AN EXPLORATORY EXAMINATION OF LITERACY ASSESSMENT PRACTICES OF ADULT PROGRAMS IN NORTH CAROLINA'S PIEDMONT-TRIAD REGION

Eboni Nikita Byrd

Marcus M. Comer

Abstract

It is estimated that 22 percent, (slightly higher than the national percentage) of adults in the Piedmont Triad of North Carolina have poor literacy skills, meaning that they have difficulty with tasks involving simple texts and documents.

Purpose

Given this low level of adult literacy , the purpose of this exploratory research study was to analyze the perceptions of North Carolina's adult program personnel regarding adult participation in these programs and related activities. In order to accomplish this purpose, the following research goals were developed: 1) To determine how adult programs in the Piedmont-Triad region of North Carolina define literacy; 2) To determine how adult literacy is assessed by adult programs in the Piedmont-Triad region of North Carolina; 3) To determine strategies utilized by adult programs in the Piedmont-Triad region to address adult literacy; and 4) To determine what the characteristics of literacy challenged adults enrolled in adult programs in the Piedmont-Triad region of North Carolina are.

Methodology

Using a descriptive design a survey instrument containing 17 questions designed to gauge the opinion of administrators and instructors regarding assessment practices of adult programs in North Carolina. Data were analysis

Results

Based on the data collected the researcher determined that administrators of adult programs in the Piedmont-Triad region of North Carolina define the term literacy as how well the learner is able to read and write. Literacy comprehension and reading are said to be synonymous because when understanding breaks down, reading actually has not occurred.

Administrators in North Carolina measure literacy skills on a scale consisting of three major components. They are prose, document, and quantitative.

This study also found that programs in the Triad-Piedmont region of North Carolina use strategies such as Adult Basic Education (ABE), English as a Second Language (ESL), English

Literacy/Civics Education (EL/Civics), Adult Secondary Education (ASE), Family Literacy, Correction Education and School-to-Work to address adult literacy.

Recommendations

Based on the findings of this research study and data analysis, the following recommendations are made for further research:

1. Further research should be conducted in other regions of North Carolina to examine the different characteristics of Adult literacy programs.
2. Further research should be conducted in other regions of North Carolina to examine the assessment systems utilized by these respective programs.
3. Further research should be done to see what types of instructional strategies and assessments are utilized by privately owned adult literacy programs throughout the state of North Carolina.
4. Further research should be conducted to analyze the various curriculum materials utilized by adult literacy programs in the state of North Carolina and the effect on the learning outcomes of the organizations.

Introduction

Today's rapidly shifting demographics, globalizing economy; fast-paced, high-tech world is changing the face of America. It is well known that in order for a person to remain relevant in these rapidly changing times, he/she must continue to upgrade his/her knowledge and skills. This has resulted in adults returning to school in record numbers. In recent years the demographics on college campuses across America has changed from mostly freshman straight out of high school to "non-traditional" adult students. One academic area most greatly affected is Career and Technical Education (Cameron & Heckman, 1993). This influx of adults returning to the education arena is good; however, it does not come without its problems. One such problem is the high level of poor reading literacy skills among adults. About twenty-one percent of Adults in America have poor literacy skills. (NALS, 1993, Siedow, 1998). In North Carolina it is estimated that 22 percent of adults have poor literacy skills, meaning that they have difficulty with tasks involving simple texts and documents.

Literacy

Literacy commonly characterizes emphasis on reading, writing, and computation skills, but not on the criteria for establishing skill level (Imel, 1985). The U.S. National Literacy Act of 1991 defined adult literacy as an individual's ability to read, write, and speak in English and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and to develop one's knowledge and potential.

Comprehension is the reason or purpose for reading. In order to acquire information from a text, remember it later, and use it effectively, whether for work or pleasure, reading comprehension is essential for complete understanding (Gold, 1983).

In Adult Education, comprehension is defined as understanding a text that is read, or the process of constructing meaning from the text (Kirsch, 1993). Comprehension is a construction process because it involves all of the elements of the reading process, working together (Jungeblut, 1993). The reader must construct a writer's message without the benefit of live conservation, relying only on what is derived from the text and the reader's own prior knowledge or past experiences (Jenkins, 2004). The reader must monitor this construction process, solving problems and making repairs as needed (Kolstad, 1993). This involves the conscious use of comprehension strategies. During the reading process, there is interplay between the reader's preexisting knowledge and the written content. Competent reading is an active process in which the reader calls on experience, language, schemata (theoretical constructs of knowledge related to experiences) to anticipate and understand the author's written language (Burns, 2004).

Measuring Literacy Skills

The National Assessment of Adult Literacy measures basic adult literacy along three scales Illustrated in table 1—prose, document, and quantitative—composed of literacy tasks that simulate the types of demands that adults encounter in everyday life. Prose literacy tasks include understanding and using information from texts such as editorials, newspaper articles, poems, and stories. Document literacy tasks include locating and using information found in common artifacts such as job applications, bus schedules, maps, payroll forms, indexes, and tables. Quantitative literacy tasks include performing arithmetic operations required as prose and documents encountered in everyday life (e.g., bank deposit slips, checkbooks, order forms, loan applications) (National Center for Education Statistics, 2003).

Table 1 Overview of the literacy levels

Level and definition	Key abilities associated with level	Sample tasks typical of level
Below Basic indicates no more than the most simple and concrete literacy skills. Score ranges for Below Basic: Prose: 0–209 Document: 0–204 Quantitative: 0–234	Adults at the Below Basic level range from being non-literate in English to having the abilities listed below: ▪ Locating easily identifiable information in short, commonplace prose texts ▪ Locating easily identifiable information and following written instructions in simple documents (e.g., charts or forms) ▪ Locating numbers and using them to perform simple quantitative operations (primarily addition) when the mathematical information is very concrete and familiar	▪ Searching a short, simple text to find out what a patient is allowed to drink before a medical test ▪ Signing a form adding the amounts on a bank deposit slip

Table 1 Continued

Basic indicates skills necessary to perform simple and everyday literacy activities. Score ranges for Basic: Prose: 210–264 Document: 205–249 Quantitative: 235–289	▪ Reading and understanding information in short, commonplace prose texts ▪ Reading and understanding information in simple documents ▪ Locating easily identifiable quantitative information and using it to solve simple, one-step problems when the arithmetic operation is specified or easily inferred	▪ Finding in a pamphlet for prospective jurors an explanation of how people were selected for the jury pool ▪ Using a television guide to find out what programs are on at a specific time ▪ Comparing the ticket prices for two events
Skills necessary to perform moderately challenging literacy activities. Score ranges for Intermediate: Prose: 265–339 Document: 250–334 Quantitative: 290–349	▪ Reading and understanding moderately dense, less commonplace prose texts as well as summarizing, making simple inferences, determining cause and effect, and recognizing the author's purpose ▪ Locating information in dense, complex documents and making simple inferences about the information ▪ Locating less familiar quantitative information and using it to solve problems when the arithmetic operation is not specified or easily inferred	▪ Consulting reference materials to determine which foods contain particular vitamin ▪ Identifying a specific location on a map ▪ Calculating the total cost of ordering a specific office supplies from a catalog
Proficient indicates skills necessary to perform more complex and challenging literacy activities. Score ranges for Proficient: Prose: 340–500 Document: 335–500 Quantitative: 350–500	▪ Reading lengthy, complex, abstract prose texts as well as synthesizing information and making complex inferences ▪ Integrating, synthesizing, and analyzing multiple pieces of information located in complex documents ▪ Locating more abstract quantitative information and using it to solve multi-step problems when the arithmetic operations are not easily inferred and the problems are more complex	▪ Comparing viewpoints in two editorials ▪ Interpreting a table about blood pressure, age, and physical activity ▪ Computing and comparing the cost per ounce of food items

NOTE: Although the literacy levels share common names with the NAEP levels, they do not correspond to the NAEP levels.

SOURCE: Hauser, R.M, Edley, C.F. Jr., Koenig, J.A., and Elliott, S.W. (Eds.). (2005). Measuring Literacy: Performance Levels for Adults, Interim Report.Washington, DC: National Academies Press; White, S. and Dillow, S. (2005). Key Concepts and Features of *the 2003 National Assessment of Adult Literacy (NCES 2006-471). U.S. Department of Education.Washington, DC: National Center for Education Statistics.*

Statement of Problem

The ever increasing rapid pace of society has severely impacted adult education for over a century now. Once upon a time a person could make it through life without ever learning to read. However, in today's world were more reading is required in order to do much of anything; an illiterate person is a "danger" not only to themselves but also to others. The world today is multi lingual, diverse and communication driven, all of which places greater demand on one's ability to comprehend. In fact according to Merriam & Brockett, (1997), the three leading socio-cultural context dilemmas affecting the level of literacy, comprehension and nature of adult learning today are demographics, the global economy, and technology.

The demographics of the population in America are changing rapidly. Communities contain a complex mix of races, cultures, languages, and religious affiliations. During the year 2000, one of every three Americans was expected to be an ethnic minority (Bailey & Morris, 1999), in addition, by the year 2050, fifty percent of the United States. Population will be ethnic minorities (US Census, 1999). This diverse mix has the potential of being catastrophic as it relates to literacy. Many non-Americans have a difficult time reading and speaking the language, added to the 22 million Americans that read below basic levels (NAAL, 2003), spells trouble.

Aging of the population

In addition to a more diverse America, the population will be older. In 1997, the percentage of the population over age seventy-five rose dramatically (Farm Facts, 1999). This was due to increases in life expectancy and the aging of the baby boomer population. In regards to literacy this directly contributes to health problems and reduces the ability of seniors and their caregivers to access the information and help that they need. Literacy among the elderly can led to social isolation, which is often tied to, inadequate housing, transportation problems, and health issues.

Globalization

This rapid integration or move to a global economy has made the world seem to be a much smaller place (Worrell, & Hollingsworth, 1999). This integration is commonly referred to as Globalization. Globalization put in simple terms is the process of corporations moving their money, factories, and products around the planet at rapid rates of speed in search of labor and raw materials and consumers (McMichael, 1996).

The economic impact of globalization in the United States has been detrimental to the poor and unskilled. Each time a factory relocates to foreign soil, to save money and increase profits, it means a loss of jobs. A person with poor literacy skills are more likely to be unemployed, receiving government assistance (Welfare), and of poor health. The costs of these services directly impact the tax rates paid by others. The cost of health care for persons with low literacy skills is estimated to be four times the amount of the average American because of unnecessary health care expenses. As the economy becomes more global, and poor literacy skills continue to be on the rise, the costs to U.S. taxpayers is most likely to increase.

Technology

Since the early 1900's, changes in technology have had social and economic ramifications. Rapid technological advances have transformed the way individuals interact with the environment. Super high-speed computers, network, and communication systems make it possible to transfer information in the form of voice, data, and video into homes, offices, and industries across phone lines. Such systems spread ideas and concepts around the world faster than printed media (Ezell, 1989). Such developments are moving the world closer together while persons with low literacy skills are becoming more and isolated

Strategies of Adult Learning Programs

Much work is being done to address and improve the literacy skills adults and youth. There are many types of adult and family literacy programs that provide instruction strategies for adults. Each program uses a variety of teaching and delivery methods and evaluation.

Purpose

The purpose of this study was to examine the strategies and tools used to assess the literacy of adults enrolled in adult education programs across the Piedmont-Triad region of North Carolina. This research was an exploratory study using the measures of central tendency and variability as a means of describing phenomena systematically to reveal patterns and connections that might otherwise go unnoticed (Huth, 1986). To accomplish the aforementioned purpose the following research questions were developed.
1. How do adult programs in the Piedmont-Triad region of North Carolina define literacy?
2. How is adult literacy assessed by adult programs in the Piedmont-Triad region of North Carolina?
3. What strategies are utilized by adult programs in the Piedmont-Triad region to address adult literacy?
4. What are the characteristics of literacy challenged adults enrolled in adult programs in the Piedmont-Triad region of North Carolina?

Methodology

The purpose of this study is to examine the strategies and tools used to assess the literacy of adults enrolled in adult education programs across central North Carolina. This research was a descriptive exploratory study using the measures of central tendency and variability as a means of describing phenomena systematically to reveal patterns and connections that might otherwise go unnoticed (Huth, 1986). To accomplish the aforementioned purpose the following research questions were developed.

This study used a descriptive design to determine what assessment tools are used to measure literacy among adults as well as possible solutions to increasing the level of literacy of adults in these programs and related activities.

Population

The population for this study consisted of 57 administrators and instructors of adult programs in the Piedmont-Triad region of North Carolina (N=57). A listing of administrators and instructors were obtained from extension agents, YMCA's and United Way's in the Piedmont-Triad region.

Instrumentation

The survey instrument for this study consisted of a survey containing 17 questions. The survey was designed to gauge the opinion of administrators and instructors regarding assessment practices of adult programs in North Carolina. These survey questions were designed to gauge possible solutions to increasing the level of literacy of adults in these programs and related activities. The survey also measured various demographic variables of the Piedmont-Triad region. Some questions were utilized as a Likert-type scale with the following responses: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

The validity of the instrument was established by means of content and face validity. Brown (1983) defined content validity as the degree to which items on a test representatively sample the underlying content domain. Brown recommended using expert judges as one means of establishing content validity. A panel of experts consisting of the graduate student's thesis committee reviewed the instrument. Face validity was established during a pilot study consisting of emailing 57 administrators in the Piedmont-Triad region of North Carolina that was not included in the final survey population. To establish internal consistency reliability, the pilot tested instrument was analyzed utilizing Cronbach's alpha according to conventions established by Nunnally (1967) and Davis (1971).

Data Collection

Elements of Dillman's Total Design Method (2000) were utilized to achieve an optimal return rate. A two round mail questionnaire approach was utilized for this study. The first round consisted of adult program administrators and instructors receiving a cover letter, a survey, and a return stamped envelope from the researcher and the researcher's major professor outlining the purpose of the research. Agents were given one week to return the initial survey. The next round consisted of all non-respondents receiving a follow-up letter stressing to them the importance of returning the survey. Non-respondents were given one week to return the survey.

Results

Question one asked the respondents what type of adult programs was implemented into their programs. Respondents were allowed to choose more than one entry if they had more than one instruction implemented into their program to insure that learning is actually taking place. Table 2 describes in great detail the types of program each participant offered in their programs.

Table 2   Programs Offered to Adults (N=18)

Response	Frequency	Percent
Assistive Technology	0	0
Academic Tutoring	5	28
Academic Advising	1	6
Career Planning	2	11
Family Literacy	8	44
English as a Second Language	12	67
Workplace Basic Skills	6	33
Voluntary Literacy Program	9	50
Correction Education	2	11
Retraining	1	6
School to Work	2	11

*Participants could choose more than one

Twenty-eight percent of the participants stated that they used academic tutoring. Only 1 used Academic Advising and Retraining in their program. Eleven percent stated using Career Planning, Correction Education and School to Work Training in their programs. Thirty-three percent of the programs used Workplace Basic Skills. Forty-four percent of the programs had family Literacy implemented into their program. Voluntary Literacy Programs were implemented into 50 percent of the programs. Sixty-seven percent of the programs stated that they had English as a Second Language in their programs.

Survey question two asked the administrators and instructors what delivery method they used in their classrooms. Table 3 describes how administrators in the Piedmont-Triad responded to this question.

Table 3   Delivery Methods

Response	Frequency	Percent
Traditional	11	61
Correspondence	1	6
Internet	0	0
Both Traditional & Correspondence	1	6
Both Traditional & Internet	1	6
All of the above	2	11

Traditional delivery is using basic classroom strategies and props to reach the learners. Sixty-one of the participants still used the traditional delivery method in their program.

Communicating through correspondence delivery, both traditional and correspondence and both traditional and internet were reported to be used in only six percent of the programs. Out of all 18 participants in the survey, none used the internet alone as a delivery method. Another eleven percent used all of the methods provided altogether to reach their learners.

Table 4 describes responses on their methods of assessing adult literacy.

Table 4 Assessing Literacy in Adult Programs

Response	Frequency	Percent
Standardized testing	10	83
Competency based	6	33
Participatory	4	22

Eighty-three percent of the participants used standardized testing in their programs to assess their adults. Competency Based was used by only 33 percent of the programs surveyed to assess adult Literacy. The programs that used participation as a method of assessing their adults totaled 22 percent.

Table 5 discusses the researcher's findings on textbooks in adult programs.

Table 5   Textbooks in Adult Programs

Response	Frequency	Percent
Yes	8	44
No	7	39

The participants were asked if their program required a textbook. Forty-four percent of the participants responded that they used textbooks in their programs. Thirty-nine percent of the programs did not require a text or relied on other methods of contextual information to deliver material to their participants.

Survey question five asked the participants how they measured the readability of their textbooks. Table 6 discusses their responses in detail.

Table 6   Measuring the Readability of the Textbook

Response	Frequency	Percent
Sentence structure	8	44
Interest and motivation	8	44
Legibility and layout	8	44

*Participants could choose more than one

This data indicated that forty-four percent measured the readability of their textbooks through sentence structure. Another forty four percent used interest and motivation for measuring. The last forty-four percent used legibility and layout to measure the readability of their text to the learners. They were able to choose all entries that applied to their program.

This survey question asked the participants what types of commercial tests they used. Table 7 describes the findings in detail below.

Table 7   Commercial Testing

Response	Frequency	Percent
CASAS	11	61
Academic Profile	1	6
Entry-level Mathematics Test	1	6
English Placement Test	2	11

CASAS tests were used by sixty one percent of the participants. Academic profiles were used by six percent to test their learners. Entry-level Mathematics tests were also used by six percent. English Placement tests were used by 11percent of the participants.

Table 8 discusses in detail the level of agreement of administrators on literacy.

Table 8   Instructors and Administrators Level of Agreement on Literacy

Response	Frequency	Percent
Very High	11	61
Moderate	3	17
Very Low	0	0

Sixty-one percent of the participating programs said they agreed very highly that the same literacy issues are seen in their programs. Seventeen percent of the participants moderately agreed. No participants responded to say very low.

Survey question seven asked the participants what illiteracy related issues they often found in their programs. Table 9 discusses in detail the findings.

Table 9   Illiteracy Issues in Adult Programs

Response	Frequency	Percent
Reading below average reading level	15	83
Lack of motivation and confidence	12	67
Unable to apply learned information to a new job created	2	11
Intimidated of new technology in the classroom and on the job	7	39
Older adults intimidated in the classroom and on the job of younger adults	3	17

This question asked the participants what illiteracy related issues they often found in their program. Reading below average reading level was observed by 83 percent of the participants. Sixty-seven percent of the programs responded by saying that they observed a lack of motivation and confidence in their learners. Eleven percent were unable to apply learned information to a new job created. Thirty-nine percent saw intimidation toward new technology in the classroom as well as on the job. Seventeen percent of older adults were intimidated by young adults on the job as well as in the classroom.

Survey question eight asked the participants who in their programs were responsible for seeing to it that meeting the needs of literacy were being met. Table 10 discusses the researcher's findings.

Table 10   Meeting the Needs of Adult Literacy

Response	Frequency	Percent
Program Developers	2	11
Academic Administrators	1	6
Coordinators	11	61
Director of Studies	3	17
Teaching Staff	3	17
Teacher Training Personnel	1	6

Eleven percent of program developers were responsible for educating and seeing to it that the needs of literacy were met. Six percent of the job was done by the academic administrators and teaching training personnel. Sixty-one percent of coordinators worked with these adults to

maintain learning in their programs. The director of studies and the teaching staff took over another 17 percent of this task.

Survey question thirteen asked the participants what kind of instruction their program participants received. Table 11 introduces the findings of the types of instruction received by program participants.

Table 11   Instruction Received by the Participants

Response	Frequency	Percent
ABE	12	67
ASE	4	22
ESL	11	61
LEA	2	11
LVA	6	33
GED	3	17
PACE	0	0
CBO	7	39

Sixty-seven percent of the programs used Adult Basic Education as instruction for their learners. Adult Secondary Education was used by 22 percent of the programs. Sixty-one percent based their assistance through English as a Second Language teaching. Local Education Agencies provided assistance for 11 percent. Thirty-three percent used Literacy Volunteers of America. General Equivalency Diploma training was provided to seventeen percent of the learners. Program for Adult College Education was not used by any of the participants. Community Based Organizations were used by 39 percent of the instructors as instruction to adult learners.

Survey question fourteen asked the participants who the instructors of the programs were. Table 12 discusses in detail the researcher's findings.

Table 12   Instructors of Adult Programs

Response	Frequency	Percent
Volunteer /paid instructors	13	72
Part-time/professional teachers	4	22
Certified in adult education	3	17

Seventy-two percent were volunteers or paid instructors for their programs. Twenty-two percent were part-time professional teachers. Seventeen percent were certified in adult education. Some of the participants fell into more than one category and had to give more than one response.

Findings

Objective One

      Based on the findings of this study, the administrators of adult programs in the Piedmont-Triad region of North Carolina define the term literacy as how well the learner is able to read and write. Literacy comprehension and reading are said to be synonymous because when understanding breaks down, reading actually has not occurred.

      Reading and writing comprehension is an interactive process of meaning construction. The reader's background knowledge structures (schemata), the information in the text, and the context in which the reading takes place all interact to produce comprehension. Schemata related to the reading material must be activated if students are to comprehend material as fully as possible.

      Phonic analysis involves breaking down words into basic sound elements and blending these sounds together to produce spoken words. Phonic analysis is not taught by the content area teacher but lies in the hand of the reading teacher and basic skills instructor.

      With regard to writing comprehension, the use of the dictionary's spelling of a word is helpful and is an important skill for students to master. Many students need lessons in using the dictionary's pronunciation key to help them decode the word and then spell it out.

Objective Two

      This study found that literacy skills are measured on a scale consisting of three major components. They are prose, document, and quantitative. They are basic tasks that adults are faced with on a daily basis. These three things include comprehending information read in text and using it later in an authentic manner, using information in usual attachments such as job applications, bus schedules, maps, payroll forms, indexes, and tables.

Objective Three

      This study found that programs in the Triad-Piedmont region of North Carolina use strategies such as Adult Basic Education (ABE), English as a Second Language (ESL), English Literacy/Civics Education (EL/Civics), Adult Secondary Education (ASE), Family Literacy, Correction Education and School-to-Work to address adult literacy.

      Adult Basic Education (ABE) was made the most simple of all the strategies used to promote an immediate connection to raise the learning level of adults. ABE is usually combined with other methods such as family literacy, workplace and workforce training activities. Adults who used this source of help did not complete high school.

      English as a Second Language (ESL) is a method of assistance for learners that are foreign to the English Language. This program provides training to English language learners that lack fluency in the areas of reading, writing, talking and listening. If the student excels with this instruction, they can be promoted for enlisting into Adult Basic Education, Adult Secondary Education and combined with workplace and workforce training or family Literacy activities.

English Literacy/Civics Education (EL/Civics) is a source of help that was federally funded in 2001to help English Language learners to better adapt to their environment, and communicate with native language speakers on a more intense social level. This program also aids in familiarizing these learners with the laws they are expected to follow in their new communities.

Adult Secondary Education (ASE) is designed to help adults receive training to complete a program to obtain their GED and diploma through a planned program outside of high school. This program is also designed to help adult high school graduates sharpen their professional skills in math, reading, and writing to better fulfill their duties as parents, employees and conversationalists. If the participants pass each GED test given, they can receive a certificate stating that they have enough credits to receive an equivalent high school diploma.

The Family Literacy program is a higher level of training that provides professional training for adults in the areas of higher education and economic self- sufficiency. This is the best strategy of all because it teaches parents to be the main educator of the child instead of the teacher. The program allows the parent and the child to enhance their literacy skills together.

Community and technical colleges allow incarcerated adults to involve themselves in Correction Education programs at all the state's correction facilities. These programs offer adult literacy and vocational training that includes GED instruction combined with Adult Basic Education and English as a Second Language. The program is allotted youth offender funds to incarnated young adults up to age 25. Depending on their success in the program, these adults are able to enter into community college after being released from jail.

The School-to-Work program helps to aid in the transition for all types of adults from their training to entering into the workforce. This program uses learners as resources as they share their knowledge and expertise with others in the class. They combine life-skills reading competencies with phonic word recognition, word order, spacing words in a sentence, reading words in context, and reading comprehension.

Objective Four

This study found that most of the characteristics of illiterate adults in the Piedmont-Triad region of North Carolina are similar to the characteristics found in other programs across the nation. These tend to be problems with memory, reasoning and processing, reading, writing and concentration. Because of their poor reading ability, they may have difficulty filling out job applications or forms. By poorly filling out the application, they can be left unemployed. If they are given a list of questions that will be asked during an interview, and they have trouble reading information pertinent to the interview, they will be unprepared and rejected for the position being offered. If an adult cannot count money and has difficulty using a calculator they can be cheated out of the right amount of change given back to them or end up paying too much for something. Illiterate adults may overdose or catch an allergic reaction because they cannot read labels on food or medicine containers. They may add too much of an ingredient to their meal because they did not accurately read a recipe.

Recommendations

Based on the findings of this research study and data analysis, the following recommendations are made for further research:

5. Further research should be conducted in other regions of North Carolina to examine the different characteristics of Adult literacy programs.
6. Further research should be conducted in other regions of North Carolina to examine the assessment systems utilized by these respective programs.
7. Further research should be done to see what types of instructional strategies and assessments are utilized by privately owned adult literacy programs throughout the state of North Carolina.
8. Further research should be conducted to analyze the various curriculum materials utilized by adult literacy programs in the state of North Carolina and the effect on the learning outcomes of the organizations.

Implications

Based on the findings and conclusions presented in Chapters 4 and 5, the researcher is led to present the following implications that are beneficial to individuals. Findings of this study presented the fact that programs are not fully meeting the needs of the growing literacy problem of the adult population in the Piedmont-Triad region. This study has demonstrated the need to improve program curricula by taking administrators and instructors' perceptions into account when determining how to meet the needs of adult literacy. This study has demonstrated that more effort needs to be made to reach adults regardless of their educational experience and/or level of literacy. If America is truly a melting pot of diversity and cultural exchange, then adult programs must be actively involved in aiding this process, by encouraging the population of administrators and instructors to participate in America's wealth of educational opportunity.

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