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AN EXPLORATION OF TEACHERS' INTEGRATION OF VISUAL LITERACY IN THE EGYPTIAN SECONDARY LANGUAGE CLASSROOMS.

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Abstract

Recognizing the need for students to be literate in the more traditional areas of reading and writing, professional organizations such as the NCTE, IRA, and NCATE as well as NAQAAE, The National Authority for Quality Assurance and Accreditation of Education in Egypt, have put in place English language standards that address other literacies, including visual literacy. Yet, it has been unclear how secondary English language teachers feel about and understand what is expected of them in teaching non-print literacy, and if they indeed are teaching concepts related to comprehension and production of information in non-text format. This study attempts to discover teachers' attitudes toward, understanding of, and use of visual literacy concepts through a survey of the secondary English language teachers in Egypt. Based on the information from the responses to the survey, secondary English language teachers have received no formal training in teaching visual literacy and that their informal training consists mainly of discussions with colleagues and independent study; among others.

An Exploration of Teachers' Integration of Visual Literacy in the Egyptian Secondary Language Classrooms.

INTRODUCTION & BACKGROUND

In this electronic age, technology has brought the ability to fuse the verbal and the visual into the homes of people throughout the world (McLuhan, 1964). Taking advantage of the possibilities of writing with text and image, people may soon incorporate imagery as a standard feature. Helping students extend their understanding of the messages behind both the images and the text of documents will be the goal of the teacher of this new type of literacy. Yet, because reading and writing are such complex processes, people do not generally think in alphabetic terms. In fact, Felder & Henriques (1995) concluded that, in order for the thinking to take place, symbolic/alphabetic text must be converted either to visual images or to auditory expression. Thinking is generally only in visual or verbal modes. While some people may visualize words, phrases, or even short passages, people cannot generally hold enough alphabetic images in their minds to actually think in written language.

Despite the difficulty that people have with thinking alphabetically, most teachers in secondary schools expect their students to do most of their learning through alphabetic means. Reading is basic to education and has been for hundreds of years. Yet, reading is the least preferred way to learn (only 10% of the population) according to learning style inventories that include reading as a preferred learning style (Nooriafshar & Maraseni, 2005). Research has revealed that, on average, 50% to 65% of the population is visual learners; 25% to 30% are auditory learners; 5% to 15% are kinesthetic; and less than 5% are alphabetic learners (those who learn best through reading and writing) (Davis, Nur, & Ruru, 1994).

Yet, in the first decade of this new millennium, researchers are still trying to make sense of how visual literacy fits together with the traditional literacies taught in schools for hundreds of years. The lack of research in visual literacy may result from the nature of vision itself. Because the act of seeing is an early-developed and natural means of understanding the world, people frequently do not look beyond the surface to understand visual images. Research has indicated that human infants less than six months old can recognize the meaning of facial expressions (Charlesworth & Keutzer in Ekman, 2006). With the innate ability that humans have to interpret visual cues, some may feel that it is unnecessary to help students "read" and present visual information. Yet, the ability that humans are born with to interpret some visual cues does not necessarily reach into the more subtle types of expression that visual images can afford (Braden & Hortin, 1982). Therefore, instructing students how visual images convey information is necessary for those students to develop the critical thinking skills called for in modern society.

In addition, understanding the relationship among visual, verbal, and alphabetic language allows students to comprehend and express ideas more fully and makes them more comfortable moving from one form of communication to the other. In traditional teacher education programs, the specific courses that prospective English language teachers take are generally in linguistics and literature. Since most English language teachers are still instructed almost exclusively in literature and language, not in how visual information can be incorporated with literature, they do not have the background knowledge to help their students sift through the volumes of visual

images that bombard them daily. While English language teachers are familiar with traditional literacy--comprehending and creating alphabetic text--they have less practice with visual literacy--comprehending and creating visual text. As a result, the English language teacher may wish to leave instruction in visual literacy to the visual arts teacher. Yet, the visual arts teacher has little background in literacy, particularly as it pertains to rhetoric—the ways in which a message is conveyed or created so that it will bring meaning to a particular audience.

Therefore, the visual arts teacher may feel inadequate to help students understand how images fit into the paradigm of rhetoric, audience and text because most visual arts teachers' training has been largely in aesthetics rather than rhetoric. Trying to address the problem becomes even more difficult on the secondary level than on the elementary level. Although young children learn innately through visual messages, by the time students are in secondary school, they have been conditioned to rely more on verbal message, both auditory and alphabetic, rather than on visual message for information (Callan, 1996).

In addition, realizing the stake both language arts and visual arts have in visual literacy instruction; an interdisciplinary approach is obviously called for. Yet, the elementary teacher has the advantage of being able to incorporate and integrate visual with verbal and alphabetic literacy instruction that the secondary teachers does not have. Because of the separation of disciplines above the elementary level, however, secondary teachers have fewer opportunities for the collaboration necessary to blend students' understanding of the power of visual images to communicate (Locke, 2007).

Furthermore, the current system of teacher education programs is not conducive to encouraging integration of visual, verbal, and alphabetic literacy instruction. Merely using non-print materials in the classroom is not enough to satisfy proper development in visual literacy. Students must understand the message of visual images and be able to select visual images that communicate their purpose to their selected audience in order to enhance their learning and develop the types of literacy demanded of people living in the 21st century. In order to teach visual literacy, however, teachers must first understand the meaning of the term.

The visual literacy movement, according to Avgerinou & Ericson (1997), has captured educators' interest in recent years because its emphasis on using visuals for communication, thinking, learning and forming creative expression fits well with the most prevalent learning mode of most student in public schools today. Yet, "opposition to the visual media in situations where they form an alternative to writing… [may] be seen as a potential threat to the present dominance of verbal literacy among elite groups" (Kress & van Leeuwen, 1996. p. 16). Especially above the elementary level, some educators see the addition of visuals to learning materials as "dumbing down" academic content. They are not yet willing to recognize the shift that is taking place in what it means to be literate. While being able to sign one's name was once enough for a person to be considered literate, now people must be able to comprehend and create messages in multiple modes in order to function productively in modern society (Vincent, 2000).

With today's technology, visual literacy has taken an even more prominent role in communication. As a result of the availability and rhetorical effectiveness of such visual images, teachers can no longer be content with teaching only traditional literacy. Instructing students on the secondary level in visual literacy has become a vital part of English language instruction because of the increasing power of visual media and technology.

Growing out of visual literacy theorists' use of metaphors related to verbal learning to describe visual learning, the National Council of Teachers of English (NCTE) and the

International Reading Association (IRA) recognized in 1996 the need for English language teachers to teach not two or four areas of literacy, but six, three receptive and three expressive. The chart below illustrates those areas of instruction in English language determined by NCTE and IRA (2007).

Figure 1: English Language Areas of Instruction

	Aural/Oral	**Alphabetic**	**Visual**
Receptive	Listening	Reading	Viewing
Expressive	Speaking	Writing	Presenting Visual Information

Like receptive alphabetic literacy (reading), receptive visual literacy (viewing) requires comprehension. Receptive alphabetic literacy uses the comprehending process, by which the reader decodes the symbols used in written language to make sense of the words, phrases, sentences, and ideas by relating the information to previous knowledge and building on existing schema. Similarly, understanding a visual image requires the viewer to decode the strokes, pixels, dots, and lines that make up the image to make sense of the objects in the image and their relationship to each other (Messaris, 1994). In expressive alphabetic literacy (writing), the writer uses the composing process to select the proper words, sentence structure, and arrangement to convey ideas or persuade an audience. Likewise, in expressive visual literacy, the one creating the image must choose the proper medium, color, line, and arrangement to convey ideas and influence the audience to the creator's point of view (Mitchell, 1994).

Defining literacy as being able to read and write expressive marks reveals the breadth of what teachers are expected to teach in the name of literacy. English language teachers are, of course, among the ones generally held responsible for literacy instruction. According to NCTE/IRA standards, English language teachers are expected to instruct their students in listening, speaking, reading, writing, viewing, and using visual expression. Therefore, English language arts teachers must now consider how they will use these newly defined literacies to enhance their students' academic skills (DePorter, 1992). Before they can instruct their students in these other literacies, however, they must first be able to define the concepts involved and understand how they fit in with the traditional approaches used in English language classrooms.

Students who are not strong alphabetic learners (reading and writing) can compensate for deficiencies in those areas by increasing their abilities in their areas of strength. Since an estimated 65% of the adult learners in the world are visual (Davis, Nur & Ruru, 1994), instruction in visual literacy would address the strengths of the greatest number of people. In addition to speaking to the preferred learning mode of the greatest number of people, instruction in visual literacy also has the advantage of being strongly related to aural and alphabetic literacy. Both receptive aural literacy, being able to interpret what another is saying, and receptive alphabetic literacy, being able to interpret what one reads, have similarities to receptive visual literacy. Like the other two types of receptive literacy mentioned, receptive visual literacy consists of several components, including visual thinking and visual rhetoric (Kostelnick & Hassett, 2003; Stroupe, 2000).

Realizing that being able to read and write alone no longer makes one literate, educational researchers in the twenty-first century are using terms such as "aural literacy," "visual literacy," "media literacy," "information literacy," and "technical literacy" to describe the types of instruction that go beyond traditional instruction (Rafferty, 1999). How these literacies

interact has not been studied thoroughly, but that verbal literacy and visual literacy influence each other seems clear from studies of elementary school students in which those who used both words and visuals to create narratives improved their writing skills significantly (Milliard & Marsh, 2001).

Therefore, few studies have posed the question of how visual literacy and verbal literacy interact. As a result of teachers' failure to make connections between visual and verbal literacy, older students who are highly visual often have difficultly following traditional approaches to writing expository and persuasive essays. Yet, "visualizers," when allowed to follow nontraditional approaches to the writing process, can produce essays that are often superior to those of "verbalizers" (Tucker, 1995). While current studies hold out hope that teaching concepts common to aural, alphabetic, and visual representations may improve the communication skills of students, the confusion of ever-changing technologies and the discipline-specific nature of most secondary classrooms pose problems. Much of the current research concludes that visual literacy should be an integral part of instruction, particularly in the English language classroom. As part of this interest in visual ways of knowing, learning, and communicating, the researcher believes that a thorough study of how English language teachers understand, use, and feel about the concepts of visual literacy in the classroom is vital to progress in providing students with instruction in the types of literacy necessary to function in the twenty-first century and beyond.

Statement of the Problem

While much of what we learn about our world comes through visual means, in education people still give precedence to verbal communication. Nonetheless, visual literacy is clearly literacy in the same sense as traditional literacy. Yet, visual literacy has never been emphasized as strongly in formal education as traditional literacy, particularly at the secondary level. This fact can be illustrated by the textbooks used at the secondary level. Rather than visual images, English language arts teachers generally use verbal means to analyze, judge, and communicate. While images in the mind are difficult to externalize, this difficulty may allow students to be more creative in their expression (Tucker, 1995). English language teachers are reticent to instruct their students in the non-verbal skills in which they themselves have little or no training (Childers & Lowry, 2000). "A narrowly specialized training in particular academic disciplines must be regarded as, at best, a necessary but never sufficient cultural orientation for teachers working in schools …" (Richards in Buckingham, 1998, p. 137). Thus, the study explores attitudes toward, understanding of, and use of visual literacy concepts through a survey of the secondary English language teachers in Egypt

Purpose of the Study

The study had the following goals:

1. to clarify secondary English language teachers' attitudes toward teaching visual literacy,
2. to explore their understanding of visual literacy,
3. to determine their use of visual media,
4. to evaluate their training and preparation to teach visual literacy, and
5. to look at the types of instruction in visual literacy that students receive.

A definition of visual literacy was first offered by John Debes (1969), one of the most important figures in the history of the International Visual Literacy Association. Debes defined visual literacy as:

> …a group of vision-competencies a human being can develop by seeing and at the same time having and integrating other sensory experiences. The development of these competencies is fundamental to normal human learning. When developed, they enable a visually literate person to discriminate and interpret the visible actions, objects, symbols, natural or man-made, that he encounters in his environment. Through the creative use of these competencies, he is able to communicate with others. Through the appreciative use of these competencies, he is able to comprehend and enjoy the masterworks of visual communication. (27)

For the purpose of this study, the author has determined that the term "visual literacy" to be "understanding and using visual images to think, learn and communicate." While media and information literacy are related to visual literacy, both media and information literacy can involve verbal and multiple literacies as well as strictly visual literacy.

Significance of the Study

Since professional bodies such as NCATE, NCTE and IRA, as well as NAQAAE, have identified the need to teach visual literacy in the English language classroom (NCTE, 1996; KSDE, 2000; KSDE, 2003; NAQAAE, 2009), this study of how secondary English language teachers view, understand, and apply visual literacy concepts in the classroom will help to determine needs in teacher training. By assessing secondary English language teachers' knowledge and use of visual literacy concepts in the classroom, deficiencies in the curricula of teacher education institutions in Egypt can be evaluated. By assessing their attitudes toward being expected to teach visual literacy, the study hopes provides a better understanding of how secondary English language teachers view their roles as those being responsible for teaching life-long skills in literacy: visual, aural, and alphabetic.

Limitations of the Study

The relatively small population of secondary English language teachers in the sample (100) limits the generalization of the results of the research. Because the study was completed exclusively in public secondary schools in Dakahlia governorate, the results may not be consistent with finding for private schools or for public schools in the remainder of the country. Consequently, while the study is representative of the country, the results of the study may not generalize to teachers who live in other areas of Egypt.

Methodology

Research Hypothesis

The study hypothesis was that most secondary English language teachers in Egypt had no training in visual literacy instruction; thus, resistant to teaching visual literacy along with more traditional literacy concepts. The research questions were designed to determine if that hypothesis was valid and if other issues related to attitudes toward, understanding of, and use of visual literacy in the English language classroom were common among secondary English language teachers in the Dakahlia governorate.

Research Question

1. What kind of attitudes and use of visual literacy are prevalent among secondary English language teachers in Dakahlia governorate?

Sub- Questions

1. What attitudes do Secondary English language teachers have toward instructing their students in visual literacy?
2. What types of instruction in visual literacy did English language teachers receive in their teacher education programs?
3. What types of instruction in visual literacy do English language teachers provide their students?
4. How do English language teachers use visual media in their classrooms?
5. How do the students of English language teachers use visual literacy concepts in the classroom?
6. What do English language teachers expect from their students' essays?

Survey Design

The survey was designed to explore teachers' attitudes toward, understanding of, and use of the concept of visual literacy instruction in their English language classes. The survey is included in Appendix A. The first part of the survey asked the respondent to give personal information that the researcher used to disaggregate data analysis. The personal information on the survey was mainly concerned about the teachers' years of experience and the types of settings in which they taught, as well as the duties they performed outside of the classroom. Questions regarding age and gender were also included to identify demographic differences among groups in their attitudes toward and use of visual literacy concepts.

The second part, which made up the bulk of the questionnaire, consisted of Likert-scaled questions concerning teachers' attitudes and use of visual literacy as well as their perceptions of their students' attitudes and use of visual literacy concepts. The third part of the survey consisted of four open-ended questions. The first three asked about the teachers' general responses to being expected to teach visual literacy in the English language classroom and the influence of technology on both traditional and visual literacy instruction. The final question on the survey was an open-ended question that allowed the teachers to give free responses to anything addressed in the survey.

The topic and number of questions on each topic in the Likert-scaled section are shown as follows:

Table 1: Survey Questions

Topic	Attitudes toward teaching visual literacy	Training in visual literacy instruction	Use of visual literacy concepts	Students' competency in visual literacy concepts	Teachers' competency in visual literacy concepts	Instruction of students in visual literacy	Barriers to visual literacy instruction
Total Number of Questions 61	**11**	**1 (multiple response)**	**5**	**17**	**7**	**11**	**9**

Sample

The study included 100 Egyptian English teachers from fifteen public secondary schools in Dakahlia governorate.

Data Collection

At the beginning of the second semester 2008, the researcher contacted the principals of the schools by telephone, at the numbers, asking for permission to survey the English language teachers at the school. On March 1, 2008, the researcher visited the schools identified. The researcher visited the 15 public schools. All English language instructors listed the 15 public secondary schools were met and asked to complete the survey. The researcher clarified the purpose of the study, and the instructions to complete the survey. The researcher completed the surveys by March 30, 2008. After the final submission of surveys, March 30, 2008, the researcher began analyzing the data, particularly looking for significant differences in responses among various demographic groups. Surveys were disaggregated by 1) gender, 2) age, 3) level of education, and 4) years of teaching experience.

Data Analysis

The researcher coded the responses in the survey. The questions in the Likert-scaled portion were coded according to the numbers corresponding to the responses from 4 being the highest to 1 being the lowest. Means and weighted means (relative importance) for each item were then determined. Free responses were analyzed for their content, with the frequency of similar responses recorded. Because the question on training in visual literacy instruction was relevant to an important research question for the study, care was given to analyze the question.

The question on training was a multiple-response question, which meant that some of those surveyed responded to a range of statements. Since those who responded to several statements could skew the data if most people surveyed only responded to one or a few statements, the researcher also looked at the responses to this question individually for each person surveyed and coded each person's responses. In addition to calculating the responses to each statement, the researcher coded the responses to get a clearer picture of the types of training

that the respondents had received in visually literacy instruction. The results, then, revealed more precise information on the training in visual literacy provided to prospective English language teachers by Faculties of Education in Egypt. The coding determined whether individuals had received formal, informal or no training in visual literacy instruction, based on the statement with the highest rating to which each person surveyed responded positively.

Formal training indicated that the respondent had received training in visual literacy instruction from a post-secondary institution in a specific class or unit within a class. Informal training indicated that the respondent had received limited training in visual literacy instruction from a post-secondary institution as a student or from a secondary institution as an employee in the form of a structured discussion or in-service training session. The question was coded according to the method shown in Table 2.

Table 2 Coding for statements on training in visual literacy instruction

STATEMENT	Type of Training	Coding Score
I was required to take an undergraduate course in visual literacy.	Formal	6
I was required to take an undergraduate course in visual literacy.	Formal	6
I was required to take a graduate course in visual literacy.	Formal	6
A unit in visual literacy was included in my required undergraduate classes.	Formal	5
A unit in visual literacy was included in my required graduate classes.	Formal	5
Visual literacy was mentioned in my required undergraduate classes.	Informal	4
Visual literacy was mentioned in my required graduate classes.	Informal	4
I received training in visual literacy at an in-service or seminar.	Informal	3
I learned about visual literacy informally through others.	Informal	2
I learned about visual literacy through my own study.	Informal	1
I received no undergraduate training in visual literacy.	None	0
I received no graduate training in visual literacy.	None	0
I have no training in visual literacy, either formal or informal.	None	0

Findings:

The teachers responding came from a variety of age groups and teaching experience, but their age groups were not necessarily reflective of their years of teaching experience. While only 7 percent of the respondents were 35 years old or younger, 49 percent reported having ten or fewer years of teaching experience. At the other end of the scale, 13 percent of respondents stated that they were 55 or older while 10 percent claimed 30 or more years of teaching experience. Overall the correlation between the two variables was .85 on the Pearson r scale. A closer look at the comparison of the two measures, however, indicated either that attrition from English language education may occur most heavily when teachers are between the ages of 36 and 55 or that teachers are entering the profession past the traditional 21 to 24 years of age. Although 47 percent of respondents indicated that they fell in the 36 to 55 age range, only 23 percent of the respondents reported 16-30 years of teaching experience. The data in table 3 show the correlation between the respondents' ages and their years of teaching experience.

Table 3: Respondents' Ages Compared to Their Years of Teaching Experience

Age	Years of Teaching Experience						
	5 or less 6	6-10	11-15	16-20	21-30	Over 30	Total
30-35	7	0	0	0	0	0	7
36-45	0	40	5	5	0	0	50
46-55	0	9	6	5	10	0	30
Over 55	0	0	0	0	3	10	13
Total	7	49	11	10	13	10	**100**

Regarding gender, of those who responded, 73 percent were female. This figure may also be reflective of more females entering and remaining in English language instruction and teaching in general.

Responsibility for Teaching Visual Literacy

Data in table 4 show the mean scores for each item in the section on responsibility for visual literacy instruction.

Table 4: Mean and Weighted Mean Scores, on a 4-point scale of questions on Responsibility for teaching visual literacy

No.	Statements	Mean	W.M.
1	Teachers should use visual materials in their classroom instruction.	1.86	0.465
2	Teachers should instruct students how to understand visual materials.	2.32	0.58
3	Teachers should instruct students how to present visual materials.	2.05	0.513
4	Visual literacy should be taught as a formal class.	2.09	0.523
5	Instruction in visual literacy should receive as much time as instruction in traditional literacy.	1.98	0.495
6	All curricula should teach students how to understand visual materials.	2.07	0.518
7	All curricula should teach students how to present visual materials	1.95	0.488
8	Administrators should have primary responsibility for instructing students in visual literacy.	1.58	0.395
9	English Language teachers should have primary responsibility for instructing students in visual literacy.	1.79	0.448
10	Arts teachers should have primary responsibility for instructing students in visual literacy.	2.62	0.655
11	Media Specialists should have primary responsibility for instructing students in visual literacy.	2.62	0.655

The areas that most of those surveyed agreed on were the necessity for all teachers to use visual elements in their instruction and to teach students how to use and interpret visual elements. Regarding their responsibility for teaching visual literacy, respondents were less certain. On a four-point scale, the item that asked instructors to agree or disagree with the statement, "All curricula should teach students how to understand visual materials" received a mean of 2.07 with an average rating of 0.518. A slightly weaker, but still average agreement resulted from instructors' responses to the statement, "All curricula should teach students how to present visual materials." That item received a mean of 1.95 with an average rating of 0.488. Yet, teachers were consistent in their responses as to who should be responsible for that instruction. When English language instructors were asked about specific instructors'

responsibility for teaching visual literacy, the two discipline that received mean of 2.62 with the highest average rating of 0.655, indicated that visual arts instructors' and media specialists be primarily responsible for visual literacy instruction. The responses to visual arts teachers and media instructors being primarily responsible for teaching visual literacy may reflect some misunderstanding about how visual literacy differs from appreciation of visual expression in the sense usually taught in visual arts classrooms. Among the groups rated lowest as needing to have primary responsibility for teaching visual literacy were administrators and English language teachers. While the English language teachers did not want the administration to be responsible for visual literacy instruction, neither did they want to be the ones primarily charged with such instruction. A few of those surveyed strongly agreed that instruction in visual literacy should primarily be the responsibility of English language teachers. While English language teachers surveyed supported instruction in visual literacy in the abstract, they were less certain about the specifics of how instruction in visual literacy should be accomplished. Moreover, they were even more ambivalent about their own discipline in taking the lead in visual literacy instruction.

However, the four statements with the highest ratings were the statements which dealt with instruction in visual literacy in general terms, asking respondents about visual literacy as a more abstract concept or as the responsibility of all curricula, with little specificity. The more specific questions about visual arts teachers, and English language teachers' received, the less enthusiastic response they get. Also, as might be expected from English language arts teachers, the instructors surveyed generally disagreed that visual literacy instruction should receive as much time as instruction in traditional literacy. Part of the reasons English language teachers did not see visual literacy instruction as on a par with traditional literacy instruction, likely was related to their own educational experience.

Training in Visual Literacy Instruction

English language teachers may not feel that visual literacy instruction should be incorporated with traditional literacy instruction because of their own lack of training in visual literacy instruction. As part of the preparation for English language teacher, colleges of education, according to those surveyed, provided little training in how to instruct students in visual literacy. When the instructors surveyed were asked about their training in visual literacy instruction, 100 percent indicated that they were not required to take formal courses in visual literacy instruction as part of their undergraduate or graduate programs. All respondents indicated that no units in visual literacy instruction were included in courses that they took in their undergraduate or graduate programs. Even when asked if visual literacy instruction was mentioned in any of their undergraduate or graduate courses, 100 percent recalled that teaching visual literacy in English language classes received no attention. While colleges of education may not have spent extensive time discussing visual literacy with the prospective English language teachers, schools provided no visual literacy instruction training through in-service Training. 100 percent of the instructors indicated that they had received no training in visual literacy instruction after starting their teaching careers.

The most common way for the teachers surveyed to learn about visual literacy instruction was informally through colleagues or independent self study. These two methods were identified by 5 percent of those surveyed. Even though a significant percent of instructors had knowledge of visual literacy instruction, received through informal venues, 95 percent stated that they had received no training, either formal or informal, in visual literacy instruction. Since respondents were asked to mark all that apply, the responses were coded according to the data in table 2.

Based on this coding, responses were then analyzed according to the highest coding score for each respondent. Respondents were assigned the highest level from formal to none on their responses to the statements about visual literacy instruction. According to the analysis of the highest coded response for each individual, 95 respondents had no formal or informal training in visual literacy instruction. 5 respondents had informal training in visual literacy instruction generally through self-study or discussion with colleagues. The type of informal training varied according to the gender of the respondents, with males getting informal training through independent study and females through discussion with colleagues.

Use of Visuals

Table 5: Mean and Weighted Mean Scores, on a 4-point scale of questions on Use of Visuals

No.	Statements	Mean	W.M.
13	I have two-dimensional still visuals—posters, pictures, graphs, charts, maps—in my classroom.	3.35	0.838
14	I have three-dimensional still visuals—statues, models, globes—in my classroom.	2.7	0.675
15	I use moving visuals—movies, demonstrations, role-playing—in my classroom.	3.35	0.838
16	I have a computer in my school for my own use.	1.64	0.41
17	I use a computer in my teaching.	1.82	0.455

Despite their lack of training, almost all teachers surveyed used visual literacy concepts in their classrooms and in their teaching. Yet, their uses tended to be more traditional in nature. The majority stated that they either "always" or "usually" had two-dimensional still visuals in their classroom. Displaying poster, pictures, charts, and map on classroom walls has been a longstanding tradition in all classrooms. The majority of the instructors surveyed also used moving two-dimensional visuals in their classroom. Although globes and similar three-dimensional stills have traditionally been part of many classrooms, less than one third of the group surveyed stated that they had such three-dimensional visuals in their classroom. Even though active, hands-on learning, which can lead to three-dimensioned visuals for display, has received a great deal of attention in public K-12 education, few of the English teachers surveyed had such spatial visuals for their students in the classroom.

Although three dimensional stills are readily available through student projects, most English language teachers surveyed did not display those projects in their classrooms. A stark contrast also appeared between the availability of visual literacy materials and the use of those materials in the classroom in relation to computers. Most of the teachers surveyed stated that they had no computer in the school at all times for their own use. Although computers were available to the teachers surveyed, only a few actually used a computer in their teaching on a regular basis.

Student Competency in Visual Literacy

Table 5: Mean and Weighted Mean Scores, on a 4-point scale of questions on Student Competency in Visual Literacy

No.	Statements	Mean	W.M.
18	My students are able to use a scanner.	1.69	0.423
19	My students are able to use digital still cameras.	1.81	0.453
20	My students are able to edit still photos using a computer.	1.81	0.453
21	My students are able to use digital movie cameras.	1.69	0.423
22	My students are able to edit video clips using a computer.	1.69	0.423
23	My students are able to use a computer for word processing.	3.77	0.943
24	My students are able to use a computer to access information on the Internet.	3.77	0.943
25	My students are able to distinguish fiction from reality in visuals.	1.65	0.413
26	My students are able to distinguish advertising from articles.	1.64	0.41
27	My students are able to analyze the content of visual images.	1.68	0.42
28	My students know the limitations of visual images.	2.07	0.518
29	My students use visuals effectively.	1.64	0.41
30	My students use headings in their compositions.	1.68	0.42
31	My students use bulleting and numbering in their compositions.	1.69	0.423
32	My students use charts and graphs in their compositions.	1.68	0.42
33	My students use drawings and photographs in their compositions.	1.68	0.42
34	My students use appropriate fonts in their compositions.	1.64	0.41

Data in Table 5 show how teachers rated their students' ability with various types of technology used to capture and format alphabetic and visual expression. When asked about their students' use of technology related to visual literacy, teachers had a high level of confidence in the ability of their students to use computers for word processing (0.943) and for accessing information on the Internet (0.943), skills growing out of more traditional writing and research skills taught in English language classes. Their confidence waned, however, when asked about their students' use of other technologies less closely related to traditional activities in the English language arts class. Less than 50 percent expressed confidence in their students' ability to use technology more closely associated with visual literacy, such as scanners, still and video digital cameras, and software for manipulating visual images. Even though most people would assume that younger individuals would have more experience with technology related to visual literacy, teachers generally rated their students lower than they rated themselves in their ability to use modern technology for capturing and manipulating visual images. This counter-intuitive finding did not necessarily reflect students' actual ability but only their teachers' perceptions.

If English language teachers did not have their students using technology related to visual literacy, they would not be able to accurately evaluate those students' ability to use those technologies. The variance in ratings of students' ability may relate to if and how much the various instructors had their students use technology in the classroom. Teachers' confidence in their students' ability to use technologies such as scanners, digital still and movie camera, as well as editing software was low (. Their confidence in their students' ability to distinguish fiction from reality and advertising from article in visuals was also low. Again, a traditional approach to teaching English language is more likely to focus on comprehension based exercises rather than distinguishing fact from fiction. Even though the teachers surveyed generally felt that their

students were able to distinguish fact from fiction in both text and visuals, they had less confidence in their students' ability to analyze and interpret visual images and to recognize the limitations of visual images which can now be easily manipulated and altered. The advances in technology were quickly picked up and mastered by most high school students, but their ability to think critically about what they saw was not as advanced, according to their teachers.

Because interpreting images is often more difficult now than creating those images using the available technologies, teachers may face difficulty in getting students to look more closely at visual images in order to properly interpret the intent and message of the images. This finding has implications for teaching critical thinking as well as visual literacy across the curriculum. Students' being able to analyze writing, speaking, and various symbols used in mathematics, science, and music is generally ranked as being high in importance but low in achievement by teachers at all levels. How teachers surveyed responded to statements on the survey verified that the importance but low achievement in analysis also applies to visuals. Since the teachers' attitudes toward the ability of visual images to communicate information effectively could influence the way they responded to the question, further probes into teachers' beliefs concerning the limitations of visual images may be warranted.

When the mean responses as a percent of a possible "4" were compared to the percent who strongly or moderately agreed with the statements on students' ability to interpret visual images, one statement produced a statistically significant difference between the two measures. That statement asked about teachers' opinion on their students' awareness of the limitations of visual images. Therefore, while most respondents did not strongly or moderately agree that their students were competent in this area, overall they saw students as adequate in their awareness of the limitations of visuals.

Although virtually all students, according to their teachers, could use computers for word processing and accessing information, using the computer for effective visual formatting was less evident in compositions created by their students, according to respondents. Using formatting conventions commonly used in business, technical, and other types of writing, such as bulleting, numbering also receives little attention in English language classes, according to the responses on the survey. Students' lack of attention to formatting in their compositions may be more the result of instructors not being fully aware of the formatting possibilities with current software or their failure to instruct students on the options they have for formatting than on students' lack of knowledge or ability in formatting documents. Just as teachers indicated that their students used few formatting conventions, those teachers were also not convinced that students had the necessary ability to incorporate visual images with text, including charts, graphs, drawing, and photographs. While it is possible that students do not have the necessary computer skills to incorporate visuals with text in their compositions, it seems more likely that teachers simply do not encourage students to use visual elements in their compositions in English language classes.

On the other hand, students' use of headings and appropriate fonts were areas in which teachers generally felt their students were not competent. Some respondents indicated that they did directly instruct their students to use certain fonts and headings, indicating that direct instruction of students in appropriate use of visual elements in their compositions can be effective.

Based on teachers' responses to the questions on their students' use of visual elements in their compositions, the respondents' trust in their students' ability to use formatting conventions was mixed, as was their confidence in their students' ability to use visuals effectively and

appropriately. The wide disparity in the percent strongly or moderately agreeing with statements compared to mean responses as a percent of a possible "4" on statements involving bulleting and numbering, use of charts and graphs, and inclusion of drawing and photographs suggested an ambivalence or lack of strong commitment one way or the other to the use of visual elements in students' compositions.

Teacher Competency in Visual Literacy

Table 6: Mean and Weighted Mean Scores, on a 4-point scale of questions on Teacher Competency in Visual Literacy

No.	Statements	Mean	W.M.
35	I am able to use a scanner.	1.51	0.378
36	I am able to use digital still cameras.	2.66	0.665
37	I am able to edit still photos using a computer.	1.64	0.41
38	I am able to use digital movie cameras.	1.82	0.455
39	I am able to edit video clips using a computer.	1.51	0.378
40	I am able to use a computer for word processing.	2.91	0.728
41	I am able to use a computer to access information on the Internet.	2.75	0.688

Teachers' rating of their use of visuals in the classroom paralleled their rating of their ability to use technology related to visual literacy. Ratings were the highest in areas that used technology to perform operations previously done without such technology. All respondents gave themselves the highest available rating for being able to use word processing effectively (0.728) and for being able to access information on the Internet (0.688). These operations are similar to activities that most English language teachers did in more traditional ways in the past with typewriters and library research with print texts. Respondents also expressed moderate confidence in their ability to use digital still cameras. However, their confidence in their ability to use scanners, digital movie cameras, and editing software for still and video camera images was less strong. Their weakest area, according to their self-assessment, was in their ability to use equipment to shoot and edit videos. Given that teaching students to reform words and images into new expressions is part of what English language teachers are expected to do, the low level of confidence in using the necessary equipment to transform images into new expressions may be problematic as English language arts teachers take on the role of instructors in all literacies, including visual literacy.

The uncertainty regarding their skills in using equipment to create and edit moving visual images may also reflect a general lack of confidence in their ability to keep up with emerging technology in the area of visual literacy. While those surveyed felt more confident in modern iterations of old technology such as word processing, which has replaced the typewriter, and Internet site and web-based databases, which have replaced, or at least supplemented, traditional library research than in their ability to use more modern technology such as scanners, digital cameras, and similar devices, they still had more confidence in their own ability than in their students' ability to use the modern technology related to capturing and manipulating visual images. While the list of technologies about which teachers were questioned did not include the most up-to-date technologies, it did inquire about technologies that are readily available to most school systems and individuals.

Instruction in Visual Literacy

Table 7: Mean and Weighted Mean Scores, on a 4-point scale of questions on Instruction in Visual Literacy

No.	Statements	Mean	W.M
42	I teach students how to "read" visual images.	1.48	0.37
43	I teach students how to locate or create visuals that enhance the message of their written text.	1.45	0.363
44	I teach students about elements of document design.	1.29	0.323
45	I teach students about visual literacy through spontaneous discussion.	1.29	0.323
46	I teach students about visual literacy using media.	2.75	0.688
47	I teach students about visual literacy using computers and the Internet.	2.56	0.64
48	I teach students to use visuals—graphic organizers, charts, graphs—in their work.	2.56	0.64
49	I have a computer in my school for students to use.	2.75	0.688
50	I expect my students to use a computer when writing papers.	1.45	0.363
51	I encourage students to use visuals in their written assignments.	1.45	0.363
52	I allow students to present their ideas in ways other than formal essays—PowerPoint presentations, websites, visuals with explanation, or other similar media.	1.41	0.353

While some "always" or "usually" have computers available for student use (2.75) and do not always expect their students to word process their papers (1.45), instruction in visual literacy does not necessarily follow. One of the most encouraging pieces of data was the response to the statement about the use of visuals to aid students' thinking and organization. Most instructors who responded said that they "always" or "usually" asked their students to use graphic organizers, charts, graphs, and similar visuals to help understanding of material. An apparent discrepancy appeared in the fact that even though many individuals related that they used media in their instruction in an earlier part of the survey, only a slight percent stated that they "always" or "usually" used media in visual literacy instruction.

While instruction in visual literacy on the receptive side—viewing—was low, instruction in visual literacy on the productive side—creating visual expression—was equally as low in most areas. On statements about their expectations of students' compositions, while some teachers had computers available for their students and expected those students to word process their compositions, few encouraged students to use visuals in their compositions or allowed students to present ideas for compositions in alternative visual formats such as PowerPoint or websites. The comparison of the two measures indicates consistency in responses to three of the four questions.

However, the difference between the two measures on the statement about encouraging students to use visuals in their compositions is statistically significant. The discrepancy indicates that, even though many may encourage such use of expressive visual literacy, they do not do so on a regular basis. This finding goes along with other findings that point out that visual literacy is seen as subordinate to traditional literacy, not as an integral part of the multi-faceted literacy required in contemporary civilization. Many responded in other parts of the survey that they saw teaching visual literacy as additional work that they could not fit into their already tight schedule. Therefore, helping teachers with integrating visual literacy with traditional, alphabetic literacy

may help teachers to instruct their students in multiple literacies without compromising attention to either.

Limitations on Teaching Visual Literacy

Table 8: Mean and Weighted Mean Scores, on a 4-point scale of questions on Instruction in Visual Literacy

No.	Statements	Mean	W.M.
53	I would spend more time teaching visual literacy concepts if I had the necessary materials and equipment.	3.38	0.845
54	I would spend more time teaching visual literacy concepts if I had enough time.	3.41	0.853
55	I would spend more time teaching visual literacy concepts if I had the training.	3.77	0.943
56	I would spend more time teaching visual literacy concepts if it were appropriate to the subject I teach.	3.26	0.815
57	Most teachers do not spend time teaching visual literacy concepts because of lack of time.	3.41	0.853
58	Most teachers do not spend time teaching visual literacy concepts because of lack of materials and equipment.	3.41	0.853
59	Most teachers do not spend time teaching visual literacy concepts because of lack of proper training.	3.79	0.948
60	Most teachers do not spend time teaching visual literacy concepts because of objections from administration.	1.41	0.353
61	Most teachers do not spend time teaching visual literacy because of objections from parents.	1.41	0.353

Teachers surveyed indicated that they did not provide significant instruction to their students in visual literacy nor did those responding use visual literacy elements extensively in their English language instruction. Based on these responses and the mandates by various governmental and professional entities to provide visual literacy instruction in secondary English language classes, the question arises, “Why do not English language teachers provide instruction in visual literacy?” In response to questions about what kept them from teaching visual literacy, most of them indicated lack of materials and equipment, time, training, and appropriateness to subject. When discussing what limited their own teaching of visual literacy, over 90 percent indicated that not having enough time was the most significant factor.

When asked about why other teacher did not provide visual literacy instruction, however, teachers surveyed responded differently from when they were asked about their own reasons. Their responses to statements about why others did not teach visual literacy were generally not as strong as their responses to statements about their own reasons for not teaching visual literacy. Teachers surveyed predictably reported the lack of training, rather than a lack of time, as being the major obstacle to visual literacy instruction for others. The highest percent of respondents (0.948) strongly or moderately agreed that most teachers do not instruct their students in visual literacy because of a lack of training on the teachers’ part. When asked about their own reasons for not teaching visual literacy, respondents cited training as more important than time and materials and equipment. Yet, the percent who strongly or moderately agreed that their own lack

of training was a major factor in their not teaching visual literacy was higher than the percent citing training as a factor for other teachers.

The areas that those surveyed did not see as hindering teaching visual literacy were the attitudes of administrators and parents. Only 1.41 percent strongly or moderately agreed that objections by administrators kept them from teaching visual literacy. An even equal percent (1.41) strongly or moderately agreed that parents' objecting to visual literacy instruction was a major factor. If teachers do not feel pressure from stakeholders to emphasize traditional literacy instruction to the exclusion of visual literacy instruction, the questions still remains, "Why do not English language teachers provide instruction in visual literacy?"

Paralleling their assessment of who should be primarily responsible for teaching visual literacy, the English language teachers surveyed indicated that they could not squeeze out any more hours from the day in order to teach visual literacy as well as traditional literacy. While respondents did not see any pressures from stakeholders not to teach visual literacy, they also did not feel any outside pressures to spend extensive time in such instruction. This lack of pressure from outside sources and the increasing demands on their time result in most instructors putting instruction in visual literacy "on the back burner," simmering until the need for such instruction boils over and draws unpleasant attention to itself.

Open Responses

The survey asked teachers to respond to three open-ended questions plus gave them a chance to make any additional comments at the end of the survey. Their open responses further illustrated their uncertainty about instructing their students in visual literacy. The questions asked were as follows:

1. How do you respond to NAQAAE English language standards that require instruction in non-print text?
2. How has technology influenced the teaching of traditional literacy?
3. How has technology influenced the teaching of visual literacy?

Those who responded interpreted the first question in one of two ways. Some discussed the relevance of visual literacy instruction in the English language classroom and if such instruction should be included; others addressed how they used elements related to visual literacy instruction in the classroom as they saw such instruction meeting NAQAAE standards for secondary English language. Of the 100 instructors taking the survey, 33 replied to the first open-ended question. Of those 33 who responded, 21 of their answers were coded to indicate their reaction to being expected to teach non-print text in the English language classroom; 26 answers were coded to indicate the ways in which the respondents used visual literacy concepts in their classroom, including using charts and graphs, directly instructing students on visual literacy, or having students make presentations that included visual images.

Of those responses which addressed the relevance of being expected to teach visual literacy concepts in the English language classroom, nearly 43 percent were unaware of the standards, had a lack of experience with the standard, or were unclear as to what was expected of them in relation to visual literacy instruction. This lack of clarity makes it apparent that training by colleges and universities preparing English language teachers have not done a good job of helping English language teachers see the importance of visual literacy instruction nor providing training on how to integrate visual literacy instruction with traditional literacy taught in English language classrooms. Slightly less than 30 percent of the respondents felt that visual literacy

instruction was unimportant, took away from instruction in traditional literacy, or consumed too much additional time. Their unwillingness to give up time on traditional literacy instruction for visual literacy instruction reflected not only their educational experience but the emphasis in society on the basics of reading and writing. In addition, this attitude reflected the failure of teachers to see that visual literacy instruction is not an add-on but an integral part of literacy instruction in more general terms.

Also, slightly more than 14 percent believed that visual literacy was too difficult to test or that they would only teach visual literacy if it were required for their students to pass local and national assessment tests. The pressures from General Secondary Certificate made those surveyed reticent to explore areas that were not being tested, fearing that their students would score lower on required tests. The pressures of national assessments tests have clearly made instruction in visual literacy seem less important to English language teachers surveyed because of the high-stakes nature of those tests. Of the responses coded, only 14.3 percent indicated that visual literacy was an important part of the English language curriculum.

When asked how technology has influenced the teaching of traditional literacy instruction, teachers gave responses which were categorized into sixteen areas, eight of which were positive, six of which were negative, and two of which could be either negative or positive. Of the 35 teachers who responded to the questions of technology's influence on teaching traditional literacies taught in English language classes, 69 different types of responses were classified by the researcher. Of the 69 responses that were classified, 46 were in positive categories; 14 were in negative categories; and nine were in categories that could be either negative or positive, depending on the circumstances and the students. Consistent with responses in other areas of the survey, most of the negative comments had to do with visual literacy instruction interfering with teaching literacy in traditional ways. Even though less than 26 percent of the responses were negative, the data may not include the most negative responses that English language teacher have toward technology since those with the most negative attitudes were not likely to have completed an electronic survey. Data in table 4.3 record the types, number, and percentage of responses.

Table 9: Types and number of open-ended responses to questions on the influence of technology on English language instruction

Response Category	Number	Percent
Enhance (Positive)	14	20.3%
Modernize (Positive)	2	2.9%
Multiple Sensory (Positive)	8	11.6%
Individualize (Positive)	5	7.3%
Provide Helps (Positive)	3	4.4%
Research (Positive)	7	7.3%
PowerPoint (Positive)	4	5.8%
Word Processing (Positive)	5	7.3%
Information Overload (Negative)	2	2.9%
Interfere with Traditional Literacy (Negative)	4	5.8%
Makes Students Lazy (Negative)	4	5.8%
Cut and Paste/Plagiarism (Negative)	2	2.9%
Hinders Students Ability to Assimilate (Negative)	1	1.5%
Misinformation (Negative)	1	1.5%

Internet (Either Positive or Negative)	3	4.4%
Spell Check/Grammar Check (Either Positive or negative)	2	2.9%

Teachers generally acknowledged the importance of multi-sensory instruction and that technology has enhanced teachers' ability to provide instruction through different modes on a more individualized basis to their students. The positive influence that technology has had on the ease with which students can do research was also frequently noted. Many also pointed out that students being able to word process their papers both inside and outside of class has helped students' writing and also teachers' ability to read and grade written assignments more easily. Negative comments generally focused on students' substituting technology for true learning.

Despite the overwhelming positive comments about the influence of technology on the teaching of English language, teachers are still uncertain how technology is affecting their students' abilities in traditional literacy. Yet, instructors are generally more uncertain about the influence of technology on the teaching of visual literacy. When asked about the effects of technology on the teaching of visual literacy, many did not differentiate between technologies' influence on instruction in traditional literacy and on instruction in visual literacy. Although 70 individuals did not respond to the questions, 41 responses were classified from the remaining 30 individuals who did choose to remark about visual literacy and technology. Of those who responded, 7.3 percent indicated that they did not differentiate between the influence of technology on traditional literacy instruction and visual literacy instruction, and 4.9 percent felt that technology had a negative influence on students' ability to look below the surface of visual images or dulled students' senses because of endless "boring Power Points". Ambivalence was apparent in 7.3 percent of the teachers' responses with some expressing a feeling of being overwhelmed with the possibilities of technology in visual literacy instruction or inadequacy as an instructor because students already came knowing more about the available technologies related to visual literacy than the teacher.

However, over 80 percent of the responses indicated that technology had a positive impact on visual literacy instruction. Specific technologies such as computers, the Internet, digital camera, video camera, and scanners were mentioned in 31.7 percent of the responses. Another area mentioned frequently was the ability to reach more students (22%). Those responses included references to students having greater access to information and images, learning through hands-on activities, being able to use multiple intelligences, and working independently, as well as teachers being able to display information to large numbers of students at one time. Of the 26.8 percent who believed that technology enhanced their ability to teach visual literacy, one mentioned that teachers gained more credibility with students by using technology to provide instruction since students are often used to getting more of their information through various twenty-first century technologies.

Others appreciated the ease with which technology allowed them to access visual material to enhance their instruction. Being able to access visual material easily and almost instantaneously was recognized as a clear benefit in teaching students how to find meaning in visuals. Even though information overload was mentioned as a negative influence on teaching traditional literacy, teachers did not identify such a problem with teaching visual literacy. This discrepancy may be due to teachers' failing to identify or have their students identify visual materials. On the other hand, the discrepancy may also be due to the amount of visual materials available through technology not appearing as massive as the amount of textual materials available through technology. By far the majority of those surveyed looked at technology as a

major enhancement to their instruction of students in both traditional and visual literacy. Yet, a significant minority (12.2%) indicated that they felt that the advances in technology were either overwhelming or negative in their effects on English language instructors, ability to teach their students in multiple literacies. The negative responses were particularly associated with students' relying on technology too heavily, rather than their own learning.

Although those taking the survey were also given the opportunity to make any other comments about visual literacy instruction in the English language classroom, only 43 of the 100 individuals surveyed (43%) responded. Of those who did respond, many (47.1%) indicated a need for more training, time, and resources in order to teach both traditional and visual literacy effectively. The greatest benefit mentioned was the ability to address students with varying needs and learning styles (35.4%) through the use of individualized instruction made possible with technology. A few felt that instruction in visual literacy and the use of technology for instruction were not priorities and were only tools in teaching students in more traditional English language areas, particularly literature and writing. Even those who identified visual literacy instruction and technology as tools to teaching traditional literacy did not discuss how they incorporate instruction in multiple literacies within their classrooms.

Summary

The major issues that emerged from the survey were the differences in training that English language teachers have had in visual literacy, the variation in use of visual literacy concepts in the English language classroom, the range of perceptions in both students' and teachers' skill in using technology related to visual literacy, the lack of consensus as to who should be responsible for visual literacy instruction, the failure to identify limitations on teachers' addressing visual literacy in the English language classroom, and teachers' lack of awareness of standards related to teaching visual literacy in the English language classroom. With these issues in mind, the researcher analyzed the information as it related to research questions posed earlier. Conclusions and recommendation in some cases seem clear while in others the appropriate course is less certain.

Questions #1 and #2: Attitude and Training

As indicated, only slightly more than 14 percent of respondents had a positive attitude toward teaching visual literacy. While most indicated that they were unwilling to take time away from traditional literacy in order to teach visual literacy, many also indicated that they simply did not have an adequate knowledge of either the standards or how to teach visual literacy. Respondents of all ages do not feel that administration or parents limit English language teachers' ability to instruct their students in visual literacy. All generally strongly disagreed with the statements, "Most teachers do not spend time teaching visual literacy concepts because of objections from administration", (1.41 with 4.0 being strongest agreement with statement) and "Most teachers do not spend time teaching visual literacy concepts because of objections from parents" (mean of 1.41 with 4.0 being strongest agreement with statement).

Yet, despite the fact that they do not perceive strong extrinsic forces from the profession or community keeping them from teaching visual literacy, as a whole, they agree that they might teach visual literacy if it were more appropriate to the subject they teach. The failure to see instruction in visual literacy as germane to the subject of English language instruction may also be a training issue that colleges and schools systems need to address. Even if they did not see visual literacy instruction as part of the English language curriculum, all respondents generally

conceded that materials and equipment, time, and training are issues limiting their own and their colleagues' ability to instruct their students in visual literacy. Most agreed that other teachers would be more likely to teach visual literacy if they had more time and resources than they, themselves, would. Less significant, but still worth noting, is the difference between the means of time providing more incentive for self and time providing incentive for others, on the 4- point scale. Training was the only area of the three—time, resources, and training—that respondents rated as more likely to encourage them to teach visual literacy as compared to training for their colleagues. The responses may indicate that teachers are slightly more open to training in visual literacy instruction than they perceive their fellow English language teachers to be.

The concerns of English language teachers that they do not have sufficient materials and equipment, time, or training to adequately instruct their student in visual literacy are issues that teacher education institutions that train teachers and public school systems that hire them will need to address if society wants secondary students to be more savvy about the influence of visual media and how to get information through multiple types of presentation of information.

Although the researcher did not expect English language teachers to have as much knowledge of visual literacy as they have of traditional literacy, the lack of training was one of the most striking, but expected, findings. Statistically significant differences also exist among various demographic groups in their training in visual literacy. Those who recalled discussions of visual literacy in their course work were generally younger, had less experience teaching, and taught in larger schools than those who had no formal training in visual literacy. Those with master degrees or above and those who had been teaching more than twenty years tended to indicate no training, either formal or informal, in visual literacy. One clear gender difference in training appeared in questions regarding informal training in visual literacy. Women were more likely than men to have learned about visual literacy informally through other teachers or to have studied about visual literacy on their own.

Question #3: Instruction of Students in Visual Literacy

No matter how much training teachers have, how much they use visuals in their instruction, or how competent they think their students and they themselves are in use of visual technology, the heart of the question is if they instruct their students in visual literacy concepts. Although the responses to questions on visual literacy instruction reveal some mixed results, most teachers admit to providing little instruction to their students in visual literacy. No statistically significant difference among groups is apparent, with all aggregated responses in the section on visual literacy instruction scoring below 3 for all groups.

While the aggregate numbers give little insight into how teachers instruct their students in visual literacy, responses on individual questions may be telling. Based on their responses to the individual questions, most teachers expect their students to use word processing for their essays. Even though using word processing enhances readability, students apparently are not encouraged to use other features of the computer that could improve their communication.

When asked if they encourage students to use visuals in compositions, most teachers indicate that they rarely suggest such inclusions despite the ease with which visuals can now be included with text. Responses to other questions about visual literacy instruction also produce responses that indicate that teachers only sometimes or never instruct their students in visual literacy. From other responses, it seems apparent that training is not solely the issue. Several open responses and responses on the limitations on visual literacy instruction reveal why English language teachers do not instruct their students in visual literacy. Some respondents stated that

they were unaware that teaching students to interpret and present visual information is part of both the professional and national standards for English language classrooms. Others expressed a sense of being overburdened and unable to cope with additional expectations on their instruction. Of those who responded to a question about their reaction to being required to teach students how to comprehend and interpret non-print text, over 70 percent signified that they were either unaware of standards or felt the standards were unreasonable. Only 14 percent of respondents had a positive view toward instructing students in visual literacy in the English language classroom. If they had time, training, and resources, some suggested that they might instruct their students in visual as well as traditional literacy.

Realizing that more students are coming to secondary education with a preference for visual learning and that a majority of Egyptian adults receive their information on current events through visual media, visual literacy instruction is becoming less of an option and more of a necessity. Yet, English language teachers do not feel prepared to add instruction in visual literacy to their already full platter. Being required by the ministry of education to make sure that all their students are proficient in reading and writing absorbs most of teachers' time and energy in English language classrooms. National standards that are not directly addressed in national testing are not priorities among English language teachers, and, therefore, often are ignored or touched on in the most cursory way.

Question #4: Use of Visual Literacy Elements in the Classroom

On an even more elementary level than teaching students in visual literacy is using visual elements in the classroom. Therefore, of even more concern than the lack of training in visual literacy is the disconnect between training and use of visual literacy concepts. An exception to the disconnect between training and use involves gender. Just as males report more formal training in visual literacy instruction than do females, males also use visual literacy approaches in their classroom to a greater extent than do females. Again this difference may support research on the relative strength in visual learning of males over females.

Questions #5 and #6: Student Use and Document Design

Although all teachers rate their own competency in using visual technology higher than their students', those with just a bachelor degree, who have been teaching six years or less rate themselves closer to their own students. The only other group who rates their students' competency nearly equivalent to their own is those who have been teaching over 30 years or are over 55 years old. It is not apparent if older, more experienced individuals have not kept up with technology or if they merely perceive their students to be more proficient in their use of visual technology because those students have grown up with such technology. These responses may be based on the myth that young people are better able to negotiate technology than those who grew up in a low-tech world. Other responses that may be based on and support other myths about technology relate to gender. While males and females report approximately the same level of competence for their students in use of visual technology, males rate themselves considerably higher than females do.

While English language teachers do not have a great deal of influence over how competent their students are at using technology related to visual literacy, they do have more control over whether their students use visual literacy concepts, including document design. Again, most English language arts teachers apparently encourage their students to rely more on traditional concepts associated with the English language curriculum. For example, the mean

score for the responses to "My students use charts and graphs in their compositions" was 1.68, indicating that such use is rare. However, in most areas outside of English language, charts and graphs are a vital part of expressing information in a visual manner. Also, the mean score for the responses to "My students use drawing and photographs in their compositions" was 1.68, even though both virtually all published materials now included such elements. Most respondents appeared to encourage the use of styles of expression converted from old technologies than methods commonly used in current technology.

The scores on two questions related to document design were consistent. The mean score for "My students use headings in their compositions" was 1.68. "My students use bulleting and numbering in their compositions" received a mean score of 1.68, even though bulleting and number are now easily included and have become common elements in most business and professional writing. As indicated earlier, those English language teachers who responded seem to use word processor more as electronic typewriters than as a means to allow their students to explore the possibilities of literacy provided by modern technology.

Conclusions

From the respondents surveyed, the researcher concluded that, while teacher preparatory institutions are doing a better job of training prospective teachers in how to instruct their students so that the students will develop visual literacy, the majority of English language teachers still do not have a clear understanding of how to integrate visual literacy instruction with the more traditional literacies taught in English language classrooms in the past. Moreover, schools have done little to train teachers already in the profession to incorporate visual literacy instruction with traditional literacy instruction. In fact, because most teachers have gained knowledge in how to instruct their students in visual literacy through self-study or discussion with colleagues, the English language teachers' knowledge of methods for visual literacy instruction varies widely. This lack of systematic training in visual literacy instruction has led to teachers' not being clear on what is expected of them as they work with their students to meet the standards for visual literacy set by NAQAAE. Because many of those surveyed pointed to the ministry not testing visual literacy as a reason for their not addressing the issue, the ministry is also at fault in the failure of most secondary English language teachers in Egypt to incorporate visual literacy instruction in their classes. If teachers are more concerned with teaching what is tested, the ministry of education must incorporate assessments of all standards, including those related to visual literacy, if it expects teachers to help students meet all of those standards.

In addition, the failure of teacher education institutions, the ministry, and professional organizations to make English language teachers aware of their responsibility in visual literacy instruction is, however, no worse than the apparent failure of English language teachers to recognize the abilities and needs of their students. Even though many of the teachers surveyed rated their students' ability with various technologies lower than their own, the teachers' failure to encourage students to use those technologies to develop all types of literacy related to English language —listening, speaking, reading, writing, viewing, and presenting visual material— cannot be excused by the teachers' own lack of training in various areas of literacy. While their students are learning naturally through all sensory modes—auditory, tactile and visual—secondary English language teachers are not using all those modes to their greatest advantage in instruction to improve their students' literacy.

As evidenced by responses on the survey, training alone, however, is not enough to insure that teachers use visual materials and instruct their students in visual literacy. Both teacher

education institutions and the Ministry of Education must help English language teachers realize they will need to modify their teaching styles to integrate visual literacy concepts into the classroom in order to optimize student learning. Along with training, schools will need to make sure that teachers and students have access to visual materials in the same way that they guarantee that teachers and students have access to textbooks now. While it is important that teachers have the training, materials, and equipment necessary to use visuals in their instruction, the impact will only be significant when instructors use their knowledge to make sure that their students are literate, alphabetically, technologically, and visually.

Holding teachers accountable for students becoming visually literate will necessitate having a means of assessing visual literacy. Finding ways to assess visual literacy without relying on traditional literacy skills, will allow students to show their ability in other literacies. Assessing visual literacy using traditional paper and pencil testing makes little sense. While testing students' ability to interpret visuals may be difficult, English language teachers can easily encourage and assess their students' ability in using visual elements in communication. Expanding options for relaying information through less traditional means such as presentations, videos, magazines, poster displays and other venues that are popular both in other disciplines and at other level in English language could expand students' readiness to enter a world requiring both traditional and visual literacy.

Recommendations

For Research

This study provides incentive to other researchers to explore the differences that may exist in visual literacy instruction between homogeneous and heterogeneous populations and between rural and urban schools. Resistance to and misunderstanding of visual literacy apparent in the population studied indicates that a study of another geographic area in Egypt may be necessary to determine if the resistance and misunderstanding is localized to Dakahlia.

Teacher education institutions should also study how to instruct teacher candidates in methods that will address the demands of a society that relies on multiple literacies for information. Because teacher education institutions will only be able to address the needs of future secondary English language teachers, how the public schools can provide training for existing staff will need to be studied. What equipment best serves teachers in instruction that addresses multiple literacies will be an issue for investigation. Ministry of Education should not throw money for equipment and materials at a concern until the best approaches are clearly understood.

If research indicates the importance of instruction in visual literacy and that instruction in visual literacy can complement instruction in traditional literacy, then more stringent standards for teaching visual literacy in the complete the sentence

For Instructors

For the English language instructor, materials and equipment, time, and training in visual literacy instruction are major concerns. These needs, however, are predicated on maintaining English language standards that include instruction in interpretation of information presented visually and in presentation of visual information.

A first step would be to incorporate units on instructing students in visual literacy in methods courses for those training to become secondary English language teachers. While teacher-training preparation often stretches beyond the traditional four years of post-secondary

education now, restructuring units in methods courses would not have to add semesters or years to the English language teacher preparation curriculum as full courses on the subject might. Even though such a step would supply new teachers with training in instruction in how to teach visual literacy, public school systems would have to be responsible for supplying training to teachers who are already in the classroom. The Ministry of Education could encourage such training by supplying in-service presentations to school systems at no cost to the schools. In-service training sessions would raise awareness of the importance of visual literacy instruction in the English language classroom.

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