L2 Pedagogical Framework of Internet-Integrated Instruction

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The purpose of this study is to examine the Internet as an effective teaching tool in the L2 context by analyzing its possible functions and reviewing its relation to current L2 pedagogy. This study categorizes present ESL materials over the Internet into four types according to their instructional uses: Computer-Mediated Communication, Authentic Text-Based Information, Drill and Practice, and Form-Focused Tutorial. This research also fully reviews the features of the four types from a widely accepted L2 perspective, Communicative Approach (CA) to find out how well these lesson types coincide with the second language theory. The comprehensive review of previous literature reveals commonalities between these functions and the theory-based practices, respectively, Communicative Language Teaching, Content-Based Instruction, and Focus on Form approach. Based on this analysis, this study finally attempts to suggest a pedagogical framework of Internet-integrated language instruction.

[Internet-integrated language instruction/communicative approach, 인터넷 결합 언어교수/의사소통 접근이론]
1. Introduction

1. The Background of This Study

The rapid growth of networking technology (e.g., the Internet) has led to a new branch of Computer-Assisted Language Learning (CALL), recently known as Network-Based Language Teaching (NBLT). Since NBLT is a newly emerging area, there is little research that examines the pedagogical use of the Internet in a language-learning context. NBLT, as a research topic in the second language (L2) area, in particular, has not even been explored in a systematic manner. Thus, it is crucial to open a theoretical, methodological dialogue on network-based language teaching considering the explosive popularity of the Internet and the depth of L2 educators' expectations for this new teaching tool.

By way of contrast, online learning has already become a familiar classroom practice to many L2 educators (Hanson-Smith, 1997). The Internet is a common topic that appears in many recent L2 conferences. For example, Teachers of English to Speakers of Other Languages (TESOL) has strongly supported and sponsored the network CALL area for years. The Annual TESOL Conference has regularly presented an Internet fair, Internet-mediated class projects, and publications on online education. At the 34th Annual TESOL Conference (2000), approximately 15% of the presentations and expositions focused on CALL-related topics. More than half of those CALL shows dealt with network technology including the Internet or e-mail. Considering the trend, it seems incumbent on ESL teachers to enter the mainstream of current language education. As a L2 researcher remarked, "Regardless of instructor preferences, the future of education may not offer a choice about whether or not to teach online."3

As seen above, this significant gap between theory and practice in NBLT is a serious issue within SLA research is urgently needed for the successful integration of the Internet into second language classrooms without frustrating

1) Past TESOL Convention websites are found in http://www.tesol.org/conv/archives.html
2) See CALL Interest Section website, http://www.uoregon.edu/~call/ and also visit TESOL Electronic Village page in this site.
3) This unpublished thesis (Frizler, 1995) is only available from the Internet, http://thecity.sfsu.edu/~funweb/thesis.htm
teachers with the dearth of solidly formulated research on network-based language teaching. L2 researchers must focus on the Internet as a multifunctional instruction tool, a lot more than just providing information, which may scaffold L2 theory and practice.

2. Two Common Questions Never Appropriately Answered

The following questions are the ones frequently asked by teachers who are in the initial phase of incorporating the Internet into their L2 classes. They are not unexpected questions, but appropriate answers haven’t been given yet by the previous literature.

(1) What useful resources (or functions) does the Internet provide for my instruction?

(2) How can I effectively use these resources in my class?

First of all, teachers will need to develop the knowledge necessary for web-based instruction regardless of whether they are expert teachers or frequent Internet users. It is surprising that little effort has gone into comprehensively analyzing and evaluating the WWW ESL/EFL resources even though teachers’ demand for knowledge seems quite obvious. There have been few in-depth reviews or research references that meet teachers’ practical needs or theoretical concerns.

The first systematic attempt to answer ‘what’ and ‘how’ was made by Warschauer (1995), who extensively examined ongoing Internet projects and related online activities. Warschauer mainly focused on online communication in and across the classrooms by introducing the various media of computer-mediated communication (CMC), such as e-mail, listservs, bulletin boards, and multi-objects oriented domains (MOO). Although his analysis provided original insights and useful implications for ESL online education with more than 200 examples, it presented only a brief guideline with suggestions for actual classroom practice. Warschauer’s ideas and projects are not grounded in theory nor supported by research, and as such they don’t seem to provide reliable standards or criteria on which curriculum designers or school administrators can rely. In addition, Warschauer’s analysis focused on the aspect of communication, but not
upon other functions and aspects of language that the Internet currently provides, such as grammar or other skill-enhancing practice and tutorials. Other reviews (Kim, 1999a; Sperling, 1997; Warschauer, Shetzer, & Meloni, 2000) have primarily focused on specific language skills (e.g. reading, writing, speaking, listening or vocabulary) without consideration for theoretical or general curricular concerns.

With regard to their effective use (related to the second question), ESL web resources should be examined in terms of the relevancy to and appropriateness within teachers’ current curricula and teaching methods. It is important to classify and evaluate online materials from the perspective of how effectively they can be merged into the existing language class. Thus, a pivotal step is to examine commonalities between Internet use and current L2 pedagogy. Previous NBLT research has in part dealt with the relation between theory and practice, especially computer-mediated communication (CMC) and the Communicative Approach (Liaw, 1996; Rankin, 1997; Underwood, 1984). However, since CMC is only one function supported by the Internet, it can explain only a limited part of effective utilization of the Internet for L2 teaching. In addition, some research indicates that online communication seems to be the area that students tend not to use spontaneously at the beginning of the Internet-mediated English for Speakers of Other Languages (ESOL) classroom experience (Kim, 1999b).

Thus, Internet L2 researchers should place more focus on analyzing the various possibilities of the Internet from a theoretical viewpoint. Exploring ideas and resources that are widely accepted by both teachers and curriculum designers in L2 classrooms is one such way. Some CALL educators believe that coincidence with contemporary pedagogical theory has enhanced the rapid development in this area (Hanson-Smith 1997; Ortega, 1997). This assumption is well supported by previous CALL research and types of approaches used to analyze ESL web sites.

This study examines several types of ESL web materials based on current approaches in second language instruction: Communicative Language Teaching (CLT), Content-Based Instruction (CBI), and Focus-On-Form instruction (FoF). These trends are, of course, interdependent because they are all based upon the Communicative Approach (CA). CBI is one specific instructional design based on CA, and Focus on Form is generally regarded as a revision or addition to CA. Consequently, these approaches have overlaps in their fundamental positions and instructional settings. However, for better understanding of its relation with ESL
web resources, this study deals with these approaches in separate categories that consider their emphasis and functions in the L2 classroom. To reiterate, these approaches are developing communicative competence a) through interaction (CLT), b) in academically contextualized language (CBI), and c) with attention to form (Focus on Form).

This work provides a comprehensive and in-depth analysis that covers all different types and functions of online ESL materials considering their relation to current L2 teaching methods. For this purpose, this research examines an extensive list of web-based materials presently available online and analyzes these materials based on their functions.

II. L2 Pedagogical Framework of ESL Web Materials

1. Four Types of ESL Web Materials

Considering their function and classroom use introduced by previous studies and teachers’ empirical reports, this study categorizes all the potential ESL materials provided by the Internet into four types: 1) Computer-Mediated Communication, b) Authentic Text-Based Information, c) Drill and Practice, and d) Form-Focused Tutorial. These formats have been equivalently employed in the development of web-based ESL materials across all levels of language skills.

FIGURE 1
Four Types of ESL Web Materials

[Diagram]

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4) In this study, ESL web materials included some English education web sites designed for native speakers of English. A total of 315 carefully selected ESL web sites were reviewed for this analysis. Many websites serve more than one function. The complete list is in Kim’s book (1999a).
Kim’s (1999a) review of 300 ESL web sites (written in either English or Asian languages) shows that these four formats are found in relatively equal frequency with various uses.

**TABLE 1**

<table>
<thead>
<tr>
<th>Types</th>
<th>CMC</th>
<th>ATBI</th>
<th>D&amp;P</th>
<th>FFT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Use</td>
<td>136</td>
<td>83</td>
<td>98</td>
<td>117</td>
</tr>
</tbody>
</table>

* CMC: Computer-Mediated Communication, ATBI: Authentic Text-Based Information, D&P: Drill and Practice, FFT: Form-focused Tutorial

1) Computer-Mediated Communication (CMC)

Network communication media such as e-mail, listserv, discussion boards, and chat rooms, fall within the CMC rubric. More specifically, CMC is a type of communication that generally takes place between users, not between computers and users. There are numerous web sites that are designed to support CMC solely for ESL education. Many English teachers and researchers worldwide are involved in on-going cross-cultural e-mail exchange projects. Many listservs have become well known by students and teachers in both the United States and other countries. Hundreds of so-called ESL web sites have established discussion boards on their site for ESL students to discuss many topics, while strictly utilizing the English language. At any one time, students are talking in ESL chat rooms, such as Dave’s ESL Café Chat Central.

Additionally, educational MOOs (Multi-Object Oriented domains) have been commonly used by many L2 teachers in and out of class to develop communication skills. Many universities support cyber writing labs (often called OWL: Online Writing Labs) including a synchronous writing tutor service using

5) The web address of Dave’s ESL Cafe Chat Central is http://www.eslcafe.com/chat/chatpro.cgi
MOO. Online proofreading/editing services and grammar consulting are open to ESL learners through the use of an asynchronous web board.

The primary goal of using CMC is to develop communication skills. However, teachers also expect CMC activities to build cultural understanding and personal relationships among students or between teachers and students. Shetzer (1997) examined CMC in an ESL class via the Internet and advocated an innovative framework to apply CMC into the language classroom. She illustrated three rationales for employing CMC in the ESL classroom: First, CMC extends the place and time boundaries of the traditional classroom. Teachers and students can continue CMC outside the class beyond class schedules. Second, CMC allows for varying numbers of participants such as one-to-one communication (e-mail), one-to-many communication (listservs and discussion boards), and many-to-many communication (MOO: Multi-Objective Oriented domains and chats). Finally, CMC facilitates connection with people across the world either synchronously or asynchronously helping instructors and students communicate and collaboratively learn with each other.

2) Authentic Text-Based Information (ATBI)

The most fundamental benefit attained from the Internet seems to be its quantity of information. The Internet resources include a diverse collection of authentic English language texts dealing with a wide array of interdisciplinary topics. Unlike CMC, most web sites in the ATBI category are not designed for ESL/EFL language materials per se, but as reading pieces or study references for native speakers in genres such as science, history, literature, and culture. Thus, many Internet web sites written in clear and precise English belong to this category called ATBI. These sites are being used by ESL teachers a) for purposes such as teaching target language culture and history, academic reading, writing or research skills, and language skills for business, periodical writing and b) in various ways such as Treasure Hunt or Web Quest.7

6) One of the well-known examples for OWL service is Purdue University’s online writing lab. Their web address is http://owl.english.purdue.edu/.

7) These are common web activities of utilizing Authentic text-based information for the purpose of developing both an online research skill and an overall reading skill. See a project guideline, “How to write a treasure hunt for ESL
activities using hyperlink on class home pages.

The major benefits of ATBI that many language practitioners commonly note are as follows. First, students can understand the various facets of target language countries and cultures which help them to learn the target language. Second, the texts that the web sites provide employ truly authentic English that is useful on a daily basis and for many purposes. Third, since ATBI is self-searchable, this feature can easily lead into learner-centered instruction (Kern & Warschauer, 2000). Fourth, these web sites can function as a good medium that gives comprehensive input to ESL/EFL learners by integrating four language skills as a whole language in a given context (Kasper, 1998, 2000).

3) Drill and Practice

Despite popularity of the communicative approach, controlled practice and form-focused exercises have never been completely abandoned by practitioners. WWW materials are no exception. ESL web sites have introduced hundreds of thousands of exercises and quizzes for language practice and testing. Advanced technology and network unique features (e.g., games or simulations for language practice) as well as traditional forms, such as fill-in-the-blank, multiple choices, crossword puzzles, and hangmen, are mostly responsive, visually intriguing, and individualized. They provide immediate individual feedback to each answer, sometimes with detailed explanation and/or an accuracy rate. Some powerful free downloadable software provides even better audio-visual quality than cassette tapes for listening.

8) Such as, Java™, Applet™, Shockwave™, Flash™, and Quick Time™, etc.
9) The commonly cited good examples are 'English Zone.Com' (http://www.english-zone.com/) as an interactive exercise provider, 'Quia.com' (http://www.quia.com/) as a interactive quiz maker, and 'Cutting Edge CALL Demos' (http://www-writing.berkeley.edu/chorus/call/cuttingedge.html) as an ESL game trial using advanced technology.
10) For example, Real Player™, Window Media™
and speaking practice. Voice recognition and user reception technology can further assist students with pronunciation training. The greatest strength of this technology is its ability to motivate users (Kim, 1999b; Warschauer, 1996) and to enhance their self-learning ability. Thus, these resources are considered optimal as out-of-class supplementary materials for individual or extended practice.

4) Form-Focused Tutorials

Websites in this category can be described as ‘online textbooks,’ mostly providing linguistic knowledge, such as word lists (sometimes dictionary-sized), examples and explanations of grammatical elements, tutorial handouts of academic writings and phonetic descriptions in the traditional mode. Form-focused tutorials seem to have no distinctive difference from paper-based ESL references. However, teachers and students have found several advantages to these tutorial web sites. First, they are easily accessible. There are numerous ESL web sites that provide English tutorials and references with plenty of good examples for almost any aspect of language. Learners can find the appropriate materials just by navigating ESL web sites without the hassle of looking for them in the library and bookstores. Second, easy access offers teachers and students the opportunity to appropriately use references for focus-on-form instruction and learning both in and out of class. Learners can print whatever they want with no cost rather than buying grammar or idiom books. Third, the tutorials offer extensive websites databases that are searchable for more effective use. Many sites also function as an electronic dictionary or language encyclopedia. The user can get more examples and information with less effort and time. This function is also indicated as a unique characteristic of Network-based Language Teaching (NBLT) by Warschauer and Kern (2000). Finally, this way of instructing and explaining linguistic elements is more attractive to many students than traditional textbooks, because it utilizes multimedia technology. For example, color coordination, visual arrangement, hypertext links, and easy updating give a better effect on delivering desired instruction and exploring information. Overall, FFT-oriented websites contribute to better facilitating and motivating language learners in a self-learning environment.
2. Supporting L2 Approaches

1) Communicative Language Teaching (CLT) through Computer-Mediated Communication (CMC)

One of the most popular approaches in L2 education during the past two decades is the Communicative Language Teaching (CLT) approach. The basic concept of CLT originated from Hyme’s (1972) term, ‘communicative competence,’ and later was expanded and modified by others (Savignon, 1972). The communicative approach, articulated from numerous perspectives (Anderson, 1993; Krashen & Terrell, 1983; Omaggio, 1986; Savignon, 1991; Widdowson, 1978) emphasizes the following common elements: use and appropriateness, fluency and meaning, learner-centered and task-based, communicative interaction, learner differences, learners’ awareness of their own learning process, and learners’ needs.

The most noticeable impact of CLT on language curriculum, syllabus design, and material development can be found with Task-Based Language Teaching (TBLT). With this method, there is a concentration on the learners’ needs and content-based communication in order to promote the development of L2 functional competence through learner participation in L2 classrooms. Nunan (1991) describes TBLT as having the following five features: “communication through interaction,” “the introduction of authentic texts into the learning situation,” “focus on the learning process,” “use of the learners’ own personal experiences for classroom learning,” “link of classroom language learning with language activation outside the classroom” (p. 279).

All of the CLT features briefly reviewed above match the function of CMC over the Internet. Using a CMC activity itself in the classroom yields a task-based lesson with the purpose of developing communication. As Nunan notes, CMC also requires the interaction between participants using meaning-focused language and based upon the learners’ own personal experiences. CMC activities are often considered as a good out-of-class language practice to activate learners’ in-class learning.

Underwood (1984) also related the communicative approach to computer-mediated language instruction by posing twelve premises of Communicative CALL. Here are four related premises: “(1) Communicative
CALL will aim at acquisition practice rather than learning practice. There will be no drill; (3) Communicative CALL will allow and encourage the student to generate original utterances; (8) Communicative CALL will use the target language exclusively; (11) Communicative CALL will create an environment in which using the target language feels natural, both on screen and off” (p. 119).

The role of communicative CALL, as described by Underwood, is very similar to the role that CMC is expected to play in L2 classrooms. As Underwood indicates, CMC provides language learners an opportunity to extensively use the target language for their meaningful interaction in a natural and encouraging environment.

However, despite this overlap, there hasn’t been much research examining the role of CMC as a contributor to the communicative concept of the L2 classrooms. Since CMC research in education began in the early 1980s,11 numerous studies have been completed. However, early CMC studies were limited to L1 setting with a nonlinguistic focus. For example, Hiltz (1990, 1998) conducted a series of studies investigating the effect of computer-mediated communication (CMC) in a virtual classroom, “an environment in which students can share their thoughts, questions, and reactions with professors and classmates, using computers to send and receive messages” (p. 143). The results of these studies indicate that students and teachers interact in such a way that is seldom or if ever seen in a traditional classroom. Similarly, Burton (1994) also conducted a case study of using e-mail as an academic discussion forum in the university and concluded that CMC provides a number of features that add to the strength of the discussion.

Over the last decade, some researchers also have paid attention to CMC as a medium of communication in L2 education. However, the focus of the research concern was not very different from that in L1 settings. For example, Leppanen and Kalaja (1995) observed five students taking a content-area course by means of computer conferencing. Compared with traditional classroom discussions, Leppanen and Kalaja reported that using online conferencing not only provides a forum for answering the teacher’s questions, but it provides a place for students to disagree, challenge, argue and consider written form (content,

11) This analysis is based on CMC Annotated Bibliography (1998). The web address is http://www.lll.hawaii.edu/nflrc/NetWorks/NW3/
organization, and grammar). Beauvois (1997) also describes how synchronous computer-assisted classroom discussion provides a unique environment for student-student and student-teacher interaction in an experimental networked lab.

Very recently CMC gained acceptability as a way of building communicative competence in L2 research. Studies of CMC studies in ESL have been done mostly in writing classes, but CMC was used and studied for its overall effect on oral communication skills as well as writing skills. Rankin (1997) claims that synchronous CMC develops the communicative competence of FL (Foreign Language) students, pointing out that lack of time for individual students to use the target language is a fundamental weakness of traditional ESL classes. He incorporated a popular online FL chat room into his writing class and asked students to use it for doing homework and for asking questions. Rankin observed that with an online chat room the instructor could greatly increase the amount of time students spend communicating in the target language in this fashion. Rankin also found that the FL chat room allows the instructor and students to continue more in-depth discussions around grammatical, cultural and literary topics outside the classroom.

Like Rankin, Liaw (1996) investigated online communication strategies used by EFL students. She paired 22 university students in Taiwan with EFL teachers in a language program in the US and had them exchange e-mail messages as a cross-cultural project for a semester. In her data analysis, she found various speech acts and communicative strategies used online by students to develop their English language skills and concluded that e-mail writing in the target language is a viable way to enhance L2 learners communicative competence.

Likewise, Shen (1999) reports that computer-assisted writing can help ease ESL writers anxieties and improve writing proficiency in quantity and quality. By observing an e-mail-based English writing class for EFL students in China for about three months, Shen concluded that students have more confidence when they write in English using a computer, and students are motivated to produce more output. Further, Shen found that students written communication skills were enhanced in three aspects: topic generation, clarification of meaning, and peer-editing on structure and word choice. Similar studies have been done by Turbee (1997), Warschauer (1996), Schetzer (1997), and Lamy and

2) Content-Based Instruction (CBI) Using Authentic Text-Based Information (ATBI)

ATBI seems to match one of the recent ESL methodologies, Content-Based Instruction (CBI), fairly well. The theory of CBI came from the same parent as CLT, which is the communicative approach. Like CLT, CBI also encourages students to learn a new language by working with real artifacts using that language as a concrete means of communication. In the same vein, the philosophy of CBI aims to empower students to become autonomous learners and to continue the learning process beyond the classroom and also to be successful in their after academic subjects.

A unique characteristic of CBI is its integration of content with language learning. Stryker and Leaver (1989) defined CBI as "the total integration of language learning and content learning" (p. 33). In CBI, as they explain, the focus of instruction has shifted from language learning itself to language learning through the study of subject matter that reflects various reader interests.

Stryker and Leaver (1997) outlined three characteristics that are essential for success in CBI-based curriculum. First, CBI is based on 'a subject-matter core.' In traditional language classrooms, language is artificially isolated from subject matter. Teachers tend to use bottom-up approaches that focus on form, rather than top-down approaches that focus on meaning. CBI supporters insist that since the traditional approach rarely draw students' interest and motivation and has often created frustration and anxiety, there should be interrelation between language and subject matter, such as math, science, art, social studies, culture, business, history and so forth. Second, CBI uses 'authentic language and texts.' The core material should be selected from those resources for native speakers of the language in the target culture. Depending on the students' language proficiency, the decision can be made whether to use the authentic text exclusively or selectively. By analyzing both content and context to understand messages, students can develop the strategies to deal with unknown language in other contexts, at the same time, improving their foreign language proficiency. Third, CBI is appropriate to 'the needs of a specific group of students.'
content and learning activities should meet the needs of the students and be appropriate to their personal interests. A CBI curriculum should also be flexible and dynamic to reflect the students' linguistic development, cognition, and affective characteristics.

The advantages of CBI are numerous as indicated in many studies. First, CBI is especially suitable for facilitating the development of all four-language skills while simultaneously focusing on the functional use of language in authentic settings. Also, CBI provides for a variety of discourse forms rather than just traditional discourse in the L2 classroom. Even more important is that CBI helps students learn academic content and the language needed to deal with it while developing appropriate cognitive skills. It is very common that L2 teachers use authentic language materials such as newspaper clips or movie scripts rather than using textbooks only. Many ESL/EFL educators and researchers have tested and supported the use of authentic text and content in reading and writing classes (Blanton, 1992; Redmon 1994; Rosser, 1995; Snow, Met, & Genesee, 1989).

There seems little doubt that the Internet can play a major role as an authentic language and content provider in content-based classrooms. The utility of the Internet in this context might be unexpectedly high, particularly in EFL classrooms, where students study in a less than ideal environment for learning English as a foreign language in terms of limited exposure to target-language speaking people and contexts. More than 80% of electronically stored materials are written in authentic English, and EFL learners can also easily access these resources regardless of subject matter. Teachers in ESL settings also can deal with one subject in a more in-depth way with much less effort. For example, Kasper (1998) describes a sample lesson of Internet-assisted, content-based instruction in his ESL academic reading and writing course. Kasper's students studied the Greenhouse Effect to develop research and rhetoric skills by searching Internet resources, doing in-depth small group discussions and presentations, and learning how to write a research paper. Kasper asserts that various modes of writing and comprehension-facilitated rich information enable students to articulate knowledge and to consolidate their understanding of English. Kasper concludes that the Internet can become an ideal instructional resource for teaching research and rhetoric skill.

Osuna and Meskill (1998) investigated the potential role of Internet resources
as a means to understand the culture of the Spanish-speaking world for FL college students. They gave five web-based activities to thirteen students in a Spanish class and examined their level of comprehension and student attitudes. From their analysis of questionnaire data from each activity, they conclude that the Internet is a suitable medium to teach foreign language and culture; provides balanced learning of both language and culture or textbook and authentic material; and highly motivates and satisfies students. Similarly, Krauss (1998) provides suggestions regarding research skill development by presenting the real lesson plans and useful web sites used in his classroom. Similar studies (Freeman, 1999; Tan, Gallo, Jacobs, & Lee, 1999; Warschauer, 1998b) report the strength of online content-based instruction for academic writing, business English, and culture respectively.

3) Renewed Emphasis on Form with Drill and Practice /Form-Focused Tutorial

In the last decade, the importance of form-focused instruction is re-emerging (Celce-Murcia, Dornyei, & Thurrell, 1997; Ellis, 1997; Long, 1991, 1998; Pica, 1997; Schmidt, 1993a, 1993b; Swain, 1993, 1995; Swain & Lapkin 1996). Richard (1990) discusses L2 speaking skill instruction based on both indirect and direct approaches. According to his analysis, “the indirect approach sees conversational competence as the product of engaging learners in conversational interaction” (p. 76). The direct approach involves “planning a conversational program around the specific micro skills, strategies, and process that are involved in fluent conversation” (p. 77). The direct approach uses the traditional methods of teaching grammar, whereby new linguistic information is passed on and practiced explicitly.

Many researchers are currently investigating the role of attention to form, which has been reawakened by the work of Long (1988, 1991). Departing from traditional grammar teaching, focus-on-form entails a prerequisite engagement in meaning before giving attention to linguistic features. As Long (1991) notes, “Focus on Form overtly draws students’ attention to linguistic elements as they arise incidentally in lessons whose overriding focus is on meaning or communication” (p. 45-46).

Thus, direct approach proponents believe that the advantage of Focus-On-Form, over the traditional forms-in isolation type of grammar
teaching (i.e. 'focus on forms' named by Long), is that the learners' attention is drawn precisely to a linguistic feature as necessitated by a communicative demand. Many, like Long, criticize the undervaluing of form in many communicative classrooms. Using the communicative approach, "grammar rules are made available to learners in indirect ways, through reading and listening to meaningful, comprehensible input. These practices often de-emphasize, and even supplant direct instruction. A tolerance of learners grammatical errors is frequently preferred over correction" (Doughty & Williams, 1998, p. 121).

Advocates of the direct approach also encourage traditional techniques such as dictation, recitation, drill, and dialog that are typically placed in the background or eliminated entirely in communicative classrooms. Their defense of drill and practice is based on the idea that communicative activities, materials, and strategies have not been sufficient enough to bring learners to adequate levels of proficiency for effective English language use. Although this assumption is challenged by communicative methodologists, recent research has shown that the communicative approach does not seem to apply to all aspects of language learning. "Communication is very critical to language learning, but it is not sufficient to meet the needs and goals of many learners." As a better alternative, they suggest the integration of CLT with traditional methodologies. This integrated approach suggests that direct instruction should be the major teaching strategy involving grammar instruction and correction, but that this instruction should integrate the revised traditional methods, such as grammar exercises, dictations, and recitations that include decision-making, information exchange, dictogloss and dictocomp, into the process (Pica, 1997).

DeKeyer (1998) defines the terms 'meaningful drill' and 'communicative drill' in opposition to 'mechanical drill,' which is extremely form-focused.

Meaningful drills require the student to process meaning, but do not require a student to communicate anything the hearer did not already know, such as "Is this a pen or pencil?" "It's a pencil." Communicative drills do require conveying actual content unknown to the hearer, e.g., "What did you do this weekend?" "I went fishing. Did you go fishing Kevin?" "No," "No? What did you do then?" "I went swimming with my brother." (p. 50-51)
DeKeyer claims that meaningful drill and communicative drill make sense because they are defined in terms of behaviors to be drilled. These drills are less structurally controlled (than mechanical drill), more context-situated, convey real meaning while some recently taught rules are kept in mind and, provide large and varied activities to help reduce the error rate.

Therefore, in the contextualized form-focused activities, the function of drills and form practices can be redefined and reevaluated under the rubric of teacher’s contextualized grammar instruction. They can play a crucial role in communicative and form-focused integrated lessons by providing meaningful and communicative practice to students.

It seems that form-focused online materials, including drills and grammar exercises and tutorials, have not been often used in the L2 classroom nor considered as a main concern in CALL classroom research. However, renewed emphasis on form in current L2 methodology sheds light on the effective utilization of online drill and practice and electronic form-focused tutorials in ESL/EFL classrooms. For example, these web materials can be effectively utilized as supplementary handouts or additional exercises for focus-on-form instruction in the process of a meaning-based communicative task.

An attempt of integrating theory into practice using form-focused multimedia application was done by Hwang (2000). He attended to the major function of CD-ROM software which offers easy and rapid access to vast amounts of linguistic knowledge data and examined the possible effect of utilizing this for Focus-On-Form (FoF) instruction. Although Hwang’s research material was not network-based, and the way he employed this material for FoF instruction was not specified, but this study implies that researchers’ concern is increasing in utilizing the form-focused practice materials in CALL for FoF instruction.

The rationale for using drill and practice in CALL is also strongly supported by Decoo (1994), who criticizes the fact that drilling as practice has been disregarded and undervalued as the other side of higher communicative form in CALL. “It may well be that by avoiding drill and practice in CALL, we miss the area in which CALL can be the most effective” (p. 151). He points out two causes of this oversight: a) negative thoughts about lexical and grammar teaching pushed by the slogans of certain communicative methods, and b) lack of advanced technology in much early CALL software. For the effective use of CALL in language class, Decoo also introduces a few criteria for high quality
drill and practice, as summarized follows. First, drill and practice in CALL should be adapted for each particular situation and also satisfy the learners need across all the proficiency levels and curriculum. Second, one small program should contain a large amount of content compared with printed material, and this must be cost effective in relation to textbooks. Third, DP in CALL should have a communicative dimension, and lexical and grammatical elements taught in drill and exercises must be also within sentences or small dialogues that frequently occur in daily communication. Fourth, DP in CALL should contain some criteria for precise evaluation of the learners responses such as prompt scoring criteria adjusted to the students level, and statistical analyses of errors sorted by error types. The importance of meaning-enhancing CALL is also indicated by Chun and Brandi (1992).

III. Summary and Conclusion

Four types of web materials and their supporting L2 approaches in this study can be summarized in the following framework.

**FIGURE 2**

L2 Pedagogical Framework of Internet-Integrated Instruction

![Diagram of L2 Pedagogical Framework of Internet-Integrated Instruction]

* CMC: Computer-Mediated Communication, ATBI: Authentic Text-Based Information, D&P: Drill and Practice, FFT: Form-focused Tutorials CLT:Communicative Language Teaching, CBI: Content-Based Instruction, FonF: Focus-On-Form
As discussed above, these four types of ESL web materials seem all well supported by current L2 approaches. This means that existing online materials can be effectively integrated into the existing communicative language classrooms according to individual class goals and contexts.

This study attempts to take only a primitive step toward successful and solid settlement of network technology into our language classrooms. Thus, it needs far more concrete and practical instructional designs and curricular considerations for Internet-integrated instruction to appropriately fit each classroom situation. Since many English classes, especially in an EFL setting, still do not employ a communicative approach for many reasons, it can be more difficult to utilize web materials from the suggested theoretical viewpoint for their existing lesson.

However, it is hoped that this study provides an insight for teachers exploring clearer answers for 'what' and 'how,' and also suggests an L2 theory-based criterion to design and evaluate online ESL materials. It is also expected that the future CALL study will examine ideas and effects of internet-integrated classroom practice considering this pedagogical framework.

REFERENCES


New York: Oxford University Press.


**예시언어(Examples in): English**

**적용가능 언어(Applicable Languages): English**

**적용가능 수준(Applicable Levels): College/Adult**

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