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Are Preservice Instructional Designers Adequately Prepared For Tomorrow's Diverse Learning Audiences?—A Cultural Content Analysis Of Textbooks (1993-2003) Used For Instructional Design

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Are Preservice Instructional Designers Adequately Prepared For
Tomorrow's Diverse Learning Audiences?—A Cultural Content Analysis Of
Textbooks (1993-2003) Used For Instructional Design

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
Education Specialist
Department of Secondary Education
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ABSTRACT

This study used content analysis to examine the coverage of cultural issues in the five phases of instructional design within ID/ISD textbooks published between 1993 and 2003. The results indicated that not all the ID/ISD textbooks examined in this study covered cultural issues. Among the textbooks that did cover cultural issues, none of them reached more than 10% coverage of the total pages of any one book. The phase of Analysis and the Other category received the highest amount of coverage in both the 53 books sample and 36 books sample; whereas the phase of Implementation received the least amount of coverage overall.

The findings from this study have implications for both students and faculty members. With respect to students, the coverage of cultural issues in the textbooks examined in this study might influence students' beliefs regarding cultural issues. It may indirectly influence future instructional designers' work effectiveness as well. With respect to faculty members, the amount of cultural issues coverage may reinforce faculty members to underrate the importance of cultural issues in the instructional design process. The study also provides several recommendations to textbook authors, faculty members and instructional designers regarding the amount of coverage of cultural issues within the ID/ISD textbooks.

Chapter One

Introduction

Statement of the Problem

American society is diversifying daily. The demographic changes in America require instruction responsive to the varied racial and cultural backgrounds of learners (Branch, Brigham, Chang, & Stout, 1991). Minority learners bring their culturally based characteristics such as value systems, expectations, learning styles, and cognitive styles to their learning environments. Understanding the characteristics of these minority learners and being a culturally aware instructional designer are keys to developing effective instructional design, and thus maximizing the potential for students' learning.

Additionally, with more and more international cooperation and communication, the need for cross-cultural training is growing. Instructional materials relevant to one culture are not necessarily relevant or meaningful to another culture. The problems associated with cross-cultural design have become more challenging. Simply translating instructional materials to meet learners' needs in other cultures is not necessarily a panacea. How to appropriately develop a cross-cultural training program is an issue that instructional designers must face and cannot evade.

Therefore, instructional designers in America face two challenges. One is how to incorporate learners' cultural diversity into instructional design. The other is how to make

cultural adaptations to meet the constantly growing need for cross-cultural training. Both challenges require instructional designers to be culturally sensitive.

To date, research does not show any evidence of increased faculty awareness of cultural issues. Instead, it suggests that few instructional design (ID) and instructional system design (ISD) programs have included cultural diversity as a factor in designing effective instructional programs. Thompson (1996) observed that faculty members in the instructional design field have been reticent to incorporate cultural factors into instructional planning. Therefore, it is unlikely that they would include cultural sensitive topics within their instruction (Powell, 1993). As a result, these ID graduate programs would not have prepared preservice instructional designers for their future careers: designing instructional materials for learners with diversified cultural backgrounds.

In 1993, Powell made an investigation regarding the awareness level of faculty members in ID/ISD programs with respect to principles and guidelines related to cultural diversity and instructional design. He discovered that faculty in the ID/ISD field did not view cultural sensitivity of instructional materials as a priority factor to establish effective instructional programs. These faculties were somewhat aware of the concepts, principles, guidelines, strategies and prescriptions for designing instruction for culturally heterogeneous learners but they were not including these topics in their classes. Now that ten years have passed since Powell's investigation, we need to examine whether faculty members in the ID/ISD field have changed their attitudes. A way to measure current faculty attitudes is to determine if they incorporate cultural issues and topics into their instructional design programs. Considering that textbooks might be a good reflection of what is being discussed in the classroom, we could examine what textbooks are currently

being used, whether these textbooks address any topics related to culture and to what extent these topics are discussed.

Need or Significance

Although cultural issues have pervaded learning (McLoughlin and Gower, 2000) in schools of education for a long time, they have largely been ignored in the field of instructional design. Cultural issues have not been treated with the same regard as cognitive abilities, aptitudes, and motivation in the educational technology literature (Powell, 1997a). Until the 1990s, the evaluation literature of instructional design gave little attention to the issues of cultural diversity (Mertens, Farley, Madison, & Singleton, 1994). Under such circumstances, DeVaney (1996) questioned why instructional technology is the last to consider issues of culture. Henderson (1996) held that instructional design should consider culture because it is the creation of cultural identity. McAlpine (1992) strongly suggested that cultural experts should be used to evaluate instructional design products.

Reeves (1997) claimed that cultural sensitivity is a serious issue and not a passing fad or a by-product. He further stressed the importance of being sensitive to cultural diversity:

Sensitivity to cultural diversity and pluralism is a 'meta-value' that should influence virtually every aspect of human activity, including instructional system design and evaluation (p. 27).

Therefore, although cultural issues have existed within instructional design for a long time, only recently have instructional designers and their teachers become aware of

the related issues and taken cultural dimensions seriously (Ngeow & Kong, 2002). In an age when cultural issues have become significant and relevant, this study is necessary, important and timely. Thus, we need to determine if future instructional designers will be adequately prepared for tomorrow's increasingly diverse learning audiences (Powell, 1993).

Hopefully this study will initiate serious discussions on some of the most pressing questions: Should we or should we not incorporate cultural issues into our instructional design curriculum? What is the best way for us to prepare our future instructional designers to meet the challenges in their fields? It is time for us to ponder such important issues. Faculty members, textbook authors and researchers in instructional design must respond to our rapidly changing world to effectively prepare future instructional designers to meet with tomorrow's challenges.

Research Question

To what extent do ID/ISD textbooks address cultural issues related to the five steps of instructional design—analysis, design, development, implementation and evaluation?

Definitions and Assumptions

There are three assumptions in this study. First, American society is becoming more diversified daily. The phenomenal growth of the World Wide Web brings the whole world much closer, suggesting strongly that the field of instructional design must take into account the factors that initiate change in the workplace and society. A cross-cultural perspective will have profound implications for the practice of instruction and training. It should be a mission of textbooks in the instructional design field to examine such issues and reflect societal and cultural changes. Second, a commonly held view is that textbooks are a dominant part of a student's educational experience. Both teachers and students regard textbooks as a major source of information and knowledge on a given topic. Teachers rely on textbooks to organize lessons and structure subject matter, whereas students rely on textbooks to complete their reading assignments. Therefore, textbooks are an important tool to prepare future instructional designers. Third, since Powell investigated faculty members' awareness level of cultural issues, ten years have passed. Change within the content of the textbooks over a ten-year period is probable.

For the purpose of this study the following definitions are used:

Culture. The Random House Webster Dictionary (p. 324) defines *culture* as "the behaviors and beliefs characteristic of a particular social, ethnic, or age group."

According to Kroeber and Kluckhohn (1952, p.2), there are more than 300 definitions of *culture*. Although there is a lack of consensus towards the definition of *culture*, many researchers agree that *culture* is learned behavior consisting of thoughts, feelings, and actions (Hoft, 1996, p. 41).

Cultural awareness/sensitivity. Cultural awareness refers to being sensitive to the existence and legitimacy of other cultures; to understanding and accepting other cultures; and to viewing cultural phenomena from the perspective of both the culture in which they occur and another culture, usually that of the viewer. Having a cross-cultural perspective/awareness/sensitivity means having the ability to view the world from a standpoint of a culture other than one's own (Powell, 1997b, p.6).

Cultural diversity. Also called multiculturalism. Cultural diversity is reflected in the great melting pot of the United States where different ethnic and racial heritages with various beliefs and customs are maintained and valued. Cultural identities should not be discarded and ignored. Used in education, it refers to each learner having a subjective culture, including unique value systems, norms of behavior, modes of interaction, socialization practices, linguistics patterns, and so forth (Cushner, McClelland, & Safford, 1992, cited in Powell, 1993).

Summary

Today preservice instructional designers are facing two challenges: cultural diversity in the national working environment and cross-cultural issues in the international setting. According to recent research, cultural issues such as cultural diversity are often left out of the ID/ISD fields. Therefore, performing a content analysis on textbooks used in ID/ISD program could determine if our instructional designers are

being prepared for culturally diverse learning audiences. In business and politics, the understanding of culturally sensitive issues has become a necessary means for survival. It similarly holds true for instructional technology programs. Preservice instructional designers should learn to value the diverse, dynamic, and changing cultures of America including the founding peoples, and subsequent immigrants, who have shaped the American identity. It is anticipated that people will continue to immigrate to the USA, thereby increasing cultural diversity and international communication challenges for our instructional designers.

Chapter Two

Review of Related Literature

This literature review describes and discusses the relationship between culture and instructional design as well as culture's influence on instructional design. The following topics are examined in this chapter: cultural diversity, internationalization and instructional design; cultural variability interacting with instructional design; and issues and problems in instructional design. The purpose of this review is to demonstrate the importance of cultural issues in developing effective instructional design.

Cultural Diversity, Internationalization and Instructional Design

With the dramatic shift of American demographics, most American classrooms have become culturally diversified. By the year 2020, children of color will comprise one-half of the children in classrooms (Cushner, McClelland & Safford, 2000, p. 10). Educators will face a great challenge: educate increasingly culturally and ethnically diverse students (Anderson & Powell, 1991).

Parallel to these demographic changes, corresponding changes in management, pedagogy, and instructional delivery systems will be required (IBM, 1990) because "learner cultural diversity has significant instructional design implications" (Powell, 1993).

Increasing internationalization of the modern world brings more and more companies to operate in the international marketplace, which stimulates a greater need for cross-cultural training (Black & Mendenhall, 1990). As Stern (1990) noticed, there is “a growing need to operate in an international rather than national environment.” Additionally, the failure to develop a good understanding of other cultures can be measured in lost dollars (Slate, 1993). Therefore, the demands of doing business in a global environment are challenging professionals including instructional designers. A program developed for American audiences cannot be delivered to other countries without significant changes (Powell, 1997). Cultural mores, values and perceptions make people different from each other (Gerber, 1989). Effective training requires the trainer to understand and appreciate other cultures. They should be at a high level of awareness and be able to appreciate trainees’ cultural backgrounds.

Therefore, instructional designers should abandon ethnocentrism because lack of cultural sensitivity is problematic (Powell, 1997), resulting in an inaccurate and improper assessment of the target population (Copeland, 1985). Ineffective instruction or learning may occur for children whose cultural backgrounds do not match that of the mainstream.

Cultural Variability Interacting with Instructional Design

In order to understand why instructional designers should appreciate culture and be culturally sensitive, we need to review the relevant literature that identifies the most important concepts in cross-cultural communication fields and to discuss various cultural variables that may relate to instructional design.

For hundreds of years, cultural anthropologists have been exploring different approaches to define *culture*. What, then, is culture? The Random House Webster dictionary (p. 324) defines *culture* as "the behaviors and beliefs characteristic of a particular social, ethnic, or age group." Kroeber and Kluckhohn (1952, p.2) provided a list of 160 cultural definitions. Although there is no consensus, many researchers agree that *culture* is learned behavior consisting of thoughts, feelings, and actions (Hoft, 1996, p. 41).

Cultural variability.

Defining *culture* is a difficult task; however, researchers agree that culture has a definite and strong influence on instructional design. Edward T. Hall, Geert Hofstede, Florence R. Kluckhohn, and Fred L Strodbeck have been regarded as the cultural theorists whose insights are particularly relevant to the instructional designer (Gould & Zakaria, 2001).

Hall (1976) introduced three important dimensions of cultural variability: monochronic time vs. polychronic time, high-context culture vs. low-context culture and low message speed vs. high message speed.

"Time is one of the fundamental bases on which all cultures rest and around which all activities revolve. Understanding the difference between monochronic time and polychronic time is essential to success..." (Hall 1990, p.179). According to Hall (1990), monochronic time is characterized by schedules, promptness, and compartmentalization of activities whereas polychronic time is characterized by "the simultaneous occurrence

of many things and by a great involvement with people" (p. 14). In monochronic time, events are scheduled one at a time while in polychronic cultures many activities may occur simultaneously; people change plans constantly and do not adhere to appointment schedules as rigidly as in the monochronic time cultures.

Hall (1976) defined the high-context vs. low-context dimension as the amount of information that a person can comfortably manage. In high-context cultures, the meaning of a message depends on the rhetorical situation and the relationship of the speakers; whereas in low-context culture, the meaning is directly encoded into the words of the message itself. A high context culture tends to send information implicitly. A low-context culture tends to take messages at face value.

Hall (1976) noted that people decode messages at different speeds. Prose, headlines and television commercials are fast messages people can quickly decode and act upon. Poetry, books, and television documentaries are slow messages, which make people take longer to decode.

Hofstede is a Dutch academic who has spent long periods employed in industry, most notably at IBM. As early as the late 1960s, he produced a strong interest in cultural differences through gaining access to rich data. In 1980 he published *Culture consequences: International differences in work-related values*. Eleven years later, based on his previous work and a multinational survey he conducted while working with the Personnel Research Department of IBM Europe as a psychologist, he published *Cultures and organizations: Software of the mind* and updated its content in 1997. The following is Hofstede's typology of five dimensions of culture:

Power distance: Power distance refers to the extent to which people respond to power and value inequality. It characterizes the extent to which people consider it natural that power, status, and privileges are distributed unequally among individuals or that this distribution has no high significance in their lives. In weak power distance countries, subordinates and superiors consider each other as existentially equal, while in strong power distance countries people are submissive to authority and power.

Individualism/collectivism: Individualism/collectivism refers to how people value the relationship between each other. In collective cultures, people develop strong ties and loyalty to the group. In individualistic cultures, people pay more attention to their own benefits; individual needs are considered more important than those of the group.

Femininity vs. masculinity: Femininity vs. masculinity refers to whether a society is feminine oriented or masculine oriented.

Uncertainty avoidance: Uncertainty avoidance defines how a society responds to unknown situations. Strong uncertain avoidance means people are sensitive to threatening situations and try to avoid them. Weak uncertain avoidance means people are less threatened by strange and foreign situations.

Confucian dynamism (Hofstede 1991; Hofstede & Bond 1988): The Confucian dynamism dimension was later added to the above four dimensions. It was created in a study among students in 23 countries around the world, using a questionnaire

designed by Chinese scholars. Confucian dynamism has also been called Long Term Orientation and Short Term Orientation. Values associated with Long Term Orientation are thrift and perseverance; values associated with Short Term Orientation are respect for tradition, fulfilling social obligations, and protecting one's 'face'. Because both the positively and the negatively rated values of this dimension are found in the teachings of Confucius, the influential Chinese philosopher who lived around 500 B.C., this dimension is called Confucian dynamism. This dimension also applies to countries without a Confucian heritage.

Florence R. Kluckhohn and Fred L Strodbeck wrote *Variations in value orientations* in the late 1950s and published their book in 1961. Kluckhohn and Strodbeck (1961) believed that there are a limited number of universal problems that all human societies must address, forming the basis of their six dimensions of value orientations: nature of the individual, relationship of people to their world, individualism vs. collectivism, doing vs. being, time orientation and space orientation.

Both Adler (1991) and Hills (2002) provided an interpretation of Kluckhohn and Strodbeck's value orientations. According to their perspectives, the nature of the individual dimension is a dominant value in most cultures and an individual may be good, evil, or a mixture of the two natures. The relationship of people to their natural environment may be taking a dominant, harmonious or submissive role. Individualism vs. collectivism describes a relationship of the individual to the group: it may be hierarchical, collateral or individualistic. Doing vs. being describes motives for behaviors. The doing orientation stresses accomplishments while the being orientation stresses indulgence of desires and life experiences. Time orientation refers to a culture's focus on the past, the

present or the future. Space orientation refers to the cultural perception of the use of physical space, private or public. Adler (1991) described an American cultural orientation according to the six dimensions of Kluckhohn and Strodtbeck's value orientations: people in the USA are seen as a mixture of good and evil, and change from one orientation to the other is possible. The relationship of people to their natural environment is regarded as dominant over nature. Humans are regarded as individualistic, future-oriented and private. The primary mode of activity is doing.

How cultural variability interacts with instructional design.

Because one of the major flaws in traditional instructional design is that theorists do not include culture into their design models (Sabin & Ahern, 2002), there is little literature regarding how cultural variability interacts with or influences instructional design (Powell, 1993).

Smart (1983) provided an example how the Western trainer, coming from a low-context culture, had difficulty in understanding his Singaporean students from a high-context culture. He speculated that communication difficulties were caused by the fact that the Western trainer accepted high-context messages from students at their face value and failed to perceive the implicit meaning. The challenge of any instructional situation is to find the level of context that is appropriate for the students.

This example also holds true for instructional design. Gould and Zakaria (2001) noted that Malaysia and the United States strongly contrast with one another in many of the cultural dimensions as defined Hall and Hofstede. They identified Malaysia as a high-

context, high power distance culture with collectivist and polychronic features whose polemic encodes status and group identity and the United States as a low-context, low power distance country with individualistic and monochronic features. They reminded instructional designers when designing instructional materials for learners with different cultural backgrounds, that different strategies should be considered. For example, in designing courses directed toward high power distance and collectivist countries like Malaysia, instructional designers should make strong assertions, tie learners' purposes into the national mission, emphasize the credentials of the faculty, and adopt a more teacher-centered pedagogy.

In another paper, Gould and Zakaria (2003) proposed several recommendations for course development after examining several academic websites from Malaysia and the United States. They strongly believe that in *collectivist cultures*, students' freedom of action is limited by their membership in groups. As a result, course developers should:

- ❖ Use team projects;
- ❖ Emphasize broad organizational and social goals that transcend classroom differences;
- ❖ Build collective truths;
- ❖ Expect indirect, impersonal speaking and writing styles and extensive discussion of backing and claims;
- ❖ Avoid conflict or highlighting differences between fellow students (avoid shame);
- ❖ Approach students personally (out of class) if you want their individual opinions;
- ❖ Use 3rd party intermediaries to negotiate conflicts. (Gould & Zakaria, 2003)

In *individualistic cultures*, students perceive the purpose of education is to maximize self-expression and self-determination. They often have little patience with the lack of direction in academic areas or what they consider bad usability in course interfaces. Thus, instructional designers should use the following guidelines:

- ❖ Pedagogy should maximize student activity and input since empowerment is more valued than knowledge;
- ❖ Faculty should function as facilitators or counselors;
- ❖ All student contributions need to be acknowledged;
- ❖ Text and assessments require “you-attitude” (writing directed to the reader);
- ❖ Graphics should show individuals achieving goals;
- ❖ Differences between students can be highlighted in the effort to generate debate.

(Gould & Zakaria, 2003)

Hall’s concept of decoding message speed is also applied to instructional design. Illman (1980) suggested that trainers slow their presentation speed to facilitate understanding. Hites (1996), echoing Illman’s point of view, argued that when we design instructional materials for people who are geared to slower messages, the message could fail to be decoded correctly if we design a faster message. Therefore, the presenter should slow down the presentation speed.

Hofstede’s power distance dimension was also related to instructional design. For instance, China belongs to a high power distance culture. In such a culture, people are very status-conscious. Authority is respected and disagreements with authorities must be avoided at all costs. Authorities have a final say. Lindsay and Dempsey (1985) reported unexpected problems when they went to China to train Chinese business managers to use

American management techniques. They mixed students with different management levels together and did not select a leader to organize the discussion. Later they discovered that their Chinese trainees had a high dependence on authority and authority figures, because nobody talked. After they had selected a leader, each person in the group presented their points of view on the issue in serial order. After each person had had a turn to speak, the leader pronounced a decision. No discussion, no disagreement.

What Lindsay and Dempsey had observed is inappropriate or ineffective in the United States is appropriate and acceptable in Chinese culture. If Lindsay and Dempsey had not selected a leader, the discussion would totally have failed. This is a very good example how the power distance dimension influences the effectiveness of training.

Elashmawi (1998) reported another example that illustrated how the differences of perception of time influence training. He noted that American trainees expect training sessions to begin and end on schedule (in monochronic culture, people value time). However, in polychronic culture, the training session can be extended into the evening if the trainees are interested. It is acceptable in this type of culture to start meetings late and extend them for more hours than scheduled. Japan and the Philippines are good examples of such cultures.

Issues and Problems in Cross-Cultural Instructional Design

Hites (1996) categorized the problems instructional designers deal with into two main areas: cultural conditions and language conditions. She defined conditions as traits students bring to training, traits which are beyond the control of instructional designers.

These two inextricably entwined conditions influence the effectiveness of instruction and profoundly influence instructional methods.

Cultural conditions may include cultural shock, cross-cultural communication skills or barriers, cultural value differences and job structure differences (Hites, 1996). Cultural shock is the first cultural condition that can affect students' ability to learn (Berry & Annis, 1974), especially if familiar cultural cues are removed from the instructional materials (Hites, 1996). Cultural shock as a condition only affects students. However, cross-cultural communication skills or barriers affect both instructors and students (Hites, 1996) because normally people perceive their own context and way of thinking as logical and self-evident (Schipper, 1993), which potentially becomes a barrier to communication. Cultural values can affect all levels of organizational behavior, including training. Students and instructors may have different expectations including instructor leadership styles and the motivations of both students and instructors (Weaver, 1995; Hofstede, 1984). The expectations may relate to cultural values such as those related to education, power and authority. Because different countries have different job structures, international students may have different prerequisite skills or objectives from those possessed by domestic students (Gooler, 1979; Spielman, 1983; Hites, 1996). All these factors will affect learning and training effectiveness (Hites, 1996).

Language conditions are considered the most obvious obstacle faced by instructional designers in foreign technical training (Rome, 1980; Hites, 1996). International students or foreign trainees, due to their less able second language competencies, take a longer time to understand the instructions (Lambert, Havelka & Gardner, 1959). Students tend to understand concrete words better than abstract words

(Hites, 1996). Another important aspect regarding language conditions is non-verbal communication. Olaniran and Williams (1995) claimed “different cultures attribute different meanings to similar behavior, which result in communication distortion” (p. 225). Hall (1987) and Matsumoto (1991) noted that proxemics, use of gestures and eye contact patterns are three non-verbal ways of communication that have different meanings and use across culture.

Summary

The literature review indicates that within the last 20 years, demographic trends reflect that the population of the United States is becoming more and more ethnically, culturally, and racially diverse. Because increasing numbers of companies are operating in the international marketplace, the need for cross-cultural training is growing. In the light of the changing demographics and the increasing of international communication, instructional designers should be culturally sensitive. Because researchers agree that cultural variability produces strong influence on communication and instructional design, instructional designers should include cultural factors into their instructional design. In the past, faculty in instructional design programs have not incorporated cultural values into their curriculum and thus, preservice instructional designers have lacked preparation for the challenges of cultural issues in their work. Preservice instructional designers need to know what the cultural issues are and how to cope with them. This is a very pressing issue every faculty member has to face as they prepare today’s preservice instructional designers for tomorrow’s challenges.

Chapter Three

Procedures

This chapter contains a description of the methods and procedures employed by the researcher in this study, which consists of five parts: overview of content analysis, sample, categorizing and coding sheet, pilot study and an assessment of intercoder reliability.

Overview of Content Analysis

Content analysis was initially used in 1910 by sociologist Max Weber to examine press coverage of political issues in Germany. A popular research method since World War II, content analysis has wide applicability in educational research (Holsti, 1969). As descriptive research, it is “valuable for gathering data on the materials used in technology education” (Brownell, 1993). It is also a research tool used in studies to determine the presence of certain concepts or words within texts, which might be encyclopedias, novels, newspapers, advertisements, political speech, television, books, essays, interviews, discussions or anything which can be called texts (Borg & Gall, 1989; Brownell, 1993). As Berelson (1952) commented, content analysis is “a research technique for the objective, systematic and qualitative description of the manifest content of communication” (p.6).

The main function of content analysis as a research tool is that researchers can quantify and analyze the presence, meanings and relationships of certain words and concepts to make inferences about the messages.

The purpose of content analysis is to examine the latent and/or manifest content of documents, texts or other forms of communication in order to understand or draw conclusions about points of interest (Barbie, 2000, p.6). It allows the researcher to collect and summarize information about textual materials in an objective and systematic fashion, thereby making it possible to derive valid inferences from text (Anderson, 1994). In this study, a quantitative content analysis method was used based on the research question, allowing the researcher to analyze the presence of particular words and messages from the manifest content of the text and use a system of interpretation that goes beyond mere counting of occurrences to make inferences. Quantitative content analysis is a commonly used method because it seems more objective and lends itself to statistical analysis (Beck & McKeown, 1991).

Sample

Kerlinger (1986, p.479) argued that the most important step in a content analysis procedure is to define the universe of content to be analyzed. In this study, textbooks in the field of instructional design were the content to be analyzed. These textbooks are not only a resource commonly available to most instructional design teachers, but they are also regarded by teachers and researchers alike as an important and significant body of

information used extensively by a large proportion of general instructional design practitioners. As such, these textbooks are considered to be a good representation of instructional practices and appropriate as a body of analysis for this study.

This study focused on a 10-year period with the purpose of examining if any content change in ID/ISD textbooks has occurred since Powell investigated faculty members' cultural issues awareness levels in 1993; textbooks published before 1993 presented no cultural issues (Powell, 1993). This study employed a non-random sampling method to collect the sample, which included all of the available textbooks published from 1993 to 2003. As part of collecting the samples, the researcher examined Amazon and Barnes & Noble ebookstores. On these two websites, the researcher selected the textbooks tab and typed in the key word *instructional design* to start searching. On the Amazon site, there were 257 results. On Barnes & Noble, there were 613 results. Then the researcher sorted the results by selecting Publishing Date. The books published before 1993 and those planned to be published in 2004 and 2005 were removed from the list. The researcher also found that not all of the books published between 1993 and 2003 were applicable. Some of the books whose titles do not specifically relate to instructional design were not selected. For example, *Classrooms That Work: They Can All Read and Write*, *Getting Your Sex Life Off To A Great Start*, *Indian Bead-Weaving Patterns: Chain-Weaving Designs*, and *Bead Loom Weaving* were not kept, to name a few. Also, some books were also removed even though their titles related to instructional design but the contents dealt with none of the five phases of instructional design: analysis, design, development, implementation and evaluation. The reason that the researcher selected the ADDIE model is that most widely used ID models include to some degree each of the

five steps of the ADDIE model: analysis, design, development, implementation and evaluation (McCombs, 1986; Merrill, 1997). As Kruse (2003) states, “There are more than 100 different ISD models, but almost all are based on the generic "ADDIE" model, which stands for Analysis, Design, Development, Implementation and Evaluation.” Therefore, in accordance with this standard, books such as *Sam’s Teach Yourself Macromedia Dreamweaver MX in 24 Hours*, *The Non-Designer’s Design Book*, and *Professional Photoshop: The Classic Guide to Color Correction* were not used. There were altogether 36 textbooks on instructional design that were determined to be applicable to this project. To help ensure that the list of the books included all the ID/ISD books published between 1993 and 2003, the researcher consulted faculty members, instructional designers, textbook authors and instructional design students by sending the list of 36 books to the instructional technology student email list locally and nationally. Two experts who attended the validation of the instrument were also invited to review the book list. As a result, 17 new books were added to the book list, making a total of 55 books. See APPENDIX D for the list of textbooks. For reasons beyond the control of the researcher, the following two books were unavailable for review: *Instructional Design and Planning Computer Based Professional Development Course* (1999) by J. Neill and D. Mashburn and *Constructivist Instructional Design* (2003) by A. Showalter. As a result, this study examined only 53 books.

Categorizing and Coding Sheet

The review of literature indicated that no instruments were available to fit the needs of this study; therefore, the researcher had to construct the instrument. Because the

research question of this paper tried to determine to what extent cultural issues were addressed, it was important to determine if these textbooks described or discussed any topics related to culture. Categorizing is a key part to constructing the instrument.

According to Kerlinger (1986, p. 479), categorization is possibly the most important task in the content analysis process. It is “a direct reflection on the theory and problem of the study” (Kerlinger, 1986, p.458). Berelson asserted (1954) that content analysis “stands or falls by its categories” (p. 510). Categories serve as the basis for the objective analysis of the selected content material (Holsti, 1969, p. 89).

Because categories are variables which are linked to the problem and theoretical framework (Budd, Thorp, & Donohew, 1967), for the purposes of this study the categories for the content analysis were those items and topics deemed important and used frequently by scholars and instructional designers in their papers, monographs and books regarding cultural topics. In order to set up five categories according to the nature of the problems—how instructional designers incorporate cultural issues in the five phases of the traditional ADDIE model—the researcher reviewed more than fifty articles which discussed instructional design and culture and additionally studied more than ten books that dealt with education and culture. For the cultural coverage that did not belong to one of the five phases, the researcher set up the Other category in which to record such instances. Based on the categories, a coding sheet was constructed to answer the research question. This instrument can be found in APPENDIX B.

Validity is an important factor in a scientific inquiry. The validity of an instrument is directly related to the precision and accuracy of a study. Berelson (1952) listed validity as one of the technical problems a content analyst needs to consider. Budd

et al. (1967, p. 69) held that the researcher must give attention to validation if he didn't aim to do mere purposeless exercises.

To ensure the validation of the instrument that was used in this study, the researcher took two steps to attain this goal: an expert analysis and a pilot study. The idea of the expert analysis was borrowed from Landy and Trumbo (1980) who introduced a very useful procedure to construct a behaviorally anchored scale:

To construct a behaviorally anchored scale, groups of workers and/or supervisors are gathered together for group conferences in which they attempt to identify and define all of the important aspects necessary for successful performances on a particular job. Next, a second group is asked to take the aspects as they have been defined by the first group and provide examples of high, average, and low performance on each of the aspects of performance. Then, a third group is given a list of each of the aspects and a randomized list of the examples provided by the second group. They are asked to place or allocate each example in the category or aspect for which it is written. This is known as 'retranslation' (p. 127).

Borrowing the third step described by Landy and Trumbo, the researcher designed the following procedure. First, the researcher created a table in a Word document with six columns, each named as follows: Key word or phrase, Analysis, Design, Development, Implementation, and Evaluation. Second, the researcher developed key words or phrases that are criteria measuring whether these cultural issues are manifest in the five corresponding phases and put the key words or phrases in the first column of the table. Third, the researcher invited a graduate student in an instructional design program and a professional instructional designer with a Ph.D. at a university located in the southeast United States to allocate each key word or phrase into its related category. The student and the professional instructional designer come from different ethnic backgrounds. The student is from India, whereas the instructional designer is from the United States. The key words or phrases that fit into the five phases were copied and put into the

corresponding categories. Key words or phrases that were not deemed relevant or deemed repetitive were removed. The matrix format is indicated in APPENDIX C.

Pilot Study

Before starting a formal coding procedure, a pilot study was conducted. As part of this pilot study, the researcher selected 10% of the sample books to complete the pilot study. Altogether six books were examined in this pilot study. Two coders were involved in this pilot study: the researcher and the professional instructional designer mentioned above. However, a few changes from what was originally proposed were implemented after the pilot study.

First, in the pilot study, the two coders found using a sentence as a unit of measurement would be inappropriate for this study because of the large amount of cultural coverage in some books. One book allotted a whole chapter to discussing cultural issues and several other books even allotted many paragraphs to cultural issues. As a result, in the formal coding, a page was used as the unit of measurement. Second, in order to illustrate the issues, some books used figures, tables, charts, and pictures to facilitate readers' understanding. These figures, tables, graphs, charts, and pictures were excluded for the analysis in the proposal. However, because they described cultural issues to some extent, they were included for the analysis in the formal coding. Third and last, another important issue found in the pilot study was that even though the key words in the content analysis did not appear on the index pages or on the tables of contents, the books may have carried culture coverage. Considering this fact, the two coders decided to include words relevant to or related to culture in examining index pages and tables of contents of

the textbooks. As a result, the words globalization, diversity, ethnocentrism, learner analysis, localization and multicultural were added to the key word list.

Intercoder Reliability

Another important factor of doing content analysis is that it allows other researchers to obtain similar results if they follow the same procedures (Budd et al. 1967).

Berelson (1952) suggested sound intercoder reliability should be between 66% and 96%. Intercoder reliability can be calculated by many methods. However, Holsti (1969, p.140) reported a very simple but useful method:

$$\text{Reliability} = 2M / (N_1 + N_2)$$

where M is the number of coding decisions on which two coders agree, and N_1 and N_2 refer to the total number of coding decisions by the first and second coder, respectively. This statistic ranges from .00 (no agreement) to 1.00 (perfect agreement). For example, if two coders judge a subsample of 50 units and agree on 35 of them, the calculation is $\text{Reliability} = 2(35) / (50+50) = .70$. In the pilot study, the researcher and the professional instructional designer only disagreed on one book. According to Holsti's formula, the resulting intercoder reliability is .83.

After the pilot study and the revision of the coding procedure, the researcher started coding all 53 books. Meanwhile, the professional instructional designer also started coding all 53 books for the purpose of calculating the intercoder reliability for this study. Both coders found there were altogether 17 books that didn't allot even one page

to cultural issues. In the 36 books that did cover cultural issues, they agreed on 29 books and disagreed on seven books, which resulted in an intercoder reliability of .86. The results of this study were based on the researcher's findings.

Chapter Four

Findings and Conclusions

This chapter is composed of two parts: findings and conclusions. Findings displays the results of this study. Conclusions answers the research question and summarizes the findings.

Findings

Williams Horton, in his great work *Designing Web-based Training*, asserted:

...putting training on the web makes it available around the globe, but availability is not enough. Barriers of language, custom, and expectations limit the use of our training. Local economic and business conditions further restrict who can take our training. Reaching the goal of global training requires solid knowledge of the differences among learners throughout the world—and careful design for these differences (p. 439).

Even though cultural issues are important, the findings of this analysis revealed that not all the textbooks used for instructional design covered cultural issues. For those books that discussed cultural issues, the devoted pages ranged dramatically (see Table 1).

Table 1 further indicates that coverage of the cultural issues appeared in 36 of the 53 books in the sample. Therefore, 68% of the total sample books covered cultural issues and 32% did not (see Figure 1). Conversely stated, approximately one-third of the sample excluded cultural issues from their coverage of instructional design. Table 1 also

demonstrates that only 3 of the 36 books that covered cultural issues devoted more than 5% of their total pages to such issues; 33 books carried less than 5%. Figure 2 illustrates that the books whose coverage was over 5% comprise 8% of the total 36 books that covered cultural issues; whereas, those whose coverage was less than 5% constitute 92% of the total of 36 books.

Table 1

Overview of the Cultural Coverage in the 53 ID/ISD Textbooks Sorted in the Descending Order by Percentage of Coverage

Books by authors' names	Pages devoted	Pages in text	Percentage of coverage
Horton, W.	48	607	7.9%
Rothwell, W.J., & Kazanas, H. C.	30	473	6.3%
Armstrong, A.	17	269	6.3%
Ledford, B.R., & Sleeman, P. J. (b)	11	225	4.8%
Witkin, B. R., & Altschuld, J. W.	8	302	2.6%
Tennyson, R., Schott, F., Seel, N., & Dijkstra, S.	12	475	2.5%
Edwards, C.	7	307	2.2%
Reigeluth, C.	16	715	2.2%
Ertmer, P. A., & Quinn, J.	5	242	2.1%
Reiser, R., & Dempsey, J.V.	8	415	1.9%
Anglin, G.J.	7	431	1.8%
Seels, B.	5	278	1.8%
Smith, P. L., & Ragan, T. J.	7	399	1.8%
Zook, K.	7	415	1.6%
Dean, G. J.	2	126	1.6%
Lee, W. W., & Owens, D.	5	359	1.4%
Wiggins, G., & McTighe, J.	3	201	1.4%
Spector, J.M., Polson, M.C., & Muraida, D.J.	5	364	1.3%
Milano, M., & Ullius, D.	4	340	1.1%
Morrison, G. R., Kemp, J.E., & Ross, S. M.	4	369	1.1%
Paquette, G.	3	262	1.1%

Table 1 -- *Continued*

Conrad, K.	3	280	1.1%
Ledford, B.R., & Sleeman, P. J. (a)	2	176	1.1%
Dick, W., & Carey, L.	4	418	0.9%
Alessi, S., & Trollip, S.R.	5	580	0.8%
Rogers, P.	2	274	0.8%
Christian-Carter, J.	1	147	0.7%
Dijkstra, S., Seel, N., Schott, F., & Tennyson, R.	3	418	0.7%
Piskurich, G. M.	2	297	0.7%
Morrison, G. R., & Lowther, D.L.	2	367	0.5%
Jonassen, D.H., Hannum, W. H., Tessmer, M.	1	275	0.4%
Wilson, B. G.	1	252	0.4%
Allen, M.	1	326	0.3%
Altschuld, J.W., & Witkin, B.R.	1	282	0.3%
Fleming, M.	1	331	0.3%
Romiszowski, A. J.	1	415	0.2%
Akker, J., Branch, R. M., Gustafson, K., Nieveen, N., & Plomp, T.	0	296	0%
Beyer, B.	0	81	0%
Bruce, G.	0	536	0%
Chauncey, D.	0	198	0%
Clark, R. C.	0	263	0%
Clark, R.C., & Mayer, R. E.	0	322	0%
Gustafson, K. L., & Branch, R. M.	0	71	0%
Ivers, K. S., & Barron, A.E.	0	230	0%
Jonassen, D.H.	0	218	0%
Kommers, P., Grabinger, S., Dunlap, J. C., & Grabinger, R. S.	0	276	0%
Medsker, K.L., & Holdsworth, K.	0	384	0%
Merrill, M.D.	0	465	0%
Merrienboer van, J.J.G.	0	525	0%
Mijksenaar, P., & Westendorp, P.	0	505	0%
Seels, B., & Glasgow, Z.	0	342	0%
Shambaugh, R. N., & Magliaro, S. G.	0	298	0%
Tessmer, M.	0	159	0%

Figure 1. Number of ID/ISD textbooks that cover cultural issues.

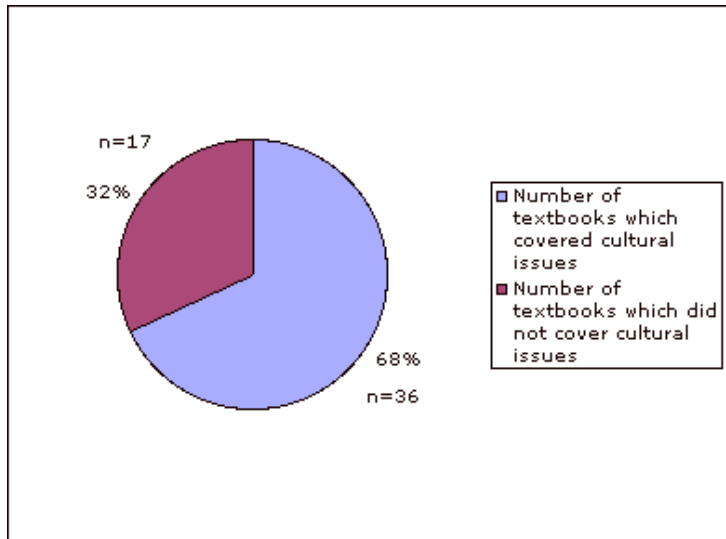
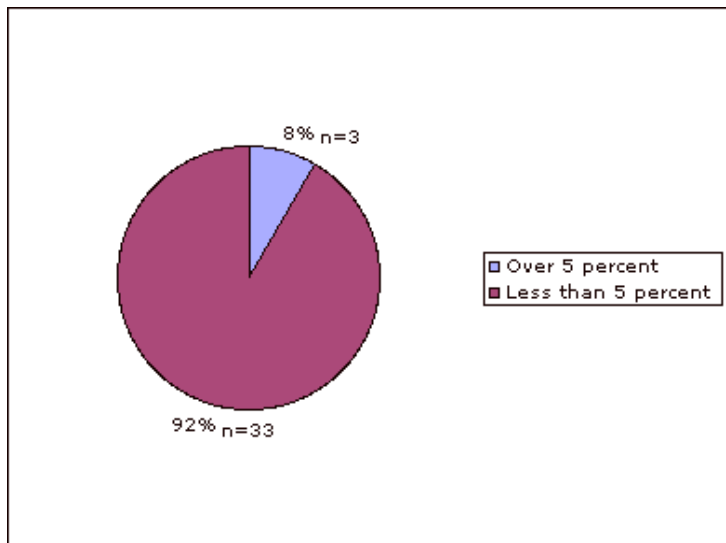


Figure 2. Textbooks with over 5 % and less than 5 % of cultural coverage in the total sample of 36 books that covered cultural issues.



It is important to note that Armstrong's text, Horton's text, and Rothwell and Kazanas's text are the three books that devoted the most pages to cultural issues. Both Armstrong's text and Horton's text devoted an entire chapter to cultural issues. Rothwell and Kazanas's text devoted a section addressing cultural issues in several chapters. The chapter about cultural issues in Armstrong's text discussed the author's cultural experiences in doing his instructional design work in a foreign country. Rothwell and Kazanas's text addressed the importance of cultural issues in the phases of Analysis, Design, Development and Evaluation. After addressing the importance of cultural issues in these phases, they further addressed strategies to deal with the cultural issues. However, Horton's text is the only textbook that provided detailed guidelines, strategies, and suggestions regarding how to deal with cultural issues that may appear in global training. For example, in the section Making Numbers Easy to Understand, he listed the following suggestions:

- ❖ Spell out your currency units
- ❖ Remember that decimal points are not always dots
- ❖ State dates clearly
- ❖ Make your time zone known
- ❖ Include both international and American units
- ❖ Include international telephone numbers

Regarding stating dates clearly, he further gave examples such as which kinds of state forms are preferred.

As Table 2 demonstrates, distribution of cultural coverage is uneven in the five phases of instruction design. Table 3 demonstrates the number of pages in the total pages

of 53 textbooks devoted to the five phases of the ADDIE model. Of the 17,581 total pages contained in the 53 textbooks, only 250 pages were devoted to the coverage of cultural issues. Therefore, on average, only 1.4 pages of each one hundred pages were devoted to cultural issues.

As both Table 3 and Figure 3 indicate, the majority of authors devoted most of their cultural coverage to the phase of Analysis and Other categories. Coverage of cultural issues both in the phase of Analysis and Other categories was somewhat larger than the total coverage devoted to the other four phases: Design, Development, Implementation and Evaluation. The phase of Implementation received the least amount of coverage among the five phases. Even though the 53 textbooks devoted a total of 88 pages to the phase of Analysis and 65 pages to the Other category, the coverage rate is 0.5% and 0.3% of total pages respectively. Looking at the other phases, the pages devoted are even less. Only 34 pages of a total of 17,581 pages were devoted to the phase of Design, 44 pages devoted to the phase of Development, 5 pages devoted to the phase of Implementation and 14 pages devoted to the phase of Evaluation.

Because 17 books in this study did not show any evidence of cultural coverage in their contents, Table 4 indicates one more way of calculating and examining cultural coverage in the examined textbooks. As Table 4 demonstrates, in the 36 books that did cover cultural issues in their contents, there were no more than 2 pages of each one hundred pages on the average devoted to cultural issues. The greatest amount of coverage fell into the phase of Analysis; however, the rate is less than 1%. The amount of coverage in other phases is even less.

Table 2

Distribution of Cultural Issues Coverage in the Five Phases of Instructional Design

Books by authors' names	A	D	D	I	E	O
Akker, J., Branch, R. M., Gustafson, K., Nieveen, N., & Plomp, T.	0	0	0	0	0	0
Alessi, S., & Trollip, S.R.	2	2	0	0	0	1
Allen, M.	0	1	0	0	0	0
Altschuld, J.W., & Witkin, B.R.	1	0	0	0	0	0
Anglin, G. J.	1	0	0	0	0	6
Armstrong, A.	3	5	2	2	5	4
Beyer, B.	0	0	0	0	0	0
Bruce, G.	0	0	0	0	0	0
Chauncey, D.	0	0	0	0	0	0
Christian-Carter, J.	1	0	0	0	0	0
Christian-Carter, J.	0	0	0	0	0	0
Clark, R. C.	0	0	0	0	0	0
Conrad, K.	3	0	0	0	0	0
Dean, G. J.	2	0	0	0	0	0
Dick, W., & Carey, L.	2	0	2	0	0	0
Dijkstra, S., Seel, N., Schott, F., & Tennyson, R	0	0	0	0	0	3
Edwards, C.	8	0	0	0	0	0
Ertmer, P. A., & Quinn, J.	3	2	0	0	0	1
Fleming, M.	0	0	1	0	0	0
Gustafson, K. L., & Branch, R. M.	0	0	0	0	0	0
Horton, William	3	6	36	0	1	2
Jonassen, D.H.	0	0	0	0	0	0
Jonassen, D.H., Hannum, W. H., & Tessmer, M.	1	0	0	0	0	0
Kommers, P., Grabinger, S., Dunlap, J. C., & Grabinger, R. S.	0	0	0	0	0	0
Ledford, B.R., & Sleeman, P. J. (a)	2	0	0	0	0	0
Ledford, B.R., & Sleeman, P. J. (b)	11	0	0	0	0	0
Lee, W. W., & Owens, D.	3	2	0	0	0	0

Table 2 -- *Continued*

Medsker, K.L., & Holdsworth, K.	0	0	0	0	0	0
Merrill, M.D.	0	0	0	0	0	0
Merrienboer van, J.J.G.	0	0	0	0	0	0
Milano, M., & Ullius, D.	3	1	0	0	0	0
Morrison, G. R., Kemp, J.E., & Ross, S. M	4	0	0	0	0	0
Morrison, G. R., & Lowther, D.L.	0	0	0	0	2	0
Paquette, G.	0	0	0	0	0	1
Piskurich, G. M.	2	0	0	1	0	0
Reigeluth, C.	0	0	0	0	0	16
Reiser, R., & Dempsey, J.V.	0	0	0	0	0	8
Rogers, P.	2	0	0	0	0	0
Romiszowski, A. J.	0	1	0	0	0	0
Rothwell, W.J., & Kazanas, H. C.	13	10	3	0	3	1
Seels, B.	0	2	0	0	1	2
Seels, B., & Glasgow, Z.	0	0	0	0	0	0
Shambaugh, R. N., & Magliaro, S. G.	0	0	0	0	0	0
Smith, P. L., & Ragan, T. J.	7	0	0	0	0	0
Spector, J.M., Polson, M.C., & Muraida, D.J.	0	0	0	0	0	5
Tennyson, R., Schott, F., Seel, N., & Dijkstra, S.	1	0	0	0	0	11
Tessmer, M.	0	0	0	0	0	0
Wiggins, G., & McTighe, J.	0	0	0	0	0	3
Wilson, B. G.	0	0	0	0	0	1
Witkin, B. R., & Altschuld, J. W.	8	0	0	0	0	0
Zook, K.	2	2	0	2	2	0
Sum	88	34	44	5	14	65

Note. ADDIEO stands for Analysis, Design, Development, Implementation, Evaluation and Other respectively.

Table 3

Number of Pages in a Total of 53 Textbooks Devoted to the Five Phases of ADDIE Model

Total pages of 53 textbooks devoted to cultural issues	250	$250/17,581 = 1.4\%$
Analysis	88	$88/17,581 = 0.5\%$
Design	34	$34/17,581 = 0.19\%$
Development	44	$44/17,581 = 0.25\%$
Implementation	5	$5/17,581 = 0.03\%$
Evaluation	14	$14/17,581 = 0.08\%$
Other category	65	$65/17,581 = 0.36\%$

Note. The total pages of 53 textbooks is 17,581.

Figure 3. Distribution of the five phases within the 250 pages of coverage.

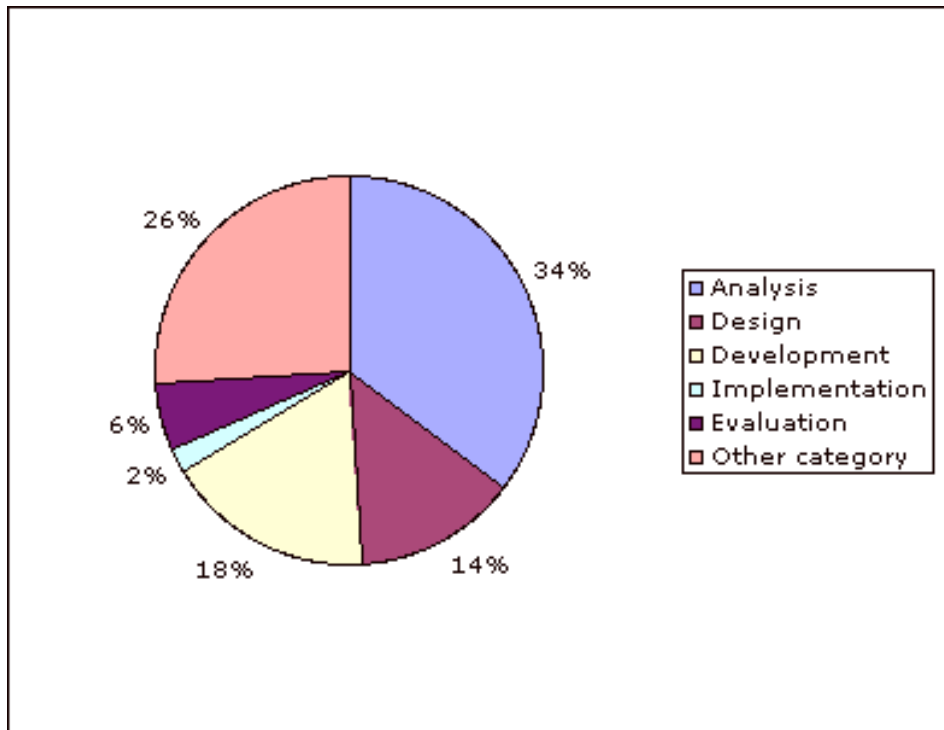


Table 4

Number of Pages in a Total of 36 Textbooks Devoted to the Five Phases of the ADDIE

Model

Total pages of 53 textbooks devoted to cultural issues	250	$250/12,412=2\%$
Analysis	88	$88/12,412=0.7\%$
Design	34	$34/12,412=0.27\%$
Development	44	$44/12,412=0.35\%$
Implementation	5	$5/12,412=0.04\%$
Evaluation	14	$14/12,412=0.11\%$
Other category	65	$65/12,412=0.5\%$

Note. The total pages of 36 textbooks is 12,412.

Considering that cultural issues are very important to instructional design, examples indicating how various textbook authors addressed cultural issues follow.

Examples of cultural coverage in the phase of Analysis.

In relation to the phase of Analysis, most books emphasized that as part of doing a learners' analysis, designers should consider cultural differences among learners. Other books addressed the importance of cultural issues because they may hinder or help needs assessments.

Smith and Ragan (1999) provided us a very good example of learners' analysis:

A common error resulting from failure to analyze the characteristics of an audience is assuming that all learners are alike. An even more common error is assuming that the learners are like the designers. This means that we tend to explain things the way we will understand them, use examples that are familiar to us, and use instructional techniques that work well for us. This hidden form of ethnocentrism can play havoc with the design of instruction (p. 46).

After Smith and Ragan (1999) posited two common errors instructional designers make, they indicated that there exist stable similarities and differences between learners. Cultural differences are stable differences because they are relatively unchanging over time.

Rothwell and Kanzanas (1998) gave another example of cultural issues in the phase of Analysis:

Needs assessment is prone to the same cross-cultural issues as performance analysis. Just as political climate can help or hinder performance analysis, so too can it help or hinder needs assessment. While no silver bullet exists to avoid all problems in all settings, a cultural informant should be identified and consulted before a needs assessment is conducted in a culture with which the instructional designer is unfamiliar (p.78).

Rothwell and Kanzanas further suggested that cultural informants should be consulted about the language abilities of the targeted audiences in needs assessments. Cultural analysis within the needs assessments can help determine if the instructional materials are written in the learners' mother tongue or in a foreign language.

Examples of cultural coverage in the phase of Design.

During the phase of Design, most textbook authors addressed cultural issues lightly.

Milano and Ullius (1998) provided a good example in describing the critical factors of designing and selecting learning activities:

The cultural backgrounds of your participants will affect the selection of activities. For example, participants from certain cultures may find it especially uncomfortable to assume a “role” during a role play or to “argue” during a structured debate. The designer must consider how best to address cultural norms and needs without compromising the program objectives (p.162).

Alessi and Trollip (2001) described three factors that first appeared as a result of the Web’s international nature: language differences, cultural differences, and time differences. After discussing these three factors, they argued that there were two design challenges instructional designers might face:

Concerning design challenges, there are two problems. First is recognizing the difficulties your learners will encounter when they access sites in different countries. Second is recognizing the difficulties learners from other countries will encounter if they access your site. For your own learners facilitate their use of foreign sites through directions (including print directions), ongoing advice, and selection of the only model sites of high quality. For foreign users accessing your site facilitate their use through multilingual entry pages, graphical and verbal icons and directions, and avoidance of local jargon and knowledge (p. 391).

Examples of cultural coverage in the phase of Development.

During the phase of Development, the five books that addressed cultural issues devoted most of their coverage to practical problems.

Alessi and Trollip (2001) alerted instructional designers to be cautious in discussing two types of cultural bias instructional designers might encounter:

You should be cautious about using sports metaphors. Be certain that your sport is universal. References to a sport may have gender implications as well. Cultural bias may best be assessed using an audience during the planning phase.

Sometimes using cultural biased materials is unavoidable. In the United States, for example, it is unrealistic to use anything other than miles, gallons, or pounds

for some subjects. Programs using these measures would have to be rewritten for export because other countries use metric measurements (p. 419).

Horton (2001) is the author who devoted the most pages to the coverage of cultural issues during the phase of Development. Horton argued that national chauvinism is a kind of ideology that makes people think only their own culture and country matter. He presented four ways to avoid national chauvinism.

- ❖ Use generic objects in examples
- ❖ Avoid local expressions
- ❖ Think from the viewpoint of your learner
- ❖ Format address flexibly (pp. 452-453).

Examples of cultural coverage in the phase of Implementation.

As Table 3 indicates, only three authors addressed cultural issues that might appear during the phase of Implementation.

Piskurich (2000), in Chapter 6 of his book, addressed cultural issues he experienced:

One last comment on these processes that I've also gained from experience. If you are developing a class for delivery in different cultures, do at least a beta test, if not both a beta and a pilot, in each of these cultures. I learned this lesson when I designed a class with a whole range of great activities based on my own culture, only to find that in another culture one of the key activities was experienced and mastered by every grade school student, while in yet a third culture the follow-up activity was not acceptable, as it put too much stress on the trainee/supervisor relationship.

Even if you are designing within a multicultural team, you still need to test your program with real people from each culture in which your program will be

delivered to determine whether cultural differences exist before the rollout (p.194).

Zook (2001) believed that learner diversity is one important factor that determines the complexity of classroom teaching. He wrote:

One of the variables that adds significantly to the complexity of classroom teaching is learner diversity. Teachers are increasingly being held accountable for the learning of students who reflect racial, cultural, gender, linguistic, physical, intellectual, and social-emotional differences. A systematic approach to instructional design can be a powerful tool to help you meet the needs of all your learners in three major ways (p. 19).

The three ways Zook (2001) indicated to meet the needs of learners are:

First, the precision with which a systems model encourages you to think about each instructional decision and action can heighten your awareness of the impact those decisions and actions may have on different types of learners, resulting in your ability to detect when modifications and adaptations may be necessary.

Second, the goal-directed focus of systematic instructional design helps you plan and evaluate learning experiences for students who have specific learning needs.

Finally, using a systems model to guide your instructional decision making can help you make adaptations for individual learners and ensure that they are achieving important learning goals (pp. 19-20).

Examples of cultural coverage in the phase of Evaluation.

Horton (2001) suggested that instructional designers test their course early and often by using the following three ways:

- ❖ Foreign sales office personnel
- ❖ Staff in your office who come from the target countries and cultures
- ❖ Local members of the target cultures (p. 450).

Rothwell and Kazanas (1998) suggested applying cross-cultural awareness to evaluating instruction. They explained:

Cross-cultural sensitivity is as important to successful evaluation as it is to other activities in the instructional design process. As in specifying instructional strategies and designing instructional materials, evaluating instruction effectively calls for consideration of the cultures in which the evaluation will be carried out. To cite a few examples of the importance of remaining sensitive to the cross-cultural implications of evaluation:

- In low task-oriented cultures, group evaluation efforts such as focus group may take longer than in high task-oriented cultures simply because group members will seek consensus on what they think of instruction.
- In cultures characterized by low individualism, participants in formative evaluations may falsely agree to statements about their opinions. In other words, they may say that instruction is effective when, in fact, it is not. The reason: they aim to please an instructional designer of higher perceived status. For this reason, double-checks may have to be instituted in the process, or else formative evaluations should be carried out by those of the same status as the targets participants of the formative evaluation.

One way to meet the challenge of conducting formative evaluation cross-culturally is, as in other situations, to rely on cultural informants. They can suggest ways to achieve results when cultural difference may otherwise lead to unexpected complications during formative evaluation (pp.283-284).

Examples of cultural coverage in the Other category.

Gott, Lesgold, and Kane (1997) wrote a chapter in their book, Instructional design: International perspectives Volume 2: Solving instructional design problems, edited by Dijkstra, Seel, Schott and Tennyson. In this chapter, they mentioned culture.

They wrote:

At one extreme, the constructivist approach takes on an idealized humanistic character. Within this view, it is thought inappropriate for the teacher even to have explicit goals for learning. The student is to be free to develop his own mind, his own understandings, and his own competence. The viewpoint we have taken is perhaps closed to the other extreme. We realize the need for the student to build knowledge anchored in his or her own prior knowledge and understandings, but we see many situations in which a culture has specific learning goals for its novitiate and in which seeking instruction into that culture implies acceptance of at least a partial goal structure for learning (pp. 221-222).

Hawkrigde (2002) discussed the importance of culture:

Cultural aspects of design are important too. Collis (1996b) provides ten practical guidelines for instructional designers who are developing culturally sensitive web-based learning, arguing if we want our pages to be acceptable, used, and useful, we must take culture into account (p. 274).

Conclusions

This study examined the coverage of cultural issues in the five phases of instructional design within ID/ISD textbooks. While scholars and researchers have indicated that the presence of cultural issues within the instructional design literature has been infrequent, little empirical information existed about the extent to which these issues have been overlooked within these textbooks. To address the gap in the knowledge base, this study utilized the method of content analysis to explore the coverage of cultural issues in the five phases of instructional design within ID/ISD textbooks published between 1993 and 2003.

The question that this study sought to address is as follows:

To what extent do ID/ISD textbooks address cultural issues related to the five steps of instructional design—analysis, design, development, implementation and evaluation?

The result of this analysis indicated that many ID/ISD textbooks published between 1993 and 2003 addressed cultural issues; however, not all the ID/ISD textbooks examined in this study covered cultural issues. Seventeen of 53 books examined did not carry any cultural coverage; whereas, among the textbooks that did cover cultural issues,

none of them reached 10% coverage. Three books were found to allot over 5% of their pages to cultural issues. The other 33 books devoted less than 5% of their total pages to cultural issues. Overall, the average page coverage was 1.4 pages for each one hundred pages in a total sample of 53 books. The average page coverage was two pages for each one hundred pages in the total of 36 books that did cover cultural issues. The phase of Analysis and the Other category received the higher amount of coverage in both the 53 books sample and 36 books sample; whereas the other four phases received the relative smaller amount of coverage in both the 53 books sample and 36 books sample. The phase of Implementation received the least amount of coverage in both samples. It could be argued that the larger coverage of Analysis indicated that it is easier for the textbook authors to address the differences between learners in this phase. The relatively larger coverage of the Other category indicated that there is a large number of textbook authors who discussed cultural issues outside of the five phases of instructional design and did not conduct a further investigation regarding cultural issues in the five phases. The reason for the relative smaller amount of coverage in the other four phases may be linked to the relative smaller amount of research and literature that focus on cultural issues in these four phases

It is obvious that since 1993, the textbooks used for ID/ISD programs have undergone some noticeable changes. Two significant examples of this change are the books: *Instructional design in the real world: A view from the trenches* edited by Anne-Marie Armstrong and *Designing web-based training: how to teach anyone anything anywhere anytime* written by William Horton. Both of them devoted a whole chapter to cultural issues. When addressing cultural issues, most of the textbook authors tended to

devote the majority of their efforts to cultural issues relevant to the phase of Analysis

Even though cultural issues have existed in the instructional design field for a long time, not until after 1993 did the textbook authors writing for ID/ISD programs begin paying attention to cultural issues. With diversified demographic changes in America and increasing international cooperation and communication between nations, issues of cultural diversity and globalization have received extensive attention and discussion. This phenomenon may have caused the reported changes in the content of the ID/ISD textbooks.

Chapter Five

Implications and Recommendations

Implications

The findings from this study have implications for both students and faculty members.

With respect to students, the coverage, or lack thereof, of cultural issues in the textbooks examined in this study obviously have an important bearing on what students will learn about instructional design from these books in the following two ways:

First, the amount of coverage of cultural issues in the textbook sample, which is reflective of currently used textbooks in classrooms, might influence students' beliefs regarding cultural issues so that students unknowingly come to accept ideas and concepts that underestimate or neglect the importance of such issues. These future instructional designers might assume that instructional design can still be effective without addressing cultural issues and that instruction and training can succeed without any cultural effort. Given this situation, can we expect instructional designers to prioritize cultural diversity issues when designing?

Second, the lack of cultural coverage in many of these textbooks may indirectly influence future instructional designers' work effectiveness. Students will lose a valuable opportunity to learn, appreciate and master the knowledge of cultural issues by using these textbooks. Without an appreciation of cultural diversity issues, can designers effectively incorporate cultural issues into instructional design? Can designers successfully modify instruction to adapt to the needs of different learners?

The amount of cultural issues coverage within the ID/ISD textbooks may also have a bearing on those faculty members who teach instructional design. Textbooks not only socialize students but also faculty members. The lack of cultural coverage found in the textbooks examined in this study may reinforce or acculturate faculty members to underrate the importance of cultural issues in the instructional design process. As Powell said (1993), it is hard to imagine faculty members would discuss cultural issues in the course of instructional design if they have developed the idea that cultural issues are not a necessary step we need to incorporate into instructional design. Faculty members, as instructors, who are responsible for preparing tomorrow's instructional designers, may not properly address the cultural diversity concerns in their teaching activities. Consequently, preservice instructional designers will not be well prepared for tomorrow's cultural diversity challenge.

Recommendations

As the first chapter of this project discussed, American society is an immigrant society; immigrant populations will continue to grow and minority groups may become the majority and outnumber whites in the future. Meanwhile, with more and more international cooperation and communication, the need for cross-cultural training is growing. More importantly, borderless education, like web-based training and instruction, brings education to a global audience. Instructional materials relevant to one culture are not necessarily meaningful to another culture. Although both theorists and practitioners have started paying attention to the cultural issues in the design process over

the past few years, IT faculty, textbook authors and instructional designers have not developed enough awareness, recognition and appreciation for the diversity issues. This lack could severely affect the ability of future instructional designers to meet the needs of students from a changing global society. A further implication may be that instruction and training will be unable to generate meaningful learning outcomes and learning experiences. How to deal with the interwoven and inseparable relationship between culture and learning are important and pressing tasks for textbook authors, faculty members and instructional designers.

The literature review indicates that cultural issues are an important component of instructional design although designers have tended not to pay attention to such issues in the past. As a result, there is a need for systematic investigation regarding cultural issues. It might be the mission of the textbook authors to complete this difficult task. Textbook authors might well examine the elements of instructional design for their cross-cultural applications and implications and provide strategies in dealing with cultural issues. If it is difficult for textbook authors to do a deep investigation on cultural issues, they at least could emphasize the role that cultural issues play during the process of instructional design, thus reminding instructional designers to address such issues.

Considering the findings of this study, those faculty members who have not incorporated cultural issues into their courses may determine to change the way they prepare future instructional designers. They may change their curricula, add reading materials of cultural issues to their syllabi, organize discussion of cultural issues in classroom or online chatting, and assign a student a project dealing with cultural issues.

With regard to practicing instructional designers, if they are not fully aware of the

importance of cultural issues or have not received any formal training focusing on cultural issues, they may want to make the following attempts during the design process:

- ❖ Do a cultural analysis of learners' characteristics by including international members on design team
- ❖ Maintain cultural identity of the creation of the projects
- ❖ Evaluate projects before releasing by using a cultural informant

Although the above three recommendations are not a panacea to tackling cultural issues that might appear in the whole process of instructional design, at least they may help instructional designers better understand cultural issues and lay a foundation for them to become culturally sensitive instructional designers.

Before closing this chapter, the researcher thought it might be helpful to address a suitable amount of coverage of cultural issues for an ID/ISD textbook. Even though the textbooks since 1993 reflect remarkable coverage from before 1993, is the current amount of coverage enough? Even with changes in the contents and the overall increase in coverage, the allotted capacity for cultural issues in some textbooks might be insufficient. In the researcher's opinion, the author of an ID/ISD textbook should allow at least one chapter to discuss cultural issues. One chapter to address cultural issues in an ID/ISD textbook should be a minimum. If this guideline is followed, these textbooks will help today's preservice instructional designers, to a greater extent, obtain cultural knowledge and develop multicultural perspectives to meet tomorrow's culturally diverse learners' challenge.

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Appendices

Appendix A: Coding Book

General Directions

This coding sheet is composed of five general categories. The five categories are designed to determine if any of the selected textbooks address cultural issues relating to the five phases of instructional design.

How to determine the presence of a key word: Before you begin coding, please read through each category to become familiar with the key words and statements. The unit of measurement is one page. It is very important for you to decide if the key words, phrases or statements present in the text are relevant to the topic of instructional design. For example, suppose the key word *immigration* appears but it is not used in relation to the topic of instructional design; instead, it is used in the context of economic growth. In this case, put a zero in the corresponding column. Two examples follow:

(1) *Immigration* is present within the context of economic growth: Immigration is a major contributor to overall U.S. population growth. A major impact of immigration on U.S. economy is the increase of real estate.

(2) *Immigration* is present within the context of instructional design or training: Immigration is a major contributor to overall U.S. population growth. A major impact of immigration on U.S. education has been an increase in the past years. Designing training and instruction requires a good knowledge of the audience, and it becomes even more important when the cultural backgrounds of the audiences differ. Americans are just now understanding the importance of being sensitive to other cultures, including the sub-cultures within the United States.

Appendix A: Coding Book (Continued)

How to count a page: If a key word relevant to instructional design appears in a paragraph, you need to count how many pages the key word runs through the text. If the coverage is less than one page, it still is counted as one page.

How to identify items named “Other”: The “Other” category is designed to include occurrences of cultural topics that relate to instructional design but do not fit in one of the five phases of the traditional ID model.

Appendix B: Textbook Coding Sheet

Title:

Date of Publication:

Publisher:

Author(s):

Name of Coder:

Directions to coder:

1. Examine the index of each book for occurrences of the key words or phrases as listed under Column 2.
2. Examine section headings, chapter headings and subheadings of the book for occurrences of the key words or phrases as listed under Column 2.
3. For each occurrence of a key word or phrase, count how many pages the topics run through the text. Write the number in Column 3. If there is no occurrence of the key words or phrases listed, make a zero in Column 3. Don't count key words appearing in references and bibliography.

Column 1	Column 2	Column 3
Instructional design phases	Criteria measuring if these cultural issues are manifest in these phases	Number of pages devoted
Analysis	Cultural analysis	
	Cultural characteristics of learners	
	Cultural traits of learners	
	Determine cultural characteristics of learners	
	Demographic changes of American society	
	Identify relevant cultural categories/variables in learners analysis	
	Instructional design and culturally diverse learners	
	Language and/or cultural problems	
	Learners analysis for training international audiences/students/trainees	

Appendix B: Textbook Coding Sheet (Continued)

	Needs analysis for training international audiences/students/trainees	
	Task analysis for training and/or instructing international audiences/students/trainees	
	Train in-country personnel to do needs analysis	
	Globalization, diversity, ethnocentrism, learner analysis, localization and multicultural	
Design	Developing training or instruction objectives for international audiences/students/trainees	
	Developing training or instruction objectives for domestic culturally diverse audiences/students/trainees	
	Design training programs and instruction for international audiences/students/trainees	
	Developing training or instruction objectives for domestic culturally diverse audiences/students/trainees	
	Establish training objectives for international audiences/students/trainees	
	Establish training for domestic culturally diverse audiences/students/trainees	
	Examine the effects of cultural variables on media selection strategies	
	Instructional strategies for international audiences/students/trainees	
	Instructional strategies for domestic culturally diverse audiences/students/trainees	
	Strategies for selecting training media for cross-cultural training and/or instruction	
	Strategies for selecting training media for domestic culturally diverse audiences/students/trainees	
	Globalization, diversity, ethnocentrism, localization and multicultural	
Development	Perform a cultural review of training and/or instruction materials	

Appendix B: Textbook Coding Sheet (Continued)

	Recommendations on specific development techniques to use with international audiences/students/trainees	
	Recommendations on specific development techniques to use with domestic culturally diverse audiences/students/trainees	
	Globalization, diversity, ethnocentrism, localization and multicultural	
Implementation	Examine the effects of training and/or instruction delivery strategies	
	Examine the effect of cultural variables on implementation strategies and planning	
	How to implement a training program and/or instruction in a cross-cultural setting	
	Important factors to consider during training program/instruction implementation	
	Globalization, diversity, ethnocentrism, localization and multicultural	
Evaluation	Challenges of cultural differences on training and/or instruction evaluation	
	Cultural considerations of evaluation	
	Cultural differences in practice and feedback strategies	
	Cultural diversity and evaluation	
	Cultural/international training and/or instruction evaluation	
	Cultural factors affecting training and/or instruction evaluation	
	Strategies for conducting cross-cultural training evaluation	
	Strategies for conducting evaluation for domestic culturally diverse audiences/students/trainees	
	Strategies for culturally sensitive evaluation	
	Globalization, diversity, ethnocentrism, localization and multicultural	
Other—please specify		

Appendix C: Matrix for Validating the Instrument

Key words or phrase	A	D	D	I	E
Cultural analysis					
Cultural characteristics of learners					
Cultural traits of learners					
Determine cultural characteristics of learners					
Demographic changes of American society					
Identify relevant cultural categories/variables in learners analysis					
Instructional design and culturally diverse learners					
Language and/or cultural problems					
Learners analysis for training international audiences/students/trainees					
Needs analysis for training international audiences/students/trainees					
Task analysis for training and/or instructing international audiences/students/trainees					
Train in-country personnel to do needs analysis					
Developing training or instruction objectives for international audiences/students/trainees					
Developing training or instruction objectives for domestic culturally diverse audiences/students/trainees					
Design training programs and instruction for international audiences/students/trainees					
Developing training or instruction objectives for domestic culturally diverse audiences/students/trainees					
Establish training objectives for international audiences/students/trainees					
Establish training for domestic culturally diverse audiences/students/trainees					
Examine the effects of cultural variables on media selection strategies					
Instructional strategies for international audiences/students/trainees					
Instructional strategies for domestic culturally diverse audiences/students/trainees					
Strategies for selecting training media for cross-cultural training and/or instruction					
Strategies for selecting training media for domestic culturally diverse audiences/students/trainees					

Appendix C: Matrix for Validating the Instrument (Continued)

Perform a cultural review of training and/or instruction materials					
Recommendations on specific development techniques to use with international audiences/students/trainees					
Recommendations on specific development techniques to use with domestic culturally diverse audiences/students/trainees					
Examine the effects of training and/or instruction delivery strategies					
Examine the effect of cultural variables on implementation strategies and planning					
How to implement a training program and/or instruction in a cross-cultural setting					
Important factors to consider during training program/instruction implementation					
Challenges of cultural differences on training and/or instruction evaluation					
Cultural considerations of evaluation					
Cultural differences in practice and feedback strategies					
Cultural diversity and evaluation					
Cultural/international training and/or instruction evaluation					
Cultural factors affecting training and/or instruction evaluation					
Strategies for conducting cross-cultural training evaluation					
Strategies for conducting evaluation for domestic culturally diverse audiences/students/trainees					
Strategies for culturally sensitive evaluation					
Adapting training for other cultures					
Consequences of cultural values for instruction and/or training					
Cross-cultural instructional design					
Cross-cultural training and/or instruction					
Adaptation issues in training and instruction					
Cultural adaptation					
Cultural considerations in instructional design					
Cultural influences on instruction and/or training					
Cultural learning differences in instruction and/or training					
Cultural variability on instruction and/or training					

Appendix C: Matrix for Validating the Instrument (Continued)

Culturally constructed instructional design					
Culture and design practice					
Designing for other					
Designing for differences					
Effects of cultural variability on learning and instruction					
Impact of culture on instruction and/or training					
Include international members on design team					
Instructional design and development for international training					
International training design and development					
Multiple cultural design model					
Program design or adaptation for other cultures					
Problems of cross-cultural instruction and/or training					
Relationship between cultural contexts and instructional design					
Responsibilities and role of cultural expert					
World views and instructional design					

Note. ADDIE stands for Analysis, Design, Development, Implementation and Evaluation in order.

Appendix D: List of Textbooks Used for Instructional Design (1993-2003)

1. Akker, J., Branch, R. M., Gustafson, K., Nieveen, N., & Plomp, T. (1999). *Design approaches and tools in education and training*. Boston: MA: Kluwer Academic Publishers.
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3. Allen, M. (2003). *Guide to e-learning*. Hoboken, NJ: John Wiley & Sons.
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5. Anglin, G.J. (1995). *Instructional technology: Past, present, and future*. Englewood, CO: Libraries Unlimited.
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7. Beyer, B (1995). *How to conduct a formative evaluation*. Alexandria, VA: Association for Supervision & Curriculum Development.
8. Bruce, G. (1999). *Instructional design made easy*. Tucker, GA: Aubrey Daniels & Associates, Inc.
9. Chauncey, D. (2003). *Instructional design for the corporate trainer: A handbook on the science of training*. San Jose, CA: Writers Club Press.
10. Christian-Carter, J. (2001). *Mastering instructional design in technology-based training*. Woodstock, NY: Beekman Publishers, Inc.

Appendix D: List of Textbooks Used for Instructional Design (1993-2003)

(Continued)

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12. Clark, R. C., & Mayer, R. E. (2003). *E-learning and the science of instruction*. San Francisco: Jossey-Bass.
13. Conrad, K. (2000). *Instructional design for web-based training*. Amherst, MA: Human Resource Development Press.
14. Dean, G. J (1994). *Designing instruction for adult learners*. Malabar, FL: Krieger Publishing Company.
15. Dick, W., & Carey, L. (2001). *The systematic design of instruction*. New York: Addison-Wesley Educational Publishers.
16. Dijkstra, S., Seel, N., Schott, F., & Tennyson, R (1997). *Instructional design: International perspectives*, Vol. 2. Mahwah, NJ: Lawrence Erlbaum Associates.
17. Edwards, C. (1995). *Systematic approach to instructional design*. Champaign, IL: Stipes Publishing.
18. Ertmer, P. A., & Quinn, J. (Eds.). (2003). *ID casebook: case studies in instructional design*. Upper Saddle River, NJ: Merrill.
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Appendix D: List of Textbooks Used for Instructional Design (1993-2003)

(Continued)

20. Gustafson, K. L., & Branch, R. M. (2002). *Survey of instructional development models*. Syracuse, NY: ERIC Clearinghouse on Information Resources.
21. Horton, W. (2000). *Designing web-based training: how to teach anyone anything anywhere anytime*. New York: Wiley.
22. Ivers, K. S., & Barron, A. E. (2002). *Multimedia projects in education: designing, producing, and assessing*. Englewood, CO: Libraries Unlimited.
23. Jonassen, D. H. (2003). *Learning to solve problems: an instructional design guide*. San Francisco, CA: Pfeiffer/John Wiley.
24. Jonassen, D. H., Hannum, W. H., & Tessmer, M. (1999). *Task analysis methods for instructional design*. Mahwah, NJ: Lawrence Erlbaum Associates.
25. Kommers, P., Grabinger, S., Dunlap, J. C., & Grabinger, R. S. (1996). *Hypermedia learning environments: instructional design and integration*. Mahwah, NJ: Lawrence Erlbaum Associates.
26. Ledford, B. R., & Sleeman, P. J. (a). (2000) *Instructional design: a primer*. Greenwich, CT: Information Age Publishing.
27. Ledford, B. R., & Sleeman, P. J. (b) (2003). *Instructional design: system strategies*. Greenwich, CT: Information Age Publishing.
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Appendix D: List of Textbooks Used for Instructional Design (1993-2003)

(Continued)

29. Medsker, K.L., & Holdsworth, K. (2001). *Models and strategies for training and design*. Silver Spring, MD: International Society for Performance Improvement.
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33. Milano, M., & Ullius, D. (1998). *Designing powerful training*. San Francisco: Jossey-Bass/Pfeiffer.
34. Morrison, G. R., Kemp, J.E., & Ross, S. M. (2001). *Designing effective instruction*. New York: John Wiley.
35. Morrison, G. R., & Lowther, D. L. (2002). *Integrating computer technology into the classroom*. Upper Saddle River, NJ: Merrill/Prentice Hall.
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37. Paquette, G. (2003). *Instructional engineering in networked environments*. San Diego, CA: Pfeiffer & Co.

Appendix D: List of Textbooks Used for Instructional Design (1993-2003)

(Continued)

38. Piskurich, G. M. (2000). *Rapid instructional design: learning id fast and right*. San Francisco: Jossey-Bass/Pfeiffer.
39. Reigeluth, C. (Ed.). (1999). *Instructional-design theories and models: A new paradigm*. Mahwah, NJ: Lawrence Erlbaum Associates.
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41. Rogers, P. (2002). *Designing instruction for technology-enhanced learning*. Hershey, PA: Idea Group Publishing.
42. Romiszowski, A. J. (1999). *Designing instructional systems: decision making in course planning and curriculum design*. London: Kogan Page.
43. Rothwell, W. J., & Kazanas, H. C. (1998). *Mastering the instructional design process: a systematic approach*. San Francisco: Jossey-Bass.
44. Seels, B. (1995). *Instructional design fundamentals: A reconsideration*. Englewood Cliffs, NJ: Educational Technology Publications
45. Seels, B., & Glasgow, Z. (1998). *Making instructional design decisions*. Upper Saddle River, NJ: Merrill.
46. Shambaugh, R. N., & Magliaro, S. G. (1997). *Mastering the possibilities: a process approach to instructional design*. Boston, MA: Allyn and Bacon.
47. *Showalter, A. (2003). *Constructivist instructional design*. Greenwich, CT: Information Age Publishing.

Appendix D: List of Textbooks Used for Instructional Design (1993-2003)

(Continued)

48. Smith, P. L., & Ragan, T. J. (1999). *Instructional design*. New York: John Wiley & Sons.
49. Spector, J. M., Polson, M. C., & Muraida, D. J. (1993). *Automating instructional design*. Englewood Cliffs, NJ: Educational Technology Publications.
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51. Tessmer, M. (1993). *Planning and conducting formative evaluations*. London: Kogan Page.
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54. Witkin, B. R., & Altschuld, J. W. (1995). *Planning and conducting needs*. Thousand Oaks, CA: Sage Publications.
55. Zook, K. (2001). *Instructional design for classroom teaching and learning*. Boston, MA: Houghton Mifflin.

Note. * means the book was not available for this study.