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**The Use of Technical Skill Standards in the
Admissions Process for Florida Allied Dental Health Education Programs**

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ABSTRACT:

The purpose of this study was to determine if there are allied dental health education programs within the State of Florida currently using Technical Skills Standards (any non-academic abilities or requirements necessary to perform the job) as part of their applicant counseling and admissions process. In addition, the research was to determine faculty's knowledge of the Americans with Disabilities Act and its impact on the admissions policies and procedures of their programs was examined. The program faculty and administrators representing 27 institutions throughout the State of Florida offering accredited, Dental Assisting, Dental Hygiene, and Dental Lab Technology training programs were surveyed as experts in their field.

Analysis of the responses suggests that a majority of those surveyed from the three disciplines agree that there should be published technical skill standards used for program admissions purposes. In addition, although a majority of those surveyed were found to have some knowledge of the Americans With Disabilities Act (ADA) enacted in 1990, approximately 96% responded negatively regarding this federal mandate's affect on the admissions criteria for their program. As baseline statistical information, the data from this project serves to provide educators and program advisors in Florida allied dental health education programs an opportunity to assess the opinion of their peers and colleagues regarding the current need to establish and adopt uniform, statewide technical skill standards for dissemination to all potential program applicants.

INTRODUCTION:

It would appear that today, more than ever, it is important to ensure that work-based training programs are informing potential program applicants of the minimum physical, emotional, and intellectual technical skill standards required to successfully complete an occupational education program. This is particularly true in higher education where the opportunities for people with disabilities in employment training are expanding (HEATH Resource Center, 1987). A wide range of programs, including vocational and occupational courses are provided, as a low- cost educational alternative for individuals in the local geographic area surrounding the Community College (HEATH Resource Center, 1993).

When educating individuals for employment, however, one of the most critical areas of concern is the emphasis on the need for qualified and skilled workers (Scott, 1997). Based on the most recent statistical reports from the Bureau of Labor and Statistics, in both national and regional areas, employment in health care occupations is on the rise (BLS, 1998). Therefore, there is a need to answer the question “What does a worker need to *know* and be able to do to contribute to the safe and effective delivery of health care?” has now become a student success issue, an employment issue, and a legal issue for future educators, students, and employers (Far West Laboratory, 1995, p.1).

Purpose and Research Questions:

The purpose of this research project was to investigate and describe the extent that declared Technical Skills Standards, referring to the essential, non-academic abilities or requirements needed to perform the job, were being used in the admissions process and

counseling of program applicants for allied dental health education programs in the state of Florida. In addition, the knowledge and impact of the Americans With Disabilities Act (ADA) on admissions policies and procedures was examined.

To expedite the research, the following objectives and research questions were critical in the investigation of this topic and were the focus of the survey:

- (1) To determine if there are technical skills standards, that currently exist for the accredited dental hygiene, dental assisting and/or dental laboratory technology education programs established in the State of Florida.

Research Question: What is the status and current use of Technical Skill Standards in the admissions process of accredited allied dental health education programs throughout Florida?

- (2) To determine the degree of familiarity of educators (as experts in the field), regarding the Americans with Disabilities Act (ADA).

Research Question: What is the current knowledge of discipline experts in the field of the Federal statute, the Americans With Disabilities Act of 1990 and its impact on the admissions process of their programs?

- (3) To summarize opinions of educators, as experts in the field, regarding the need for:

- a. Uniform, published technical skills standards for each specific institution and each educational program discipline.

Research Question: Should there be uniform technical standards for each allied dental health discipline? and,

Research Question: who should establish these technical standards?

A Student Success Issue:

It seems in our current workforce development system, knowledge associated with higher education, particularly advanced technical or college-level training, is considered a key element in an individual's level of self – esteem, confidence, and ultimately a measure of their potential for success. Research has shown that this established relationship between a college education and gainful employment has resulted in a marked increase in enrollment in some post-secondary technical and vocational training programs by today's high school students, especially those with disabilities (HEATH Resource Center, 1993).

Most guides and manuals available in bookstores offer a wealth of information on how technical training and a college education can result in improved employment opportunities for graduates with disabilities. With that in mind, it would seem a current issue in need of research is the type and extent of disabilities a specific occupational area can successfully accommodate with the entry-level worker? Moreover, what minimal physical requirements or abilities need to be identified as required for the applicant to a technical/vocational program to insure the student's success?

An Issue of Definition:

Based on legal definition, a disabled individual is essentially anyone with a physical or mental impairment that substantially limits one or more major life activities (ADA, 42 USCS 12101). Albeit, by definition, "substantial" would indicate something more than minor or trivial in nature, the federal courts have historically been battling with this issue, as evidenced by the multitude of cases referenced throughout the literature on disability law (Thomas, 2000). Research indicates that the types of disabilities experienced by

people can vary widely and can include physical (e.g. quadriplegia), mental (e.g. anxiety), sensory (e.g. deafness, blindness), cognitive, intellectual, and health related factors. Functional limitations from a disability may range between negligible to profound. Disabling conditions may be temporary in duration, but most are life-long and some are ultimately fatal. Disabilities may virtually be invisible, in that they are not readily noticeable by others, but they can be found in every age group, gender, ethnic and racial segment, educational and socioeconomic level of society. Each kind of disability produces its own special needs and must therefore be carefully evaluated (Scott, 1997). According to the U.S. Bureau of the Census statistics, people with disabilities constitute the single largest minority group identified in the United States, surpassing the elderly and African Americans (Wells & Hanebrink, 1998). It is not surprising, then, according to statistics from HEATH Resource Center, in the 1998 published Profile of 1996 freshmen with disabilities, that there are more students with documented disabilities in higher education than ever before (Thomas, 2000). Therefore, it would seem important to investigate our health related occupational programs to see if they are prepared in the process of recruitment and admissions to address the Technical Skills Standards (e.g. essential, non-academic skill requirements) required for the specific program's level of training and minimum entry-level skills; and to examine our technical training programs' compliance with the law, when planning to accommodate the training needs of a disabled student in our particular occupational area.

A Legal Issue

It would seem that society has become increasingly aware of how individuals have historically been and are continuing to be discriminated against. It seems to be a

serious and pervasive problem in our society. Early on, Federal Civil Rights legislation ranging from the Title VI of the Civil Rights Act of 1964, to Title VII of the Civil Rights Act of 1968, to the Mental Health Bill of Rights Act of 1985, and the 1975, Education for All Handicapped Children Act and the Developmental Disabilities Assistance Bill of Rights Act, all attempted to address the inequities in programs and activities involved with the government and funding.

More recently, the support for people with disabilities has grown into a “sociopolitical force” (Wells & Hinebrink, 1998). Enacted to protect and provide equal opportunity to the disabled, the Rehabilitation Act of 1973, as amended in Section 504, and the Americans with Disabilities Act of 1990 affirmed the view that the growing population of those with disabilities were being subjected to persistent discrimination. Specifically, Section 504 of the Rehabilitation Act of 1973 states that no otherwise

“qualified” person due to a disability may be denied participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance”

(Scott, 1997). Therefore, it is important for postsecondary institutions, as well as individual training programs, to understand the principles set forth in the provisions of these statutes to insure compliance with the requirements and spirit of the law (Petesch, 1999).

In most instances, and in this specific example, post-secondary technical/vocational educational training programs are open to all qualified individuals

(BCC Catalog, 2000). Because some health occupations offer only limited enrollment, however, admissions officials or committees use multiple criteria and attempt to identify those candidates who are best qualified from the pool of applicants. Ultimately, then the question is what is (or is not) required in a particular discipline area to constitute a “qualified” student who will upon completion of the training program become an entry-level employee in the field (Scott, 1997). It would seem, without uniform, established performance standards that are published requirements for *all* students to agree to for admission into the program, this process could be construed as subjective in the eyes of some individuals and ultimately in a court of law.

An Issue of Safety:

Apparently, the American Association of Dental Schools (AADS) has previously addressed the issue of “Minimum Standards for Admissions and Matriculation” in their article published in the Journal of Dental Education, May 1998. This article was prepared to assist *dental schools* respond to the legal requirements set forth by the Americans With Disabilities Act (1990) and Section 504 of the Rehabilitation Act of 1973. It provided in-depth descriptions and examples of Technical Skills Standards to aid schools of dentistry prepare and modify specific standards to be used in their program’s admissions process. Many of the allied dental health programs within the university setting of a dental school followed their lead and established blanket minimum, technical skills standards for all dental career training.

However, not all allied dental health education programs are affiliated with a four-year dental school. There appears to be a possible need to address the Technical

Skills Standards issue at the associate degree (and certificate) levels. In fact, only one dental hygiene and one dental assisting program in the State of Florida presently, based on location and close proximity, have apparently utilized similar stated admission policies and criteria, patterned after an affiliated college of dentistry, as part of a broad, dental programs' application process (ADA,2000)

The unique nature of dental education programs, which have some similar clinical performance aspects between dental practitioner training and the allied dental health training for auxiliaries, is based on the fact that students must perform critical thinking as well as provide oral health care services safely for clinical patients (Virginia Commonwealth University, 2000). The ability to perform, or to learn to perform these essential skills will ensure patients are not placed in jeopardy by allied dental health students or dental practitioners with impaired intellectual, physical, or emotional functions. It is viewed as part of the faculty and institution's responsibility to the educational welfare of the student, as well as the welfare of the patients treated or otherwise affected by the dental program's students (Indiana University School of Dentistry, 1999). Therefore, it seems logical that admission to dental or allied dental health programs should be offered to only those who present the highest qualifications to acquire the knowledge and technical functions to meet the full requirements of the program's curriculum. Ultimately, according the institutions that have published minimum skill standards for admission and retention purposes, the outcome is a graduate that is can demonstrate the skills necessary to be a *safe and* effective dental career professional.

Assumptions and Limitations of the Study:

It was assumed that because this data was collected predominantly from a group of respondents converging at a central location for an annual professional meeting, that a majority of the statewide-accredited programs would be represented and that all those in attendance would complete the survey questionnaire honestly and with sincerity.

By providing accurate responses to the survey questions regarding their knowledge of performance-based Technical Skills Standards, the ADA, and their program's specific admissions process, very little bias in interpretation of the responses was anticipated based on the initial process undertaken by the researcher to develop a simple, yet specific survey instrument to be used. The possibility for limitations presented by the wording of the self-generated research instrument and how the questions were formatted may ultimately have had an affect on the validity of data analysis and the conclusions derived from the responses given.

The convenience and timeliness of the conference for Florida Allied Dental Health Educators helped provide a captive audience of informants and served as an opportunity to personally explain and administer the survey to those present, in hopes of a strong return rate. It was also deemed cost effective and simple in terms of logistics, but presented a limited, and small sample population for data collection and analysis

Ultimately, the willingness to participate in completion of the survey and to return the document, provided it was not lost or misplaced, was an inherent limitation of this method of data collection which may have affected the final response rate and ultimately the inferences made from the sample. The expectation of the return of subsequent mail-out surveys, to schools not represented at the conference, was slightly less than expected due to the researcher's lack of control over which respondents would actually complete

and return the questionnaires. In addition, to that limitation, the ability to identify sample non-respondents, in order to re-contact those non-compliant individuals was a bigger issue to consider with the limited size of the sample.

It was assumed that the convenience sampling used for this project would represent a relevant portion of professionals who, based on their experience in the field and their knowledge about their programs, would yield accurate data and justified the reality of the narrow sample size. It does however, present limitations to the nature of the results and conclusions of the project. Because of the questionable representativeness of the sample used for data collection, the results and findings of this project will not be generalized to dental health education programs in other regions or nationally, but will apply only to those programs who faculty responded within the State of Florida. In light of this obvious limitation, the opportunity for replication of this research on a larger scale in other states or at a national level is a consideration.

Definition of Critical Terms:

Technical Skills Standards: all non-academic criteria used for admission to and/or participation in a program, which may include physical requirements if they are established as essential to completion of the program or course and that are applied to all applicants (Scott, 1997)

Allied Dental Health Education Programs: general term to describe dental auxiliary Certificate (PSAV) and Associate of Science Degree technical training programs that include, but are not limited to assisting, dental hygiene to dental, and dental lab technology (BCC Catalog, 2001).

Individual with a disability: A person, who has a physical or mental impairment

that substantially limits a major life activity, has a record or history of such impairment or is regarded as having such an impairment (Section 504, Subpart A of ADA; Scott, 1997).

American Disabilities Act (ADA – P1101-366): civil rights legislation that ensured equal rights to over 49 million individuals with disabilities (Scott, 1997).

Section 504 of (1973) Vocational Rehabilitation Act (29 USCA Sec. 794): disability related legislation that was actually a precursor to the ADA and states that “No otherwise qualified individual with disabilities in the United States shall solely by reason of his/her disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance” (Scott, 1997, p. 10).

Qualified Person: Title II of the ADA (28 CFR 35.104) states, “An individual with a disability who with or without reasonable modifications to rules, policies, or practices, the removal of architectural, communication, or transportation barriers, or the provision of auxiliary aids and services, meets the essential eligibility requirements for the receipts of services or the participation in programs or activities provided by a public entity” (Scott, 1997, p. 15).

Reasonable Accommodations: concept to describe the means or actions used to achieve equalization for people with disabilities in terms of education, employment and access to public services and facilities. “The compliance standards under both Section 504 Part 104.44 (d)(1) and the ADA (and their implementing regulations) require an institution to take such steps as are necessary to ensure that an individual with a disability

is not denied the opportunity to benefit from or participate in the institution's programs”

(Scott, 1997, p. 55).

REVIEW OF THE LITERATURE :

Although it is true, qualified students cannot be denied participation in a postsecondary educational training program solely because of their disability; the important issue is that the chosen program of study be available to those for whom it is appropriate to insure student success. This view can be interpreted and supported in the literature from many perspectives.

In the 1990's, as a result of increased advocacy, research, and several major federal laws, more attention has been focused on efforts to provide qualified students and applicants with disabilities nondiscriminatory access to higher education (Kerka, 1998). Today, the literature states that there are more students with documented disabilities in higher education than ever before — 140,142 freshmen reported having a disability in 1996 (Thomas, 1992).

The **American Disabilities Act (ADA)** was signed into law by President George Bush in July 1990 and is recognized as “a significant and wide-reaching piece of civil rights legislation that prohibits colleges and universities, as well as other public and private entities, from discriminating against individuals with disabilities” (Scott, 1997, p.7). More specifically, **Section 504 of the Rehabilitation Act of 1973**, a precursor to the ADA, served to establish many of the requirements and procedures for institutions of higher education in providing an equal opportunity for individuals with disabilities. It states that, “no otherwise qualified handicapped individual . . . shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance” (Griffin, 1982, p. 22). Recent litigation indicates that interpretation of this

part of the statute is not program specific. In fact, Griffin's article, *Legal Issues Surrounding Section 504*, confirms with citations of several court rulings, that the broad intent of the law means that colleges and universities receiving federal financial assistance for *any* of their programs or activities, are required to make *all* programs accessible to handicapped students and to insure that qualified handicapped persons are not inadvertently excluded from such programs by the absence of auxiliary aids (1982). In her book, *Educating College Students with Disabilities*, Sally Scott explains that federal financial assistance has even been clarified as including student financial aid (*Grove City College v. Bell, 1984*). Hence, review of the literature reveals that few federally financed public institutions of higher learning are exempt from the mandates of Section 504.

In addition, "On July 26, 1994, the **Americans With Disabilities Act (ADA)** became applicable to businesses with as few as 15 employees", so now more than ever, employers have become concerned with their legal obligations (and rights) under ADA, (Brodwin, 1994, p. 53). Why? Because it is reported, "In the United States, one in six workers have some form of disability. People who are disabled have difficulty performing certain functions, such as seeing, hearing, talking, walking, climbing stairs, or lifting and carrying" (Career World, 2000, p. 2). So many disabled individuals are returning to colleges and universities as a new resource to help them obtain a new career or job. "The ADA specifies only that the person with a disability be "qualified" (42 U.S.C. Section 12112) – that is the person must be able to meet the essential eligibility requirements of a program, with or without reasonable accommodation, in spite of restrictions imposed by the disability" (Thomas, 1992, p. 252).

Although “few new requirements are mandated of institutions of higher education, the ADA’s extension of nondiscrimination mandates to public and private licensure or certification programs and to the employment sector is of significance to college faculty. The law provides the assurance that accommodations and academic adjustments required in the college programs will also be available to individuals with disabilities during licensing and certification exams (Title, Sec. 35.130 and Title III, Sec.36.309) and after college graduation in the employment sector” (Scott, 1997). These broad legal interpretations regarding “access assurances” serve to address the concerns that college programs and any “reasonable accommodations” required to perform the essential functions of the job, are actually a part of preparing individuals with disabilities for employment in the “real world” (Scott, 1997, p. 17). Overwhelming amounts of research indicate that a college education brings improved employment opportunities for graduates with disabilities. However, as with all students, those with disabilities must take their strengths and weaknesses, including the limitations of their disability into account when making career decisions (Friehe, 1996).

The need for identified **industry-based skill standards** that are founded on performance competencies and certification criteria, whether implied or expressed in writing, are not new. Educators at the post-secondary level have used them in career training programs for years to ensure a skilled work force (Wills, 1995). In fact, according to the National Health Care Skill Standards Project published in 1995, these are classically the statements that are used in allied health care training curriculums to answer the question, “What does a worker need to know and be able to do to contribute to the safe and effective delivery of health care?” (Far West Laboratory, 1995, p. 1). In light of recent

legislative initiatives, like Section 504 of the Vocational Rehabilitation Act of 1973 and the ADA (1990), however, the need to communicate these essential skill requirements for all students and applicants has taken on a new focus in terms of compliance with federal law.

In reviewing the literature, by definition, the term “**Technical Skills Standards**” in health career education refers to those “essential functions” or specific skills required of students in training to perform a specific job or activity (Scott, 1997, p. 18). According to Scott’s article, in legal context they are defined as “all non-academic criteria that are essential to participate in the program in question (34 CFR, Part 104, Appendix A, paragraph [5]”. They are those qualification standards, other than academic requirements like GPA’s or SAT scores, that may include but are not limited to

“personal and professional attributes, skills, experiences, education, physical, medical safety requirements that an individual must meet in order to be eligible for admission to the institution and program as well as the desired professional field of practice” (Scott, 1997, p. 56).

In general, it is found that most literary journals and publications of occupational training programs commonly address the more popular learning disabilities (LD) and the impact of Federal regulations on implementing educational strategies to manage and support students with disorders of certain “learning processes” (Kerka, 1998). Even more limited research has been conducted on the range and scope of institutional responsibility to individuals with disabilities in technical or professional career training programs that involve acquiring clinical abilities and laboratory skills within a specific job-training curriculum, like dental schools or dental health educational training of auxiliaries.

It was found while researching this topic online, only one document, the *Journal of Dental Education*, 62, (5): 387-90, 1998, published by the American Association of Dental Schools was written to address technical skill standards for dental career training. The article states its purpose is to be used by Schools of Dentistry as a reference tool or starting point in developing their own institutional or program specific technical standards. The objective was “to assist dental schools as they respond to the legal requirements of the Americans Disabilities Act and Section 504 of the Rehabilitation Act of 1973” (American Association of Dental Schools, 1998, p. 387). Follow-up research of technical (skill) standards for dental education programs, via the Web, provided very few examples of dental school admissions information sites that appeared to have undertaken the task of developing or publishing the technical skill standards for their dental career training programs. Of the hundreds of dental schools nationwide, only Indiana University School of Dentistry, University of Tennessee, Memphis, College of Dentistry, Louisiana State University Medical Center, and Virginia Commonwealth University School of Dentistry and the University of Alaska, Dental Hygiene Program were identified using the term “Technical Skills Standards” as a descriptor.

Additional time was spent investigating allied dental health education program websites to see if any performance or technical skill standards were outlined for existing training programs for ancillary dental professions. It is presumed, based on the lack of information found, that allied dental health educational programs, such as dental hygiene, dental assisting, and dental lab technology, unless affiliated with a larger university dental school had not addressed this issue as part of their program or admissions information. This is surprising in light of the fact that there are, within the

clinical practice of dentistry, certain minimal technical standards that are considered requisite to the provision of safe and effective dental treatment for clinical patients, as stated in previous discussion of the article by the American Association of Dental Schools, 1998.

PROJECT INTENT:

Therefore, this study sought to address this issue by examining the use of technical skill standards in the admissions process of students in all twenty-six (26) institutions offering accredited allied dental health education programs in the State of Florida, as reported by the administrators and faculty employed in these programs. The targeted institutions for this project offer one or more disciplines as part of their Certificate, also termed Post Secondary Adult Vocational (PSAV) and Associate Degree programs, totally 17 Dental Assisting, 15 Dental Hygiene, and 4 Dental Laboratory Technology programs, statewide.

Based on past and present research, this appears to be the first time that the issue of Technical Skills Standards and their use in allied dental health education program admissions has been addressed in Florida. So, the data collected will be pertinent to this sample of respondent, and the programs they are affiliated with statewide.

RESEARCH METHODOLOGY:

This research project's objective was to examine the status of technical skill standards in the admissions process of all twenty-six (26) institutions offering accredited allied dental health education programs in the State of Florida. Data as reported by statewide administrators and faculty currently employed in these programs was gathered, via a survey questionnaire, and analyzed using SPSS computer software.

The survey instrument used was distributed to respondents present at a two-day conference for Florida Allied Dental Health Educators in Ft. Pierce, Florida. Any institutions with faculty not present at the meeting were mailed, or faxed, a cover letter and survey to be completed and mailed in a stamped, pre-addressed envelope by the specified date, within two weeks after the conference.

Specific program admissions information was investigated related to respondent's knowledge of the current use of Technical Skills Standards at their institution.

Participant's knowledge of the Americans with Disabilities Act and its impact on the admissions process were also questioned. There was opportunity for respondents to give specific explanations of issues and incidences they feel are relevant to their individual answers. The opinion of participants in the survey regarding the need for uniform Technical Skills Standards and who should develop and establish them was solicited. Lastly, questions in the last section of the survey addressed demographics of the participants and their programs; age and highest level of education; current employment status; years involved in the dental field; current membership status in a Professional Organization; and type of degree program and clinical affiliates the participants are involved in.

The definition of the term *Technical Skills Standards* used throughout the project is based on terminology found in the resources used in the initial development of this project, which were discussed earlier.

Setting:

At the Annual Florida Dental Allied Health Educators Conference in Fort Pierce, FL, pertinent data for this exploratory research was collected utilizing a researcher-generated survey questionnaire administered to those allied dental health educators in attendance (n=75). There are *thirty-six* accredited allied dental health education programs within the State of Florida and according to the pre-registration roster; a good representation of statewide program educators had pre-paid to attend the two-day meeting. The respondents were asked to complete the survey and to submit their responses at the closing session joint meeting for all discipline members on the last day

of the conference. As an alternative method of submitting responses, the participants were given the option of faxing or mailing the document to the researcher within a week following the meeting.

Sample:

The small size of the sample used for the survey could have possible bias on the results. The objective was to reach the whole population of Florida Allied Dental Health educators, but the researcher did not achieve that goal. Nevertheless, based on convenience, location, and timing of the Florida Allied Dental Health Educators Conference, the opportunity to have a captive audience of dedicated, discipline experts gathered at the same time to help attain a good response rate seemed to be a reasonable choice. In addition, the effort made by those to attend the annual Educator's conference and to maintain membership in this statewide professional organization indicated qualities exhibited by professionals in their field.

Based on an acquired copy of the registered members in attendance from all three disciplines, dental hygiene, dental assisting, and dental lab technology, any institutions with faculty not present at the meeting were noted and mailed or faxed a survey to be completed within two weeks after the meeting date. The self-addressed survey, cover letter, and stamped pre-addressed envelope were mailed to the program directors of the schools not represented at the conference (n=12). Participation by respondents was completely voluntary and return of the survey was considered consent to participate.

Survey Procedure:

Utilizing project objectives and research questions, the researcher developed a survey questionnaire and cover letter, for distribution to the project sample. The goal was to collect pertinent information on Technical Skills Standards and their use in the admissions process of statewide programs, respondents' knowledge of the Americans With Disabilities Act, and characteristic respondent demographical data.

The three-part, 29-item format of the survey questionnaire contained predominantly closed-ended questions throughout, with one response chosen by the participant. However, some explanation items were requested to allow participants opportunity to clarify their "yes/no" responses with program specifics. A Likert Scale indicating level of agreement regarding specific statements given was used in the opinion-based section of the survey.

Data/Statistical Analysis:

Data from completed questionnaires was entered into the SPSS program 9.0 Student Version for Windows for frequency analysis of all survey items. The analysis included results of the (1) response rate, (2) frequency of data associated with the specific objectives and questions outlined as the purpose for the study, and (3) relevant descriptive demographics that will support and establish rationale for the selected sampling for the project as well as the researcher question format used. Statistical values were calculated and are presented as tables and graphs used to integrated data into the narrative of this report.

Results:

The data collected on completed questionnaires in this research project disclosed the extent that declared Technical Skills Standards, referring to the essential, non-academic abilities or requirements needed to perform the job, are being used in the admissions process and counseling of program applicants for statewide allied dental education programs in Florida is small compared to the total number of programs. In addition, most experts employed in these statewide programs revealed the extent of their knowledge with the Americans With Disabilities Act (ADA) to be “somewhat familiar” to “thoroughly familiar” with the law. However, the extent of their knowledge of its impact on admissions policies and procedures was a bit more limited.

Results indicate a sizeable segment of those surveyed feel there is need for uniform, published Technical Skills Standards and a varied perception on who should be responsible for establishing these standards. This outcome may signify the respondents’ opinion that a committee would be appropriate for this purpose.

Of the ninety-seven (97) surveys that were distributed or mailed to respondents, forty-seven (47) were completed and returned, resulting in a 48% (percent) overall response rate. Interestingly, however, of the seventy-five (75) distributed surveys to educators in attendance at the statewide conference, only thirty-six (36) questionnaires were returned resulting in a 48% rate of return with this “in-person” form of distribution. Eleven (11) of the twelve (12) surveys mailed to program directors of those schools with no faculty present at the conference, were completed and returned with a higher response rate of 92%.

Research Question #1 - What is the status and current use of Technical

Skill Standards in the admissions process of accredited allied dental health education programs throughout Florida?

Section One of the survey questionnaire pertained to interpretation of the Survey Information on the current existence and use of Technical Skills Standards in program admissions. The first question on the survey asked respondents if, to their knowledge, there were Technical Skills Standards currently being used as part of their program's admissions process. Questions 2 - 6 that followed were designed to address specifics about the status and application of those "existing" Technical Skills Standards, if the respondent answered, "yes" to this first question.

Responses to Question 1, on the survey revealed that very few allied dental health education programs in Florida currently have established Technical Skills Standards that they are using as part of their admissions process. All 47 of the respondents completed this question and were the basis for the data analysis and this background information. However, specific numbers of individuals reporting from each of the 26 statewide programs was not identified. No additional information on which programs the respondents were representing was collected. *Figure 1* (below) shows the prevalence of "Yes vs. No" responses from those surveyed.

RESPONSES	Frequency (#)	Valid %
<i>1 - No</i>	<i>31</i>	<i>66%</i>
<i>2- I Don't Know</i>	<i>6</i>	<i>13%</i>
<i>3 -YES</i>	<i>10</i>	<i>21%</i>
	<i>N= 47</i>	<i>100%</i>

Respondents whose programs have established technical skills Standards that are used in the admissions process to their programs.

Of those 21% who answered “yes” to this initial question, Question 2, addressing the **evaluation of program Technical Skills Standards** resulted in an even split with regard to the participants responses. About half (50%) in Question 2 reported evaluation of the Technical Skill Standards in their programs was done every one to two years, with sixty percent (60%) in Question 3, claiming they had revised their Technical Skills Standards at their institution within the last one to two years. In contrast, the other 50% of the “Yes” respondents in Question 1, claim evaluation and revision of the existing

standards had not been done in over 5 years time (30%). One respondent checked “Never revised” as an answer in Question 3.

Question 4 of the survey, revealed Program Directors (10/10), Program Faculty (4/10), and Clinic Dentists (2/10) and Clinical Instructors (2/10) were most commonly noted as being involved in the development and revision process of existing Technical Standards. Of the schools reporting to have established Technical Skills Standards in place, a vast majority (90%) also indicated that these Standards were published. Of those reporting published standards, 70% appeared in the Program Admission Application Packets. A Program brochure, the School Catalog, and the program Website were also reported as sources for written standards by at least one respondent.

In Question 6, Compliance with the Program’s Technical Skills Standards were accomplished predominantly through a Physical Exam, by 50% of those claiming to have existing Technical Skills Standards. Consultation or discussion with the Program Administrator prior to admission, evaluation by program personnel of the student’s performance or abilities (after admission to the program), student self-reporting, and a manual dexterity test were also reported as currently used compliance measures by one or two of the respondents.

All respondents addressed issues in Questions 7 through 11 of Section One gathering Survey Information, because these questions were applicable to any of the programs regardless of whether they had existing Technical Skills Standards or not. These questions addressed the requirement of documentation and reporting of personal and health characteristics for incoming students to these programs. Those surveyed were asked to check all that apply and give brief responses to clarify answers as needed.

Respondents in Question 7, ranked Immunization Records (32%) and Physical Exam and Health Records (36%) as the most common requirements for student admission to an allied dental health education program, resulting in a combined rate of 68% participants claiming their programs require these conventional medical records. Also reported as required, by the respondents in Question 6, were Communicable disease history (22%), initial drug/toxicology screening (5%), and 4% who cited “Other” specific requirements, such as Hepatitis B status, a Physician’s release statement and a criminal (felony) record, as commonly used. In addition, the responses in Question 8 appeared to be evenly split at twenty percent (20%) for each, Visual Acuity and Hearing, as conditions that specifically require verification and documentation from a physician for incoming students. Surprisingly, however, 32% (25 of the 79 total responses) had no items checked when asked the question of conditions needing a physician’s verification for entry to their programs. Only five responses were checked for a History of Back Problems (6%), four were checked for Gross/Fine muscular movement (5%) and three (4%) checked the Ability to Communicate effectively in English.

It appears, in Question 9, few students question the applicability of the information asked on the Physical Exam/Health Record forms, as most respondents (81%) claim that no formal or informal complaints had been made to their programs regarding the questioning of health issues. The few “yes” responses that gave an explanation cited informal complaints by students regarding the insurance of confidentiality of personal information as the topic of concern. The necessity to accommodate a disabled student does warrant documentation of the disability, said 79%

of those responding to Question 10, with Learning disabilities most commonly specified, followed by Physical Disabilities.

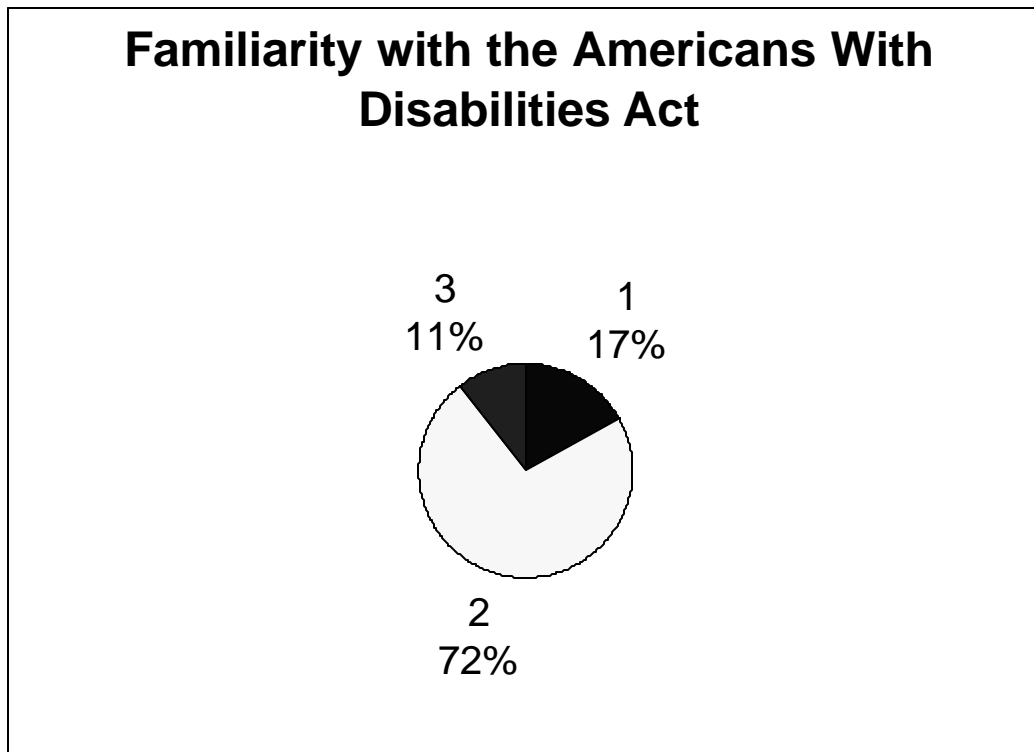
In Question 11, forty percent (40%) of the respondents who stated “yes”, when asked if their program has had to make accommodations for a physically disabled student, specified use of modifications associated with Learning Disabilities, such as requiring note taking services, tape recording lectures, altering testing environments, and tutoring as the most common. Other specifics noted in Question 11, pertained to Hearing and Visual impairment services. Amazingly, of the other 60% responding to Question 11, most reported, “No” accommodations had been made (by their program) for any physically disabled student. Only one respondent noted their program was designed physically to accommodate wheelchair access for disabled students.

Research Question #2 –What is the current knowledge of discipline experts in the field of the Federal statute, the Americans With Disabilities Act of 1990 and its impact on the admissions process of their programs?

Survey responses to Questions 12 and 13 are shown graphically in Table 2 with most of the respondents (72%) stating they are “somewhat familiar” with the Americans With Disabilities Act (ADA). When added to the 17% of those responding that they are “thoroughly familiar” with this legislation, it would seem safe to say that a majority of the total survey participants (89%) feel to some degree familiar with this federal law. As shown in **Figure 2**, below, only five respondents or 11% admittedly were not familiar with the Americans With Disabilities Act enacted in 1990.

Figure 2

1 = Thoroughly Familiar 2= Somewhat Familiar 3= Not

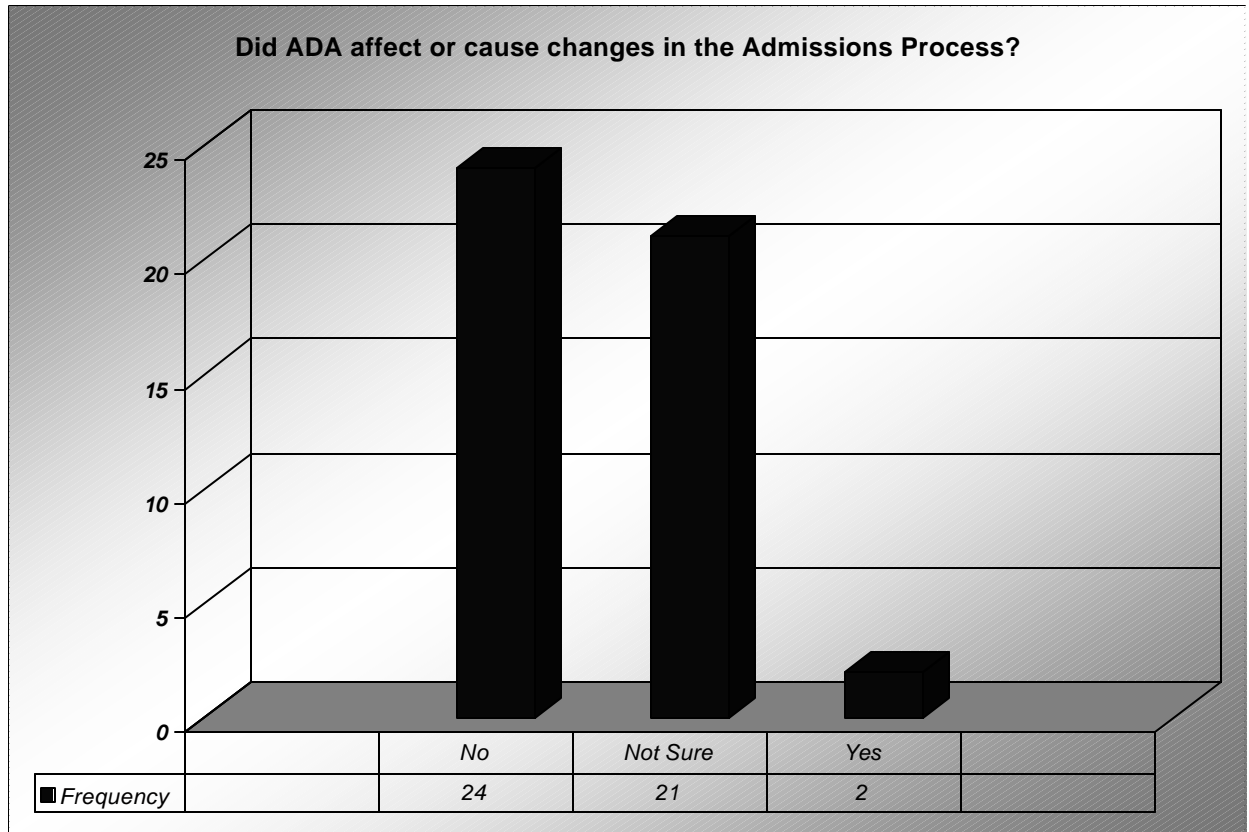


Familiar

Furthermore, when asked in Question 13 if enactment of the ADA affected or caused changes in the program regarding admissions or the use of Technical Skills Standards, over half (51%) said “No”, with another 45% responding with “Not Sure”. The two (2) “yes” responses did specify that the impact of the ADA resulted in changes regarding documentation (of disabilities) and the publishing of general areas of performance in their program. This would seem to indicate a positive step taken by those “yes” respondent’s programs in avoiding complaints of violations of federal Civil Rights Law that ensures equal opportunity for people with disabilities. **Figure 3** below illustrates, to most respondent’s knowledge, the ADA and its legal foundation for faculty and colleges to provide access for students with disabilities has had little or no impact on the admissions

process of most programs.

FIGURE 3



**Impact of the ADA on Admissions Policies & Procedures
(Survey Question # 13)**

Research Question #3 - Should there be uniform technical Standards and, who should establish these technical standards?

Section Two of the survey questionnaire required opinion responses by those surveyed. Respondents were asked to indicate their level of agreement with the need for

uniform, published Technical Skills Standards for each of the three dental health education disciplines; dental hygiene, dental assisting and dental lab technology. Consistently, based on Questions 14 through 17, the majority of respondents, from 47% to 49%, “Agreed” to “Strongly Agreed” with the need for uniform Technical Skills Standards in each of the three discipline areas. Sixty-two percent (62%) of the survey respondents expressed “Agreement” in the need for published Technical Skills Standards to be available for all Florida allied dental health program applicants.

FIGURE 4

a. The Need for Uniform Technical skills Standards for each allied dental health discipline

	Strongly Agree= 5	Agree= 4	Neutral= 3	Disagree= 2	Strongly Disagree= 1	No Response = NR
	N	5	4	3	2	1
		(%)	(%)	(%)	(%)	(%)
(%) Technical Skills Standards There should be <i>uniform</i> for all Dental Hygiene Programs in Florida 4.3	47	29.8	17.0	21.3	12.8	14.9
There should be <i>uniform</i> Technical Skills Standards for all Dental Assisting Programs in Florida 0	47	29.8	19.1	23.4	14.9	12.8
There should be <i>uniform</i> Technical Skills Standards for all Dental Lab Technology programs in Florida 2.1	47	27.7	17.0	25.5	14.9	12.8
There should be <i>published</i> Technical Skills Standards For all applicants to Florida Dental Allied Dental Health Education Programs 0	47	36.2	25.5	12.8	6.4	19.1

(Survey Questions # 14 - # 17)

FIGURE 5

The person(s) who should establish Technical Skills Standards for the program

	Strongly Agree= 5	Agree= 4	Neutral= 3	Disagree= 2	Strongly Disagree= 1		NR
	5	4	3	2	1	NR	
N = 47	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Educators	61.7	12.8	2.1	4.3	12.8	6.4	
Institutional Administrators	14.9	14.9	27.7	8.5	19.1	14.9	
Statewide Discipline Committees	8.5	27.7	23.4	8.5	14.9	17	
Practitioners (in the field)	14.9	27.7	19.1	6.4	14.9	17	
Professional Organizations	14.9	19.1	19.1	10.6	12.8	23.4	

(Survey Questions #18 - # 22)

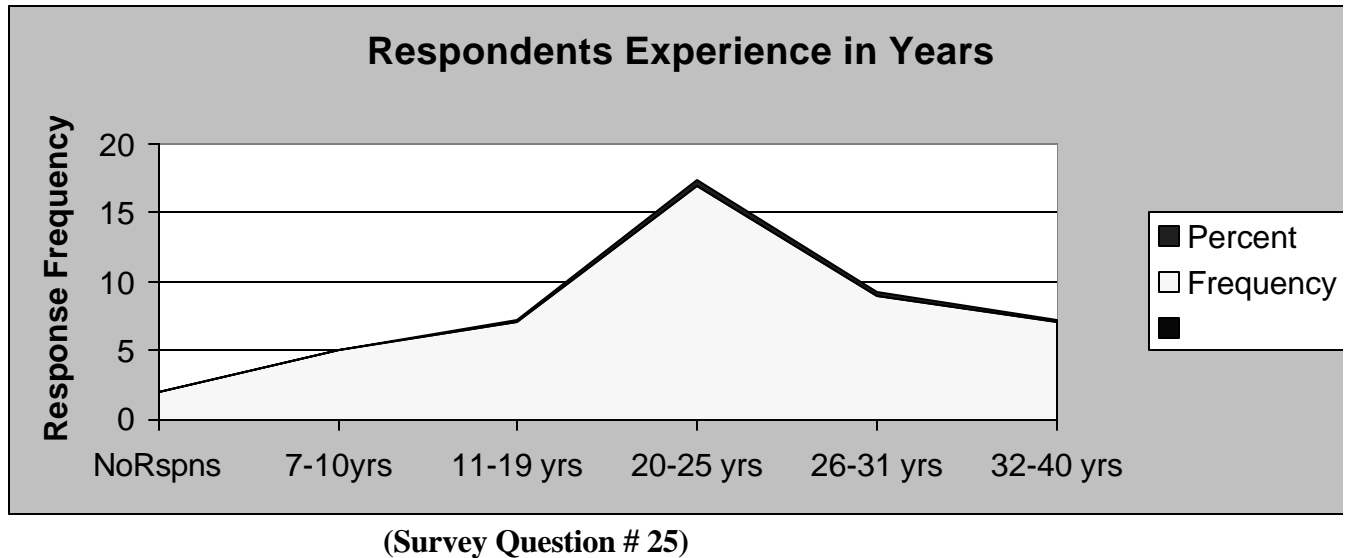
Figure 5 data indicates the respondents' opinion in percentage form regarding "who the person or persons should be that establishes Technical Skills Standards for a discipline or program". It appears approximately 74% of those surveyed favored Educators. Combining percentages for the "Agree" to "Strongly Agree" responses, the perception is that Educators are in high regard, followed by Practitioners (in the field) at 42% and Statewide Discipline Committees (36%). **No opinion** was indicated for some responses, with the highest percentage occurring in the category of Professional Organizations (23%). In addition, dissension was possibly indicated by the respondents for Institutional Administrators, with 43% (combining percentages for choosing 1 or 2) of

the respondents indicating they “Strongly Disagree” or “Disagree” with School Administrators establishing Technical Skills Standards for programs.

Demographics:

The Final Section of the survey questionnaire addressed participant and program demographics, in Questions 23 through 29. Demographic characteristics of the sample indicated that the majority of respondents ranged in age from 35 to 54 years of age, with 59% falling within the 45 – 54 year range. Most of those completing the survey, Question 24, indicated educational backgrounds at Masters Degree (51%), PhD (4%), or DDS/DMD (13%) levels, with a combined percentage of 68% of respondents having advanced degrees. Question 25 results indicated a broad range in years of involvement in the dental field ranged from seven (7) to forty (40). A large bulk of respondents, approximately 36%, was statistically shown falling between twenty (20) and twenty-five (25) years in the dentistry. **Figure 6** graphically shows that the resulting data and the many years of involvement the respondents have in the educational training of allied health students, nearly a quarter of a century or more for some. This would certainly indicated a positive characteristic in qualifying their expertise in the field.

FIGURE 6



There was a high positive response to Question 26 regarding professional organizational membership at the local, state and national level by 81% of respondents. Due to the close-ended nature of the question posed, little is learned about the actual involvement of the individual, like holding office, or committee appointments. However, the results still indicate an important characteristic of experts in the field in terms of their interest in and support for professional career growth and service.

When questioned about current employment, the majority of survey participants answering this question (N=40) reported working full time (87%), with 13% working part-time. Of that number, 64% were Educator/Instructors, 27% were Program Administrators/Staff and only 9% were working as a Clinical Instructor Only. In Question 26, those surveyed were instructed to “mark all that apply”, so some individuals marked more than one item when responding to this question, resulting in N=85 of total responses.

Because there are no four-year, baccalaureate degree dental hygiene, dental assisting, or dental lab technology programs in the State of Florida, only two choices were offered respondents, in Question 28, as descriptors for their educational programs. In some instances, questionnaire respondents marked both categories because Florida has unique articulated programs at some institutions creating a ladder concept between Dental Assisting and Dental Hygiene at the same institution. Still, most of the educational programs, 65%, reported to be Associate in Science or Associate in Applied Science (A.S./A.A.S) programs for Question 28. The other 35% reported Vocational/Technical Certificate (PSAV) status for that question.

When asked about program off-site clinical affiliates, the interest was in a possible correlation between those programs that have addressed the use of performance-based, Technical Skills Standards in their admissions process and the need to comply with program externship requirements in the field. It was thought the potential for more stringent compliance with federal mandates would presumably be more likely at military facilities and public health sites. As reported in Question 29, most clinical sites appear to be at Public Health Facilities, Private Practice Offices, and Military Bases (40%, 32%, 12% respectively). The data supplied in an open-ended format for this question also indicated other options given by nine respondents, as the University of Florida College of Dentistry, Veterans Administration and Children's Hospitals, Homeless Shelters, and Retired Citizens Centers that were externship affiliates. Certainly availability of externship sites is an issue for some institutions, as 5% of those completing Question 29, marked the option that their "program does not have off-site clinical affiliates".

Conclusions and Recommendations:

This project was the **first time** attempt to investigate the existence and use of Technical Skills Standards (referring to those essential, non-academic skill abilities needed to perform the job) in advisement for students as part of the admissions process to allied dental education programs in the state of Florida. A result that 66% of the respondents in this project disclosed that they have **no** established Technical Skills Standards that are used in their counseling or admissions process confirms there is a need to examine this issue. The resultant question then becomes, should we have uniform Technical Skills Standards for each allied dental health program and should the uniformity be within the state, the country, or among school programs? Respondents indicated that they feel there is a need for uniform, published program technical skills standards for their disciplines, and that they have varied opinions on who should establish these standards. That, in itself, offers additional questions for further research and investigation.

The sample used for this research was determined by the convenience, timing, and cost-effectiveness of surveying those devoted dental health educators attending the Florida Allied Dental Health Educators conference. It seemed reasonable, too, that a face-to-face encounter with that number of expert respondents gathered in one place at the same time for the purpose of discussing statewide issues would insure a better response rate than a mailed survey. But this was not the case. The response rate was actually higher for the follow-up mailing to those not in attendance at the conference (92%) versus the distribution of the surveys at the conference. That return rate was 48%, to the

surprise of the researcher. It was odd that the “captive” audience at the meeting responded at a lesser rate than the mailed questionnaires. In the end, because of the limited sample size, the deductions and conclusions derived from the sample information will predominantly remain only pertinent to the sample of participants and their programs here in Florida.

The data collected on what is currently required of incoming students to these dental programs is significant. It confirms in Section One of the survey, Questions 7 and 8, that our priorities are still focused on documentation of Immunization status (36%) and sensory issues, like visual acuity (20%), hearing impairment (20%), and general Physical Exam and Health (32%) issues. In contrast, the low percentages of reported documentation, in Question 8, required for a History of back problems by only 6% of those responding; Gross/fine muscular movement at only 5% of those responding, and the Ability to Communicate effectively in English by only 4% of the respondents represent a lack of awareness of conditions significant to student success in allied dental health professions.

With regard to student complaints of personal or health information requirements to dental health training programs, respondents to survey Question 9, reported that in only a few isolated incidences (8%) did students informally question the applicability of the Physical or Health information requested. In most instances, 81%, the respondents indicated students accepted the relevance of the required information, and perceived the personal or health characteristics as a necessary part of the admissions process. This is relevant because some conditions that may require documentation if used to evaluate a student’s qualifications for admission to a program, may not be upheld in the courts when

dealing with students with disabilities. It would seem appropriate for all students to have prior knowledge of Technical Skills Standards (essential functions of the job) provided to them as part of that information-based admissions process. As far back as 1981, Ross and O'Brien's article reaffirmed this need in the statement, "Allied health education at the associate degree level has a greater need for technical standards since educational programs in allied health have substantial performance components which all students must be able to demonstrate in order to successfully complete a program of study" (p. 7).

Certainly a review of the literature confirms that today, "there are more students with documented disabilities in higher education than ever before" (Thomas, 1992, p. 248). Data gathered in this research project also confirms an awareness of this by post-secondary, allied dental health career training programs in Florida. With the reported 79% of participants claiming, in survey Question 10, that their programs ask for formal documentation of the students Learning and/or Physical disabilities, this shows that programs are attentive to the growth in the number of students with disabilities in recent years. In contrast, Question 11, revealed only 40% of the respondents' reported their programs have had to make accommodations for a physically disabled student. Most of those accommodations were associated with Learning Disabilities, followed by sensory (hearing and visual) impairment services. This trend may be explained in part by the prevalence of adults with documented learning disabilities as a result of increased research in that area (Kerka, 1998). Surprisingly, 59% responding to Question 11 reported "No" accommodations have had to be made by their program for any physically disabled student. Six percent failed to respond to this question so, for the sake of argument, these are assumed to be "no" responses.

The data reveals that it most of our statewide programs may be relying on their own “good faith” interpretations of how to address the issue of insuring that no applicant is discriminated against with regard to admissions into Florida allied dental health education programs. Based on current legislation and civil rights laws, an abundance of recent litigation proves that very little latitude is given when addressing denial of what is considered “reasonable accommodation” for a physically disabled student (Griffin, 1992, p. 23). *Legal Issues Surrounding Section 504*, citing several court rulings, confirms the broad intent of the law means that colleges and universities receiving federal financial assistance for *any* of their programs or activities, are required to make *all* programs accessible to handicapped students and to insure that qualified handicapped persons are not inadvertently excluded from such programs by the absence of auxiliary aids (Griffin, 1982).

The original intent of this project was to initiate further discussion and research regarding Americans with disabilities and specifically, Florida’s allied dental health education programs’ role in this critical area. This data reveals that a very few programs and institutions have seen the need or taken the initiative to address this issue already.

Lastly, the data reveals that statewide allied dental health educators feel there is a need for uniform, published Technical Skills Standards in Dental Hygiene, Dental Assisting and Dental Lab Technology (47%, 49%, 45% respectively) a finding that supports the literature suggesting that “as a result of . . . several major federal laws, more attention has been focused on efforts to provide qualified students and applicants with disabilities nondiscriminatory access to higher education (Kerka, 1998) . In addition, the literature states “As the number of students and applicants seeking to attend institutions

of higher education increases, colleges and universities can expect to see even more individuals with disabilities applying for admission (Scott, 1997, p.15). The results from survey Questions 18 –22, seem to indicate, respondents were not only positively in favor of the fact that there should be Technical Skills Standards established and published, but the majority either “Agreed” or “Strongly Agreed” that Educators (61%), or %), Practitioners (in the field) at 43% or Statewide Discipline Committees (36%) should be the ones to establish these Technical Skills Standards for all allied dental health educational programs.

Recommendations:

Overall, this research project accomplished its objectives which were to determine 1) if there are technical skills standards that currently exist for the accredited dental hygiene, dental assisting and/or dental laboratory technology education programs established in the State of Florida; 2) the degree of familiarity of educators (as experts in the field) regarding the Americans with Disabilities Act (ADA); and 3) summarize opinions of educators, as experts in the field, regarding the need for uniform, published technical skills standards for each specific institution and each educational program discipline and who should establish these technical standards.

Although useful in describing characteristics and demographics of the probability sample for this project, inherent problems with validity and formatting of the questions on a “researcher developed” survey will surely result in some ambiguity and misrepresentation of data from the respondents. For example, some questions may not address a topic in enough depth and specificity to elicit the information needed. Attempt

was made to limit researcher bias and personal prejudice in interpreting the data elicited from the survey questions by the use of closed-ended questions. However, wherever additional explanation or specific notations were made, the researcher's interpretation may have affected the input of data, ultimately the outcome of the findings and conclusions.

The results attained in this project reflect the researcher's attempt to overcome any internal and external validity factors. However, it is recommended that additional studies be done to address items in question or in need of more specific dialogue. For example, careful analysis of the provisions set forth by the American's With Disabilities Act of 1990 and their applicability to each programmatic admissions policies and procedures would be appropriate.

This study has some limitations in its generalizability to all allied health education programs, nationwide, based on the convenience sample used. However, the data analysis and findings discussed earlier indicate this project could be used as a Pilot Study with which further research could be compared at the state or national level. The results of the survey may also serve as a starting place or reference point for other programs and disciplines, both state and nationwide. It is recommended that a larger population sample be selected in light of achieving a higher response. Although the response rate for subsequent mailings which were done after the initial in-person survey distribution at the conference, were at a high (92%) rate of return versus the 48% return rate at the meeting,. It is recommended to include some type of incentive for respondents to encourage their participation.

Confirmation of the need to examine the admissions process for all allied dental health education programs and to develop essential, non – academic requirements necessary to perform the fundamental job duties for dental hygiene, dental assisting and dental lab technology has been the most positive outcome of this project. “Health care has been one of the nation’s fastest growing industries... According to recent reports of the Bureau of Labor and Statistics, with over nine percent of the total workforce is employed in the health care field”. (Far West Laboratories FWL), 1995, p. ix). The results of this study provide important information for allied dental health educators in Florida. It is paramount that technical, or pre-baccalaureate, levels of allied health care training such as Associate (A.S.) Degree Dental Hygiene and Dental Lab Technology programs, as well as Vocational (PSAV) Certificate programs like Dental Assisting, are especially aware of this issue because of their unique and vital contribution of providing fundamental training to the entry-level dental health care worker (FWL, 1995, p.5).

This study has merit, even in light of its limitations in generalizability to all dental health education programs, but will hopefully inspire additional interest in this critical area, maybe through replication of this study in other disciplines and allied health education programs. It has successfully established a clear need for more research into the need for essential Technical Skills Standards for those allied dental health education programs without them. Quite possibly, other health care disciplines with performance criteria requirements will also see it as an area of focus to equalize opportunities for all qualified students, practitioners, and employees.

It is recommended, also, that secondary research be conducted on career educators’ knowledge of ADA and its effect in performance-based occupational training.

This issue has so many facets; it appears to be rich with the need to expand the knowledge of this select population as well as others in allied health technical training programs. To support this recommendation, the research cites a comparison study of two-year community and technical colleges by McGuire and Bieber where it was found that “as college becomes a realistic goal for increasing numbers of students with learning disabilities, the option of a technical school is one which may be appropriate for some” (1989, p. 8).

The recommendation to take a more global look at the topic of informing potential program applicants of the minimum physical, emotional, and intellectual technical skill standards required to successfully complete an occupational training program has been supported by the expressed interest of these allied dental health respondents and the statewide data collected in this research project.

Summary:

People with disabilities constitute the single largest minority group identified in the United States, surpassing the elderly and African Americans, according to the U.S. Bureau of the Census statistics (Wells & Hanebrink, 1998). The topic needing to be addressed by educators is not only what types of disabilities in an occupational area can successfully be accommodated with the entry-level worker but what minimal physical requirements or abilities should be identified as required for the applicant to a technical/vocational program to insure student success (Scott, 1997)?

In conclusion, the findings of this project confirm that is important for postsecondary institutions, as well as individual training programs and faculty to comply with the

requirements and spirit of the law, to better meet the needs of students with disabilities.

“The key to compliance with disability discrimination laws is balancing the rights of disabled individuals with the institution’s desire to preserve the dignity of its programs. When essential components are clearly and objectively delineated, a nondiscriminatory standard is established for all students” (Scott, 1997, p. 15).

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