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Curriculum development for disadvantaged students enrolled in nursing courses in career and technical education programs

Wanda Jean Vickers

CURRICULUM DEVELOPMENT FOR DISADVANTAGED STUDENTS ENROLLED IN NURSING COURSES IN CAREER AND TECHNICAL EDUCATION PROGRAMS

A Project

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

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in

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by

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ABSTRACT

The purpose of this thesis was to address the increase in enrollment of disadvantaged students in career and technical educational programs in the nursing profession. There is a need to utilize specific teaching modalities to benefit individual learning styles, which will increase the success of these students in career and technical nursing programs.

The purpose of the study was to identify the characteristics of special needs students in technical educational programs; identify common learning disabilities; and to develop effective strategies in meeting the needs of these students to succeed in regular vocational education programs.

The focus of the study was to development a curriculum and to modify current lesson plans to teach special needs students in career and technical education courses in nursing. A lesson plan was developed emphasizing effective teaching strategies to teach students with Attention Deficit Hyperactivity Disorder (ADHD).

The program goal was to meet the needs of all students in the classroom, and that all students when given the tools and opportunity, can be successful. The

challenge to the educator is to develop teaching strategies to meet the individual needs of each student. Despite the challenge, "good teachers" are those who can meet the needs of all students, regardless of what those needs may be. The handbook provides effective strategies to meet these goals.

ACKNOWLEDGMENTS

I would like to give special thanks, first of all, to my parents who have always encouraged me to pursue my education endeavors and who have always emphasized the importance of a good education. I have been assisted and supported by many other special people, including family, friends, colleagues, and educators. My students have challenged me as an educator to teach to their individual needs and learning styles to ensure success for all students and through those challenging classroom experiences have encouraged me to write this thesis. Special thanks to Dolly Adams, Rose Bonilla, Edna Bartholomew, and Carla Crow, nursing instructors, for their valuable expertise and contributions. A special thank you is extended to Dr. Ron Pendleton, Timothy Thelander, and Dr. Joe Scarcella for your time, support, advice, and encouragement in completing this project. Despite the many other challenges unknown to many, I am thankful to God for strengthening me to accomplish my educational endeavor.

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CHAPTER ONE

BACKGROUND

Introduction

The contents of Chapter One presents an overview of the project. Challenges of the curriculum development in technical education are discussed within the context of the problem, followed by the purpose, significance of the project, and assumptions. Next, the limitations and delimitations that apply to the project are reviewed. Finally, the chapter concludes with operational definitions of terms.

Purpose of the Project

The purpose of the project was the development of effective teaching modalities (teaching styles) for disadvantaged students enrolled in career and technical education programs in nursing. In order to create an educational environment where all students have a better chance to become successful, to improve learning performance, and to ensure that specific competencies for both clinical and theory subject matter are met by each student, changes must be directed toward teaching methods. Effective teachers must utilize curriculum and specific teaching modalities to benefit individual differences and

to provide the accommodations necessary to allow maximum success for each student in the class.

Context of the Problem

Curriculum development has always been a challenge for educators. Developing a technical education curriculum for disadvantaged and at-risk students could be an even greater challenge for educators who must meet specific state and vocational education guidelines. A disadvantaged individual is defined as a person who has academic or economic disadvantages or limited English-speaking abilities, who require special services and assistance in order for them to be able to succeed in regular vocational education programs (Kraska, 1996). To clarify the word "at risk," the definition is any student that performs substantially below their ability levels and/or are in danger of dropping out of school or at least out of one or more courses (Edwards, 1994).

Historically, the capabilities of persons with moderate to severe handicaps or disabilities have been underestimated. Persons with moderate to severe handicaps have solidly demonstrated their abilities to learn complex tasks (Crosson, 1967; Gold, 1972); to perform tasks at high production levels (Bellamy, 1976); and to perform

successfully in a variety of competitive employment sites (Rush & Mithaug, 1980; Sowers, Thompson, & Connis, 1979; Wehman, 1980). The clear implication is that productivity or lack of vocational success cannot be attributed simply to the presence of a handicapping condition. In fact, the research strongly suggests that there is no individual whose handicap is so severe as to make his/her productive capacity inconsequential. The evidence overwhelmingly supports the claim that people with moderate to severe handicaps are capable of becoming vocationally competent workers. With specialized and structured training, persons with moderate to severe handicaps can successfully be taught a variety of skills in diverse environments, whether they be in sheltered work environments or in competitive community placements (Fredericks, 1987).

Whether the student entering a technical education class has a handicap, or is labeled as a disadvantaged or at-risk student, certain prerequisites must be met for the student to be successful in the class. The student must have a solid background of mathematic classes (at least up to algebra) and a background of science classes (chemistry, biology, etc.) with a grade of C or better and should have good reading comphrension skills. The problem is that many disadvantaged students, at-risk students, and

handicapped students may not meet the prerequisite requirements, which contributes to their failure rate in completing the technical education classes in nursing. Many of these students have poor critical thinking skills, which are essential to the nursing student in applying theory to the clinical environment. This fact may put the instructor, patient, and clinical facility at risk for patient safety.

Significance of the Project

The significance of the project was to develop a curriculum for disadvantage students, which also may include students with disabilities (learning and physical) that cover numerous learning style preferences, which are effective in increasing the success rate of these students in pursuing a technical education career in nursing. This integration of learning styles, assessment of individual learning styles and their ability to process information, ensures that educators accommodate the "whole brain". All learners have a learning style preference based on their sensory intake of information.

Assessment and screening of students entering in career and technical education classes is very essential to the success of the student and in providing, the

instructor valuable information related to the students evaluation and learning style differences. Prerequisites for the class should be evaluated during the registration process in order to assure the student adequate performance in the class, and to assure that any special needs are identified. Educators on the other hand, need to be trained and equipped to teach the disadvantaged student and to meet their special needs in order to be successful in the class. Kraska (1996), reports that the increase number of special population learners, (disadvantaged, at-risk and handicapped students) being served by technical education and the demands of these populations make it imperative that technical education teachers be fully prepared to serve these groups effectively.

Assumptions

The following assumptions were made regarding the project:

1. Teachers using this guide will possess basic teaching strategies to aid disadvantaged students and students with learning disabilities in technical education courses.
2. Teachers using the guide will have knowledge of basic learning disabilities and how to

effectively enhance the learning experience of special need students.

3. Teachers using the guide will have knowledge of assessment modalities of students in their individual learning styles.

Limitations and Delimitations

During the development of the project, a number of limitations and delimitations were noted. These limitations and delimitations are presented in the next section.

Limitations

The following limitations apply to the project:

1. The curriculum section of the guide was designed for use with Technical Education courses in nursing.
2. The curriculum section of the guide was designed for high school and adult students.

Delimitations

The following delimitations apply to the project:

1. The curriculum guide could be modified to meet the need of teachers teaching classes other than Technical Education courses.

Definition of Terms

The following terms are defined as they apply to the project.

Accommodations - Refers to adjustments and modifications within a general education program to meet the needs of students with disabilities (Lerner, 1996).

At-Risk learners - Students that perform substantially below their ability levels and/or are in danger of dropping out of school or at least out of one or more courses (Edwards, 1994).

Attention-Deficit/Hyperactivity Disorder (ADD/ADHD) - is characterized by symptoms of inattention, hyperactivity and/or impulsivity that are developmentally inappropriate and are the result of other conditions. Symptoms must have occurred before age seven and exist in two or more settings. Students may be classified with one of three types: predominantly inattentive, predominantly hyperactive-impulsive, or combined (Turbull, 1999).

Disadvantaged Individuals - Persons who have academic or economic handicaps or have limited English-speaking abilities, who require special services and assistance in order for them to be able to succeed (Kraska, 1996).

Dyslexia - A disorder in recognizing and comprehending written words as a result of a developmental language impairment (Turnbull, 1999).

Inclusion - The term educators use to describe the goal of integrating students with disabilities into the same classrooms, community activities and resources, and home settings as students who do not have disabilities (Turbull, 1999).

Learned Helplessness - A condition in which individuals who have experienced repeated failure tend to expect failure (Turbull, 1999).

Learning Disabilities - Include disorders involved in understanding or in using spoken or written language that result in substantial difficulties in listening, speaking, reading, written expression, or mathematics (Turbull, 1999).

Learning Styles - A biologically and developmentally imposed set of personal characteristics that make the same teaching method effective for some and ineffective for others (Rief, 1996).

Mnemonic - A device-for example, a rhyme, formulas, or acronym-used to aid memory (Turbull, 1999).

Multiple Intelligences - Different kinds of giftedness that are found across cultures and societies (Turbull, 1999).

Peer Tutoring - Instruction of one student by another for the purposes of instructional and social support (Turbull, 1999).

Receptive Language Disorders - Difficulties with receiving and understanding language (Turbull, 1999).

Technical Education - A term used to identify a level or sub-set of vocational or occupational education that involves the preparation for or upgrading within occupations that lie some place between the skilled craftsman and the professional. The occupations tend to involve a heavier reliance upon understanding and competence in mathematics and science than might be found in most occupations that require less than baccalaureate level preparation (Scarcella, 1999).

Vocational Education - This term is used to identify a broad array of educational programs designed to prepare a person to enter an, or to upgraded within an, or to retrain for new occupation that does not require a baccalaureate or other advanced degree for entry (Scarcella, 1999).

Organization of the Thesis

The thesis portion of the project was divided into four chapters. Chapter one provides an introduction to the context of the problem, purpose of the project, significance of the project, limitations and delimitations and definitions of terms. Chapter Two consists of a review of relevant literature. Chapter Three documents the steps used in developing the project. Chapter Four presents conclusions and recommendations drawn from the development of the project.

CHAPTER TWO

REVIEW OF THE LITERATURE

Introduction

Chapter Two consists of a discussion of the relevant literature. Review of the literature include inclusion of special needs students in technical education programs, the disadvantaged and at-risk student, common learning disabilities: dyslexia; attention deficit/hyperactivity disorder (ADD/ADHD); emotional or behavior disorders; limited English proficiency. Learning styles, and teaching strategies and are the last part of this chapter, followed by the summary.

Inclusion of Special Needs Students in Technical Education Programs

As today's classrooms become more inclusive and students with special needs are integrated into regular classrooms, these same students are enrolling in to technical educational programs as well. Federal legislation mandates that the full range of vocational education programs and services be accessible to special populations. The Perkins Act describes, members of these "special populations" as "individuals with handicaps, educationally and economically disadvantaged individuals

(including foster children), individuals of limited English proficiency, individuals who participate in programs designed to eliminate sex bias, and individuals in correctional institutions" (Kraska, 1996, p. XX). According to Kraska (1996), the Perkins Act has specific definitions for the following terms.

- The term *disadvantaged* means individuals (other than individuals with handicaps) who have economic or academic disadvantages and who require special services and assistance in order to enable such individuals to succeed in vocational education programs. Disadvantaged includes individuals who are members of economically disadvantaged families, migrants, individuals of limited English proficiency and individuals who are dropouts from, or who are identified as potential dropouts from, secondary school.
- The term *economically disadvantaged family or individual* means such families or individuals who are determined by the Secretary to be low-income according to the latest available data from the Department of Commerce.

- The term *individual with handicaps* means any individual who is an individual with any disability (as defined in section 3 [2] of the Americans With Disabilities Act of 1990).

Further noted by Kraska (1996), The National Assessment of Vocational Education: Final Report to Congress (1994) found that individuals with disabilities and/or economic and academic disadvantages (including limited English proficiency [LEP]) take more vocational education than other students. The legal, financial and social pressures are making it more likely that learning disabled, mildly retarded, and mildly emotionally disturbed children will appear with increasing frequency in regular classrooms. One goal of the Perkins legislation and a primary task for vocational education is to ensure that individuals in these special populations develop the knowledge and skills they have historically lacked (Kraska, 1996).

The Disadvantaged and At-risk Student

The population of students has changed with respect to culture, ethnicity, and the integration of special need students in the classroom. Additionally, there are other variables that are affecting the students in the public

school classroom. The combination of economic and social forces, individual perceptions of school, and varying learning styles, disabilities, and health issues that effect a students performance in school. This has created more and more students who are at risk of failure, thus labeled at-risk.

Cardon (1998), gives the following definition of at-risk students, which have three characteristics:

- First, they are students who are at risk of not achieving the goals of education, of not meeting local and state standards of high school graduation, and of not acquiring the knowledge, skills, and dispositions to become productive members of society (receiving less than 2.00 grade point average).
- Second, they are children who exhibit behaviors that interfere with themselves and others attaining an education, requiring disciplinary action (at least three incidents).
- Third, they are those whose family background characteristics may place them at risk (low income to poverty level, non-English native speaker, etc.).

Characteristics

Cardon (2000), refers to the following common characteristics that define at-risk students:

Individual

- history of school absenteeism,
- poor grades,
- low math and reading scores,
- low self-concept,
- history of behavior problems,
- inability to identify with other people,
- employed full time while in school,
- low socioeconomic background,
- more males than females,
- feel alienated and isolated.

Family

- family with several siblings,
- father absent from the home,
- father unemployed,
- father did not complete high school,
- mother absent from the home in early adolescence,
- little reading material in the home.

According to Womble (1997), youth at risk could mean a young person who is chemically dependent, a runaway, suicidal, pregnant, economically disadvantaged, a minority, or a school dropout. Today, dropouts, students who leave school as early as the law permits and without the benefits of diploma or graduation, remain the most visible at-risk population. Wommble (1997) also suggested that many of the teaching modalities utilized in vocational education, such as hands-on training, performance-oriented approach, and its emphasis on individual and small-group activities, make it an effective mechanism for increasing high school graduation rates.

Educators have a responsibility to learn more about at-risk youth. Understanding the family systems and dynamics that produce at-risk students is very essential. With this knowledge, educators can begin to understand and develop possible intervention and helping strategies and, therefore, make a difference in the lives of their students.

Common Learning Disabilities

To be an effective teacher it is imperative to have awareness, sensitivity, and understanding of the academic,

behavior, and social/emotional difficulties some of our students have. According to Reif (1996), learning disabilities can cause difficulty with language, memory, listening, conceptualization, speaking, reading, writing, spelling, math, and motor skills—in various combinations and degrees. Learning disabilities (LD) is a term used to describe a neurological handicap that interferes with someone's ability to store, process, or produce information. It affects approximately 10 percent of the population. Each individual is unique and has a combination of strengths and weaknesses. Learning disabilities can be quite mild and subtle, and may go undetected; or they may be quite severe, greatly affecting one's ability to learn or acquire a vocational skill.

Rief (1996), suggests that types of learning disabilities may affect any combination of: the reception or input of information into the brain (visual and /or auditory perception), the integration of that information in the brain (processing, sequencing, organization), the retrieval from storage (auditory and/or visual memory), and the output or expression of that information (communicating motorically or through oral/written language).

Fortunately, over the past 20 to 25 years there has been much more education and awareness regarding specific learning disabilities. An understanding of the basic characteristics of children with learning disabilities is essential to the technical education instructor. Below you will find a "Symptomology Checklist" of common characteristics of children with learning disabilities as suggested by Rief (1996).

Dyslexia

Severe reading problems are often referred to as dyslexia (Turbull, 1999). Dyslexia is a learning disability characterized by problems in expressive or receptive, oral or written language. Students who exhibit written language problems may:

- Have a hard time getting started and feel overwhelmed by the task;
- Struggle to organize and use mechanics of writing;
- Struggle to develop their ideas fluently;
- Often have difficulties with spelling and constructing written products in a legible fashion;

- Submit written work that is too brief (Turbull, 1999).

People with this disorder find it extremely difficult to recognize letters and words and to interpret information that is presented in print form. Many people with dyslexia are intelligent in other ways. For example, they may have very strong mathematics or spatial skills (Lerner, 1997).

Effective Teaching Strategies

Turbull (1999) suggests, that students with dyslexia need the following teaching practices as well as those mentioned under the teaching strategies for ADHD.

1) Set Curricular Goals

2) Implement Instruction

- Employ learning strategies

  Programs outside of technical education programs must be utilized to teach reading skills. Also methods must be presented to improve word recognition, improving fluency, and improving reading comprehension. According to Lerner (1996), computers have been found to be successful with teaching reading.

Attention Deficit/Hyperactivity Disorder (ADD/ADHD)

ADD/ADHD is not a new phenomenon. As early as 1902, George Still identified students who had characteristics of ADD/ADHD. Still, a London physician, identified a new class of "sick" children. They had average or higher intelligence and "an abnormal deficit of moral control" being unable to obey adults or delay their gratification (Turbull, 1999).

ADHD is often described by the medical/scientific community as a "neurological inefficiency" in the area of the brain that controls impulses, aid in screening sensory input, and focuses attention. According to the researchers, they have found that there is less activity taking place in that portion of the brain. ADHD is viewed by many as a biological disorder of which there is a chemical imbalance or deficiency in certain chemicals called neurotransmitters in the area of the brain responsible for attention and activity, and the ability to inhibit or control behaviors (Reif, 1996).

Rief (1996), provides the following clinical definition of ADHD. It is provided by the Diagnostic and Statistical Manual (DSM) of the American Psychiatric Association, and has been revised several times over the

past 15 years. The most recent clinical definition of ADHD is the new DSM_IV manual (4th ed., 1996). It contains 18 symptoms of ADHD which are listed in two separate categories:

Nine symptoms of INATTENTION: fails to give close attention to details or making careless errors in schoolwork or other activities; has difficulty sustaining attention in tasks or play activities; often appears not to listen; does not follow through with instructions or fails to finish tasks; has difficulty with organization; avoids tasks that require sustained mental effort such as schoolwork; loses things necessary for tasks or activities; is easily distracted by extraneous stimuli; is forgetful in daily activities.

Nine symptoms of HYPERACTIVITY-IMPULSIVITY: fidgets with hands or feet, or squirms in seat; is unable to sit during periods of time when remaining seated is expected; runs about or climbs excessively in inappropriate situations (with adolescents or adults this is usually manifested as restlessness); has difficulty playing quietly; is on the go constantly as if "driven by a motor"; talks excessively; blurts

out answers to questions; interrupts others; has difficulty waiting in line or waiting turns in games.

It is important that educators take great caution in their role of identifying students who may or may not have ADHD. The role of the educator is to share objective observations and concerns with parents, counselors, school nurse and other support staff. Although the student's behavior may be very disruptive with the instructors ability to teach, and affect the learning environment for other students as well, these students may perform well with hands -on activity versus traditional classroom lecture settings.

Many different kinds of treatments are prescribed for individuals with learning disabilities, including medication therapy and various forms of diet control. Treatments with a medical basis are among the most vigorously debated issues in the field of learning disabilities.

Effective Teaching Strategies

Rief (1996), suggests that students with ADHD and/or Learning Disabilities need:

- Clarity of expectations
- Structuring of work environment, tasks, and materials

- External assistance in helping to get and maintain attention
- Cueing, prompting, and reminders
- Active learning
- Help with organization and study skills
- Learning style accommodations
- Predictability of schedules and routines,
- Extra time to process information and output/perform tasks,
- Extra space,
- Help with coping skills and feelings of frustration,
- Choices,
- Teaching strategies that build upon their strengths and help bypass their weaknesses (Rief, 1996).

Emotional or Behavior Disorders

According to Turbull (1999), emotional disorders identified under Individuals with Disabilities Education Act (IDEA)are defined in the following way:

The term means a condition exhibiting one or more of the following characteristics over a long time and to

a marked degree that adversely affects a student's educational performance:

A. An inability to learn that cannot be explained by intellectual, sensory, or other health factors.

B. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.

C. Inappropriate types of behavior or feelings under normal circumstances.

D. A general pervasive mood of unhappiness or depression.

E. A tendency to develop physical symptoms or fears associated with personal or school problems.

F. The term includes schizophrenia (Turbull, 1999).

Students with emotional or behavior disorders also Possess many positive characteristics. Some students may not be identified under IDEA, because their emotional or behavior disorders do not interfere with their educational progress. Perhaps to our surprise, some characteristics of students who are served in special education under IDEA's category "emotional or behavioral disorders" are relatively stable. Turbull (1999), focuses on five main characteristics: (a) anxiety disorder, (b) mood disorder,

(c) oppositional defiant disorder, (d) conduct disorders, and (e) schizophrenia.

Many students with learning disabilities develop emotional problems. These reactions can take many forms, including conscious refusal to learn, overt hostility, resistance to pressure, clinging to dependency, quick discouragement, fear of success, and withdrawal into a private world (Lerner, 1996).

According to Lerner (1996), research shows that students with learning disabilities often have very negative views of themselves. They do not receive the normal satisfactions of recognition, achievement, or affection. Their unsuccessful academic and/or social experiences lead to disappointment, frustration, feelings of incompetence, lack of self-worth, and a poor self-concept. The teacher may be convinced that the student could do it "if she just tried harder." The teacher is unable to comprehend their difficulties. Failure now may be viewed purely in terms of bad behavior, or attitude, or lack of motivation. Increased impatience and blame from the teacher intensify the student's anxiety, frustration, and confusion.

Effective Teaching Strategies

Turbull (1999), describes two main effective teaching Practices for students that display emotional or behavioral disorders.

1) Set Curricular Goals

This consists of setting:

(A) Emotional and Behavioral Goals

(B) Social Goals

(C) Academic and Career Goals

2) Implement Instruction

A frequently used technique of instruction with students with emotional or behavior disorders is called *applied behavior analysis (ABA)*. The basic theory principle is that all behaviors are learned responses to external stimuli. Its goal is to change the stimuli that a student receives in order to change the student's behavior, reducing and perhaps eliminating the problem behaviors and increasing the behaviors that lead to the student's emotional, social, and academic success

Strengthening self-esteem, the feeling of self worth, self-confidence, and self-concept is also of great importance. A more constructive approach is to help the

students accomplish an educational task so that their feelings of self-worth are oriented in a positive direction. Their accomplishments can increase their ability to learn and strengthen their emotional outlook.

Teaching strategies to build self-esteem and to enhance a healthy mental attitude should be utilized such as building a good relationship between student and teacher in order to establish a good rapport; shared responsibility and involvement of both the teacher and student in working on the learning issues; providing positive feedback and praise as the student meets established goals.

Limited English Proficiency (LEP)

One of the strengths of our nation is the diversity of our population. California has the largest number of immigrant children within our schools. These students bring with them a wealth of talent, strengths, and motivation to learn. Our schools are filled with many children for whom English is not their primary language, and are limited in their English proficiency (LEP). Many of these students seek jobs and may not continue on to persue a college education. Many LEP students enroll in technical education programs in order to acquire a skill

and train in a career. Teachers need to have basic awareness general cultural diversity issues and how to instruct students who have not yet acquired the ability to understand or speak English fluently.

This may create a challenge for the instructor as well as for the LEP student. Areas of concern in career and technical education may rise in the area of safety and competence in the area of skills and performance. Another area of concern, may be in the area of certification in the career choice. Many technical education programs require students to pass a state written and skills performance exam, as in the nursing career. The written exams are only given in English, as in most vocational programs. These students usually do well with hands-on activities, but are deficit in listening skills, reading and writing skills, and following and understanding instructions given in the English language.

Effective Strategies for Teaching LEP Students

In addition to their limitations in English, some students also have learning disabilities. They must cope not only with learning English but with their underlying language and learning disabilities. Effective strategies for teaching LEP students include the following:

- Use visuals/graphic representation with high frequency.
- Use a great deal of body language and gestures.
- Increase wait time (at least 5 seconds) for student to respond to any question.
- Provide peer tutors, and numerous opportunities to work in partners and triads, mixing the LEP students with a fluent English speaker
- Slow down speech and repeat as needed.
- Provide many opportunities for hands-on, active learning
- Preview and review materials and lessons.
- Listen patiently and attentively to students.
- Assess the student's learning style, presenting information and using approaches that best reflecta those learning preferences.
- Check frequently for understanding.
- Create an environment that gives the message to students that all linguistic and cultural backgrounds are recognized, appreciated, and valued.
- Celebrate the students' efforts and successes.

Learning Styles

Howard Gardner's Theory of Multiple Intelligences

According to Rief (1996), Learning style is a biologically and developmentally imposed set of personal characteristics that make the same teaching method effective for some and ineffective for others. Everyone has a learning style. Knowing students' learning styles, we can organize classrooms to respond to their individual needs for quiet or sound, seating arrangements, mobility, or grouping preferences. Patterns can be recognized in which people tend to concentrate best, alone, with others, with certain types of teachers, or in a combination thereof. Educators become aware of the senses through which people remember difficult information most easily, by hearing, speaking, seeing, manipulating, writing or note taking, experiencing, or again, a combination of these. Learning style also encompasses motivation, on task persistence, the kind and amount of structure required and conformity versus nonconformity.

Learning styles affect our way of thinking, how one may behave and approach learning, and the way an individual may process information. Recognizing our own learning styles and preferences is the first step teachers need to take in order to be most effective in working with

students of diversity. Teachers first need to take a close look at their own functioning as learners, and how that is transferred into the classrooms they teach. This leads to more awareness of our own teaching styles and how one may need to learn new strategies and techniques, and provide more choices in order to reach all of our students (Rief, 1996). Students need to be developing understanding that we all learn differently, that there is no right or wrong way to learn.

Rief (1996), states most individuals tend to have strengths and preferences for learning and processing information through different modalities or channels (hearing, seeing, touching and doing). The following descriptions of modality preferences (and those characteristics that signal strengths in that area) are accompanied by teaching strategies that address those areas of strength and allow students to learn more effectively.

Summary

It is apparent from the literature, that special needs students will have frequent enrollment into technical education programs. Therefore, teachers need to restructure the way they teach. Every learner has a

personal style of approaching and mastering learning tasks. Some students acquire knowledge best through reading, while others absorb more from lectures. Some choose to study alone; others prefer to work in pairs or groups. Some map out long-term assignments in daily increments, while others work best under pressure and wait until the deadline is at hand. Clearly, there are differences in both the way students' process perceptual information and in the way they personally approach learning tasks. It is crucial that the teacher notes these individual differences and to provide accommodations necessary to allow maximum success for each student in class. Options, choices, variety in instructional strategies and techniques are all critical elements in classrooms that are inclusive of all students. Attention to learning styles, multiple intelligences, and developmental levels of students all need to be addressed and practiced if educators are to reach and teach ALL students effectively.

Changes may need to be made in assessment of students entering career and technical education programs. It is important to identify individual learning styles and at-risk learners prior to placement of students into career and technical classes. This would aid educators in

developing innovative tools and strategies that could be used to increase the success of disadvantaged, and at-risk students interested in pursuing a technical education career in nursing. Once administrators, and instructors utilize these resources, effective curriculum development can be utilized to retain and produce successful students with various learning needs. Despite the challenge, "good teachers" are those who can meet the needs of all the students, regardless to what those needs may be.

CHAPTER THREE

METHODOLOGY

Introduction

Chapter Three documents the steps used in developing the project. Specifically, the curriculum development process structure and content validation were discussed. Questions were formulated with regard to how well educators are prepared to meet the demands of the increasing amount of special needs and at-risk learners enrolled in technical education careers in nursing. Next the population served was presented. Finally, the design of the curriculum is outlined. This chapter concludes with a summary.

Development

The curriculum for the Disadvantaged Students Enrolled in Nursing Courses in Technical Education Programs was developed in accordance with the model curriculum for Nurse Assistant Training & Assessment Program (NATAP), and the Advisory Committee for the Regional Occupational Program (ROP) for the Riverside County Office of Education (RCOE). This curriculum meets Federal and State requirements, and has been approved by

the Department of Health Services of the State of California as a curriculum for nurse assistant training.

The Advisory committee consists of Nursing educators who teach the Nurse Assistant Training curriculum, and valuable input is received from staff and administers from skilled nursing facilities and acute hospitals. The criteria for nursing industry personnel were:

1) They must be willing to give input regarding current industry and technology changes for the nurse assistant working in the acute hospital environment, as well as in the skilled nursing facility;
2) Be willing to provide community site training for students;
3) Employ prospective and qualified students at the completion of their ROP training.

Resources and Content Validation

Extensive research into the topic of inclusion of students with diverse academic and social needs, learning disabilities, and strategies to make classroom curricula adaptive, flexible, and challenging to all students, including those with disabilities, was conducted using traditional resources. Literature was reviewed from the most current books available, periodicals and case

studies, and online resources including professional organizations of several learning disabilities.

The content of the thesis and handbook was validated by a panel of nursing instructors. These panelist are expertise in the field of nursing education. They include Dolly Adams DSD, LVN; Edna Bartholomew LVN, BA; Rose Bonilla RN, MA; and Carla Crow RN. The criteria for the panelist was as follows:

1. Experience teaching the Certified Nurse Assistant Curriculum for a minimum of five years;
2. Experience teach high school and adult students in technical education classes;
3. Maintain a professional nursing license for a minimum of 15 years;

The comments of the panelist were solicited and incorporated into the final product.

Design

The curriculum guidelines were developed by guidelines by NATAP and expertise in the field of nursing education, and expertise in the field of meeting the needs of disadvantaged students. As stated in chapter one, the need for educators with experience in teaching

disadvantaged students is vital to the success of the program and for the success of all students.

Through careful evaluation of the model curriculum for Nurse Assistants by NATAP, literature review on educating special needs students, and the direction of the advisory committee, the following curriculum for teaching disadvantaged students were developed.

The nurse assistant model curriculum was developed following Department of Health Services (DHS) guidelines. The theory and clinical hours listed in the handbook are the minimum hours of study required to meet DHS's approval. However, additional time may be required as circumstances dictate to adequately cover the material. The Omnibus Budget Reconciliation Act (OBRA) regulations were also incorporated in the development of the curriculum. The OBRA and title 22 regulations require that the following content areas be included in the curriculum:

The design of the handbook included an introduction to educators providing instruction to student's enrolled in career and technical education programs for the nurse assistant program and who have a diagnosis of ADD/ADHD.

Population Served

The curriculum was developed for high school and adult students enrolled in nursing technical education training courses with various learning disabilities and those who possess special needs.

Summary

Meeting the challenges of education, and being effective in meeting the educational needs of all students is the central theme for this thesis. The handbook will offer a sample curriculum for teaching students that have been diagnosed or display the characteristics of ADD/ADHD. It offers effective teaching strategies that will enable the ADD/ADHD student to meet the objectives of the course and to successfully obtain skills to become a certified nursing assistant.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Included in Chapter Four was a presentation of the conclusions gleamed as a result of completing the project. Further, the recommendations extracted from the project are presented. Lastly, the Chapter concludes with a summary

Conclusions

The conclusions extracted from the project follows.

1. Based on the review of the literature and discussion with experts in the field of career and technical education, the current curriculum for the Nurse Assistants should be revised to accommodate students with learning disabilities.
2. Integration of various learning styles ensures that educators are accommodating the disadvantaged students who may have a multitude of learning disabilities.
3. Integration of study skills techniques will enable all learners to be successful.
4. Collaboration of educators with special education specialist, administration, other

educators, will provide the instructor with resources to accommodate the student with a learning disability.

Recommendations

The recommendations resulting from the project follows.

1. All students should be screened and evaluated prior to enrollment of career and technical education classes for possible learning disabilities that may interfere with student performance.
2. Collaboration between administration, school counselors, ROP advisors and educators was important in order to adequately plan instruction to benefit the multiple-level learning needs of all students.
3. Develop a resource specialist position who would be responsible for direct planning of vocational needs of special needs students.

Summary

Chapter Four reviewed the conclusions extracted from the project. Lastly, the recommendations derived from the project were presented.

APPENDIX

CURRICULUM DEVELOPMENT FOR DISADVANTAGED STUDENTS ENROLLED IN NURSING COURSES IN CAREER AND TECHNICAL EDUCATION PROGRAMS

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Introduction

The Certified Nurse Assistant and Assessment Program (NATAP) Model Curriculum was revised to benefit the increasing enrollment of special needs students to the technical education programs. The original curriculum published in 1994 has provided guidance to hundreds of CNA programs. The intent of this revision was to provide a curriculum that will teach to all students, therefore meeting the needs of those students who may have various learning disabilities. The following revision is focused on assisting the student with ADD/ADHD meet the objectives of the course and to successfully pass the State Competency Examination at the conclusion of the program.

The creation of such a curriculum was aimed at assisting the educator develop teaching modalities that will especially accommodate the student with ADD/ADHD characteristics. Input was sought from experts in the field of nursing education, special education, psychology, to ensure compliance with the Department of Health Services (DHS) regulations.

Approaches to Identify Student's Difficulties With Learning and Performance

Distinguishing students with learning disabilities from students who are low achjevers for others reasons is sometimes challenging. Research indicates, however that a distinction does exist. Students with learning disabilities are often the lowest of the low achievers.

The more recent approach emphasizes early identification and intervention whenever possible. The informal identification of behaviors of a student with a learning problem and the resulting classroom adaptations to accommodate the student are not aimed at curing the problem, but at finding out how the student learns.

The following checklist has been devised to identify common characteristics of students with learning disabilities.

Common Characteristics of Students with Learning Disabilities

SYMPTOMOLOGY CHECKLIST—LEARNING DISABILITIES

(Check behaviors seen.)

(Mark: S = sometimes; O = often)

Visual Perceptual Deficits

_____ reversals: b for d, p for q

_____ inversions: u for n, w for m

_____ yawns while reading

_____ complains eyes hurt, itch/rubs eyes

_____ complains print blurs while reading

_____ turns head or paper at odd angles

_____ closes one eye while working

_____ cannot copy accurately

_____ loses place frequently

Visual Perceptual/Visual Motor Deficits

_____ letters collide with each other/no space between words

_____ illegible handwriting

_____ holds pencil too tightly; often breaks pencil point

Auditory Perceptual Deficits

_____ auditory processing: cannot understand conversation or learning delivered at the normal rate/may comprehend if information is repeated slowly

_____ cannot tell direction sound is coming from

_____ does not follow directions

_____ does not benefit from oral instruction

- **Spatial Relationships and Body Awareness Deficits**

_____ gets lost even in familiar surroundings such as school, neighborhood

_____ cannot keep columns straight in math

_____ bumps into things; clumsy, accident prone

_____ does not understand concepts such as over, under, around, through, first, last, front, back up, down

Conceptual Deficits

_____ cannot read social situations, does not understand body language

_____ cannot see relationship between similar concepts

_____ does not associate an act with its logical consequence

_____ little imagination

_____ no sense of humor; cannot recognize a joke

_____ tends to be expressionless

_____ slow responses

_____ not able to create, to "think", to create poetry,

_____ excessively gullible

_____ cannot think in an orderly, logical way

_____ classroom comments are often "off track",

_____ mispronounces common words

Memory Deficits

_____ cannot remember what was just seen (was shown)

_____ cannot remember what was just heard

_____ cannot remember spelling for common/frequently encountered words

_____ remembers things from long ago but not recent events

_____ appears to know something one day but doesn't know it the next

Motor Output Deficits

_____ perseveration-gives same response again and again

_____ does not communicate orally to a degree appropriate for age

_____ can point to correct spelling but cannot copy it accurately

Behavioral Components

Attention Deficit Disorder

_____ good days—bad days

_____ cannot sit still

_____ cannot stand still

_____ impulsive; does not consider consequence before acting

_____ low frustration tolerance; short fuse

_____ visually distractible

_____ auditorally distractible

_____ fidgety: fooling with objects, incessant talking, makes mouth noises, tapping toes, rolling pencil

_____ short attention span

_____ spaces off—confused—does not sit up/head on desk/"tired"

_____ daydreams; little work produced

_____ does not follow rules; often claims didn't hear

_____ mood swings

_____ disorganizes; loses books, papers

Failure Syndrome

_____ describes self as "dumb"

_____ does not take reprimands well

_____ tends to avoid group activity; does little;

_____ daydreams/withdrawal

_____ class clown-acting out behavior

_____ immature behavior; babyish, dependant

Serious Emotional Overlay

_____ explosive, unpredictable, dangerous behavior

_____ preoccupation with death, destruction

_____ no work produced, coupled with lack of enthusiasm

_____ shallow feelings for others

_____ feels "picked on"; never assumes responsibility for actions; denial; uses projection

_____ fearful, anxious, insecure, tense

Multiple Intelligence Theory

Multiple Intelligences

We are all unique in the Intelligences we possess. According to traditional theory, we are born with a certain amount of intelligence. Intelligence consists of ability in logic and language and is measured by short answer tests. One's intelligence level doesn't change. By contrast, Gardner's "Multiple Intelligence (MI) theory, defines eight types of intelligences that reflect different ways of interacting in our environment. Every normal individual possesses varying degrees of each of these intelligences, but the ways in which intelligences combine and blend are as varied as the faces and the personalities of individuals. Assessment of one's intelligence can enhance learning and problem-solving styles.

Types of Intelligences

Dr. Howard Gardner, Professor of Education at Harvard University, developed the theory of Multiple Intelligences (MI). He stated that the theory had at least eight distinct intelligences and corresponding styles of learning. Instructional practices should involve all intelligence, so that everyone has the opportunity to learn. The eight type of intelligence defined by Gardner are as follows:

1. The Verball/Linguistic Intelligence
2. The Logical/Mathematical Intelligence
3. The Visual/Spatial Intelligence
4. The Intrapersonal Intelligence
5. The Bodily/Kinesthetic Intelligence
6. The Interpersonal Intelligence
7. The Naturalist Intelligence
8. The Musical/Rhythmic Intelligence

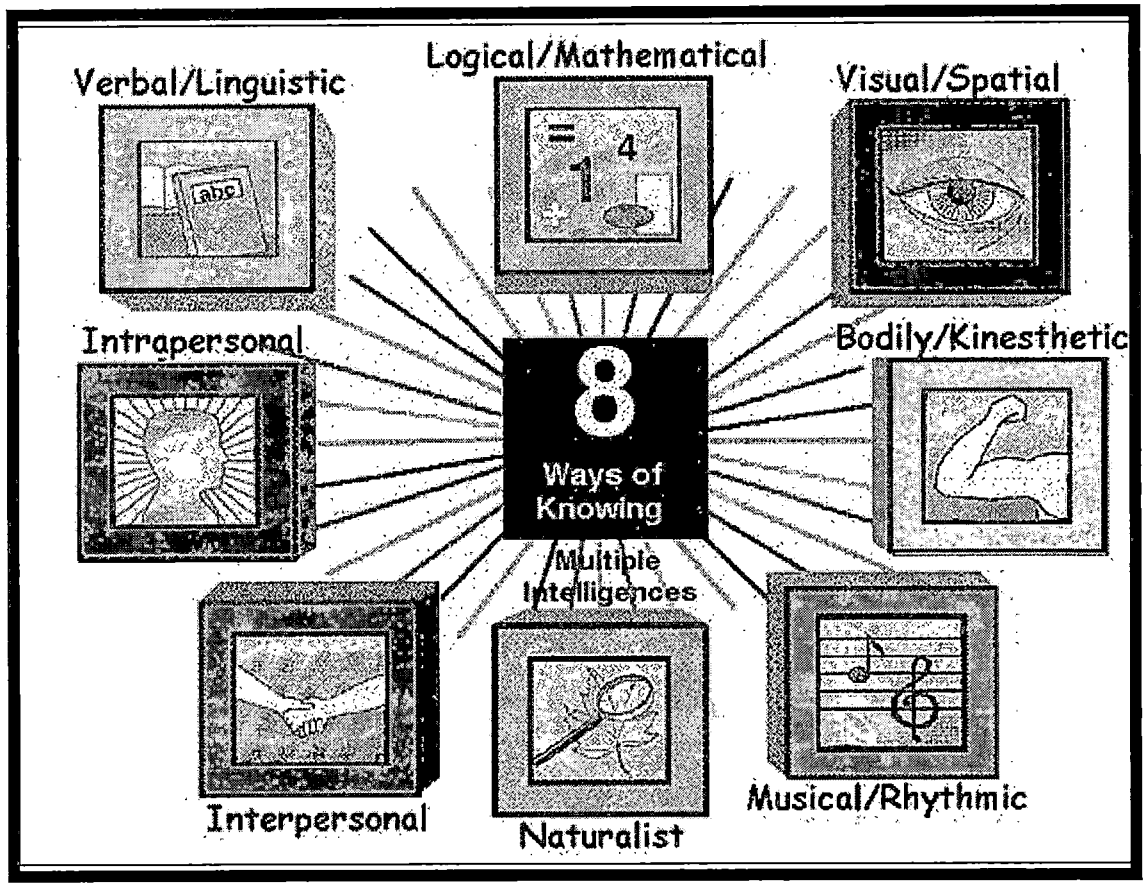
Learning Style Elements

According to Reif (1996), Drs. Rita and Kenneth Dunn, authors of *Teaching Students Through Their Individual Learning Styles: A Practical Approach,* there are a number of Physical elements (perceptual/modality strengths, time of day, need for intake-eating/drinking, and need for mobility)

For some students certain elements are essential to their success, and teachers need to be aware of these factors specific elements that comprise a person's learning style, including:

- Environmental elements (sound, light, temperature, and design)
- Sociological elements (pair-oriented, peer-oriented, team-oriented, self-oriented, and authority-oriented)
- Emotional elements (motivation, persistence, responsibility, and structure)

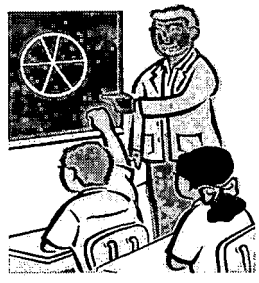
Multiple Intelligence Theory
Eight Ways of Knowing!

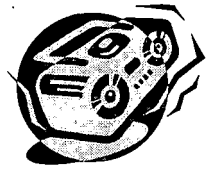


Verbal-Linguistic Intelligences

Auditory Learners

"Word Smart" or "Book Smart"





These students learn through verbal instruction from Others, self or oral reading, lecture, discussion, brainstorming, oral reports, speeches, TV, radio, music, verbal games, paraphrasing, repetition, spelling bees, audiotapes, books on tape, creative dramatics, phonics, reader's theatre (dialogue), poetry, and verse. They remember through language and use self-talk or verbalizations to help themselves get through large and small-muscle motor movements, organization of tasks, and steps in problem. They are usually very verbal and can memorize easily.

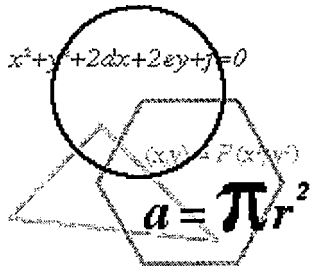
Teaching Strategies

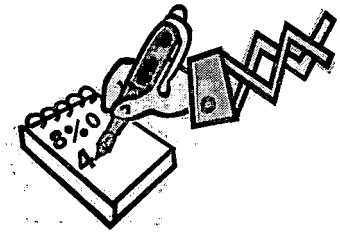
1. Use of cooperative learning, use of group discussions, debating, oral activities, oral presentations, and peer teaching are methods of instructions that work well with this group of intelligences.
2. Use of word games, memorization games and use of flash cards are essential methods to reinforce learning.

3. Use of stories to emphasize important concepts, creative writing exercises, journal writing, and use of written assignments exercises help to foster learning experience.
4. Information may also be reinforced through melodies, beats, rhythms.
5. Students learn well when theory information is presented in a lecture form.
6. Use of reading exercises work well with this group of students. Reading comprehension is usually high.

Logical/Mathematical Intelligence

"Number Smart" or "Logic Smart"





This intelligence uses numbers, math, and logic to find and understand the various patterns that occur in our lives. These individuals are skilled at manipulating numbers, problem solving, and analytical reasoning; are good at interpreting data, figuring things out; and are strong in math science.

Characteristics of analytic learners:

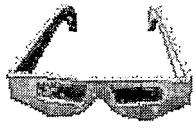
- learn best through sequential processing
- work from parts to whole
- are logical
- like to plan ahead
- enjoy writing, reading, talking
- like to follow written directions
- need to follow steps in a process
- tend to need quiet to concentrate
- pay attention to a series of facts that build up to concept

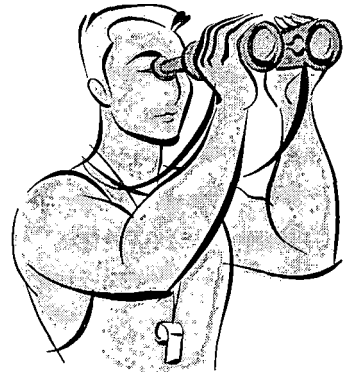
Teaching Strategies

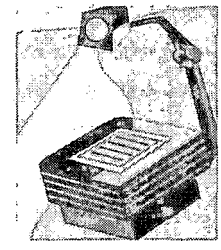
1. These students love the challenge of a problem. Providing case scenarios and providing opportunity for use of critical thinking skills to work through problems will create such a challenge.

VISUAL/SPATIAL INTELLIGENCE

"Art Smart" or "Picture Smart"







We often say "A picture is worth a thousand words" or "Seeing is believing." This intelligence represents the knowing that occurs through shapes, images, patterns, designs, and textures we see through our external eyes, but also includes all of the images we are able to conjure inside our heads.

These students learn by seeing, watching and observing, and are strong in remembering visual detail. They often learn to read best through recognition of visual patterns in words. These students remember best through pictures and images..

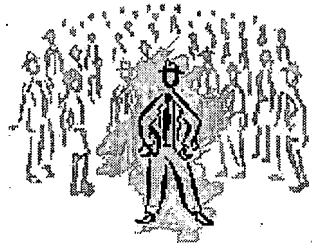
Teaching Strategies

1. Visual learners need instruction to include pictures, maps, graphs, charts, diagraphs, highlighted texts, puzzles, matching activities, and practicing with flashcards.
2. Visual aides such as videos, visual samples, overhead projectors with colored pens, writing on the dry erase white boards with color markers, and use of models is essential for learning.

3. Information should be written for them to refer to, and graphics, pictures, key words or phrases in writing should accompany verbal presentation and directions.
4. Demonstrating main ideas or procedures is important for these students.
5. Allowing students to internalize important concepts by pretending, use of role playing may be essential.

Intrapersonal Intelligence

"Self Smart" or "Introspection Smart"



At the heart of this intelligence are our human self-reflective abilities by which we can step outside of ourselves and think about our own lives. This is the introspective intelligence. This intelligence involves individuals to use their social skills and good communication skills with others. They may also show the ability to empathize and understand other people. These individuals understand and know themselves well. This important intelligence allows an individual to utilize knowledge to guide actions and make decisions.

Characteristics:

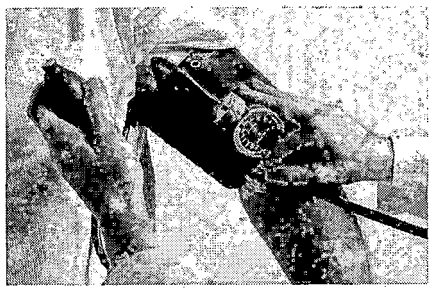
1. These individuals often like to work alone, independently; and often learn best working at their own pace, in their own space, on individualized projects.
2. They are self-secure, and independent.
3. These individuals are introspective, and able to recognize and persue their own interests and goals.
4. They utilize knowledge to guide actions and make decisions.
5. Strong willed, self-confident, and have definite, well-thought out opinions on almost any issue. Other people will often come to them for advise and counsel.

6. Bearers of creative wisdom and insight, are highly intuitive, and are inwardly motivated rather than needing external rewards to keep them going.

Teaching Strategies

1. Provide time for student to work alone on individual projects, assignments.
2. Provide peer tutoring opportunities with classmates who need assistance with written assignments and hands-on activities.
3. Provide opportunities for student to share opinions and ideas in group discussion, case scenario studies.

Bodily & Kinesthetic Intelligence



This intelligence encompasses the ability to use one's body movements to solve problems. These learners learn by doing, touching, and direct involvement. They are hands on learners who need to be involved physically with projects and activities. These students need to have many objects to touch and utilize to help lock in learning through their sense of touch. These students need many opportunities to participate in learning games, laboratory experiences, crafts, drawing, construction, and use of computers and other technology. Teach concepts with concrete examples that students can act out in the classroom.

Characteristics:

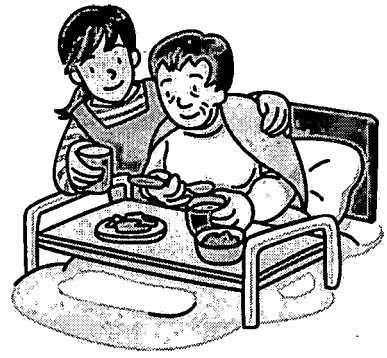
1. Individual may find it difficult to sit still for long periods of time and are easily bored or distracted if they are not actively involved in what is going on around them.
2. Expression of ideas, thoughts, and feelings using a full range of movements (e.g. gestures, facial expressions, postures, dance, drama, athletics, etc.)
3. Attention to utilization of physical skills & coordinated movements to apply knowledge. Bodily-kinesthetic learners often report that they need to be in movement to process new information (walking/pacing, acting out a concept, manipulating objects, etc.)

Teaching Strategies

1. Provide hands-on activity to enforce learning.
2. Provide return demonstration activities for student to demonstrate competency.

Interpersonal Intelligence

"People Smart" or "Group Smart"



This is the person-to-person way of knowing. It is the knowing that happens when we work with and relate to other people, often as part of a team. This intelligence also asks one to develop a whole range of social skills that are needed for effective person-to-person communication and relating.

Characteristics:

1. Sensitive to the needs, feelings, and ideas of others. This individual is good at piggybacking their ideas on others' thoughts.
2. Empathetic toward others, and exhibit a deep understanding of other points of view.
3. Skilled at including others into a group.
4. Skilled in conflict resolution, mediation, and finding compromise when people are in radical opposition to each other.

Teaching Strategies

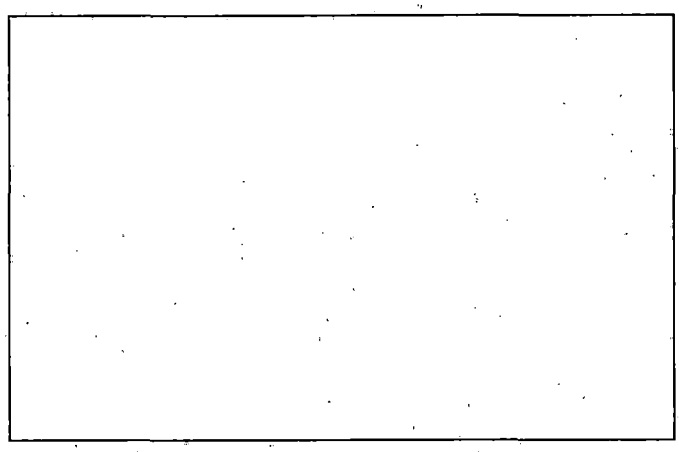
1. Provide opportunities for group discussion and interaction with others.
2. Provide opportunity for cooperative learning and games with partners/groups.
3. Provide peer-tutoring opportunities.
4. Provide hands-on activities, prefer rally with other individuals.

Naturalist Intelligence

"Nature Smart"

or

"Environment Smart"



The naturalist intelligence involves the full range of knowing that occurs in and through our encounters with the natural world including our recognition, appreciation, and understanding of the natural environment.

Characteristics:

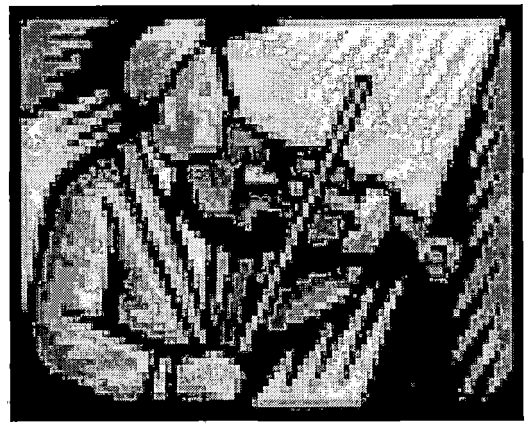
1. Individual will have a profound love for the outdoors, animals, plants, and almost any natural object.
2. Individual is fascinated by such things as the weather, changing of leaves in the fall, the sound of the wind, the warm sun or lack thereof, an insect in the room.
3. Individual will have a respect for all living beings.

Teaching Strategies:

1. Provide individual the opportunity to do individual report, presentation when lesson involves environment or nature.

Musical & Rhythmic Intelligence

"Music Smart" or "Sound Smart"



In the original research on the theory of multiple intelligence this intelligence was called musical-rhythmic intelligence. However, it is not limited to music and rhythm. It deals also with auditory, and vibrations, for it deals with the whole realm of sound, tones, beats, and vibrational patterns as well as music.

Characteristics:

1. These individuals appreciate, recognize, and are sensitive to music, rhythm, melody, pitch, and tone.
2. They learn best through music and often work well with background music.

Teaching Strategies:

1. Allow students to develop study skills, and memorization techniques utilizing the concept of rhythm.

Practical Implications

Upon learning about Gardner's theory of Multiple Intelligences, a teacher my be tempted to say that a student learns only through a specific intelligence and that this student has that one intelligence. The theory, rather, implies that educators need to place all eight intelligences as equally important intelligences in the classroom and that everyone has a little of every intelligence in them. With this understanding, educators allow every student to demonstrate their intelligence and succeed.

PROPOSED REVISED LESSON PLAN FOR

MODEL CURRICULUM

FOR NURSE ASSISTANTS

Proposed Revised Lesson Plan for Model Curriculum For Nurse Assistants

The revised lesson plan utilizes teaching strategies that would benefit the special needs student and teaches to many of the learning styles identified by the Multiple Intelligence Theory.

Module 5: Body Mechanics

Body mechanics means using the body in an efficient and careful way. It involves good posture and balance and using the strongest muscles for work. Fatigue, muscle strain, and injury can result from improper use and positioning of the body during rest and activity.

Statement of Purpose

The purpose of the unit is to provide students with an understanding of efficient and proper use of the body in performing tasks related to the role of the CNA. Students will understand the principles of positioning and transporting residents and will implement these principles when providing resident care.

Performance Objectives

Upon completion of the class plus homework assignments and four (4) hours of clinical experience, the learner will be able to:

1. Define key terminology.
2. Explain the purpose and rules of proper body mechanics.
3. Identify comfort and safety measures used to lift, turn, move and position residents in bed.
4. List and describe five basic positions for bedridden residents.
5. Describe and demonstrate resident transfer techniques.
6. Describe and demonstrate appropriate body mechanics used to ambulate a resident.

Learner Activities/Assignments

1. Peer tutoring/coaching activities
   a. Complete workbook assignments on unit of study pertaining to body mechanics, positioning.
2. Cooperative learning activities
   a. Students participate in guided practice performing resident positioning, transfers and ambulation.
3. Hands-on training activities
   a. Develop bed making skills through hands –on training
4. Use of flash cards, pictures to learn lecture and reading material.

Teaching Strategies

1. Classroom lecture
2. Small group discussions on proper body mechanics
3. Audiovisual aids that show transfer, ambulation, and procedures
4. Games to stimulate learning and memorization of terminology.
5. Demonstrate procedures before hands on activity is initiated. Allow return demonstration to assure understanding and for demonstration of competency. Demonstrate the following manual skills:
   a. Turning and Positioning the Resident,
   b. Moving the Helpless Resident up to the head of the bed using two assistants,
   c. Assisted Transfer from Bed to Chair/Wheelchair and Return to Bed,
   d. Mechanical Lift,
   e. Assistant Ambulation of Resident,
   f. Assisted the Resident to Ambulate with Walker/Cane,
6. Handouts

Accommodations

According to Section 504, educational institutions are required to make reasonable accommodations for students who are identified as having a disability (Learner, 1996). Learning disabilities are recognized as a category of disability under the Section 504 regulations. Compliance with the regulations of Section 504 requires that colleges, and technical education programs allow for modifications and make reasonable accommodations. Some of these accommodations are listed below:

- Extending the time allowed to complete a program
- Adapting the method of instruction
- Providing audiotapes of student textbooks
- Providing note takers to help students with lectures
- Offering counseling services to the students

One of the greatest challenges faced by career and technical programs, and college students with learning disabilities is gaining and maintaining the acceptance and cooperation of educators. In-service training programs are needed to help faculty understand the needs of these students and become familiar with the accommodations that can be made. Table 1 lists ways educators can help students with learning disabilities

ATTENTION DEFICIT/HYPERACTIVITY DISORDER

(ADD/ADHD)

Attention Deficit/Hyperactivity Disorder (ADD/ADHD)

ADD/ADHD is not a new phenomenon. As early as 1902, George Still identified students who had characteristics of ADD/ADHD. Still, a London physician, identified a new class of "sick" children. They had average or higher intelligence and "an abnormal deficit of moral control" being unable to obey adults or delay their gratification (Turbull, 1999).

ADHD is often described by the medical/scientific community as a "neurological inefficiency" in the area of the brain that controls impulses, aid in screening sensory input, and focuses attention. According to the researchers, they have found that there is less activity taking place in that portion of the brain. ADHD is viewed by many as a biological disorder of which there is a chemical imbalance or deficiency in certain chemicals called neurotransmitters in the area of the brain responsible for attention and activity, and the ability to inhibit or control behaviors (Reif, 1996).

Rief (1996), provides the following clinical definition of ADHD. It is provided by the Diagnostic and Statistical Manual (DSM) of the American Psychiatric Association, and has been revised several times over the past 15 years. The most recent clinical definition of ADHD is the new DSM_IV manual (4^{th} ed., 1996). It contains 18 symptoms of ADHD which are listed in two separate categories:

> *Nine symptoms* of INATTENTION: fails to give close attention to details or making careless errors in schoolwork or other activities; has difficulty sustaining attention in tasks or play activities; often appears not to listen; does not follow through with instructions or fails to finish tasks; has difficulty with organization; avoids tasks that require sustained mental effort such as schoolwork; loses things necessary for tasks or activities; is easily distracted by extraneous stimuli; is forgetful in daily activities.

Nine symptoms of HYPERACTIVITY-IMPULSIVITY: fidgets with hands or feet, or squirms in seat; is unable to sit during periods of time when remaining seated is expected; runs about or climbs excessively in inappropriate situations (with adolescents or adults this is usually manifested as restlessness); has difficulty playing quietly; is on the go constantly as if "driven by a motor"; talks excessively; blurts out answers to questions; interrupts others; has difficulty waiting in line or waiting turns in games.

It is important that educators take great caution in their role of identifying students who may or may not have ADHD. The role of the educator is to share objective observations and concerns with parents, counselors, school nurse and other support staff. Although the student's behavior may be very disruptive with the instructors ability to teach, and affect the learning environment for other students as well, these students may perform well with hands -on activity versus traditional classroom lecture settings.

Many different kinds of treatments are prescribed for individuals with learning disabilities, including medication therapy and various forms of diet control. Treatments with a medical basis are among the most vigorously debated issues in the field of learning disabilities.

Effective Teaching Strategies

Rief (1996), suggests that students with ADHD and/or Learning Disabilities need:

- Clarity of expectations
- Structuring of work environment, tasks, and materials
- External assistance in helping to get and maintain attention
- Cueing, prompting, and reminders
- Active learning
- Help with organization and study skills
- Learning style accommodations

- Predictability of schedules and routines,
- Extra time to process information and output/perform tasks,
- Extra space,
- Help with coping skills and feelings of frustration,
- Choices,
- Teaching strategies that build upon their strengths and help bypass their weaknesses (Rief, 1996).

Guidelines for Helping Students with Learning Disabilities

Accommodations for STUDENTS WITH Attention Deficit/Hyperactivity Disorder

The following tables was prepared to assist the educator in making appropriate accommodations for students with special needs, pertaining specifically to those students with Attention Deficit/Hyperactivity Disorder.

Table 1

1. Make the syllabus available prior to the beginning of the class and, when possible, be available to discuss the syllabus with students with learning disabilities who are considering the course.
2. Use a dry erase board or overhead projector to outline lecture material, reading what is written or what is on previously prepared transparencies.
3. Emphasize important points, main ideas, and key concepts orally in lecture.
4. Give assignments in writing as well as orally and be available for further clarification.
5. Provide study guides for the text, study questions, and review sessions to aid mastering material and preparing for exams.
6. Modify evaluation procedures. For example, permit untimed tests and oral, taped or typed exams instead of written exams. Allow alternate methods to demonstrate course mastery.

Table 2

BEHAVIOR	ACCOMMODATION
Inattention	▪ Seat student close to instructor. ▪ Seat student in quiet area. ▪ Seat student near "study buddy". ▪ Break long assignments into smaller parts so student can see end to work. ▪ Give assignments one at a time to avoid work overload. ▪ Pair written instructions with oral instructions. ▪ Provide peer assistance in note taking. ▪ Give clear concise instructions. ▪ Cue student to stay on task, ie. Private signal.
Socialization	▪ Praise appropriate behavior ▪ Encourage cooperative learning tasks with other students

Table 3

BEHAVIOR	ACCOMMODATIONS
Impulsiveness	▪ Ignore minor inappropriate behavior. ▪ Attend to positive behavior with compliments. ▪ Seat student near role model or near teacher. ▪ Instruct student in self-monitoring of behavior, (i.e., hand raising, calling out.)
Motor Activity	▪ Allow student to stand at times while working ▪ Involve student in hands-on demonstrations.
Mood	▪ Provide reassurance and encouragement. ▪ Make time to talk alone with student. ▪ Look for signs of stress build up and provide encouragement.

Table 4

BEHAVIOR	ACCOMMODATIONS
Organizational Planning	▪ Encourage student to have notebooks with dividers and folders for work ▪ Give assignments one at a time. ▪ Allow student to tape record assignments and/or lectures.
Compliance	▪ Praise compliant behavior ▪ Provide immediate feedback ▪ Ignore minor misbehavior. ▪ Seat student near teacher. ▪ Se up behavior contract. ▪ Instruct student in self-monitoring behavior

Special Considerations for Clinical Training

Working with students who have ADD/ADHD, can be very challenging in an academic classroom setting. But, imagine teaching a technical education program in nursing, where the student must learn skills and have the opportunity to practice these skills on ill or disabled patients. Although students diagnosed with ADD/ADHD, are quite fidgety and disruptive in the classroom setting, most of these students do quite well when it comes to hands on training. Instruction in the following subject areas are essential prior to clinical training; safety precautions, standard precautions, confidentiality, professionalism, and job ethics. Careful evaluation of student performance, listening skills, competence in nursing procedures and knowledge of required lecture content are very important in assessing of students readiness for clinical training. Once, the required skills and competence in nursing skills have been met by each student, supervisor of clinical training may begin.

The careful selection of student assignment in the clinical area is important. The buddy system is utilized where all students are paired with staff nurses during their training experience. Capitalizing on personal strengths, diligence, self-confidence, self-knowledge, and being comfortable with oneself, students with ADD/ADHD may succeed in their chosen field.

Summary

Students with Attention Deficit Hyperactivity Disorder can be a challenge for any teacher. Statistics claim that there is at least one child with ADD/ADHD in every classroom. ADD/ADHD students do not learn in the exact same ways that other students learn. This does not mean that they aren't as smart, in fact, many ADD/ADHD students are gifted. With the right teaching methods and a lot of patience, your ADD/ADHD student can have a successful learning experience and become a productive member of society working in a desired profession.

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