learn the Quran. It was the first purpose she mentioned when she first approached the researcher.

- Psyhological Reasons

The second most important objective she wanted to reach through literacy was to build her self-confidence and overcome the feeling of ignorance "darkness in her eyes"[24], "social humiliation"[25], "low self-esteem"[26], "dissatisfaction"[27] which she experienced in different contexts. At family gatherings, for example, she avoided expressing her opinions about political or social current affairs for fear to be ridiculed. She would be "silenced"[28] many times by "*What do you know, you*?" [29]

Similar slighting reactions could come from strangers as well. She was once insulted by a security guard merely because she asked him about the name of the building he was keeping. "*Can't you see? … Open your eyes!"*[30]He said.

It was also disquieting to her to depend on her family or friends for reading her own bank statements or letters. She felt she had no control over her finances and her privacy.

At the mosque, she was uncomfortable with seeking help from the other women even if their attitude was generally positive. Likewise, it was embarrassing for her, for example, to ask strangers at the supermarket about products' prices or expiration dates.

Knowledge Improvement

Closely linked to the above, her goals for pursuing literacy included expanding knowledge and awareness, "knowing" and "raising consciousness"[31], differentiating between "good and bad"[32], and nurturing high moral standards[33]. Literacy would enable her to read magazines, and watch other than Moroccan TV channels. In other words, she seemed to assign to literacy the role of opening up new horizons and building-up the capacity for discernment and personal growth.

Functional Daily Life Motives

For Fatna, basic skills in literacy could make a large difference to her daily life details. She could, for instance, perform countless daily readings (messages, letters, bank statements, bills, products' prices, dates of expiration, ingredients, names of places, instructions, warnings,

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[23] العلم فريضة
[24] الظلمة في عيني
[25] حكرة المجتمع
[26] النقص
[27] غير مرتاحة نفسيا
[28] يسكتوني
[29] اش كتعرفي انت
[30] حلي عينيك
[31] تبنغي نعرف ونفتح عيني
[32] نعرف المزيان من العيان
[33] تنمية الاخلاق

etc.), share messages with friends and family, handle nutrition and health issues, manage household finances, and many more daily life questions.

In fact, during the project, she would seek instruction related to daily issues, like reading the time, a message or numbers, weighing (ingredients for a recipe), checking expiring dates, etc. Her ultimate purpose, however, to start a small business with her husband made her request numeracy lessons.

On the whole, the revealed purposes seem to be in line with a substantial research which considers literacy as more than teaching basic skills, but a driver of change of women's lives. It helps them in their daily life matters, empowers them and boosts up self- esteem and self-confidence (Stromquist, 2006; Dighe & Reddi, 2006; UNESCO, 2015a).

Indeed, Fatna regards literacy as a means to realize her aspirations of obtaining knowledge, increasing awareness and satisfying her curiosity about political agendas, alliances, functioning of the government, and emerging public affairs, etc. She also assumed that this awareness would grant her a voice, respect and a place within her family men's clan.

It is worth mentioning that during the first discussion, she referred only to religious reasons for seeking literacy. The other purposes were mainly expressed during and at the end of the project. Therefore, it is difficult to determine whether she was aware of the purposes mentioned before she started classes or after she discovered the diverse possibilities literacy could offer her.

Whatever the case, it can be safely said that she showed deep understanding of her environment and a great capacity at expressing her goals, frustration and determination; very far from the stereotypical image of the "low-literate and ignorant person".

Perceptions of Prior Literacy Instruction

Literacy classes and Retention of learning

When asked about her previous literacy instruction, Fatna did not demonstrate an accurate recollection of the experience. She said she had benefited from about 100 hours' classes (discontinuously during two years) provided by the Moroccan ministry of religious affairs (Ministry of Habous and Islamic affairs), within the national programme for eradicating illiteracy. Yet, she showed the researcher two textbooks, one published in 2011 by the Ministry of Islamic Affairs, and the other published in 2010 by the Ministry of Education[34]. It was not clear, therefore, where nor what exact programmes she had followed.

[34] وزارة الاوقاف والشؤون الاسلامية (2011). اقرا واتعلم. المستوى الاول. تعلماتي الاساسية، مهاراتي الحياتية. الرباط: مطبعة المعارف الجديدة

زارة التربية الوطنية والتعليم العالي وتكوين الاطر والبحث العلمي. مديرية محاربة الامية (2010، الطبعة الاولى). القرائية من اجل التمكين. منهاج التكوين للكبار.

Likewise, Fatna could not remember what lessons were covered nor what exact time was allocated to them. She had practically no writing skills. When given a dictation of a sentence, she wrote a connected string of quite illegible letters. She, however, could decode most of the letters and read three short passages, though haltingly and stumbling over words.

When asked comprehension questions about a given text, she would not necessarily answer the questions but speak about the theme of concern in general. She seemed to be recalling some previous explanations or discussions about the theme rather than addressing the passage she was reading.

Nevertheless, the way she was holding the book showed she was not only struggling with her words but with a vision problem as well. A visit to an ophthalmologist proved judicious and she started wearing reading glasses a couple of weeks after the beginning of the study. Her reading and writing abilities did not improve significantly as a consequence, but she managed to discard an additional source of difficulty.

Timing and Venue of Classes

She had the choice to get enrolled in afternoon classes at a venue close to her home or at another near her workplace. But the timing and the failing transportation system of the city made both choices unsatisfactory; she either had to be unpunctual for classes or late reaching home in the evening. Finally, she thought it was safer (and more acceptable to her husband) to attend the classes located at the venue near her home neighbourhood, which resulted in late arrivals, frequent absenteeism, and gaps in learning.

Nature of classes and Instructors

Instructors were described in a positive way from the relational point of view, but they seemed to lack the ability to respond to the needs of all learners or control the class. Though not critical nor offensive, instructors tended to be "careless"[35] about the chaotic attendance[36], paid more attention to high-achievers rather than to struggling learners. Actually, the learners themselves were of diverse literacy levels and backgrounds, which sometimes pushed the instructors either to excessively slow down, repeat already acquired lessons or, quite the opposite, speed up. They did not know how to cope with the class diversity.

Similarly, Fatna estimated that instructors did not have the adequate knowledge or preparation to teach religion since they sometimes dispensed erroneous explanations of the Quran. She would have preferred instead to obtain more practice in general reading, writing and numeracy. Though having different reasons and different settings, Fatna's opinion about religious teaching seems to be in line with the World Bank's (2019) recommendations of a better distribution of studies' time among different subjects (in the Moroccan educational system in general), reduction of religious classes periods and allocation of the saved time to other subjects.

[35] ما مسوقينش
[36] شي داخل وشي خارج

In sum, the description she provided about her former literacy experience seems to summarise the inadequate pedagogical aspects pointed out by a substantial body of research (e.g. Benavot, 2015; UNESCO, 2017a) as responsible for the failure of literacy programmes. Yet, her account is valuable in highlighting the relationships among the varied factors, for example, the failing public transportation system, husband's demands of and late arrival to classes, or the inadequacy of time distribution to contents, discrepancy between ideological orientation of the programme and the learner needs, etc.

In addition, Fatna's very ineffective reading and writing skills is in agreement with UNESCO's (2015) conclusions which cast doubt on literacy campaigns' efficacy and the measurement tools utilized. In fact, despite of her nonfunctional learning, Fatna can be considered as literate if enrolment and attendance (even irregular) are the only instruments utilized to assess literacy.

Beliefs about language of instruction

The interview and the different discussions with Fatna all along the project period engendered significant and useful data.

When asked about the language of instruction, Fatna answered in an emphatic way that it should be Modern Standard Arabic (*Fusha* Arabic, for studies[37]); using the dialect would be useless, a waste of time[38]. She added that she was accustomed to watching the news in MSA (on Moroccan and Middle Eastern TV channels) and was capable of understanding most of it. Learning MSA, not the dialect, would help her understand the news better, read the press, or books, know "what's happening in the world" [39], and above all, it would enable her learn the Quran.

Learning MSA also seemed to have an emotional impact on her since she reported "feeling happiness"[40] at learning new words in Arabic, sayings or proverbs. The use of MSA was then believed to be central in literacy and therefore highly motivating. This finding challenges the view that using MSA as the language of instruction can be a handicap to learning for its dialect speakers (e.g. USAID, 2014; UNESCO, 2015; The World Bank, 2019). On the contrary, learning MSA seems to be, not only a motivating factor, but even a purpose for acquiring literacy.

Does the use of a participatory, learner-centred, and a schematic – interactive approach to reading in Arabic enhance reading ability of an adult learner?

As described in the part (Reading Intervention), the basis of the project's reading instruction draws from an interactive schematic-approach, with the reader at the centre, holding an active role, to make choices, to construct meaning and to evaluate contents.

[37] العربية الفصحى دالقراية
[38] ما قضينا والو بالدارجة
[39] نعرف اش كاين فالدنيا
[40] كنفرح حيث كنتعلم شي كلمة جديدة وللا شي مقولة

The approach corresponded to the learner's age, and attitude. This resulted in tremendous progress at reading comprehension despite a deficient oral reading performance.

Fatna equated reading with knowledge, awareness, and serving some practical purpose, which may explain her concern with meanings. In addition, she considered reading multifold and varied according to the determined purpose. Thus, reading and comprehending newspapers and books could be achieved by looking for meanings, not by repeatedly rereading them. In contrast, she believed that repetition and persistence were the only way to read and learn the Quran.

During the process of reading, she was often invited to describe what she was doing to achieve comprehension. she usually referred to trying to grasp the main meaning[41] of the text and, in case of failure, to reread or "guess"[42], use the context and her prior knowledge of the subject. Actually, her previous steady exposure to TV news helped her acquire information about current affairs and be familiar with the news' genre, vocabulary and rhetorical structures. It may also have caused her to over-rely on her prior knowledge (Carrell, 1988).

Likewise, when Fatna read to the researcher extracts from the stories she had selected for extensive readings, she could largely reconstruct the storyline, characters' relationships, underlying messages and relate them to her own environment and experiences. For example, the researcher selected randomly a non voweled passage from Taha Hussein's autobiography "The Days" for Fatna to read aloud and comment. She admitted that some expressions, words and even ideas were hard to understand, but the similarity between the environment and people's relationships in the autobiography and the Moroccan rural villages facilitated comprehending the story.

It is worthwhile to note, however, that she could not cope with reading selected passages from Abdelmajid Benjelloun's and Abdelkrim Ghallab's autobiographies, though one passage describes the author's Moroccan family and the second describes the old Moroccan Quranic school attended by the author as a child. Fatna ascribed her difficulties to the complexity of the vocabulary utilized in the two texts.

In this regard, most second and foreign language research agree on the fact that vocabulary knowledge is the best predictor of reading comprehension (among others, Hu, M. and I.S.P. Nation, 2000), and some affirm that a vocabulary size threshold is required for an "adequate" reading comprehension to take place. Lists of varied levels and types of vocabulary have been established to guide instruction (Laufer & Ravenhorst-Kalovski's, 2010).

Nevertheless, in Fatna's case, it was not clear whether the difficulty resulted from the insufficient vocabulary as separate items or from the lack of knowledge of the Arabic roots and patterns, i.e. semantic units involved.

Her oral reading also included a high number of mistakes and showed poor phonological processing and limited word identification but she managed to reconstruct meanings. She was inclined, for example, to give a word's pattern different from the written one but would use

[41] نفهم المعم
[42] وكانقول ويمكن

its root-base. The produced word and its context were still semantically comprehensible[43]. The Arabic root system was more effective to her than letters in recognizing and understanding words. This conclusion seems to concur with a body of research that affirms that the consonantal root has a mental reality as a morphological and semantic unit for Arabic speakers (Badry, 2005; Hansen, 2008; Boudelaa & Marslen-Wilson, 2011).

On the whole, Fatna made impressive progress at understanding non voweled authentic passages, and could synthesize, construct meanings, and evaluate contents critically despite her flawed fluency and accuracy. This could lend support to the assumption that an interactive schematic approach to reading instruction, and an explicit method to guide strategies' use, and critical thinking skills corresponded to and were made more effective by Fatna's attitude towards reading; i.e. engaged, purposeful, meaning-centred, reflective, and relying on a diversity of positive strategies. This also seems consistent with the view that the impact of learners' beliefs about reading is essential in successful reading comprehension (Abdallaoui Maan, 2001).

Moreover, the implication of Fatna in her reading instruction's choices appears to have boosted her confidence and positively affected the outcome, and the relational dimension with the instructor (here the researcher). This lends support to the view that instructional methods have to account for the characteristics of adult learners as self-directed, goal-oriented, self-motivated, and ready to learn (McCall et al, 2018).

Finally, besides comprehending accessible texts, Fatna was also capable by the end of the project of reading phone messages, products' expiring dates and prices, recipes, and a variety of daily notes. Reading in Modern Standard Arabic was easier for her than in Moroccan Arabic.

Nonetheless, her newly acquired literacy was mainly employed in informal, or non "risky" situations. When documents were official or administrative, she had recourse to an intermediary to "verify her understanding"[44] or read them for her. At the difference with Bouguidou et al. (2017)'s conclusions which relate non transfer of skills to low –literacy levels or to a non-contextualized instruction, Fatna's behaviour may be also explained by her lack of self-confidence and her fear of making mistakes which could prove costly.

Lack of Correspondence between Reading Comprehension and Reading Fluency in Arabic

As mentioned above, and in striking contrast to the successful performance at reading comprehension, Fatna's progress at oral reading was not significant. She continued to be slow, hesitant, and produced a high number of errors despite the introduction of a variety of related activities and exercises; e.g. modelling reading, identifying roots and word patterns, decoding words and letters (within contexts), and vocabulary exercises, etc.

Alternatively, the inclusion of extensive reading in the project and the use of self-selected themes close to Fatna's own environment, and simplified texts (unfortunately only children's

[43] She would use يحضر instead of يستحضر in the sentence : يستحضر اسم "طريق الحرير" صورة رومانسية
تَعْزِيزُ الْمَنَاعَةِ، بِأَخْذِ قِسْطٍ كَافٍ مِنَ النَّوْمِ وَتَنَاوُلِ الْأَغْذَاءِ in: تعزيز المناعة instead of تعزز المناعة or

[44] شوفي واش فهمت

books presented those features), were promising before the pause period. Fatna found the activity enjoyable and convenient since she could read anywhere and at her own pace, check her comprehension and discuss the book with the researcher. Her oral reading progressed reasonably, which corresponds to the findings related to the positive effects of extensive reading on fluency enhancement (Greenberg et al, 2011). Nevertheless, after the eight-month self-directed period, Fatna could still synthesize and produce a relatively adequate recollection of the storyline but her fluency and pace of reading did not improve but even regressed.

In sum, conclusions about the lack of progress in fluency achievement would only be hypothetical because of scarce information about Fatna's reading behaviour and contextual factors during the pause period, such as lack of motivation in general reading, irregularity and insufficient time allocated for that purpose, etc.

Nevertheless, a likely explanation may be obtained through Abu-Leil et al (2014) and Hansen (2008) who assert that, unlike English, Arabic shows insignificant correlation between fluent reading aloud and reading comprehension (Hansen, 2008; Abu-Leil et al, 2014). Focusing on phonological representations, naming of words or using the appropriate vowel, could be a source of errors, slow down reading, and reduce the attention required for adequate comprehension. In contrast, silent reading leaves space for the reader to understand words in context, rely on the morphological patterns and root-system of the language to construct meaning. Fluency and adequate comprehension occur simultaneously when the reader is competent enough to recognize and retrieve words directly from its orthographic lexicon (Abu-Leil et al, 2014). More research about the relationship between reading comprehension in Arabic, fluency achievement and linguistic and semantic threshold levels is still needed to shed light on the issue.

What challenges does a low- literate adult face when adopting ICTs? What impact does the integration of ICTs and media literacy initiation in instruction have on the learner's reading ability, autonomy and empowerment?

Difficulty of reading technical vocabulary and conceptual understanding resulted in reliance on rote memorization and visual cues

As reported above (Section on ICTS and Adult Literacy), some of the difficulties that Fatna encountered were largely discussed in the literature (UNESCO, 2018; Schmida et al, 2017; Dodson et al, 2013; Dighe and Reddi, 2006), especially with regard to learners' attitudes, cultural, and gender factors, insufficient literacy levels and the ensuing inability of conceptualising and interacting with the new technology.

In fact, Fatna was thrilled at the idea of accessing and using a computer. Her eagerness, however, could not override her anxiety towards the new technology. She had to face two major barriers; first, understanding the general concepts of the technology and, second, reading menus and all kinds of computer notifications. Unlike the case in reading comprehension, she did not seem to activate her cognitive abilities, metacognitive strategies, and her basic literacy skills to understand the computer technology and recognize its terminology in Arabic. Thus, having trouble with the computer poor ergonomy and with reading the instructions in Arabic, she had recourse to rote memorization and visual cues to

locate where an instruction was (e.g. open file being the second instruction in list, obtained by performing a mouse right-click on the file, or the colour and shape of the icon of a browser) rather than the instructions themselves. She seemed to be learning procedures by rote, which means that when she didn't perform certain types of operations frequently enough, she would forget about them.

ICTs were demystified, enabled the learner to have access to a wide range of information sources and materials and reinforced reading ability

Despite the challenges Fatna faced and the limited strategies she utilized during the instruction period, many goals have been attained. First, the new technology ceased to be for her the unapproachable prowess reserved for men and highly educated women (Dighe & Reddi, 2006). Even when she relied on her memory, she could still use a computer, have access to the internet, and look for materials suitable to her.

Second, she carried out searches herself when the keywords were easy to type and the website simple to access through visual cues. For instance, she would type "Moroccan TV "[45], open the first link on the website and then choose the target channel through its icon, colours or number. When the search was more complex, e.g. a particular literacy lesson on the website of the Moroccan Ministry of Islamic Affairs, or a given song on YouTube, she would look for assistance. Even in that case, ICTs made her realize she could find on the net materials corresponding to her needs.

Third, during the practice period, Fatna had access to the internet and chose newspapers' articles, though mostly from bookmarked websites (which she had herself selected). She would browse through the website, read titles, open the preferred article, read some of its passages, download it and save it on her computer. Eventually, she made a lot of progress, acquired a certain autonomy and could locate on her own websites, information and videos.

The searches carried out and the availability of sources and materials did push her to use her literacy skills and explore new possibilities. Both literacies, ICTs and reading skills, were in a kind of virtuous circle, reinforcing each other.

Nevertheless, during the pause period, Fatna did not have access to the internet and rereading some of the downloaded materials was rather boring. She could not make progress or practice her newly acquired skill and, her initial eagerness at learning somehow decreased. A minimal degree of support and coaching was still needed to ensure sustainability (Dighe & Reddi, 2006; Schmida et al, 2017).

ICTs promote self-confidence, personal choices and opportunities for learning

ICTs have transformed Fatna's outlook and she mainly gained self-confidence. When she forgot how to handle a procedure, she would comment: *"It doesn't matter. I will learn. See where I was and where I am now".*[46]

[45] تلفزة مغربية

[46] ما عليش. غا نتعلم، فين كنت وفين انا

At the end of the project, when she had access to the internet again, she resumed reading the news, but not as frequently as she had done at the beginning. She looked for an application for reading in Arabic, (similar to that she had for the Quran), which offered a wide choice of stories/novels and provided the possibility of both listening to and reading the text. No cost-free application was available.

At the same period, she would also search for and watch a wide range of videos; e.g. TV programmes, religious speeches, recipes' preparations, songs, etc. It was easier for her to watch and listen rather than read. Likewise, she bought a second-hand smartphone and sought instruction in the use of some of its applications, notably, using the contact list, menu, sending SMS messages and sharing messages on WhatsApp.

At the end of the project and in a similar way to the cases studied by Dodson et al (2013), Fatna's initial instruction of ICTs was still largely hindered by low literacy skills, the need of an intermediary to facilitate navigation, search and safety issues, and the ensuing loss of privacy. Nonetheless, ICTs experience triggered in her a sharp awareness of the potential of the new technology either in supporting her learning, providing access to knowledge or meeting her general needs. It also enabled her to acquire some control over her needs and the answers she wanted to reach. She was somehow empowered and clearly more autonomous and more determined than she had been at the beginning of the project.

Information and media literacy principles were constructive but not fully applied because of low literacy level and lack of knowledge of the Latin alphabet

Fatna had a positive attitude towards the initiation to information and media literacy. She understood the potential risks of false or manipulative information; she could analyze a text, image or video and detect harmful contents, but she lacked the required tools (sufficient literacy skills and the Latin alphabet) to verify the accuracy and credibility of the information or the sources.

Can successful learning to read the Quran enhance general reading performance and enable sustainability?

Use of Application helped the learner achieve faultless fluency at reading the Quran but the skill did not transfer to general reading performance.

Fatna's reading of a Quranic chapter (a Surah she had not learnt yet) was markedly flawless, with accurate speed and rhythm. It is worth noting that reading comprehension, could not be verified because of the complexity related to isolating her own understanding of the Surah from the explanations she had received at the Mosque.

When asked about how she succeeded, she ascribed her acquired fluency to her regular practice during the eight months' pause period. She would practice reading the Quran, through the use of the digital application, for at least three hours a day. The other reason she advanced was the similarity in rhetorical structures and vocabulary of the Quranic chapters. In other words, her familiarity with the Quranic genre (through many years' previous exposure),

coupled with practice and high motivation enabled automaticity and flawless fluency to be achieved.

The acquired fluency, however, did not transfer to non Quranic texts. Any explanation would be hazardous, but Fatna's deep respect for the sacred Book, and its divine linguistic properties seems to have made her create for it a mental representation totally separate from all the other texts, which may have prevented any transfer from taking place.

More research is required to shed light on the widely accepted hypothesis that reading and reciting the Quran (Tajweed) could be a means to sustain newly acquired literacy.

Use of the Quranic application enhanced using ICTs and developed information literacy

The use of the Quranic digital format helped Fatna practice opening and moving through windows, using indices to select pages, Surahs, words, reciters and styles, matching voice with text and regulating sound, etc.

It was also an opportunity to reinforce Fatna's awareness of the wide opportunities the internet offered and to remind her of the potential risks of fraud and fake websites even in sacred fields (Khan & Alginahi, 2013). The Islamic tradition of authentication of the Prophet's Hadith sources [47] facilitated the explanation of the concept.

Conclusion

The purpose of the current study is to present a holistic picture of a post-literacy experience of an adult woman with basic skills, coming from a disadvantaged background and seeking to acquire the ability to read the Quran. The focus is placed on her perceptions, expectations and choices as well as a description of the learner's processes and challenges of improving reading ability in Modern Standard Arabic (MSA), acquiring ICTs skills, and of reaching autonomy and empowerment. The conclusions, drawn from the longitudinal case study propose explanations and hypotheses to be explored further rather than answer questions:

1. The longitudinal, holistic, and participatory approach gives the participant ownership of her learning experience and provides a sharp and in-depth insight into the diverse and interdependent factors in literacy acquisition and retention: State policies, development issues, instructional and pedagogical factors, cultural and gender constraints.
2. The study reveals a new image of the low-literate person poles apart from the stereotypical "weak, ignorant and incapable" illiterate person. She knows and expresses her needs clearly, and is capable of making choices, appraising and reorienting instructional practices. Her views and shared trust with the facilitator were valuable to the progress achieved in Arabic reading comprehension and in ICTs Skills acquisition.

[47] Hadiths are the record of the Prophet Mohamed's words, actions and silent guidance. They are the second basis (after the Quran) of Islamic principles. To prevent fabrication of Hadiths, a whole field of Islamic studies ensures their authentication by relying on given criteria; e.g. examination of contents and original sources (chain of narrators).

3. The subject sought literacy not only to serve economic or daily life matters but mainly to meet religious, social, psychological, knowledge and empowerment goals.
4. Modern Standard Arabic was not only a medium of instruction but also a purpose for seeking literacy. The subject thought of using the vernacular in instruction as a waste of time since Modern Standard Arabic allows her to have access to a larger world than her local one.
5. The interactive –schematic approach utilized for reading instruction, and reliance on strategies and metacognitive processes proved effective in helping the subject achieve an acceptable level of reading comprehension. In contrast, reading fluency showed insignificant progress.
6. General (rather than specific to a narrow instructional or employability purpose) ICTS acquisition provides liberating potentials, enhanced by initiation to information and media literacy and critical appraising of texts. Lack of continuous access to the internet and a limited literacy level were major barriers to further progress.
7. The use of the digital application enabled the participant to achieve accurate and flawless fluency at reading the Quran. This notable achievement, however, did not transfer to the reading performance of other texts.

It can be concluded that successful literacy cannot be achieved unless all interacting factors are considered simultaneously. For this purpose, multidisciplinary academic research teams would contribute to analysing the interdependence of factors at the national and provincial levels, and provide adequate solutions.

The study has also uncovered the debates and salience of the teaching methods in literacy acquisition in Arabic as a Semitic language. The approach utilized in the study proved successful in comprehension but inadequate in fluency improvement. More understanding is required about the first stages of reading acquisition; notably, the role of roots, morphemic patterns, and orthographic processing in reading acquisition and in fluency building. Understanding the non- transfer of fluency at reading the Quran to general texts would provide further answers about reading acquisition in Arabic.

Finally, the investigation has revealed that low-literate people are eager to embrace new technologies if they are provided with the appropriate space, training and facilitators. Libraries can be assigned the role of providing the place, the required materials (print materials and computers), and coaching in collaboration with educated volunteers.

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