# *The Changing Global Economy and the Future of English Teaching*

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This article analyzes the emergence of a new stage of global capitalism, called *informationalism,* and its consequences for English language teaching, focusing on three critical issues. First, globalization will result in the further spread of English as an international language and a shift of authority to nonnative speakers and dialects. This change will call into question basic notions of language, culture, context, and the relationship between ESL and EFL. Second, economic and employment trends will change the way English is used. Increasingly, nonnative speakers will need to use the language daily for presentation of complex ideas, international collaboration and negotiation, and location and critical interpretation of rapidly changing information. Finally, new information technologies will transform notions of literacy, making on-line navigation and research, interpretation and authoring of hypermedia, and synchronous and asynchronous on-line communication critical skills for learners of English. The above changes, taken together, will render ineffective curricula based strictly on syntactic or functional elements or narrowly defined tasks. Rather, project-based learning—incorporating situated practice and critical inquiry, and based on students' own cultural frameworks—will be required if students are to master the complex English literacy and communications skills required by the emerging informational economy and society.

With the fast-paced changes brought about by globalization and technological development, TESOL professionals need to understand current socioeconomic factors and their influence on English language teaching (ELT). The industrial societies of the past are giving way to a new postindustrial economic order based on globalized manufacturing and distribution; flexible, customized production; the application of science, technology, and information management as the key elements of productivity and economy growth; and increased inequality between those who control technological and media resources and those who lack technological access and know-how (Carnoy, Castells, Cohen, &

Cardoso, 1993). This new global economic order, termed *informationalism* by Castells (1996), first emerged in the 1970s following advances in computing technology and telecommunications.

Informationalism has given rise to economic, social, and cultural dynamics that are very different from those of the industrial area and that are shaped by an overriding contradiction between the power of global networks and the struggle for local identity (Barber, 1995; Castells, 1996; Friedman, 1999). Simply put, people's lives are increasingly affected by international networks, operating via financial markets, transnational corporations, and the Internet, that impinge on traditional seats of authority and meaning, such as family, patriarchy, and nation. In response to the increased power of global networks, people—as individuals and in collectives—struggle to assert control over their identity and defend what they see as essential to that identity.

Although informationalism is still in its infancy, it has already had an important impact on the field of TESOL. One of its consequences is the dominance of the communicative approach within the field of ELT (at least in theory, if not in practice). The increased global contact brought about in the new networked society—through international tourism, business, scientific exchange, and media—places a premium on the ability to communicate in a lingua franca. The emphasis in the communicative approach on functional interaction rather than on the achievement of nativelike perfection corresponds to the imperatives of the new society, in which English is shared among many groups of nonnative speakers rather than dominated by the British or Americans. This trend toward multinational integration, in which English is used as an additional language, has developed the furthest and fastest in Europe, so it is not surprising that the shift toward communicative language teaching arose the earliest and most prominently in Europe (see, e.g., Council for Cultural Co-operation of the Council of Europe, 1975). As this new stage of global capitalism expands and develops, the ELT profession will face new challenges. In the 21st century, three consequences of informationalism are likely to affect ELT: (a) the growth of global Englishes, (b) changing employment patterns, and (c) the development and spread of technology.

## GLOBAL ENGLISHES

Globalization is unfolding in a two-stage manner. In the first stage, global media and businesses extend their reach into new domains throughout the world. In a second stage, these same businesses and media are relocalized in order to best meet the economic and social imperatives of functioning in different regions of the world (see the

discussion in Graddol, 1997). An example of this phenomenon is seen in the global spread of the music television network MTV, which first broadcast a single version internationally but now is increasingly developing regional versions in a variety of languages and dialects. As Castells (1996) put it, "We are not living in a global village, but in customized cottages globally produced and locally distributed" (p. 341).

Just as businesses and media have experienced globalization and relocalization, so has the English language. The past few decades have seen a growth in the role of English around the world as the lingua franca for economic and scientific exchange. According to information gathered by Crystal (1997), 85% of international organizations in the world make official use of English, at least 85% of the world's film market is in English, and some 90% of published articles in some academic fields, such as linguistics, are written in English.

But the very growth of English has shifted the balance of forces within it, with L2 speakers by some accounts now outnumbering L1 speakers (Crystal, 1997). This explains in part the shift to a communicative approach in ELT mentioned above: It would be rather odd to insist that all learners adapt to a British or North American model when L2 speakers increasingly use English to speak to other L2 speakers rather than to native speakers of the language. At the same time, the imperatives of international communication demand that some level of mutual intelligibility be upheld.

## Global Networks Versus Local Identity

This situation, then, is the linguistic equivalent of the more general dynamic mentioned above: the struggle between global networks and local identity. Increasing numbers of people around the world turn to English as a requirement of international communication, but in order to project their identity and values, they emphasize their own local variety of English rather than submit to colonial standardized norms. This is true in many countries, such as Singapore, Malaysia, Nigeria, and the Philippines, where English is spoken as a L2, that is, as an additional language of communication among citizens of the country. Perhaps most interestingly, a rejection of Anglo-American English is also emerging in what have traditionally been thought of as *expanding circle countries* (i.e., where English is spoken as a foreign language rather than as an L1 or L2; see Kachru, 1986) as they become integrated into regions where English is an L2. When I taught English in the Czech Republic in 1992, one of my university students complained about having to learn U.S. styles of polite language use (e.g., *I hope you don't mind my asking, but I wonder if . . .*; see Jones & von Baeyer, 1983, p. 17), telling me that she seldom spoke

English to Americans or even to people from Britain but rather spoke it to German, Italian, and French people. Similarly, Crystal (1999) reports on the emergence of a *Euro-English* not only with its own lexical patterns but also with a more syllable-based intonation pattern (as opposed to the stress-based intonation patterns of British and American English). And where I worked in Cairo, Egyptian colleagues regularly revised the English-language written correspondence of Americans to help ensure that it met the standards of pragmatics and politeness of English language communication in Egypt, even if that communication was directed from one American to another.

## Implications for English Language Educators

The growing prominence of regional and local varieties of English has several implications for English teaching in the 21st century.

### *Language and Culture*

First, English teachers will need to reconceptualize how they conceive of the link between language and culture. As a Taiwanese educator proclaimed at a conference of English teachers in Taipei in 1997,

> Why is it that our students learn in their English classes to talk about the British parliament but not about our local government institutions? Why do they learn to talk about British media and cultural artifacts, but not about Chinese forms of media and cultural expression? (quoted in Warschauer, in press-a)

Culture remains an integral part of language learning, but the approach toward culture must become multifaceted, taking into account the diverse cultures of the many people who speak English around the world. There is no single formula for how to handle issues of culture in teaching. Teachers will need to vary their approach depending on the particular audiences being taught and their purposes in learning English.

### *Respect for Bidialectalism and Multidialectalism*

The growing role of different varieties of English will also necessitate a new respect for bidialectalism and multidialectalism, again taking into account the needs of the learners. Japanese university students preparing to take the Test of English as a Foreign Language will need and want to study standard American English. But primary students in Calcutta, secondary students in Hong Kong, and adult workers in Dubai may all

need to master more than one dialect. Multidialectalism will be especially important for receptive communication (see Crystal, 1999) but occasionally may be needed for language production as well. Even native speakers may need to learn new dialects, not only to fully understand what people are saying in different parts of the world, but also to communicate effectively in international settings where the use of North American, British, or Australian colloquialisms may be inappropriate.

### *"Correct" Language*

This change in the role of different varieties of English will affect the way teachers think about syntactical, lexical, and phonetic standards and the great importance placed on use of "correct" language. In the 21st century, speakers of English may increasingly need to diverge from what they have been taught is correct in order to make themselves understood to interlocutors from around the world. In such circumstances, narrow emphases on the observance of decontextualized rules will serve learners poorly.

In summary, in the 21st century there will be a growing basis for learners around the world to view English as their own language of additional communication rather than as a foreign language controlled by the "Other." Teachers would do well to exploit this situation by creating opportunities for communication based on the values, cultural norms, and needs of learners rather than on the syllabi and texts developed in England and the United States.

### *The Spread of English: Good, Bad, or Neutral?*

English language educators must also come to grips with the social, economic, cultural, and linguistic consequences of the global spread of English. There has been much debate about the desirability and impact of this phenomenon (recent examples include Berns et al., 1998, 1999; Crystal, 1999, 2000; Pakir, 1999; Phillipson, 1999a, 1999b). The spread of English has its strong critics, such as Phillipson and Skutnabb-Kangas (1996), who view global English as a medium for linguistic imperialism (Phillipson, 1992) or even genocide (Skutnabb-Kangas, 1999). Others, such as Crystal (1999), take a more balanced view, pointing out the advantages of a lingua franca while also expressing concern about linguistic diversity.

My own view, paraphrasing Kranzberg's (1985) first law of technology, is that English is neither good nor bad; nor is it neutral. To declare that English is unequivocally harmful or beneficial is to deny the human agency that shapes how English is used in different circumstances.

However, it would also be naive to think that English is a completely neutral tool without weight of its own. Rather, as Pennycook (1995) points out, English carries a set of ideologies, values, and norms based on the history of its development and use. The spread of English thus privileges certain groups of people (including native speakers and nonnative elites who have the opportunity to master it) and may harm others who have less opportunity to learn it. The spread of English can also be one of many factors contributing to the tragic loss of indigenous languages around the world (Phillipson, 1992). But it can also be deployed as a weapon of the dispossessed, as occurred in the South African liberation struggle (Peirce, 1989). This notion of the colonized using English to their own ends was expressed well by a Singaporean student in a discussion on Phillipson's notion of linguistic imperialism:

> Although it was definitely unpleasant to be colonized by another country, I have to say that the British in one way or another paved the way for the development of Singapore and have educated us in English and have enabled us to benefit from all its advantages and its standing as a global language. However, we have not by any means lost our cultural heritage. Multilingualism is prevalent and we are rich in the use of different languages and dialects, which we speak and use whenever the situation calls for it . . . .
>
> One thing I would like to clarify is that we do not view and value the language in a mercenary sense—we have gone way beyond that. We study and use the language because it has developed into a language of our own that is used comfortably among ourselves. (quoted in Berns et al., 1998, p. 278)

Singapore's successful adoption of English as a medium of communication in a multilingual society is not necessarily the norm; English has played a more divisive role in countries such as India and the Philippines. And even in Singapore, struggle continues over which variety of English will predominate: the highly colloquial version known as Singlish or the more formalized version, closer to international varieties, known as Standard Singaporean English (see Pakir, 1997). In Singapore, as elsewhere, the continued use and spread of English—and whom it benefits and whom it harms—will be a site of ongoing struggle.

English language educators can lend their support to those working for worldwide *language ecology* (Phillipson & Skutnabb-Kangas, 1996) by providing linguistic and pedagogical respect for a range of English dialects; by offering professional and human support for the maintenance and use of other languages besides English; and by introducing critical language awareness into the curriculum so that students can better understand the interrelationship of language, discourse, and power (Fairclough, 1999; Morgan, 1995). These efforts will be enhanced by the increased respect and support given to the role of nonnative-speaking ELT professionals, and it is welcome and timely that there is a

growing level of organization (e.g., the TESOL association's recently formed Nonnative English Speakers in TESOL Caucus) and research on this issue (e.g., Braine, 1999).

## EMPLOYMENT

A second major way that informationalism will affect ELT in the 21st century relates to trends in employment. Simply put, the jobs that existed in the industrial era are disappearing and are being replaced by new types of job and work requirements.

### Redefined Employment Categories

By 1990, fully 47.4% of the employed population in the United States, 45.8% in the United Kingdom, 45.1% in France, and 40.0% in West Germany was involved in information-processing activities, and the proportion is continually rising (Castells, 1993). Many developing countries are also experiencing growth in information-based employment, as witnessed by the growth of information technology industries in countries as diverse as India and Egypt.

These demographics are based on both a shift from manufacturing to service industries and a shift within manufacturing and service toward jobs that require information-processing and analytic skills rather than brute force (Castells, 1996). Thus even in countries where manufacturing industries are growing, the nature of manufacturing is changing. The new forms of manufacturing and service that are arising depend on careful application of science and technology; customized production, marketing, and distribution; access to real-time, networked information; and a high level of national and international communication among teams (Carnoy et al., 1993).

According to Reich (1991), the categorization of employees into blue-collar factory workers and white-collar office workers is no longer meaningful. Rather, employees in the United States and other developed countries now fall overwhelmingly into one of three categories:

1. *Routine-production service workers* include factory workers but also routine information workers, such as data processors and payroll clerks.
2. *In-person service workers* include workers such as janitors, hospital attendants, and taxi drivers.
3. *Symbolic analysts,* as Reich calls them, spend much of their time analyzing symbol-based (numerical and textual) information. These

workers include software engineers, management consultants, strategic planners, lawyers, real estate developers, and research scientists.

(Reich offered no opinion as to where teachers fall in this hierarchy, but he did suggest that university professors are symbolic analysts. As is discussed below in the section on distance education, I believe that educators, including those at the university level, face the threat of having their work "de-skilled" and shifted into the service categories.)

The number of symbolic analysts is rising in developed countries, though how quickly is disputed (see, e.g., Apple, 1996). What is undisputed, though, is that income, status, and career opportunities are rising for symbolic analysts but are falling for the other two categories of employees. It is also recognized that symbolic analysts play a critical role in helping societies compete in the international economy (Castells, 1996). Their role is thus especially important in developing countries even though their number might be smaller. In many developing countries, academic secondary and tertiary education is geared principally to a relatively small elite in preparation for careers as symbolic analysts.

Thus new work skills of symbolic analysis are emerging as crucial for success in the 21st century. These skills include critical analysis, evaluation, experimentation, collaboration, communication, abstraction, system thinking, and persuasion (Reich, 1991). And, as a result of globalization, these skills are increasingly applied in English language contexts. Not only U.S. and British firms but also many other transnational firms based in Europe and Asia use English for international communication and even for national communication. Thus Swedes working for the high-tech Swedish firm Ericsson communicate with other Swedes using English, which is the company's language of communication (Azzam Premji, personal communication, November 2, 1998; see also Hollqvist, 1984). And growing numbers of symbolic analysts use English daily to gather information or communicate with colleagues on the Internet.

## Implications for English Language Educators

What do these trends in employment mean for ELT? First, as already mentioned, they underscore the role of English as an international language for global communication. Secondly, they signal a change in the types of communication required in English. A large and increasing number of people, even if they never set foot in an English-speaking country, will be required to use English in highly sophisticated communication and collaboration with people around the world. They will need to be able to write persuasively, critically interpret and analyze information, and carry out complex negotiations and collaboration in English.

Apparently, the need for highly advanced communication skills in English is also shaping adult education in the United States. Recently, ESL surpassed Spanish as the main language taught at U.S. branches of Berlitz (Rosen, 1999). The expensive Berlitz courses are not taken by immigrant workers, who are the main clientele of adult government-funded ESL programs in the United States. Rather, the enrollees are foreign executives, managers, and scientists working in the United States, who can usually communicate on a functional basis without problem but now find that they need more sophisticated communication skills to carry out their work.

It is because of the needs of symbolic analysts that many countries have been trying to increase "thinking skills" in their education (see the discussion in Warschauer, in press-b). But, as Fairclough (1999) points out, it is perhaps more useful "to conceive of teaching people to think [than] teaching people to argue" (p. 78), in other words, of equipping them with the skills to communicate clearly and forcefully enough to convince others of their views. Sophisticated skills of argumentation and persuasion may not readily emerge from the syntactic syllabi or basic functional syllabi evident in most English classes. Instead, teachers will have to find new, project-based approaches that give students the opportunity to learn and practice the kinds of analytic problem solving and argumentation that they will need in English if they are to compete for the better jobs in society.

Beyond the situation of symbolic analysts is that of the much larger group of employees in in-person service and routine production work. Their needs for English will vary greatly depending on local circumstances. As a result of increased tourism, international business travel, and the use of telecommunications to farm out routine work (i.e., U.S. firms sending data-processing jobs to the Caribbean or South Asia), there will be an increasing need for English among workers in these sectors as well. However, the types of English required are far more restricted than those for symbolic analysts. One probable outcome is the growth of the English for occupational purposes (EOP) industry, a branch of English for specific purposes dedicated to the needs of particular vocational groups. EOP courses will focus on basic conversation skills for hotel workers, basic reading skills for certain factory workers, and business writing skills for secretaries. These kinds of skills will also increasingly be incorporated into vocational secondary schools that train such workers and be offered by employers at work sites.

It may seem unpleasant to ponder a future world of English teaching in which a privileged group of students learns how to critique literature and produce sophisticated multimedia reports while the bulk of students focus on narrow vocational skills, but that is the unequal state of education in the informational era. For example, as Tollefson (1986,

1995) has pointed out, functional English programs for Indochinese refugees traveling to the United States in the 1980s were in part designed to prepare them for menial jobs. English language educators need to be aware of this inequality and to consider how to challenge it by promoting curricula that allow all learners of English the opportunity to think critically about their environment and express their own identity and views. Although much has been written about empowering teaching approaches in community ESL courses (Auerbach, 1995; Morgan, 1998), less has been said about the possibilities of such critical approaches in occupational programs, either in vocational schools or at work sites. This issue will be important for ESOL educators concerned with critical pedagogy in the new century.

## TECHNOLOGY

The final consequence of informationalism, and the one that underlies all the other changes discussed in this article, is the development and spread of information and communications technology (ICT). The rapid development and diffusion of ICT is both a contributor to and a result of the broader socioeconomic changes discussed in this article, and it affects the entire context and ecology of language teaching today. In this section, I address three important ICT issues for educators: technology and literacy, the digital divide, and distance education.

### Technology and Literacy

In 1998, 3.4 trillion e-mail messages, or more than 10,000 for every man, woman, and child, were sent in the United States alone (eMarketer, 1999). According to one study, e-mail has begun to surpass face-to-face and telephone communication as a frequent means of business communication (American Management Association International, 1998). More than 95% of university students in the United States use the Internet to conduct research, search for jobs, and stay in touch with friends (Diederich, 1998).

Although the United States has been a world leader in Internet use, other industrialized countries are catching up. And the fastest growth on the Internet is occurring in the emerging economies of Asia, the Middle East, Eastern Europe, and Latin America. According to one estimate, China will have more Internet users than the United States by the year 2010 ("Chinese Users to Outnumber US Users," 1999). When the Internet first emerged, the early tendency among ESOL educators was to see how it could be employed as a tool for helping teach English (see

Warschauer, 1995). This is in line with traditional approaches to computer-assisted language learning, which see the computer as an optional tool among many to be exploited for language learning purposes. Today, however, the significance of information technology for language use and learning must be seen as broader. Simply put, information technology is rapidly posing itself as the medium of a fourth revolution in human communication and cognition, matched in significance only by the prior three revolutions of language, writing, and print (Harnad, 1991). Information technology will affect how people interact, access information, and share information as greatly as did the Gutenberg revolution 500 years ago. What is more, the impact will occur much more quickly. The full impact of the invention of printing had to await the conclusion of the Industrial Revolution several hundred years later. In contrast, modern information technology is developing simultaneously with informationalism and globalization, thus ensuring a much quicker impact on literacy and communication practices.

The following are some of the new language and literacy skills that are required by the extensive use of information technology, divided into the broad categories of reading/research and writing/authoring.

### *Reading/Research*

Reading practices are shifting from the page to the screen (Reinking, McKenna, Labbo, & Kieffer, 1998; Snyder, 1998), especially among young people who grow up with computers (Tapscott, 1998). This shift will necessitate different psycholinguistic processes related to decoding information from a screen instead of a page (especially when the screen will decode words for the reader at the click of a mouse) and will change how educators teach skills like skimming, scanning, and guessing words from context (Anderson-Inman & Horney, 1998; McKenna, 1998). It will also force English language educators to think more about how texts combine with graphics, images, and audiovisual content to communicate a message (Bolter, 1998; Kress, 1999; Lemke, 1998).

But reading is more than a psycholinguistic act of decoding letters and words. Rather, it is a social practice that takes place in particular sociocultural contexts (de Castell & Luke, 1986; Gee, 1996). In this sense the shift of reading from the page to the screen, and the new socioeconomic circumstances in which the shift takes place, has an even greater impact. Reading from the screen is less a passive act of decoding a message from a single, authoritative author than a self-conscious act of creating knowledge from a variety of sources (Bolter, 1991; Landow, 1992). The following skills are central to the ability to read from the screen (adapted from Shetzer & Warschauer, 2000; Warschauer, in press-a):

- finding the information to read in the first place (e.g., through Internet searches)
- rapidly evaluating the source, credibility, and timeliness of information once it has been located
- rapidly making navigational decisions as to whether to read the current page of information, pursue links internal or external to the page, or revert to further searching
- making on-the-spot decisions about ways to save or catalogue part of the information on the page or the complete page
- organizing and keeping track of electronic information that has been saved

These may seem like esoteric skills for English learners, but as English expands as a language of international communication in the 21st century, the number of learners who master basic English skills will grow. Increasing numbers of learners throughout the world will find themselves in the situation of secondary students in many European countries today, for whom the challenge is not so much to achieve basic decoding skills but rather to use English for the types of complex global communication discussed earlier in this article.

None of these types of skills is completely new, of course. The need for critical, active, and interpretive reading has been an important part of print literacy as well. Nevertheless, the vast amount of information available on the Internet and its hypertextual organization speed up changes in the nature of reading that were already occurring in the age of print and make these kinds of critical reading skills all the more important.

### *Writing/Authoring*

Similar changes are occurring, and will continue to occur, with respect to writing (Bolter, 1996; Faigley, 1997). In much of the world, writing has been given little emphasis in English language courses and, if emphasized at all, is seen as synonymous with putting grammatically correct sentences on paper (see the discussion in Raimes, 1991). Indeed, this approach may have been sufficient for most learners' needs prior to the information revolution of the 1970s. However, the rise of informationalism, and the widespread use of computers and the Internet, dramatically raises the profile of writing and the need for effective written communication (see, e.g., American Management Association International, 1998). New types of writing/authoring skills that are required include the following (adapted from Warschauer, in press-a):

- integrating texts, graphics, and audiovisual material into a multimedia presentation
- writing effectively in hypertext genres
- using internal and external links to communicate a message well
- writing for a particular audience when the audience is unknown readers on the World Wide Web
- using effective pragmatic strategies in various circumstances of computer-mediated communication (including one-to-one e-mail, e-mail discussion lists, and various forms of synchronous [real-time] communication)

I will illustrate the importance of new types of writing by briefly discussing a case that arose in an earlier research study (Warschauer, 1999). The study involved an ESL writing course in an intensive English program in Hawai'i. One of the students in the course was a graduate student from China. This student, whom I will call Zhong, had previously conducted some research in China with co-researchers from Sweden. Agreements had been made about who would have the rights of authorship for the data collected. Zhong was surprised to learn that his Swedish co-researchers were going to usurp all the data under their own authorship. He attempted to write them an e-mail message protesting the situation. The first draft of his e-mail message, however, was highly inappropriate and would not have conveyed his message. Zhong worked with the teacher of the course intensively (over e-mail) to complete two more drafts of the e-mail message until it effectively communicated what Zhong wanted to say. As a result, the problem was resolved in an amicable manner.

The writing challenges that Zhong faced were not due solely to the new medium of e-mail. They were also due to the long-distance collaborative research that he was involved in. But, this, too, is part of the point. Reading, like writing, takes place not in a psycholinguistic vacuum but in particular sociocultural circumstances. And the Internet, together with the broader information revolution of which it forms a part, is rapidly shifting the terrain of writing as well as reading practices. Not all students will be performing sophisticated sociological research with international scholars for publication in scholarly journals, but many will need to carry out some form of collaborative long-distance inquiry and problem solving as part of their jobs and community activities. It will be incumbent on English language educators to teach the writing skills necessary for these kinds of tasks, including the pragmatics of written interaction as well as the hypermedia authoring and publishing skills needed for the effective presentation of material.

The challenge that Zhong faced—in communicating a particular

point to a particular Swedish correspondent in a text-based medium—necessitated that he adhere closely to specific norms of communication. But the opposite situation also rises in new forms of on-line writing, which frequently involve not so much the making of a single textual point but the marshaling, remaking, and orchestration of varied multimedia resources (Kress, 1998). An example is the international ThinkQuest competition (http://www.thinkquest.org), in which groups of teenage students from around the world develop educational Web sites in English on themes from the humanities and sciences. Large numbers of native and nonnative speakers of English from throughout the world participate in ThinkQuest (including, e.g., more than 100 students from Egypt who took part in the contest in 1999). Students who participate in ThinkQuest cannot follow any set rules of communication, for ideas on Web site design are evolving rapidly. Learners in such a situation not only author texts, or even only multimedia documents, but are also helping author the new rules of multimodal communication (Kramsch, A'Ness, & Lam, in press; Kress, 1999), and they can impose all of their levels of authorship on the outside world through on-line publishing. As noted by Kramsch et al., these new possibilities thus bring language learning full circle from an original emphasis on *authenticity* (i.e., following native speaker norms), to a later emphasis on *authorship* (i.e., creating texts within structured environments), to new opportunities for *agency* (defined by Murray, 1997, as "the satisfying power to take meaningful action and see the results of our decisions and choices," p. 126). The pleasure of agency "is much more than the pleasure that comes from clicking on hotlinks or even being the author of your own sentences" (Kramsch et al., in press); it is rather "the power to construct a representation of reality, a writing of history, and to impose reception of it by others."

## The Digital Divide

The possibilities of Internet-based communication are available to only a minority of the world's people. Less than 5% of the world's population had access to the Internet in 1999, according to one report (United Nations Development Programme, 1999). The increased importance of telecommunications is thus creating a digital divide between the information haves and have-nots both within and across nations (Novak, Hoffman, & Project 2000 Vanderbilt University, 1998; Schiller, 1996; Wresch, 1996). Inequality is reflected not only in who has access to computers but also in how computers are used, at least in the United States. Research has indicated that Black, Hispanic, and poor students spend more time on computer-based drills whereas White, Asian, and

wealthy students engage in more computer applications involving higher order thinking skills (Wenglinsky, 1998).

Educators in schools and communities lacking computer access will need to resist two false prophets: technoinfatuation and technocynicism. Those infatuated with technology would say that every educational problem can be solved through computers and Internet connections and that any delay in doing so will cause communities to fall desperately behind. Unfortunately, in the rush, computer-based instruction in poor communities and countries is often ill-planned (Cuban, 1993; Osin, 1998), drawing resources away from more urgent educational needs and achieving limited results. A few computers, or even a single computer with an Internet connection, may make an important difference to a school or department, but only if appropriate resources are devoted to maintenance, software, curriculum development, teacher education, and technical support.

Technocynics make the opposite mistake, claiming that the computer is just a tool and an expensive one at that, and should yield to other pressing concerns. But computers are more than a benign, optional tool for language learning. The ability to communicate and conduct research in English using computers can have an important impact on a student's life opportunities. And it is precisely students with limited economic resources who will have less opportunity to use computers and the Internet in home environments. Thus computers in schools might provide these students with their only access to socially valuable literacy practices that wealthier students get at home.

Both technoinfatuation and technocynicism stem from the same problem: downplaying the significance of human agency in shaping technology's use. Agency in this context refers again to the power to design on-line environments, but this time in an even broader sense, that is, to help bring about—through analysis, collaboration, and action—greater access to computer and Internet resources and the effective use of these resources with diverse populations. Techno-optimists believe that computers themselves will solve problems, regardless of human action. Technopessimists feel that computers cannot be used to solve problems no matter what people do. In contrast, technorealists recognize that the impact of information technology is a site of struggle and that human agency is the deciding factor determining the educational value of technology.

There are many positive examples of language teachers and learners making good use of limited resources to help bridge the digital divide, including intergenerational e-mail exchanges among immigrants in California (Gaer, 1995); collaborative Internet projects in Romania carried out with a single laptop computer (Livesy & Tudoreanu, 1995a, 1995b); and efforts by indigenous peoples to promote their languages

on-line (Almasude, 1999; Benton, 1996; Ka'awa & Hawkins, 1999; Miyashita & Moll, 1999; Office of Technology Assessment, 1995; Warschauer & Donaghy, 1997). Rather than panic in the face of the digital divide or burying our heads and ignoring it, ESOL educators and administrators should learn from these examples and seek creative pedagogical and technical approaches for reducing technological inequality.

## Distance Education

No discussion of technology's impact on English teaching would be complete without analyzing the state of distance education. Universities and the private sector are rushing into distance education, seeking to reach new markets and achieve economies of scale. This is part of a broader process of the commercialization of higher education, which began in the area of research (with production and sale of patents and exclusive licenses) and has now shifted to education (with production and sale of copyrighted videos, courseware, CD-ROMs, Web sites, and packaged courses; see the discussion in Blumenstyk, 1999; Noble, 1997).

The expansion of distance education will undoubtedly provide new opportunities for learners of English to study from the convenience of their homes, and ESL teachers will find a growing number of on-line certificate and graduate courses (Warschauer, Shetzer, & Meloni, 2000). However, the commercialization of distance education poses significant dangers. The types of distance education courses that are most effective for language learning (as well as for teachers' professional development) involve a good deal of personal interaction and are thus expensive to set up and teach (Feenberg, 1999a, 1999b; Warschauer et al., 2000). Universities and schools will be under constant pressure to cut corners in favor of cheaper alternatives based on individual access to prepackaged materials with limited opportunities for student-teacher communication. Thus quality educational programs involving extensive personal interaction—whether in the classroom or on the Internet—will face mounting economic competition from inexpensive but pedagogically unsound programs (see Blumenstyk, 1999).

The same commercial pressures may also threaten ESOL educators' professional standing and livelihood. As has happened at York University in Canada (Young, 1997), Drexel University in the United States (Young, 1999), and elsewhere (Carnevalle & Young, 1999), administrators will seek intellectual property rights over instructors' materials to reuse them in distance education programs (or even in on-site programs delivered via technology). This can eventually lead to a bifurcated system whereby the development of courses is separated from their delivery, with the educators fulfilling each role (either development or delivery, and

especially the latter) working under part-time, temporary contracts. ESOL educators may be especially vulnerable to this threat because so many already lack full-time, permanent status. Not surprisingly, the rush toward commercialization of instruction is especially strong in university extension programs—home of ESOL programs on many campuses in the United States—not only because of extension programs' involvement in distance and nontraditional learning but also because "they are typically staffed by the most vulnerable instructors, people who have little job security and would thus be most ready to comply with university demands" (Noble, 1998, n.p.).

Distance education is thus another realm in which the role of technology, in either hindering or benefiting education, will be a site of struggle. At the pedagogical level, instructors will need to strive to make sure that distance education programs are developed on sound pedagogical principles, which will usually necessitate a good deal of personal interaction (Feenberg, 1999a; Quality on the Line, 2000). At the professional level, instructors will need to carefully protect their rights to their own intellectual property, including their course materials, lectures, and discussions, whether used in the classroom or on-line. In some cases these rights can be protected individually—by scrutinizing work contracts and thinking very carefully about what one signs away. In many cases, these rights can be defended only by collective action in professional associations and unions. The expansion of on-line education may well become a key battleground for the professional standing of tertiary educators. Let us hope that ESOL educators seize this opportunity to organize better to defend their rights.

## A PEDAGOGICAL RESPONSE

The spread of world Englishes, changes in employment patterns, and the emergence of new technological literacies are mutually enforcing trends of the global informational economy, and I believe some common approaches can be adopted to respond properly to them.

### Multiliteracies

A key pedagogical concept that responds is *multiliteracies*, put forth by a group of specialists in education, critical literacy, and discourse analysis (New London Group, 1996; see also Cope & Kalantzis, 2000). The multiliteracies concept recognizes the inadequacy of educational approaches that limit themselves to "page-bound, official, standards forms of the national language" (New London Group, 1996, p. 61) and

suggests instead that students should learn to negotiate a multiplicity of media and discourses. Any pedagogical approach that can meet this challenge should include the following elements, which are discussed in more depth by the New London Group (1996):

- *Immersion in situated practice:* Practice in authentic communicative situations is required for students to learn how to collaborate with partners, negotiate complex points, and critically evaluate information as it applies to particular meaningful contexts. At the same time, such authentic situations can give students the opportunity to develop new technological literacies in meaningful contexts.
- *Overt instruction:* The kinds of sophisticated communication skills required in the 21st century will seldom develop through practice alone. Students need the opportunity to step back under the guidance of a teacher or mentor to critically analyze the content, coherence, organization, pragmatics, syntax, and lexis of communication.
- *Critical framing:* Effective cross-cultural communication and collaboration, including making effective use of information found in online networks, necessitates a high degree of critical interpretation. The instructor's overt role thus should extend beyond narrow language items to help students learn to critically interpret information and communication in a given social context.
- *Transformed practice:* Transformed practice allows students to hone their communication skills by raising their practice to new levels based on prior practice, instruction, and critical framing. This involves working toward higher quality outcomes within particular contexts and applying what has been learned in new social and cultural contexts.

## Project-Based Learning

Such a framework goes far beyond the linguistic syllabi that are most common today, based on collections of syntactic or functional items. It also goes far beyond the notion of task-based learning if such learning is interpreted as consisting of a progression of narrow tasks designed principally to assist learners in grasping particular grammatical forms. A better framework for a new pedagogy is *project-based learning* (e.g., Stoller, 1997). Projects themselves may include many individual tasks, but the umbrella of the project allows opportunities to critique and transform practice in ways that individual tasks do not.

Projects can take many guises and should be based in large measure on students' backgrounds, needs, and interests. When possible, they may involve electronic communication and collaboration to increase stu-

dents' on-line literacy skills. They may also provide opportunities to grapple with cultural and identity issues emerging in the new global era. Projects might include long-distance exchanges in which students debate and discuss issues related to cultural identity (see, e.g., Kern, 1996), service learning projects in which students use their knowledge of English and technology to assist their local communities (see, e.g., Warschauer & Cook, 1999), or multimedia creation and publishing projects in which students collaboratively experiment with new genres (Sokolik, 1999).

Project-based work of this type will, of course, not be suitable in all educational contexts. Holliday (1992, 1994) has written eloquently about the mismatch between the pedagogical values of *BANA* educators (from British, Australasian, or North American settings, often working with highly motivated adult learners in small classes) and the actual contexts of *TESEP* (in *te*rtiary, *se*condary, and *p*rimary) English teaching in the rest of the world, which may comprise poorly motivated students in large classes. Most BANA TESOL programs favor student-centered group work and "learning festivals" (Holliday, 1994, p. 36) whereas most TESEP institutions value educators with strong disciplinary knowledge (e.g., of linguistics or literature), firm control of the classroom, and the ability to deliver captivating lectures ("teaching spectacles," p. 36). Educators in a number of countries, such as Singapore, are trying to change their educational system to allow higher degrees of collaboration, group work, and projects (Warschauer, in press-b), but such changes cannot be imposed from the outside and are not always desirable.

## CONCLUSION

I predict that the trends mentioned in this article will intensify in the 21st century. According to demographic projections, the number of English native speakers will decrease relative to the population of the world (or to the number of native speakers of other fast-growing languages, such as Spanish, Hindi, or Arabic; see Graddol, 1997) whereas the number of speakers of English as an additional language will rapidly increase. So whereas a century ago native speakers of English greatly outnumbered L2 speakers of English, a century from now the relationship will be reversed (Graddol, 1997).

The shift toward a global informational economy will intensify as well, integrating more countries and regions into the global market and further spurring the need for workers worldwide in diverse occupations, from Webmaster to food server, to learn English. The most far-reaching changes will come in the area of technology, with the Internet becoming ubiquitous in the developed world and commonplace in urban areas

elsewhere (see the discussion of Internet growth in United Nations Development Programme, 1999). The expansion of the Internet and its convergence with telephony and video will allow a growing number of people to read, write, speak, and listen to English on a daily basis; to shop and sell; to learn and teach; to collaborate and struggle.

If there is a key concept that should motivate TESOL professionals' understanding of English teaching in the 21st century, I believe it is that of *agency.* As a result of changes in globalization, employment, and technology, L2 speakers of English will use the language less as an object of foreign study and more as an additional language of their own to have an impact on and change the world. They will use English, together with technology, to express their identity and make their voices heard. There is no need to choose between an *integrative discourse,* which views English as a door to international commerce, tourism, technology, and science, and an *empowering discourse,* which views English as an ideological instrument of unequal power relations (Cox & Assis-Peterson, 1999). English is both these things and more. English is what its speakers make of it, and those speakers are increasingly going to be from developing and newly industrialized countries in Asia, Africa, the Middle East, and Latin America. English, even more so than today, together with technology, will be a carrier of inequality, which is precisely why increasing numbers of people will use English to challenge that inequality, either by breaking down doors or by rewriting rules. As a group of Brazilian scholars wrote, "The learning of English, considering its hegemonic role in international exchanges . . ., can contribute to the formulation of counter-discourses in relation to inequalities between countries and social groups" (Secretaria de Educação Fundamental, cited in Cox & Assis-Peterson, 1999, p. 434). And we, as English teachers, can promote students' ability to formulate such counterdiscourses by assisting learners in developing critical literacies in multiple media and genres.

In summary, if the central contradiction of the 21st century is between global networks and local identities, English is a tool of both. It connects people around the world and provides a means to struggle and to give meaning to those connections. If English is imposing the world on our students, we as TESOL professionals can enable them, through English, to impose their voices on the world.

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