# Dematerialization and Deformalization of the EFL/ESL Textbook - Literature Review and Relevant Issues

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Abstract. Rapid development and critical convergence of Information Communication Technologies is radically impacting education, particularly in second language acquisition, where the sudden availability of multimedia content and immediacy of distance communication offer specific advantage. The language classroom is evolving to integrate computer-mediated learning and communication with traditional schooling; digitization and the Internet mean the textbook is evolving from inert hard copy that is consumed, to dynamic e-texts that students participate in. The emergence of English as a Global Language, with the primary role of English on the Internet, means that the transition from fixed hard copy to fluid online digital environment is particularly evident in EFL/ESL. I review research, trace ways in which this transition occurs, and speculate on how, under the impact of ICTs and their convergence, the EFL/ESL textbook will reform, and may even disappear as a stand-alone entity.

**Keywords:** EFL/ESL, E-Text, E-book, L2 digital literacy, Second Language, SLA, Convergence, E-learning, blending learning, autonomous learning, Information Communication Technologies, Korea, East Asia.

# **1** Introduction

The early 21<sup>st</sup> century is characterized by radical transformations that are fueled by and supported by the rapid development of Information Communication Technologies and their critical convergence. Phenomena that include globalization, urbanization, mass transportation and communication, and the rapid evolution of the computer and the Internet are evidence of a profound revolution in human culture. But that developing global culture now faces the pressures of global warming, environmental pollution, economic crises and the mass extinction of species - to which all of these phenomena have in various ways contributed. Education is an integral part of this global transformation, as the computer and the Internet become integrated more fully into everyday life. Person-to-person interaction moves from a predominantly face-to-face mode to a predominantly computer-mediated mode. Global linguistic transformation is evident in the emergence of English as a Global Language, and its

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use, to a degree, as the *lingua franca* of computer-mediated communication. Inevitably, these various aspects and pressures of transformation are becoming evident in the EFL/ESL discipline and the classroom [1] - notwithstanding delayed actualization from reactionary resistance, lack of technological expertise, and financial and imaginative constraints.

Within the second language classroom and syllabus, the two major sources of exposure to the target language are the textbook and the native teacher. The first of these has important implications for the choice of a textbook series [2]. The popularity of the cell phone, smart phone, multitouch interface, and most recently the iPad tablet with its ecology of iOS 4, apps, iBookstore and e-texts is increasingly providing ubiquitous computing, putting the Internet firmly into the hands of its users, by making the Internet available to users anywhere, anytime [3]. The packaging of information is moving from relatively fixed inert bundles that are consumed, to dynamic interactive multimedia experiences that allow integration of individual, group, class, teacher, departmental and institutional user-created content and user-modifiable orientation and navigation as well as author updating, institutional wifi installation, maintenance and updating, and the integration of distance communication and online resource utilization with interpersonal communication and individual research, study and play.

The textbook evolves from a stand-alone object to an interactive node; from there it dissolves into non-distinguishable components of an online integrated learning management system that manages and delivers online learning content, tasks, applications, assessment, administration, interpersonal communication and social networking. Concomitant with this is a certain subjectivization, as language - and even reality itself - transforms from an essentially static resource to which one subscribes, to a more participatory immersion within which one navigates and of which one partakes.

# 2 A Survey of E-Textbook Literature Relevant to Korean and East Asian Native Teacher EFL/ESL Programs

In recent years, a significant literature has begun to emerge on the evolution of the E-book and more particularly the E-textbook. For pedagogical purposes that include helping integrate the e-book phenomenon into the EFL/ESL discipline, I review four papers on electronic books and texts, which can be accessed from the links provided.

#### 2.1 Electronic Literacy in School and Home: A Look into the Future

Keith J. Topping, Director, Centre for Paired Learning, Department of Psychology, University of Dundee. Reading Online, May 1997. <u>http://www.readingonline.org/international/</u> inter index.asp?HREF=/international/future/index.html

**Topping** [4] provides parents and teachers with a broad overview of electronic literacy in the school and at home, and includes practical links and references. Texts, hypertexts and hypermedia are defined, and changes in the definitions of reading and literacy are discussed. Current developments in electronic literacy are reviewed for

various categories, and linking electronic activities between home and school considered, with access and equity issues and the practicalities of simpler alternative multimedia technologies in regard to international perspectives reviewed. The development of global electronic literacy from the home independent of the school is addressed, and future problems, opportunities and developments are reviewed, with implications for practitioners and researchers discussed, and issues of effectiveness emphasized.

*Introduction: Texts, hypertexts, and hypermedia.* While traditionally all writing systems have been linear, linear text is being replaced by hypertext in electronic literacy environments. Segments of linear text can be accessed by the user in any order via embedded structural electronic links, which can also link to other texts and materials. Thus hypertexts as large sets of parallel texts provide a network of possibilities, and exhibit ill-defined boundaries. Hypertexts thus provide a different way of organizing and linking symbolic information; and hypermedia go beyond textual symbols, typically offering much faster search and interactivity than regular books. Hypermedia may be characterized by organizational feature, variety, and immediacy of interactivity. These changes coupled with changes in the interaction between medium and user ensure that "reading" is no longer what it used to be.

What is reading, in the Electronic Age? Reading in a hypertext environment involves the reader in cognitive reconstruction to suit individual requirements and specifications. It is a search for personal relevance and salient information, involving more frequent and overt selectivity, and potentially more partial and deeper understanding. Hypertext reading is more like navigation than reading, requiring more active strategic management, with implications for metacognitive strategies and thinking skills.

*Electronic literacy.* As reading changes, so does literacy, as notions of literacy expand and develop as I elsewhere address in regard to the critical importance of enabling EFL digital literacy [9, 11, 12, 13]. Electronic literacy refers to literary activities that are delivered, supported and accessed through electronic means, rather than on paper.

Wangberg, cited by Topping, shows *Electronically supported reading* has been effective in raising literacy performance, as Reitsma shows adaptive computer programs scaffold and prompt successful reading. According to Salomon, Globerson and Guterman, inserting metacognitive prompts of questions, strategies and reminders results in superior reading comprehension and essay writing, while Reinking and Rickman suggest support for readers is more used and more effective when presented by computer. Davidson and Noyes, and Goodman, all cited by Topping, show that voice recognition, speech synthesis and digitized speech to give feedback promotes oral reading accuracy. Supported texts can extend the student's zone of proximal development. Citing Anderson-Inman and Horney [5], embedded resources can be *translational, illustrative, summarizing, instructional, enrichment, notational, collaborative,* and *general purpose* (see ¶2.2: *Types of Embedded Resources* below).

*Electronically supported writing.* Word processing, according to Bangert-Drowns, improves student writing; predictor programs scaffold and prompt the writing process, so student and machine develop an individualized, interactive and adaptive relationship combining human and artificial intelligence. Adaptive prompting spell-checkers engineer effective learning, while minimizing stress and sense of failure.

*Electronic audiences.* Electronic literacy can offer wide socialization and an expanded view of potential audiences, as students correspond and collaborate globally.

*Electronic literacy assessment, feedback, and management.* As programs for selfassessment of silent reading comprehension become more sophisticated, computers also assess reading; norm-referenced tests delivered, scored and interpreted by computer save teacher time, reduce student testing time, and generate prescriptive advice. *Electronic direct speech-text conversion* may even mean teaching writing will become of doubtful relevance, while teaching dictation skills becomes more important. *Miniaturisation and the virtual library.* Portable electronic text readers are supplanting books, as simultaneously public libraries become virtual libraries.

*The electronic literacy home-school connection.* For those with access, the potential for flow of worldwide information direct into the home is enormous; schools can help promote electronic literacy in the home, and electronic literacy activities can develop independently in the home irrespective of school involvement, given the international availability of information and communication.

*Parental involvement in reading* guided by the teacher accelerates reading achievement; while the *family literacy* movement embraces all aspects of literacy, and targets gains in literacy competence, motivation and self-image for all participants as family members help one another as collaborative partners and with the teacher.

*Family electronic literacy.* Topping, Shaw and Bircham argue for computer-based inter-generational literacy development leading to accelerated achievement gains.

Access and equity issues in electronic literacy. Critical practical access and compatibility issues redress the development of a digitally disposed information underclass.

*Global electronic literacy from the home.* While the hearth was the focal point of the family in the 19<sup>th</sup> century, and the television its focus in the 20<sup>th</sup> century, the computer may be focal in the 21<sup>st</sup> century. The stereotype of a school at the center of a village community is being replaced by the notion of a global electronic village; and parents and students are already interacting electronically independently of the school.

*Electronic distance learning.* Distance learning, with electronically scored and interpreted multiple-choice exams, is now delivered worldwide through the Internet [6].

*Future opportunities.* New methods should help students fulfill their potential by individualizing and enhancing learning, as the nature of learning changes in the face of the torrent of information. Transferable skills of selecting, processing, transforming, evaluating and adding to information are needed, rather than the traditional emphases on detailed knowledge and retention. Higher order thinking skills are increasingly needed, and information retained in the brain will be largely nodal such as signposts, frameworks, and strategies for navigating networks. Routine laborious tasks like writing will be taken over by machines, while electronic literacy offers the opportunity for expanding horizons while retaining privacy. Worldwide telecommunications allowing conversations with others in other parts of the world should generate a more global, less parochial view, and the seeing of foreigners as real people with similar concerns to oneself and one's peers. Print may not survive, and beyond hypermedia lies the world of virtual reality, as interactive virtual reality books are not "read" but are instead sensed and indeed lived. As communication reduces to digital electronic transfer, our crude symbols may no longer be needed: will any concept of literacy remain? *Effectiveness*. Issues of effectiveness are important in the research agenda for electronic literacy. If electronic literacy is to make a difference, inexpensive, simple, durable, and compatible hardware coupled with intelligent, interactive, and adaptive software and developmental menus of strategic practical options suitable for many different contexts and participants will be necessary.

#### 2.2 Electronic Books: Reading and Studying with Supportive Resources

An adaptation of "*Electronic Books for Secondary Students*" Published in the Journal of Adolescent and Adult Literacy, 40(6), 486-491.

Lynne Anderson-Inman, Director of the Center for Advanced Technology in Education and of the Center for Electronic Studying, University of Oregon; and Mark Horney, Research Associate, Center for Electronic Studying, University of Oregon. Reading Online, April 1999. <u>http://www.readingonline.org/electronic/</u> <u>elec\_index.asp?HREF=/electronic/ebook/index.html</u>

Anderson-Inman and Horney [5] observe that the term "*electronic book*" means different things to different people; stringent criteria for deciding whether a piece of software is an electronic book are: 1. An electronic book must have electronic text and that text must be presented to the reader visually, though the delivery mechanism is unimportant. 2. The software needs to adopt the metaphor of a book in some significant way, so that the program is situated within a familiar genre of reading materials. 3. The software requires a focus or organizing theme, which rules out large networks of text-based information that are not thematically organized. 4. When media other than text are available, they are primarily used to support or enhance the text.

Applying these four criteria in the selection of software results in a library of programs or websites that share important features. There is a strong textual thread and it is used to convey information or tell a story; the program has the "feel" of a book because features are labeled with terms traditionally applied to printed books. The focus of the book has some definable boundaries and a clear organizing theme; and other types of media, if available, are largely present to enhance and enrich the text.

*Purposes.* Despite considerable overlap, most electronic books can be matched with at least one of four general purposes: 1. Some are for reference, with small amounts of information on many topics. 2. Others have a strong instructional flavor, with information presented and supported to meet specific student needs. 3. Some are meant for in-depth studying, providing the reader with a large-scale network of interrelated documents, graphics and sounds, providing links across documents and text enhancements within documents. 4. Others are primarily for entertainment or pleasure reading. In evaluating an electronic book for classroom use, teachers need to understand what it was designed to do and whether this matches their instructional goals.

Advantages and Disadvantages. Advantages evolve from the specialized features inherent in most kinds of electronic documents; specifically, electronic documents are usually *searchable*, *modifiable*, and *enhanceable*.

Searchable means the reader can quickly locate key words or phrases simply by entering the desired word or words into the program's *find* or *search* function. *Modifiable* means that the electronic book can be changed during use to meet the needs of the reader. *Enhanceable* means that resources designed to enhance text use and comprehension can be embedded into an electronic book by the developers or by teachers. *Types of Embedded Resources.* The presence of embedded resources in electronic books has tremendous potential for improving student comprehension and promoting in-depth learning. Anderson-Inman and Horney categorize these types of resources by the function they perform in assisting readers to comprehend and learn from text:

*Translational resources* translate a word, phrase, or paragraph into something more comprehensible to the reader. *Illustrative resources* help readers understand the text by providing examples, comparisons, illustrations, and visuals. *Summarizing resources* provide an overview of the text without any encumbering or complicating detail. *Instructional resources* promote active processing of the text by suggesting activities for manipulating concepts and remembering information. *Enrichment resources* provide information directly related to, but not strictly necessary for, comprehension of the text. *Notational resources* are designed to enable interaction with an electronic book while supporting students' need to reinforce their learning by such actions as taking notes, outlining, diagramming, calculating, categorizing, summarizing, and collecting examples. *Collaborative resources* are those that can be linked to an electronic book but were not developed to support the text in that specific document.

*Evaluating and Selecting Electronic Books.* Anderson-Inman and Horney advise the teacher and administrator to firstly, be very explicit about their purposes for selecting an electronic book or set of books; secondly, to look for features in the available electronic books that would support their purposes; and thirdly, to look for features that would enable a diverse body of learners to use the book effectively, attending specifically to translational, illustrative and instructional resources that support student comprehension of the text, particularly definitions for problematic words, explanations for difficult concepts, and graphics that clarify or supplement the text.

#### 2.3 The Benefits and Advantages of Ebooks

Remez Sasson. SuccessConsciousness.com. http://www.successconsciousness.com/ebooks\_benefits.htm

**Sasson** [7] provides a popularist, repetitious and dated list of the benefits of ebooks: they disseminate knowledge, so prices should be evaluated according to the usefulness, relevancy and uniqueness of the information contained, and the practical knowledge, inspiration, motivational tips and advice provided. E-books are purchased and delivered immediately, do not consume trees, do not require physical storage space, are highly portable, can be read anywhere, are more safely stored and carried, provide linkages, are searchable and interactive, are printable, and display resizable fonts.

#### 2.4 "E-Book Flood" for Changing EFL Learners' Reading Attitudes

Chih-Cheng Lin and Irene Yi-Jung Lin.

Proceedings of the 17<sup>th</sup> International Conference on Computers in Education, 2009. <u>http://www.apsce.net/ICCE2009/pdf/C6/proceedings769-776.pdf</u>

Lin and Lin [8] investigate the effects of using e-books in an extensive reading program (ERP) on EFL learners' attitudes toward reading in English. In Taiwan, 109 students from three junior high school classes were recruited in the ten-week ERP of e-books. Each class was introduced to a list of 140 selected e-books for the reading program; students were encouraged to read e-books after school, with weekly targets of reading four e-books each. The degree of changes in reading attitudes was assessed using Stokmans' reading attitudes scale, cited by Lin and Lin, before and after the e-book ERP; also, the teacher's class notes of the students' reading behaviors and reactions as well as their spontaneous oral or written feedback were analyzed for triangulation with quantitative data. The e-books had positive effects on the students' attitudinal changes in all dimensions of reading attitudes, namely utility, development, enjoyment and escape, as well as in all the cognitive, affective and cognative components. E-book features, especially oral reading, highlighting, animations and music/sound effects, were important in changing attitudes. The implementation of interaction and learner control in the e-books guaranteed positive attitudinal changes.

*Introduction.* High student computer literacy and keen interest in multimedia have inspired language teachers to convert the traditional teaching setting into an e-setting that students are constantly exposed to. Teachers are encouraged to use computer technology as an intervention strategy to overcome negative student attitudes to L2 reading. E-books change the nature of reading mainly through multimedia features of oral reading, highlighting, animations, music and sound effects. The motivation of the study is to find ways to utilize e-books effectively, reinforcing student reading attitudes by employing a literature-based reading program to encourage reading, spend more time reading, foster the love of reading, and develop long-term reading habits.

The E-book ERP. The positive effects of an Extensive Reading Program have been widely recognized, e.g. by Asraf and Ahmad, and by Davis, Elley and Mangubhai, all cited by Lin and Lin. ERP is one of the most effective ways to enhance reading comprehension and reading rate; but not all studies of ERPs or e-books have positive results, the key factors being the ways ERPs are implemented and e-books are utilized. E-books may be best implemented as a new medium in an ERP, according to Green, by introducing extensive reading within the purposeful interactive framework of the task-based language curriculum. *Characteristics of Successful ERPs* may be addressed through central philosophy, suggested material, and specific principles. ERPs that emphasize extrinsic motivation, excessive reading or comprehension tests result in student loss of reading pleasure and desire. ERPs need to be able to stimulate students to read, keep them reading, and induce them to read in large quantity, hence the importance of *reading enjoyment*. Students need an ample supply of short, easy and interesting books to choose from. ERP books must conform to the student reading comfort zone with not too many unknown words, and students must be provided with

a wide range of books in terms of genres and contents. Specific tasks should be assigned to students so that they use rather than browse the Internet, as online browsing lacks direction and causes fatigue and boredom. With specific reading tasks in mind, students have clear goals to achieve, and are likely to really use Internet resources.

*Conclusion:* The study investigates the effects of e-books on EFL high school students' attitude toward reading in English and bears two central findings: E-books can effectively reinforce EFL learners' attitudes toward reading in English; and the features of e-books, such as oral reading, highlighting, animations, and music/sound effects, may reinforce reading attitudes. Participants had positive attitudinal changes because of the unique nature of e-books; and the process of reading has four dynamic stages: read increasingly, read easily, read happily and read regularly.

## **3** Discussion of E-Texts and EFL/ESL

#### 3.1 Change in the Role of E-Texts: Does the EFL Textbook Have a Future?

With the rapid development of ICT, multimedia resources and e-texts in particular have undergone a change in role. Initially, they were regarded as adjunct resources that could in some sense merely provide peripheral assistance to traditional physical textbook instruction. Then, e-texts were considered as digital versions of traditional textbooks that essentially imitated physical texts, while embodying convenient sub stitute and supplementary tools. From there, the inherent potential of the new media became stronger, suggesting new avenues in which the media could function, as the e-text came to be realized as a powerful new educational tool in its own right that could complement traditional instruction. Finally, we are seeing the radical reformalization of the educational process, as the electronic realities of digital-based computermediated Internet-hosted EFL resources assume a primary role in EFL instruction. It is becoming normal for teachers and students to effortlessly shift between traditional face-to-face learning that uses physical texts, classroom objects and physically present teachers and students, and e-learning that exploits online resources and distance communication [9]. In language class, this shift has been presaged by students adopting bilingual e-dictionaries: initially stand-alone, and now as smartphone apps [10].

In this new hybrid reality, physical texts recede into helpful adjuncts to a digitallydelivered and participated-in education (in the transitional stage, those who still prefer printed texts could be offered them as alternatives; at present, access to e-texts that students might prefer is not an option). At a later stage, students who prefer physical texts could print their own, or arrange custom printing through a copy shop.

#### 3.2 Dematerialization and Deformalization of the EFL/ESL Textbook

Texts as stand-alone entities may even eventually be completely discarded, as textbook boundaries dissolve into an integrated Learning Management System that delivers online learning content, tasks, assessment, grades, administrative content, interpersonal communication and social networking [11]. Moodle LMS allows integration of lessons that incorporate multimedia learning content into courses that include tasks, assessment quizzes, grades, administrative content, forums, blogs and so forth [12].

This new educational reality emerges as a subset of everyday reality, which moves effortlessly between on-line and off-line mode, while moving inexorably towards a predominantly online reality. In its ultimate realization, everyday face-to-face reality will for some, become computer-mediated by choice, as digital communication enables preferred enhancements such as augmented reality, that non-computer-mediated communication either does not provide or provides less effectively [13]. For others, traditional every-day face-to-face reality will remain the mode of choice.

### 4 Conclusion

The effects of the contemporary rapid development and convergence of Information Communication Technologies are radically impacting upon education and are - at least in potential - particularly evident in language education because of the sudden availability and tremendous potential of multimedia and of distance communication. These transformations will become pervasive (notwithstanding significant professional resistance in some quarters from those administrators and teachers who, apparently threatened by progress, prove incapable of accommodating to Web 2.0+ thinking [2]). In the author's opinion, language itself is being profoundly transformed, the depth and significance of this transformation extending well beyond those changes that linguists generally are willing to recognize. This transformation extends to reality itself, which is evolving from a consumerist model that is essentially received and to which one conforms, to a participatory model one confronts and with which one engages, as L2 speakers take control of their second language(s), abandoning native speakers to their restricted monolingual fate. Critical to these various interrelated transformations is the shift from traditional face-to-face reality to the adoption of computer-mediated reality and communication as being the taken-for-granted norm.

In accord with that shift, the role of the textbook in EFL/ESL is changing. The text is no longer to be regarded as a stand-alone physical object that contains received wisdom, but rather as a non-distinct hypermedia reality within which students engage and which they share and help shape. In language education, the EFL textbook is thus undergoing *dematerialization*, as it evolves through intermediary stages of digitization through e-book and beyond; it is simultaneously undergoing *deformalization*, as its traditional clear structure and shape becoming problematic as it merges with online Internet-hosted Learning Management Systems, to where it becomes merely a nondistinct aspect of that system. Ultimately, we may even see the complete abandonment of the stand-alone textbook, whether as physical object or as dedicated e-text.

That abandonment correlates with a profound shift in consciousness from viewing reality as an independent state to be conformed to, to an immediacy that might best be described, in poiesis, as the integration of the scholar with their field of study. Such a change in the nature of reality parallels the well-known aesthetic differentiation between the plasticity of object-centeredness, where separate identities stand in clear relationship (as in the Italian architecture of the Mediterranean), and the field perception of flow, in which phenomena merge into one another, and nothing stands still (as in Germanic forest landscapes or the Baroque). In the longer term, this immediacy itself may eventually exhibit a reformalization, as new modes of comprehension, being and communicating stabilize and become identifiable, understandable and describable.

### References

- 1. Meurant, R.C.: Applied Linguistics and the Convergence of Information Communication Technologies. The Opoutere Press, Auckland (2010)
- Meurant, R.C.: EFL/ESL textbook selection in Korea and East Asia Relevant issues and literature review. In: Tomar, G.S., Grosky, W.I., Kim, T.-h., Mohammed, S., Saha, S.K. (eds.) UCMA 2010. Communications in Computer and Information Science, vol. 75, pp. 89–102. Springer, Heidelberg (2010)
- 3. Meurant, R.C.: Providing Every Student with an iPad as a Means of Helping Develop Korean EFL Digital Literacy. In: NCM 2010: 6th International Conference on Networked Computing and Advanced Information Management. IEEE/AICIT, Seoul (2010)
- 4. Topping, K.J.: Electronic Literacy in School and Home: A Look into the Future. Reading Online (1997),

http://www.readingonline.org/international/

inter\_index.asp?HREF=/international/future/index.html

- 5. Anderson-Inman, L., Horney, M.: Electronic Books: Reading and Studying with Supportive Resources. Reading Online (1997), http://www.readingonline.org/electronic/ elec\_index.asp?HREF=/electronic/ebook/index.html
- Meurant, R.C.: Computer-based Internet-hosted Assessment of L2 Literacy: Computerizing and Administering of the Oxford Quick Placement Test in ExamView and Moodle. In: CCIS 60: Multimedia, Computer Graphics and Broadcasting, pp. 84–91. Springer, Heidelberg (2009)
- Sasson, R.: The Benefits and Advantages of Ebooks. SuccessConciousness.com (n.d.), http://www.successconsciousness.com/ebooks\_benefits.htm
- Lin, C.-C., Lin, I.Y.-J.: E-book Flood. for Changing EFL Learners' Reading Attitudes. In: Proceedings of the 17th International Conference on Computers in Education (2009), http://www.apsce.net/ICCE2009/pdf/C6/proceedings769-776.pdf
- Meurant, R.C.: The Korean Need for L2 Digital Literacy in English. In: KATE 2010 International Conference: Teaching and Learning English as a Global Language: Challenges and Opportunities, pp. 176–181 (2010)
- 10. Meurant, R.C.: Using Cell Phones and SMS in Second Language Pedagogy. JCIT: Journal of Convergence Information Technology 2(1), 98–106 (2007)
- Meurant, R.C.: How Computer-Based Internet-Hosted Learning Management Systems such as Moodle Can Help Develop L2 Digital Literacy. IJMUE: International Journal of Multimedia and Ubiquitous Engineering 5(2), 19–26 (2010)
- Meurant, R.C.: Developing Critical L2 Digital Literacy through the Use of Computer-Based Internet-Hosted Learning Management Systems such as Moodle. In: CCIS 60: Multimedia, Computer Graphics and Broadcasting, pp. 76–83. Springer, Heidelberg (2009)
- Meurant, R.C.: The Key Importance of L2 Digital Literacy to Korean EFL Pedagogy: College Students Use L2 English to Make Campus Video Guides with Their Cell Phone Videocams, and to View and Respond to Their Videos on an L2 English Language Social Networking Site. IJHIT: International Journal of Hybrid Information Technology 1(1), 65–72 (2008)