



College of Social Sciences and International Studies

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**Web-Based New Literacies and EFL Curriculum Design  
in Teacher Education: A Design Study for Expanding EFL  
Student Teachers' Language-Related Literacy Practices  
in an Egyptian Pre-service Teacher Education  
Programme**

**By**

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**Abstract.** With the dominance of the Web in education and English language learning, new literacies have emerged. This thesis is motivated by the assumption that these literacies need to be integrated into the Egyptian pre-service EFL teacher education programmes so that EFL student teachers can cope with the new reality of language teaching/learning. Therefore, the main objective of the present study is to develop a theoretical understanding of the relationship between Web-based new literacies and the teaching of TESOL in a way that supports the possibility of expanding Egyptian pre-service EFL student teachers' language-related literacy practices by integrating some Web-based new literacies into their education programme, with specific reference to the context of Assiut University College of Education (AUCOE). This requires accomplishing minor objectives represented in: (1) identifying the range of those Web-based new literacies that Egyptian EFL student teachers need in this ICT-dominated age; (2) identifying those Web-based facilities beneficial to them, and why and how they can be beneficial; and (3) generating framework for EFL curriculum design based on both literature and empirical data.

To accomplish this, a design-based research (DBR) methodology drawing on a pragmatic epistemology is developed and employed as the main research paradigm informing this design study. Thus, the research design involves a flexible three-stage research framework: (1) the preliminary phase, which acts as a theoretical and empirical foundation for the whole study, and informs a preliminary design framework; it involves reviewing relevant literature and obtaining empirical data through documentary analysis (100 documents), online questionnaire (n=50), and semi-structured interviews (n=19); (2) the prototyping phase that involves two iterations (36 participants in the first iteration, and 30 in the second) conducted in the Egyptian context to test the proposed design framework. Each iteration acts as a micro-cycle of the whole design study, and thus involves its own objectives, learning design, research methodology and procedures (in line with the main DBR methodology), and results; (3) the assessment/reflective phase which, based on the prototyping phase results, presents a final design framework for expanding EFL student teachers' language-related literacy practices. This has implications for the EFL curriculum design process within the Egyptian context in general, and AUCOE in particular.

Results indicate that throughout the two iterations, it has become evident that the process of expanding EFL student teachers' language-related literacy practices by integrating some Web-based new literacies into the AUCOE pre-service programme is quite feasible once some design principles are considered. Some significant conclusions and educational implications are provided, along with some main contributions to knowledge in TESOL/TEFL, language-learning theory, research methodology, and educational practice as far as the Egyptian context of pre-service EFL teacher education is concerned.

## Dedication

I dedicate this work to

-My wife, Gehan, and the three shining stars in my life, my sons: Hazem, Nouredin, and Yousef, the new-born baby who came to life on Friday, 28-1-2011, a historical and memorable day in the Egyptian history...

-Bassuni, my elder brother and first English-language teacher...

-The honourable young men who made the Egyptian revolution of the 25<sup>th</sup> of January 2011, and the martyrs (al-shohadaa) who sacrificed their blood and souls for the sake of our beloved Egypt ...Their chaste blood that was shed in Al-Tahrir Square in the centre of Cairo caused the re-birth of a new Egypt that we have been dreaming of for a quite long time. This is a very small thing dedicated to them:

<http://www.youtube.com/watch?v=oNQYcsokQVA>

-The souls of: my father (who passed away in October 2007, just a few days after my arrival in the UK); and my mother (who passed away in August 1998), both of whom always wished to see me in the best academic position...and

-To all the English language and Internet lovers who share with me this attitude:

*"Every morning, and as soon as I get up and open my eyes to realise that I'm still alive, I thank God that I was born to witness the age of the Internet, and then go to my beloved laptop to continue a dialogue that never ceases!"*

Mahmoud Abdallah 2010 [www.mabdallah.bravehost.com](http://www.mabdallah.bravehost.com) and [msayed40@yahoo.com](mailto:msayed40@yahoo.com)

## **1. Introduction and Rationale**

Globally speaking, current advances in modern technologies have created a need for reconceptualising old notions of literacy centred on the ability to read, write, and comprehend printed texts, especially within language learning contexts (Buckingham, 2007; Pahl & Rowsell, 2005). The Internet or the Web, in particular, calls for new forms of reading, writing, and communication (Leu et al, 2005: p2) in this information age which, as Jewitt (2006: p13) notes, marks a shift from page to screen. More specifically, the development of Web 2.0, a new generation of the Web that has been enabling new functions and possibilities for learning such as social networking, easy publishing online, and collaborative construction of knowledge (Alexander, 2006; Parker & Chao, 2007), imposes a new reality for language learning and practice.

Today, literate individuals should know how to gather, analyse, and use information resources to solve problems and accomplish certain goals (Kasper, 2000). This has become crucial within English language learning (ELL) contexts where learners are required to use English for a variety of communicative and functional purposes. As language learners are increasingly involved in electronic environments, they need new strategies because the ability to communicate through information resources necessitates new literacy skills (Karchmer, 2001). As a result, education and language learning demand a major restructuring based on these new literacies and curricula (Kellner, 2002) to understand the new competencies required by the Web (especially Web 2.0 technologies) along with a wide range of functional, cultural, critical, and technological aspects deemed vital for language learning.

As far as language teacher education is concerned, new literacies have become of great concern in educational institutions (Kellner, 2002; Leu et al, 2004). Internationally, there is a growing trend towards equipping prospective teachers in general and language teachers in particular with competencies to cope with new developments and innovations that necessitate expanding the concept of literacy itself to encompass current changes. This necessitates always reviewing and updating teacher education programmes themselves to be able to develop strategies that help prospective teachers to understand the new forms of literacy and be prepared to use

technology for their professional growth and teach in ways that connect to students' lives (Kellner, 2002).

At the onset of their undergraduate preparation programme, EFL student teachers experience a transitional stage that involves some psychological tensions caused by new academic requirements (Roberts, 1998: p72). This applies to the Egyptian context, especially AUCOE, where EFL student teachers spend sometime struggling with new academic demands such as independent study, using the library, and coming to grips with the English language as both the content and means of instruction (Undergraduate Study, 2008). They should master the required knowledge base that involves some general educational competencies, lifelong learning skills, and specific academic skills related to English and literacy (Freeman, 1983; Johnston & Goettsch, 2000; Richards, 1998; Shulman, 1987). The systematic pre-service EFL teacher education programmes provided by universities are, more than anytime before, necessary and important. However, their components need to be updated to address the new literacy practices related to both the Web and EFL, which may foster lifelong learning skills and strategies necessary for student teachers' continuous professional development.

Nowadays, teachers in the field face many challenges related to technology and literacy. They are challenged not only to integrate technology into traditional aspects of literacy instruction (e.g., book reading), but also to engage students in emerging new literacies (e.g., online reading and writing) (Leu et al, 2005), which can be regarded as natural extensions of the traditional linguistic aspects. Research points to the pressing need for a strategic, organised instruction dealing with these new literacies along with a meaningful, effective integration of the Web in the learning context (e.g., Asselin & Moayeri, 2008; Coiro & Dobler, 2007).

Teacher education is the means through which new literacies can be integrated (Cornu, 1997: p321). As far as EFL teacher education is concerned, Cavanaugh (2005), Kamhi-Stein (2000), and McPherson et al (2007: p24) argue that EFL teacher education programmes should be updated to encompass new technological concepts and literacy practices, which have become essential for surviving in a digital networked environment, and which should therefore be part of any pre-service teacher

education programme (Leu, 2000c; Loethe, 1997). However, how best to help future teachers to learn about the Web and other ICTs has constantly been a challenge for teacher educators (Zhao, 2003), especially when it comes to TEFL or TESOL. Consequently, a revision of the programme contents, through redesigning its curricula to address such new aspects, is needed.

The Web and other new technologies should be perceived, not merely as products, but also as literacy tools (Coiro et al, 2008) and means towards improving educational practices. Hence, Van Braak (2001) proposes ‘technical innovativeness’ as a key component in influencing how individuals would enhance their practices based on technology use.

## **2. Problem of the Study**

### **2.1 Review of relevant research**

Since the Internet was released to the public in 1993 (Dudeny, 2000; Sherman, 2003; Teeler & Gray, 2000; Warschauer et al, 2000), much empirical research has been conducted to address using the Web in education and ELL. Many studies highlighted the importance of using the Web in teaching and learning illustrating how it made a difference compared with traditional instruction in many contexts, such as those conducted by: Al-Jarf (2006) with some EFL student teachers enrolled in a pre-service teacher education programme in Saudi Arabia; Cole and Hilliard (2006) with students of low socio-economic backgrounds in the US; Englert et al (2005) using two design experiments to improve the word recognition performance of students at risk of school failure in the US by employing Internet-based software; and Sullivan and Pratt (1996) who compared students in two ESL writing environments in a US university: a networked computer-assisted classroom and a traditional oral classroom.

Other studies addressed the impact of some Web-based tools such as e-mail considering its potential influence both as an instructional tool and a means of communication (e.g., studies by: Bloch, 2002, who examined the way students in a graduate-level ESL course in the US used e-mail on their own initiative to interact with their instructor; and Yu and Yu, 2002, who investigated the impacts of incorporating e-mail for prospective teachers in a classroom setting in Taiwan); online

chat (e.g., a study by Simpson, 2005, at the University of Leeds, UK); and Blogs (e.g., a study by Chen and Bonk, 2008, in Chinese higher education, showing how Blogs provided new ideas for assessment).

The increasing use of the Web as a main information resource has motivated researchers to create instructional models that employ the Web to improve students' learning and enquiry skills. A prominent Web-based model that was devised for helping teachers to incorporate Web-based resources into classroom practices is the WebQuest model. The use of this model was empirically investigated in many studies (e.g., In science education, Gaskill et al, 2006 conducted two experiments in an American rural high-school setting to compare learning using WebQuests versus conventional instruction; Ikpeze and Boyd, 2007 used WebQuests for facilitating thoughtful literacy for 6 middle-class European American students in an elementary school in a small middle-income sub-urban neighbourhood in the US; and Mekheimer, 2005 who investigated the effect of using WebQuests on developing essay writing skills for EFL student teachers within the Egyptian context). They identified WebQuest as ideal for teaching students how to use the Web effectively and access resources to answer specific questions or solve problems. According to these studies, tasks based on the model helped students to improve their learning and motivation.

Other studies consider particular aspects of students' direct interaction with the Web, especially in the context of reading and ELL. For example, Henry (2006) suggested a SEARCH<sup>1</sup> model for organising the process of locating information online, especially within the American context. In the same vein, Damico and Baidon (2007) examined the ways in which readers engage with websites during think-aloud sessions using an eighth-grade social studies classroom located in a mid-western city in the US. Moreover, Aydin (2007) and Usun (2003) in a Turkish context, and Leino (2006) in a Finnish context, explored students' perceptions and attitudes towards the Web and its possible educational uses and displayed the advantages and disadvantages of the Web from students' perspectives. Aydin (2007) found that EFL learners had positive

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<sup>1</sup> An acronym that summarises the six steps of this model or searching framework: 1. **S**et a purpose for searching; 2. **E**mploy effective search strategies; 3. **A**nalyse search-engine results; 4. **R**ead critically and synthesise information; 5. **C**ite your sources; and 6. **H**ow successful was your search?



attitudes towards it suggesting that such attitudes would contribute to foreign language learning via the Web after overcoming some potential problems.

Many studies have addressed Internet use in university education. In the English context for example, Eynon (2008) explored the motivations and barriers to adopting the Web in teaching/learning at the institutional and individual staff level. Eynon concluded that while there may be great potential for using ICTs for some aspects of teaching and learning, their adoption is not straightforward; the use of the Web in teaching and learning does not appear to be providing a ready solution.

In the Egyptian context, some studies (e.g., Awad, 2002; El-Maghraby, 2004; Mekheimer, 2005) dealt with the Internet in TEFL and ELL. Being purely experimental, these studies focussed on particular language skills and how instructional programmes utilising some Web-based tools can be effective in developing these skills. In the Arab world in general, other studies with a qualitative orientation, such as Al-Bulushi (2008), investigated computer-mediated communication (CMC) as a Web-based communication technology and how it provided an authentic language-learning context and a supportive environment where English language learners interacted synchronously and negotiated meaning in a collaborative atmosphere.

Other studies (e.g., Alghazo, 2006 in the United Arab Emirates) indicated that one of the factors impeding classroom use of the Web is teachers' lack of expertise. This can be attributed to insufficient training in ICTs in pre-service education programmes. Recently, at the national level, many Egyptian colleges of education have begun to provide training in technology-based instruction. Many programmes like IELP-II<sup>2</sup> were launched for developing literacy and language competencies for Egyptian EFL teachers. They offered training for teaching staff over five years to promote the use of technology and enhancing ELT (Mekheimer, 2005: p60). Despite this, only few teacher educators in the Egyptian universities are ready to incorporate literacies based on new technologies into EFL teacher education (England, 2007). Besides, educational technology courses delivered in the pre-service EFL teacher education

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<sup>2</sup> Stands for: Integrated English Language Program-Two

programmes at Egyptian colleges of education still focus on general computer skills without practically relating them to ELL.

On a superficial level, the new practices associated with new technologies, especially the Web, have created a conflict between 'foundational' literacy and 'new' literacies that many researchers (e.g., Leu et al, 2004; Leu & Kinzer, 2003) tried to resolve by suggesting that new literacies build on foundational ones rather than replace them. In this sense, beside the basic abilities of encoding and decoding the language which are still important, other more advanced reading and writing skills and strategies associated with the Web and other ICTs (e.g., reading quickly, selectively, and critically online) are also required.

Many studies have addressed these new literacy practices in the context of education. These include: (1) compulsory school education and English learning, as reported by Andrews (2004); (2) adult literacy education (e.g., Snyder et al, 2005, in their Adult Literacy National Project Report, Australia); and (3) education at all levels, as reflected in research by the New Literacies Research Team (2008) at the University of Connecticut, US, on the new literacies (e.g., online reading comprehension skills) required for students to successfully exploit the Web and other ICTs (Coiro, 2007; Coiro & Dobler, 2007; Leu, 2007).

Research in the US (e.g., Janisch & Johnson, 2003; Kinzer, 2003) indicates that successful teaching/learning depends on teachers' commitment to improving their instructional practices and their selection and implementation of meaningful and engaging literacy practices inside the classroom. Thus, teachers who want to be viewed by their students as relevant and knowledgeable about the world need to demonstrate awareness of everyday literacy practices. This involves mastering some new literacy practices perceived as a direct result of the continuous interaction between new technologies and literacy (Bruce, 1997). The effect of new technologies and media like the Web on literacy has been so prominent that literacy researchers, as Nixon (2003) concludes, need to develop new repertoires of literacy practices in relation to everyday use of ICTs, and how to research new media and online literacies. In this context, Burnett et al (2006) based on a case study in North England showed

that technology can be used to promote new literacy practices in the classroom through the production of new kinds of texts.

These new literacy practices have been investigated, especially within a language teacher education context, in terms of their relation to the following: computer-mediated communication (CMC) (e.g., Arnold & Ducate 2006 in the US; Lee, 2002 in Korea); digital and Web-based technologies (e.g., Chandler-Olcott & Mahar, 2003 in Queensland, Australia; Kamhi-Stein, 2000 in the US; Snyder et al, 2008 at Monash University, Melbourne, Australia); online distance learning environments (e.g., Goodfellow, 2004 in the UK); meaning making in a context of increased cultural/linguistic diversity attached to ESL/TESOL (Mills, 2006 in Australia); and real English teaching practices in the classroom (e.g., La Fleur, 2009 in South Africa). Mills refers to these new practices as ‘multiliteracies’ situated within the new communication channels and multi-modal semiotic systems including textual practices based on Web interactions. Through a socio-cultural study in a Catholic primary school in Australia, Cumming-Potvin et al (2003) explored the new forms of L2 literacy practices. Further, focussing on the electronic literacy practices of two Korean-American heritage language learners who manage Korean weblogs, Lee (2006) concluded that electronic literacy practices provide authentic opportunities to use the language and support the development of social networks among students.

In the same vein, Doering and Beach (2002) analysed the uses of various Web-based technologies (e.g., asynchronous Web discussion) to enhance literacy practices within a multi-genre writing project at the University of Minnesota, US, that involved pre-service English teachers working with middle school students. Results indicated that Web-based communication with students helped pre-service teachers to develop relationships with students in the absence of face-to-face interaction. Meanwhile, through participation in the WebCT bulletin board, pre-service teachers employed different literacy practices ranging from the display of spontaneous thinking to engaging in word- and role-play.

Similarly, Arnold and Ducate (2006) examined transcripts from a semester-long asynchronous discussion through discussion boards between foreign language methodology classes at two different universities in the US. Results indicated that student teachers engaged in a high degree of interactivity as well as all types of social

and cognitive presence; students not only progressed in their cognitive understanding of the pedagogical topics, but also employed social presence to aid their discussions. Moreover, the study suggested that encouraging future language teachers to learn with technology before teaching with it allows them to become comfortable using various computer and Web-based applications, an idea that was also proposed and strongly defended by Richardson (2009). This is essential in preparing future teachers for the effective use of the Web in language learning contexts as they become more likely to incorporate Web-based technologies into their own teaching.

Likewise, La Fleur's (2009) case study investigated the electronic literacy practices of one English teacher and two Grade-10 English classes in a Muslim High school outside Johannesburg, South Africa. The aim was to identify the electronic literacy forms used in the classroom and the purposes of using them, and to investigate how the students would engage with these new literacy forms. Findings revealed that being electronically literate in the English classroom means having access to sophisticated forms of Web-based technologies not only inside the classroom but also outside it. They also showed an expansion of the English teacher's role, as s/he is no longer only 'a mediator of learning', but also a mediator of technology. The status of the text has also changed as the disappearance of print-based texts from the classroom was noted with the foregrounding of visual texts and hypertexts. It was found that all students were engaged with the employed Web-based technologies expressing a preference for their integration into their lessons as opposed to the traditional, print-based 'reading and writing' practices.

Some studies, on the other hand, focused on specific Web-based facilities as components of Web 2.0 or the Read/Write Web, the second generation of the Web (Luo, 2010), in terms of how they can facilitate language learning by enabling new genres of literacy and language practice (e.g., studies by: Lund, 2008, that was conducted with EFL learners at Hillside Senior High School, UK; Mak & Coniam 2008, that used Wikis to enhance and develop writing skills among secondary school students in Hong Kong; and Soares, 2008, that investigated class Blogs as a tool for language development for EFL students in a language school in Brazil). For example, Mak and Coniam (2008) investigated using Wiki in an ELL context as a valuable tool for fostering authentic social/collaborative writing as a new genre of writing

associated with the Web. They concluded that students wrote better when they used a Wiki as a platform for collaboratively generating, editing, sharing, and redrafting the content to be produced. Similar results and insights were reached by Lund (2008) who examined Wikis from a socio-cultural perspective; analysing some videotaped Wiki activities within an EFL context, Lund concluded that Wikis hold the potential for collective knowledge advancement and language development.

In the same vein, using class Blogs in an English language class with a group of Brazilian students, Soares (2008) presented a rationale behind using Blogs in language classes and concluded positively that students regarded Blogs as a learning tool that enabled them to get in touch with students in other contexts, and thus fostered the use of written language to express themselves.

Buckingham (2007) claims that a wide gap exists between what students do at home and what they do at school, creating what he calls, 'the new digital divide'. Hence, Schultz (2002) highlights the necessity of looking outside the physical space of schools and beyond the time that students are in classrooms to see students' capabilities. This gap between in-school and out-of-school literacy practices can be bridged, as Ware and Warschauer (2005) suggest, when educators encourage students to engage with hybrid texts that draw on multiple modes of representation. Consistent with this argument are studies by Bulfin and North (2007), and Snyder et al (2008). In Australia, Bulfin and North (2007) explored the relationship between literacy practices at home, school, and other spaces, concluding that young people's engagement with language, learning, and digital technologies might be seen as a dialogic negotiation of a complex range of texts and practices that flow across and between school, home, and other spaces. In the same context, Snyder et al (2008) report on a survey dealing with the digital literacy practices of some Australian students aiming at providing a comprehensive account of young people's engagement with digital technologies in various contexts of their lives, and considering the implications of this for school education. The Web acts as an important digital tool that facilitates new digital literacy practices, such as surfing the Web for resources and contacting other people through e-mail and chat.

As far as integrating new literacies and technologies based on the Web within language learning and/or pre-service teacher education contexts is concerned, some studies attempted this integration in different ways. For example, Kamhi-Stein's (2000) study in the US represented one of the earliest attempts to integrate new literacies and Web-based technologies (e.g., Web-Based Bulletin Board Discussions) into the EFL/TESOL teacher education programmes. In the same vein, many recent studies have explored this integration into curriculum (e.g., Chen, 2008; Sarsar, 2008) and teacher education programmes (e.g., Cavanaugh, 2005; Meller & Hatch, 2008). McVee et al (2008) have recently conducted a study as an instance of teacher research carried out in the context of a teacher education course in new literacies and technologies in the US wherein teacher educators attempted to take up new literacy practices. Findings indicate that teacher educators must foster environments to share problem-solving and distributed learning, to support design and multi-modal redesign of texts, and to explore literacy and technology as transactional processes. The study suggests that the learning environment, approach to learning, knowledge about multimodal text design, and stance toward literacy and technology may be far more important than the technologies that teachers use to enact their instructional plans. Meanwhile, Meller and Hatch (2008) explored the process of introducing critical literacies for pre-service teachers in the US. They described introductory practices used to prepare future urban teachers in Kansas, US, to implement critical literacy strategies in their classrooms.

Other studies addressed the process of including new literacies into formal curricula, especially within teacher education programmes. For example, to embed new literacies into the curriculum, Sarsar (2008) created a classroom website to help students in a United Arab Emirates context to move from a mono-modal approach that relies mainly on print-based text to a multi-modal one that requires them to explore a variety of modes. Some studies have dealt with using new technologies including Web-based applications in literacy education. Boling (2008), for example, investigates pre-service teachers' conceptions of the role of new technologies, such as Blogs and instant messages, in literacy education in the US. In Korea, Kim et al (2008) addressed the revision and redesign of ICT literacy curriculum in teacher education programmes to include new developments and innovations. In another study within a Taiwanese EFL teacher education context, Chen (2008) concludes that

there is a need to prepare EFL teachers to integrate the Web into their instruction after investigating the factors influencing this integration.

## **2.2 Statement of the problem**

My identification of the central issue of this study started in 2000 when I was interacting with EFL student teachers in workshops that included applications of literacy, TESOL/TEFL methodology, and educational technology. A significant period of interaction occurred during the academic year 2004/5 while I was administering my MA programme on oral language literacy practices to a group of EFL student teachers, which I reported in a recent book (Abdallah, 2010a). These interactions fostered a feeling that the learners needed to expand their literacy practices by integrating the Web into their education programme. This feeling was reinforced by EFL teacher educators' viewpoints and seminar discussions on integrating new technologies, especially the Web, into the EFL teacher education programme at AUCOE. Moreover, student teachers performed poorly when assigned some ordinary language-based literacy tasks, such as writing a short essay or working collaboratively to develop an argument.

To ground this feeling on an empirical basis, I conducted a short investigation (Abdallah, 2011) (a pilot study published as a journal article) with 30 EFL teacher educators and senior student teachers at AUCOE. In response to online semi-structured interviews (see Appendix A), all participants indicated that EFL student teachers at AUCOE: (1) did not receive any training in the college on using the Web for ELL purposes; (2) were not provided with adequate or systematic opportunities to use the Web throughout their education programme; (3) had not heard about 'new literacies' before; (4) believed in the great promise the Internet holds for ELL; and (5) experienced difficulties in using the Web for academic purposes, such as using inappropriate strategies for locating data, and thus describing themselves as "lost on the Web" (Abdallah, 2011).

Theoretically, new technologies, and subsequently the new practices attached to them, are regarded by AUCOE as an essential component in the process of EFL student teacher preparation. Besides, the vision of the college positions international

communication with foreign people as an important goal that EFL student teachers should accomplish after graduation as members in society. In addition, the standards adopted by the college focus on literacy and using language in different contexts and in real communication, and one of the objectives of the college is to advance and revise the undergraduate study programmes to cope with the global, international standards as well as the national, local, and contextual needs. However, in reality, as an online review of the AUCOE pre-service EFL teacher education programme bylaws (AUCOE, 2008) revealed, the college was still unable to provide any training in the Web-based new literacies needed; although two courses were supposed to address these literacies (i.e. Educational Technology and TESOL/TEFL Methodology), their contents were not sufficiently updated to do the job (Abdallah, 2011).

Moreover, fixed instruction that drives students to memorise facts and learn by heart is still dominant in the Egyptian context, as noted in my book (Abdallah, 2010a) and pilot study (Abdallah, 2011), and as reported by many PhD studies targeting the Egyptian context (e.g., Abdel Latif, 2009; Gahin, 2001; Ibrahim, 2009). It is surprising that AUCOE, as a teacher preparation institution, still relies on knowledge transmission as the main teaching method. Beside being contradictory to the contents of the curriculum and methodology courses in the college, which harshly criticise knowledge transmission and advocate the use of modern methodologies and technologies that cater for individual differences and learning styles, this approach does not help learners to reflect on what they learn and employ that knowledge in real-life contexts.

This is critical within a teacher education context that should target professional development and lifelong learning more than the mere memorisation of specific contents. Thus, Egyptian teacher preparation institutions in general, and AUCOE in particular, need to integrate new technologies to provide EFL student teachers with better learning opportunities that cater for their needs in the 21<sup>st</sup> century, which so far has been dominated by ICTs as new literacy tools. Although using new ICTs, especially the Web, in language learning has recently increased, little has been published on the how-to aspect of technology integration, especially in the context of pre-service EFL teacher education programmes (Dudeney et al, 2008). The situation



in Egypt reveals a clear contradiction between the national projects that seek to improve the performance of the colleges of education with greater focus on new technologies on the one hand, and the current practices of EFL student teachers which are still paper-based along with the traditional teaching/learning methods that do not employ available computers and Internet connections for ELL purposes on the other. A review of these programmes in Egypt reveals that the TESOL knowledge base represented in the undergraduate courses is still static, and not sufficiently updated to address Web-based new literacies and applications in ELT and ELL. Similarly, a review of empirical studies conducted in the Egyptian context (see 1.3.1 above for examples) reveals a lack of theorisation regarding the implementation of ICTs in general and the Web in particular, for educational and language learning purposes, especially in the context of pre-service EFL teacher education. Most empirical studies were merely individual attempts that focused on specific Web-based applications such as e-mail and chat, and how to use them for improving and/or developing specific skills for EFL student teachers (e.g., Ali, 2008; Mekheimer, 2005); they did not address the process of integrating them into the programme itself or suggest any guidelines, models, or frameworks useful for Egyptian colleges of education. This lack of theorisation resulted in inconsistencies among these studies that did not generate common design principles or guidelines to be used by EFL teacher educators, and thus, an improvement in practice was not realised.

Moreover, being purely experimental, these studies targeted certain aspects of ELL and TEFL by testing the effectiveness of certain applications in developing linguistic skills for learners without exploring issues of literacy practices, curriculum design, professional development, and/or lifelong learning that should go beyond the narrow scope of the mere technical uses of the Web. Besides, researchers tended to implement ready-made models without considering, in a developmental, dialogic fashion, the contextual elements of the Egyptian programmes and the real needs of EFL student teachers. It is argued that processes of change and innovation should be devised for the particular context, and not imported from other contexts (Fullan, 2000; Handy & Aitken, 1986).

Although there is an international call for including new literacies in teacher education programmes, no teacher education institution in Egypt, to the best of my

knowledge, has yet taken this step. Despite an increased interest in new literacies and ICTs in the educational context, it is surprising that few studies have actually been conducted on Web-based new literacies within language learning contexts, especially in pre-service EFL teacher education programmes. While it is often suggested that pre-service teacher education should be reconceived in response to the demands of new literacies, little, in Cervetti et al's (2006) terms, has been written about the programme itself.

Many of these few studies focused on Web-based reading strategies (e.g., Kymes, 2005; Schmar-Dobler, 2003; Sutherland-Smith, 2002) suggesting a need to reshape thinking about classroom reading practices and the concept of literacy. To the best of my knowledge, no studies have tackled the extension or expansion of EFL student teachers' language-related literacy practices by integrating Web-based new literacies into their pre-service teacher education programmes, especially within the Egyptian context. Awad's (2002) study is the only one targeting this integration within an Egyptian secondary-education context; it investigated the possibility of integrating the Internet into EFL instruction to determine whether the Internet can indeed contribute anything to modern language teaching. However, there were no clear guidelines to inform future practices, or any reference to teacher education programmes as ideal contexts for integrating the Web.

From a curriculum design perspective, EFL curricula in the pre-service teacher education programmes, with specific reference to AUCOE, are pre-designed from a 'fidelity' perspective that requires abiding by strict rules and guidelines during implementation regardless of the specific context, rather than from an 'enactment' perspective that considers the real teaching-learning process as a major resource for informing the curriculum design process. Therefore, this design process is still insufficiently dynamic to address many emergent global and contextual issues. Besides, and in van den Akker's (2003) terms, there is a wide gap between the three levels of the 'intended', 'implemented', and 'attained' curriculum. In other words, the intended domain, which involves the guidelines and goals made by policy makers and curriculum developers, the implemented domain, which relates to the world of teaching and learning, and the attained domain, which is attached to the students themselves and their achievement, are inconsistent with each other. For example,

though one of the main goals of EFL teacher education in AUCOE is to equip prospective teachers of English with the new technologies and practices that enable them to communicate globally and locally with others and use the language for functional-communicative purposes (AUCOE, 2008), the real practices of student teachers are still too poor to reflect this goal (Abdallah, 2011).

Thus, EFL student teachers at AUCOE lack the necessary knowledge, competencies, and skills required to use the Web for language learning purposes. Hence, a design framework that involves principles and guidelines for expanding EFL student teachers' language-related literacy practices by integrating some Web-based new literacies into the target context, is sought through the present study.

### **3. Objectives of the Study**

The main objective here is to explore the possibility of expanding the language-related literacy practices for Egyptian EFL student teachers in the context of their pre-service education programme, with specific reference to AUCOE, by integrating some Web-based new literacies into this programme. The main research aim is, therefore, to investigate and understand the relationship between new literacies and the teaching of TESOL in order to build a theoretical framework for the design of curricula. Accomplishing this aim can be realised through the accomplishment of some minor objectives represented in:

- 1) Identifying those Web-based new literacies that EFL student teachers currently need as well as those Web-based facilities useful to them, and why and how they might be useful in this context;
- 2) Establishing a design framework that includes principles and guidelines for expanding Egyptian EFL student teachers' language-related literacy practices. This entails:
  - a) Identifying a guiding language learning theory that is compatible with both the global trends followed in TESOL/TEFL, especially as far as EFL teacher education is concerned; and the student teachers' local needs and their particular learning context as reflected in empirical data;

- b) Generating some procedures that might be useful for administering future courses with the same orientation through iterative cycles of evaluation and refinement;
  - c) Bridging the gap between theory and practice in TESOL/TEFL within the Egyptian context of AUCOE by identifying practical applications of the Web in TESOL and pre-service EFL teacher education programmes, and using a design-based research (DBR) methodology that targets the improvement of current educational practices.
- 3) Generating implications that inform the curriculum design process within Egyptian pre-service EFL teacher education programmes in general, and the one provided by AUCOE in particular.
- 4) Introducing new methodologies and products into the Egyptian context. This involves:
- a) Introducing design-based research (DBR) as a new paradigm into the Egyptian context of educational research as an alternative to the commonly-used (and dominant) experimental design that has not resolved the many problems which still exist;
  - b) Introducing a revised format of DBR that is compatible with PhD studies;
  - c) Introducing new methods and techniques of data collection and analysis facilitated by new technologies (e.g., online interviews, online questionnaires, and NVivo 8); and
  - d) Introducing curricular products as models that EFL teacher educators can refer to for integrating Web-based new literacies into their teaching practices.

#### **4. Significance of the Study**

The achievement of the objectives outlined above should contribute, both theoretically and practically, to the area of TESOL/TEFL Methodology in general, and to Egyptian pre-service EFL teacher education in particular, and should have significant implications for EFL curriculum design.

In terms of TESOL/TEFL knowledge base, the study is significant as it contributes theoretically to the field by:

- a) Focusing on Web-based new literacies and classifying them to compile a comprehensive list included under an underlying taxonomy, to be contextualised in the Egyptian context. This is essential as the continuous development of the concept of literacy needs further research to address educational implications associated with rapid developments (Coiro et al, 2008; Leu et al, 2005);
- b) Presenting a thorough analysis based on empirical data of those Web-based facilities that can be used within language learning contexts in general, and EFL teacher education programmes in particular, and a rationale that explains why and how these facilities can be useful;
- c) Introducing in the prototyping phase new pedagogies, approaches, and designs, which are not familiar within the Egyptian context, such as socio-culturalism, socio-constructivist learning, community of practice (CoP), Web-mediated language learning (WMLL), and blended learning.

In terms of educational research, the study is significant because:

- a) It introduces design-based research into educational research in Egypt, and thus paves the way for future studies that might target the improvement of educational practices in the context of public education in general, and pre-service EFL teacher preparation in particular.
- b) It helps with narrowing down the existing wide gap between theory and practice in educational research in Egypt (see Gahin, 2001; Tohamy, 2009), which makes it irrelevant to the real practices inside the classroom, and results in a loss of credibility among practitioners.
- c) It can motivate TESOL/TEFL researchers to investigate specific language and literacy-related topics, such as new literacies of reading comprehension, collaborative writing using Web-based tools like Wikis and Google documents, and connective writing using Blogs.
- d) It opens new horizons for research in TEFL/TESOL methodology, as new teaching methods based on new technologies may emerge in response to new literacies.

- e) It introduces many innovative techniques that can facilitate the research process in Egypt, such as using online tools for administering data collection methods (e.g., using chat software and e-mail for conducting interviews), and employing computer software to facilitate the data analysis process.

In terms of educational practice, the study is significant because:

- a) It helps with expanding EFL student teachers' language-related literacy practices while they are studying English as a foreign language, and this, in turn, should help them to improve their learning practices in general.
- b) It introduces to EFL teacher educators in general and Egyptian educators in particular, many possibilities and avenues for employing the Web to improve their teaching practices.
- c) It exposes student teachers to new practices that should foster the lifelong learning skills necessary for their future careers.

## **5. Research Questions**

To realise the objectives described above, the following questions will be addressed:

- 1) What is the range of Web-based new literacies that Egyptian EFL student teachers need in the context of their pre-service teacher education programmes to cope with the increasing use of ICTs in TEFL?
- 2) Which Web-based facilities are beneficial to Egyptian EFL student teachers, and why and how can they be beneficial?
- 3) Which design principles are effective as guidelines for expanding the language-related literacy practices of Egyptian EFL student teachers at Assiut University College of Education (AUCOE) through integrating some Web-based new literacies into their education programme?
- 4) What are the implications of the suggested design principles for EFL curriculum design in the target context of AUCOE?
- 5) What are the methodological implications of employing an educational design-based research (DBR) methodology along with some innovative

techniques for data collection and analysis, for the Egyptian context of educational enquiry?

## 6. Definitions of Research Terms

In this section, I define the main terms used in the study:

### *a) Web-based new literacies*

'New literacies' is a broad term with a multiple nature which indicates that technology and literacy are quickly converging (Kapitzke, 2001; Leu, 2000b). In addition to being multiple, new literacies are always changing because every day, innovations come to the fore requiring certain literacies, and therefore, after some time, today's literacies will become obsolete (Leu, 2000a). This makes the concept wide and vague, and hence, if we use 'new literacies' without linking it to a specific reference, it can refer to all innovations and technologies. Hence, if the Web is the main technology in focus, 'Web-based new literacies' will be the appropriate term to use (Abdallah, 2010b).

Drawing on their cognitive-psycholinguistic background to literacy, Leu (2002: Online) and Leu et al (2004: Online) define new literacies based on the Internet as:

*The knowledge, skills, strategies, competencies and insights that allow us to effectively use the Internet and other ICTs to identify problems, locate information, analyse the usefulness of that information, synthesise information to solve problems, and communicate the solutions to others.*

Though comprehensive, this definition needs to be adapted in order to achieve a balance between cognitive approaches and social approaches to literacy, enabling it to function within my context and purposes.

I therefore suggest the following definition for 'Web-based new literacies' in the context of TESOL and pre-service EFL teacher education:

*The Web-associated knowledge, insights, skills, strategies and competencies that EFL student teachers need for an effective employment of the Web in language learning (Abdallah, 2010b: p5).*

### ***b) Web-based facilities***

Web-based applications and services have recently increased in scope, especially with the development of Web 2.0 which has recently fostered social networking, collaborative knowledge construction, publication of any Web-based content, and sharing many types of files online (O'Reily, 2005; Richardson, 2009). Hence, I need to use a comprehensive term like 'Web-based facilities' to describe all these tools that can be useful within a language learning context. Therefore, I perceive Web-based facilities as:

*All those available Web-based applications, features, resources, and services that the Web provides for education in general and for ELT/ELL in particular, and which can be used as spaces for learning and language practice.*

### ***c) Design-based research (DBR)***

One of the problematic issues of DBR is that there are many labels attached to it, such as 'design experiments', 'design research', and 'developmental research'. To facilitate matters, I will restrict myself to the label 'design-based research' (DBR) after the Design-Based Research Collective (DBRC, 2003).

To distinguish DBR, some definitions were provided; the most comprehensive one that captures the overall philosophy and procedures of DBR was provided by Wang and Hannafin (2005: p6):

*a systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories.*

From another perspective, Shavelson et al (2003) identify DBR as a type of research strongly based on prior research and theory and carried out in educational settings. It seeks to trace the evolution of learning in complex, messy classrooms and schools, test and build theories of teaching and learning, and produce instructional tools that survive challenges found in everyday practice.

Similarly, Barab and Squire (2004: p2) view DBR as "a methodological toolkit" for deriving "evidence-based claims" from naturalistic learning contexts that are engineered in ways that allow for generating and improving these claims with the



intent of "producing new theories, artefacts, and practices that account for and potentially impact learning and teaching".

From a methodological standpoint, Bannan-Ritland (personal communication, 2009) perceives DBR as "a meta-methodology combining different methods at different points in the innovation cycle".

Based on these definitions, I can signpost the core of DBR as follows:

*DBR is a new paradigm or methodology in educational research that is based on both theory and previous research with the aim of improving educational practice. It is conducted in the real, complex, and messy learning/teaching contexts through iterative cycles of analysis, design, development, and implementation mediated by some interventions. It originates from real educational problems and/or challenges, and ends with design principles and/or learning theories subject to continuous refinement and improvement. Thus, the products/outputs of DBR are design principles, learning theories, interventions, curricular products, instructional tools, and/or practical solutions/prescriptions.*

#### ***d) Language-related literacy practices***

Scribner and Cole (1981: p236) define literacy practices as "socially developed and patterned ways of using technology and knowledge to accomplish tasks".

For the purposes of the study, I define 'language-related literacy practices' in the target context as:

*Those practices that involve using the English language for a variety of learning tasks and pragmatic purposes, such as self-expression, communicating ideas to others, sharing knowledge, and reading and writing in a variety of genres and modes. Those practices are subject to change and expansion depending on the technologies of literacy being used such as the Web as well as the new language functions and/or dimensions enabled by these technologies.*

## **7. Outline of Thesis**

Because this is a three-phase design study, the structure of the thesis is unique. After Chapter 1 sets the scene for the study by introducing the rationale behind it, the context of the study, the research problem supported by relevant literature in the field, the research objectives, and the main research questions, Chapter 2 introduces the research framework that is based on a three-phase design-based research (DBR)

methodology. Although Chapter 2 usually introduces a literature review, here because literature review is part of the design (i.e., part of the preliminary phase of the study), this chapter introduces the main methodology and research framework guiding the whole study. Since DBR is an emerging paradigm in educational research, a comprehensive review will be provided presenting many important aspects about the paradigm itself and the rationale behind choosing it over a wide range of options (e.g., action research, experimental research, and interpretative research).

Chapter 3 starts the preliminary phase of the study by presenting a review of relevant literature that is quite different from the brief review presented in Chapter 1 as an empirical background to contextualise and support the problem of the study. As part of the research framework, this detailed literature review focuses on three main areas: EFL teacher education as a context that should lead to lifelong learning, and the curriculum design process within it; Web-based new literacies as an extension of the traditional concept of literacy; and Web-based facilities as online spaces for language learning.

Chapter 4 presents the data obtained in the preliminary phase. The first section presents the data collection and analysis methods used in the preliminary phase and which are compatible with the main DBR paradigm guiding the whole study (i.e. literature review combined with documentary analysis; online questionnaire; and online semi-structured interviews). The second section presents the detailed results obtained from using these methods. More specifically, this chapter answers the first and second research questions by presenting the final list of Web-based new literacies based on a quantitative analysis using SPSS as well as a list of some Web-based facilities based on a qualitative thematic analysis of the interviews using NVivo 8.

The second phase (the prototyping phase) is explored in Chapters 5 and 6. Chapter 5 presents the first iteration of the design study (i.e. Community of Practice or CoP design) guided by a preliminary design framework based on both literature review and empirical data obtained from Chapter 4. This iteration includes a discussion of the learning theory, design principles, participants, procedures, and results that should be cycled back into a refined design framework to guide the second iteration. Chapter 6 presents the second iteration (i.e. the blended design). The first section presents a more comprehensive design framework based on some empirical data as well as

lessons learned from the first iteration. The second section presents the second iteration as a micro-cycle of the whole research process. This includes discussion of objectives, methodology and learning design, participants, the interventional programme, procedures, and obtained results that should inform the third phase.

Chapter 7 outlines the third phase (the assessment/reflective phase) in which a final design framework is presented as the main results of the study based on lessons learned from the prototyping phase; this will answer the third and fourth research questions. Thus, the chapter presents both the final design framework that includes some suggested design principles as the main contribution of the study, and implications for EFL curriculum design within the Egyptian context of pre-service EFL teacher education, with specific reference to AUCOE.

The final chapter, Chapter 8, is a conclusion for the whole thesis that presents the main implications and contributions of the study (to methodology, knowledge, and practice), and thus answers the fifth and last research question on methodology; it then presents the limitations of the study followed by recommendations and suggestions for future research, and finally conclusions and reflections on the whole research process.