

**Selection Criteria Used by High School Principals in Virginia When Hiring First-Year
Career and Technical Education Teachers**

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(ABSTRACT)

The purpose of this study was to determine what high school principals look for when hiring career and technical teachers, the relative importance of that criteria, and whether certain factors (such as school district size, community size, and years of experience as a principal) affect their opinions toward the selection process. Surveys were mailed to 160 principals and 146 responded, yielding a response rate of 91%. A series of 2-group t-tests and standard regression analyses were used to answer the research questions.

The most desired hiring criteria cited by principals (in order of importance) were enthusiasm, an applicant's ability to communicate effectively, an applicant who is student-centered, an applicant's beliefs on classroom management, and their knowledge of a variety of teaching strategies.

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Chapter 1

Introduction

The omnipresent concern of the teacher educator is: “Will our curriculum provide the experiences necessary to prepare our students to represent our field of study and fulfill expectations of principals?”(Hickner, 1977, p. 162). One possible indicator of appropriate preparation is the likelihood that a student teacher will be hired following graduation. Information concerning the selection criteria used by principals will provide teacher educators with the knowledge needed to increase the chances that students will be hired upon completion of their college degrees. In order to provide quality preservice education to all students, it is imperative that teacher educators have an accurate idea of the selection criteria that principals desire when hiring new teachers.

Although selection criteria for teachers in all disciplines might have certain similarities, special considerations need to be made when hiring career and technical teachers. Career and technical education is competency-based, and the curriculum content, dictated largely by leaders in the various career professions, is constantly changing to stay current with the needs of business and industry. All career and technical teacher education faculty strive to prepare students to enter the field of education with the competencies necessary to perform as teachers in their chosen vocational specialties. College graduates are judged to have these competencies as evidenced by satisfactory completion of the preservice education. Upon completion of the preservice preparation, teachers are no longer formally evaluated by professional teacher educators. Rather, they are evaluated by school administrators in the hiring process. The school principal hiring a college graduate is the ultimate judge of that individual’s ability to adequately

enter the teaching profession. If all individuals have basically the same preservice preparation based on the state licensure standards, what is the basis for determining who is hired and who is not hired as a career and technical teacher? What are the specific criteria used by high school principals to differentiate among applicants when hiring a career and technical teacher? It is likely there are other factors that are important to school administrators in addition to academic competencies.

In October 1995, the University Council for Workforce and Human Resource Education, in cooperation with the National Center for Research in Vocational Education and the U.S. Department of Education, sponsored a national summit in San Diego. Nearly 100 educators wrestled with the reform of career and technical teacher education. From the conference speakers and the research community came several themes to guide reform. One such theme was: “Teacher education programs as a whole need to develop close ties to those they serve directly, particularly the K-12 schools. Colleges of Education should become the learners rather than the teachers” (Lynch, 1997, p. 48). Therefore, one of the things teacher educators should do is work more closely with school systems. This study is an effort to develop those closer ties. This study is also unique in that the focus is on career and technical teachers, whereas most research found on selection criteria does not address career and technical teachers.

The selection of faculty in public education typically involves several quasi-independent steps, the sequence of which is determined by the local district and legal restrictions (Gorton, 1993). This process begins after assessing the personnel needs of the district, determining the selection criteria, and initiating the recruitment of candidates. The process begins with the collection of “paper” credentials such as application forms, test scores, transcripts, and recommendations. After close examination of credentials, the most promising applicants are

selected for an interview. Gorton (1993) stated that any desired quality or characteristic can be measured by looking at an applicant's academic credentials or by participating in an interview. After the interviews are completed, the principal hires the candidate he/she feels is best suited for the position. While this may seem like a simple process, present-day public education is anything but simple. Principals are frequently called upon to implement the process of screening and selecting the candidates for teaching positions in their buildings. Are these principals able to identify and articulate the talents they are seeking in filling the positions within their building? Are principals hiring teachers who fit these "talent" profiles? It is assumed that the employment mission of each district is to recruit and employ only the most talented educators for its classrooms. Further, the individuals in charge of hiring must have a clear understanding of what characteristics are associated with outstanding teaching and be knowledgeable in determining the presence or absence of these characteristics through the selection process.

May (1994) sought to discover characteristics of successful teachers by conducting interviews with teachers whose principals had labeled them "outstanding teachers in their field." From the interviews he was able to identify common traits and qualities that make a teacher successful. Some of those qualities included being student-centered, enthusiastic, open (approachable), and knowledgeable in both subject matter and instructional strategies needed to convey that subject matter. Also important was the ability to manage a classroom and demonstrate respect for all students. He concluded that applicants with these qualities have a higher probability of success than applicants without these qualities. In addition to May's findings, a number of studies (Ducharme, 1990; Greaves, 1992) suggested a positive relationship between student teaching performance and success in the early years of teaching. As a result,

these researchers indicated that the evaluation by the cooperating teacher is a strong indication of the applicant's ability to succeed in the field of education.

Castetter (1976) also studied the selection process and hiring criteria and found that one of the problems with evaluating selection criteria is that some teaching positions require characteristics and qualities that are unique to a specific subject area. He indicated there are certain criteria (such as effective classroom management skills and good communication skills) that can be applied to every teaching position but some subject areas require different criteria for success that must be taken into consideration. Castetter (1976) stressed the importance of finding congruence between the needs and abilities of the candidate and the characteristics of the position. Hersh (1980) agreed by concluding "the qualities required of a successful teacher are dependent on the grade level, subject matter, and the particular demands of the community" (p. 65).

Selection Theory

Theory in selection research is essentially a theory of work performance (Schmitt & Chan, 1998). In 1993, Campbell and his colleagues proposed a "theory of job performance" that hypothesized that this construct comprises eight major dimensions (Campbell, Gasser, & Oswald, 1993). In general, Campbell defined performance as "goal relevant actions that are under the control of the individual, regardless or whether they are cognitive, motor, psychomotor, or interpersonal" (p. 40). The eight general factors listed below are meant to describe the universe of things people do across all jobs, though one or more of the factors may be missing or irrelevant in any given job. *Job-specific task proficiency* behaviors are those technical or core tasks that are central to the job. These define the substantive content of what gets done by computer programmers, college professors, carpenters, and so on. *Task proficiency*

of a non-job-specific nature includes those things that people across jobs are often required to perform in organizations. For example, in many workplaces, all individuals are required to help keep the workplace clean and to be watchful of unsafe conditions. Many jobs require that individuals be proficient in various *written and oral communication tasks*. People in most jobs are required to *demonstrate effort*, in that they must commit themselves to the performance of work tasks, exert a high degree of effort, and persist in that effort. They must also exercise a degree of *personal discipline*, in that they are required to arrive at work on time, avoid substance abuse problems, and abide by company rules and policies. In many jobs, an important element of performance is the degree to which workers *facilitate peer and team performance*. This includes helping colleagues with work-related and personal problems, serving as a role model, and promoting participation of colleagues in the organization's work. *Supervisory/leadership* behavior is directed at influencing the behavior of subordinates. *Management and administration tasks* include those tasks that help to manage, report, or define what an organization does without direct interaction with subordinates, as would be the case for supervisory tasks.

Campbell's theory is based on an analysis of the job and the organizational context in which the work takes place (Schmitt & Chan, 1998). One result of the job analysis is the specification of important work behaviors. Using these work behaviors, the researcher generates a set of required knowledge, skills, abilities, and other characteristics (KSAO).

Knowledge refers to the foundation upon which abilities and skills are built. *Skills* refer to the capability to perform tasks with ease and precision. *Abilities* usually refer to the cognitive capabilities necessary to perform a job function. In addition, there are *other* characteristics that must be taken into consideration when selecting a candidate—such as willingness to work under adverse conditions—and certain personality traits (e.g., persistence, tolerance of others'

viewpoints). The distinctions among knowledge, skills, abilities, and other characteristics are not important; what is important is the notion that each type of human characteristic should be considered in the generation of a comprehensive list of selection criteria (Schmitt & Chan, 1998). Measures of these KSAOs are subsequently developed, and scores on these measures constitute selection criteria.

Once it is determined what attributes are desired for a position, the final step is to determine how these attributes will be assessed. Rosse and Levin (1997) suggested using a Performance Attributes Matrix. This model lists attributes developed from the job analysis in rows of the matrix and the various hiring tools are included in columns of the matrix. The matrix is then filled in with Xs to show which hiring tools will be used to assess each attribute. Examples of hiring tools include applications, interviews, reference checks, and work samples. The matrix provides a simple visual representation of complex information that makes it easy to ensure nothing from the job analysis has been left out. It also organizes the process of selecting hiring tools around their real purpose—assessing applicants’ job-relevant attributes, rather than irrelevant factors such as biases and personal preferences regarding different tools (Rosse & Levin, 1997). An example of the Performance Attributes Matrix is shown in Table 1.

Table 1

Performance Attributes Matrix for a Teacher

<u>Attributes</u>	<u>Credentials</u>	<u>Interview</u>	<u>Reference</u>
Good classroom mgt. skills			X
Effective communication skills		X	
High Standardized Test Scores	X		

Some researchers suggest that to determine the appropriate KSAOs on which to make selection decisions, all one needs to know is the general job family to which a job belongs (i.e., teacher, rather than the more specific “career and technical” teacher). But most disagree, including Campbell (Schmitt & Chan, 1998). My study is based on Campbell’s concept that every position, regardless of how similar it might be to another position, is unique and that different KSAOs will be required in that job analysis. The nature of the career and technical teacher’s job is very different from the nature of the English teacher’s job. Career and technical teachers prepare students for specific career areas and rely on close relationships and communication with community businesses. Career and technical teachers are also charged with supervising student work experiences. They are required to continually monitor their field for changes based upon a whole host of factors such as technological advances. All of these requirements have little in common with those of an English teacher.

Campbell’s theory focused on an outline for hiring applicants but it is also important to understand the role that information processing can play in making personnel decisions. Motowidlo (1986) created an information sampling model that suggests the way interviewers sample information will affect the accuracy of their judgments when hiring applicants. The model assumes a hypothetical domain of bits of information which consists of all the positive and negative items which could potentially have been learned about a person during an interview. From this domain, the interviewer samples a subset of information bits and forms an evaluative impression for each bit and stores it in memory. A sample of these impressions is then retrieved from memory and determines the favorability of the evaluative judgment.

Two kinds of automatic processes transform observed and experienced events into evaluative material in memory. First, an event that is perceived as good or bad about the

applicant is automatically transformed into a positive or negative evaluative impression. Second, the frequencies with which positive and negative impressions of an applicant are formed are automatically tallied and stored in memory. On this basis, when an interviewer tries to form an evaluative judgment on the applicant, what comes to mind is a sense that there were plenty of good things and a few bad things, or plenty of bad things and a few good things, without the events that led to these impressions necessarily being recalled at all.

Dipboye (1982), who conducted studies on information processing, suggested that information presented before the interview caused the interviewer to form an evaluation of the applicant's qualifications even before the interview has begun. The pre-interview evaluation influenced the manner in which the interviewer conducted the interview, his or her perceptions of the applicant's performance in the interview, and causal interpretations of the applicant's performance, which affected the evaluation and hiring decision. This implies that information in the application distorts the processing of interview information presented later and affects the favorability of interviewer evaluations and decisions. Dipboye, Stramler, and Fontenelle (1984) found support for that possibility. Students who read an unfavorable application before watching a videotaped interview portrayal recalled fewer positive items from the interview and rated the applicant's effectiveness in answering the interviewer's questions lower than did students who watched the same interview after reading a favorable application. However, another study by Dipboye, Fontenelle, and Garner (1984), in which students actually interviewed a simulated job candidate, found that interviewers who previewed an application gathered more correct information from the interview. Tucker and Rowe (1977) also found that previewing an application does not necessarily reduce the effectiveness with which interview information is

processed. Despite some ambiguities, these results generally support the idea that the nature of information presented early can disproportionately affect the final evaluative judgment.

There is also evidence that interviewers' judgments of a candidate are sometimes affected by the favorability of their judgments of candidates evaluated immediately before, although these contrast effects may not always be large enough to be practically important (Cooper, 1981). For example, Wexley, Yukl, Kovacs, and Sanders (1972) had students rate three videotaped interviews in succession. The first two set the "frame of reference." Evaluations of the third interview were examined for contrast effects. Wexley et al. found that, when the third interview was preceded by two favorable interviews, it was rated less favorably than when it was preceded by two unfavorable interviews. So it is important when attempting to understand the selection process, that in addition to the hiring process, factors that affect decision-making should also be taken into consideration in order to get a broader conceptualization of what is involved when choosing candidates for a position.

Developing models or theories for teacher selection is a complex process. A study by Sievers (1989) attempted to design just such a paradigm. Interviews of district level administrators and principals formed the basis for Sievers' teacher selection theory. Sievers interviewed twenty-four administrators, seven district-level administrators, and seventeen principals. Constant comparative methodology was used to simultaneously collect and analyze data. From these data a "ground theory" was established regarding teacher selection.

The selection process was based on three clusters or theoretical propositions. First, selection of teachers is contingent on the climate within the building, the principals' perception of the climate within the building, and the principals' self-perception. Second, conditions of the teacher selection process are influenced by the supply and demand of teachers, the personal

interview, and the role of the principal. The last cluster suggests that the final decision is grounded in the principal's belief that the candidate fits the particular circumstances or "context" which the job site presents, and that the candidate understands this fit within that setting. The criteria for teacher selection were directly related to the particular needs or contexts of the building at the time. Teacher selection was predicated on values, attitudes, philosophy, and goals within the respective building. The final decision combines selection criteria and process, but ultimately rests in the principal's perception of whether the candidate fits into the scheme of the building context.

Both Campbell and Sievers place a large emphasis on the organizational climate in which the work takes place. Campbell states, "It is important to assess the organization in which the work is being done. Organizational features such as leadership practices, the reward system, and structure have direct effects on employee behavior. These features may constrain or enhance the degree to which individuals are able to use their abilities, or may change the nature of the tasks performed and the KSAOs required" (p. 44). The major difference between the two theories was that Campbell's view of selection was more objective with the eight dimensions while Sievers stressed "fit," which tended to be subjective.

In summary, it is a combination of selection criteria and "gut feeling" that ultimately decides which applicant is hired for a teaching position. The principal clearly has a great deal of power in determining who is hired and who is not. For this reason it is imperative that teacher educators learn as much as possible about what principals look for when hiring teachers so that they can better prepare students for careers in education.

Statement of the Problem

Place and Drake (1994) indicated that available research has not sufficiently answered such questions as: (a) What criteria are important in the selection of classroom teachers? (b) Which of those criteria have been determined most significant by the individuals using them to select classroom teachers? (c) What are the variables that influence priorities of individuals making these selections? In addition, little research has been found addressing selection criteria as they relate to career and technical teachers.

Between 1996 and 1997, nearly one million classroom teachers were hired in the United States. More than any other factor, the quality of a school district depends on the quality of its staff. Therefore, a hiring initiative of such magnitude represents a window of opportunity for school districts (Swinehart, 1997).

School principals are responsible for selecting classroom teachers but, according to Jensen (1986), often do not select the most promising teachers. Possible reasons offered included the complexities of the teaching function, inadequate attention to hiring, and insufficient selection techniques.

If selecting the most desirable teachers from the beginning is preferable to retraining ineffective teachers, then the criteria used for initial teacher selection are of major significance.

Purpose of the Study

When college graduates seek employment, they are hired or not hired on the basis of some criteria. Educational institutions make assumptions that certain criteria are valued in the work place; however, the ultimate judge of student employability is the school principal. The purpose of this study was to determine what high school principals look for when hiring career and technical teachers and also whether certain factors (such as school district size, community size, and years of experience as a principal) affect their opinions toward the selection process.

This study was designed to determine the relative importance of criteria used by hiring officials when selecting first-time career and technical teachers. This information will add to the knowledge base used to redesign teacher education programs in colleges and universities. For example, knowing that communication skills are valued above all else would aid teacher educators in selecting what to emphasize to ensure that their programs prepare students adequately. Results of the study will assist in answering practical questions regarding the importance of the following types of teacher selection criteria: academic credentials, interview credentials, and career and technical credentials.

Significance of Study

The results of this study could be extremely beneficial to several groups. First, career and technical teacher educators could use the results of this study to better prepare career and technical teachers for their first teaching assignments. Second, individuals considering careers as career and technical teachers could gain valuable insight concerning qualifications, personal attributes, and other credentials regarded as most significant by hiring officials. Third, principals could provide valuable information that would help teacher education faculty develop the criteria that they seek in teacher applicants, thus supplying them with a work force they desire.

Research Questions

1. What criteria do principals consider most important when hiring beginning career and technical teachers?
2. Do criteria differ depending on whether the career and technical teacher's job requires or does not require a minimum of a bachelor's degree?
3. To what extent do ratings of criteria differ depending on principal and school characteristics?

- A. To what extent do ratings concerning academic credentials differ based on community size, school district size, or years of experience as an administrator?
- B. To what extent do ratings concerning career and technical credentials differ based on community size, school district size, or years of experience as an administrator?
- C. To what extent do ratings concerning interview content differ based on community size, school district size, or years of experience as an administrator?

The rationale for variables chosen in this study will be presented in Chapter 2, the review of literature.

Assumptions

The study was based on the following assumptions:

1. School principals desire to employ the most suitable applicants for their school settings.
2. The level of acceptability of each applicant will vary even though the applicant has satisfied equivalent programs of preservice preparation.
3. The responses to the questionnaire items accurately reflect the opinions of the participants.

Delimitations/Limitations

The study is delimited to the opinions of public school principals (career and technical and comprehensive schools) in the state of Virginia. Therefore, the results of this study may be generalizable only to principals of comprehensive and career and technical high schools in Virginia. There may, however, be implications for other states.

Definition of Terms

1. Vocational or career and technical teacher: An educator who teaches career courses in one of the following areas: (a) agricultural education, (b) business education, (c) family and

consumer sciences education (called work and family studies in Virginia), (d) health occupations education, (e) industrial cooperative education, (f) marketing education, (g) technology education and (h) trade and industrial education.

2. School principal: The school official delegated the responsibility from the school board to make final recommendations on which applicant to hire (Berg, 1998).
3. Selection criteria: Those qualities, attributes, preservice qualifications and experience used in varying degrees by employing officials to rate teacher candidates (Alberti, 1984).
4. Preservice teacher: A student preparing to become licensed to teach a subject in a high school or middle school (Berg, 1998).
5. Academic credentials: Records of applicant information and achievement. For example, test scores from the Praxis Examination; overall grade point average; education coursework grade point average; subject area grade point average; professional references (college professors, cooperating teacher, etc.); and student teaching evaluation (Berg, 1998).
6. Interview content: Intangible knowledge of qualities such as enthusiasm, appearance, willingness to participate in extra-curricular activities, and communication skills, to name a few (Alberti, 1984).
7. Career and technical credentials: Those criteria that are unique to career and technical teachers. For example, work experience in a vocational area and knowledge of technology as it relates to the workplace.
8. Standards of Learning: Minimum requirements that set reasonable targets and expectations for what teachers in Virginia need to teach and students in Virginia need to learn. The standards set clear, concise, measurable, and rigorous expectations for young people. Standards of learning have been developed for the following academic subject areas: English;

Fine Arts; Foreign Language; History and Social Science; Math; and Science
(www.vapen.org).

Organization of Study

Chapter 2 will present a review of literature dealing with the teacher selection process as well as the results of studies conducted in the area of teacher selection. Chapter 3 will outline the survey design for this study, population, data collection procedures, and data analyses. Chapter 4 will present the results of the study and Chapter 5 will present the conclusions and discussion of the conclusions as well as implications and recommendations for future studies.

Chapter 2

Review of Literature

This review of literature examines studies dealing with various criteria that influence the selection of public school teachers. I will begin by discussing what the literature says about the selection and hiring process in general and then look at the components of the selection process as they directly relate to education and the hiring of public school teachers. This will be followed by research used to justify my independent variables and an examination of studies that sought to discover the most desired criteria in the selection of teachers. And finally, I will provide a summary of selection criteria as they pertain to career and technical educators. The lack of research available in this specific area (career and technical education) should serve as an indication that further studies should be done to add to the limited knowledge base that currently exists.

The Selection Process in General

An applicant's credentials and his/her performance in the interview process are the major determinants in whether an individual is chosen for a particular job (Guion, 1976). While hiring practices vary from field to field, and business to business, there are at least two steps to which every applicant is subjected. The first is a review of the resume and the second is the formal interview (Drake, Kaplan, & Stone, 1978). Many employers will include a variety of tests before the interview is conducted. Since the interview is seen as the most important procedure used in employee selection, it stands to reason that the majority of research done in the selection process focuses on the interview (Guion, 1976).

The Interview

Millions of interviews are held each year between job seekers and employers (Arvey & Campion, 1982). Acuff (1981) stated that obtaining the information required to make accurate hiring decisions is the primary purpose of the employment interview. It is an aid to gathering facts on the applicant's appearance, voice, poise, conversational ability, alertness, warmth, maturity, and job interests. These characteristics are then compared to standards and measures of success or failure in the position for which the individual is being considered (Acuff, 1981). Hakel and Schuh (1971) noted that job applicant attributes resulted in two content clusters. One involved the applicant's personal relations variables; the other revolved around "good citizen attributes" such as trustworthiness, dependability, conscientiousness, responsibility, stability, and so forth. Tschirgi (1972) noted that recruiters visiting the California State University campus stated that the most desirable attributes for a career in the business world included good character, an outgoing personality, and the ability to use proper English. He shared that these attributes can only be obtained through the interview component of the job selection process. However, it should be noted that grade point average, extracurricular activities, and work experience, while not the most desirable attributes, were also taken into account when making hiring decisions.

Problems with the Interview

There is little evidence that information gained from the typical hiring interview is predictive of subsequent job performance (Dipboye, 1982). The weakness of the hiring interview as a predictor for job success is due to several factors (Avery & Campion, 1982). Interviewers are subjected to a number of biases that affect their objective evaluations of interviewees. Interviewers may be strongly influenced by the gender, race, physical attractiveness, and dress or appearance of the interviewee—factors which are usually unrelated to effective job performance

(Dipboye, 1982). Interviewers are also apt to make “snap judgments,” arriving at an early overall evaluation of the interviewee from the first few minutes of the interview (Siegfried & Pearce, 1981). Thus, factors in the dynamics of the typical hiring interview may adversely affect the validity of the hiring process.

The Teacher Selection Process

An Overview

Teacher selection is the process of singling out one individual from a pool of candidates. This process is guided by the mission of selecting the individual whose characteristics, training, and experience most closely match the requirements of the position to be filled (Castetter, 1986).

The primary aim of selection is to fill existing vacancies with personnel who meet established qualifications, who appear likely to succeed on the job, who will find sufficient position satisfaction to remain in the system, who will be effective contributors to unit and system goals, and who will be sufficiently motivated to achieve a high level of self-development (p. 221).

To achieve this goal a number of major stages are involved. Many of the recent authors who have concerned themselves with the functions of administration of public schools agreed that selection of staff is a critical step in developing and maintaining a quality education process (Castetter, 1986; Gorton, 1983). The application process is multifaceted and is designed to create for the district an identity of the candidate with reference to background, training, experience, and a strength-and-weakness profile. Well-designed application forms provide information concerning the applicant’s background and training relative to the minimum requirements for the position as expressed by the district. An instrumental part of the candidate’s application is the request for responses from the candidate’s college or university with regard to coursework,

student teaching experience, grades, and letters of reference and recommendation. Examination of these placement documents has, as its main purpose, to determine which applicants should continue in the selection process and be invited for a personal interview (Gorton, 1993).

Who Does the Hiring?

“Those that consider themselves a success today probably have a teacher to thank. Because it is the teacher who inspires and motivates to learn, achieve, and ultimately succeed” (Arvey & Campion, 1982, p.54). It is an understatement then, to say the role of the teacher is indeed an important one in the context of education. Before an understanding of qualities and credentials desired by those hiring new teachers can be reached, it is important to first understand who makes the hiring decisions and by what framework these decisions are based.

Gorton (1993) surveyed approximately 8,600 principals and found that they perceived themselves to have primary responsibility for selecting teachers. School principals are, in most school districts, charged with the responsibility of determining which prospective educators are appropriately prepared and capable of best serving the needs of students. Swinehart (1997) interviewed 27 principals and found that over half ranked hiring as the most important of all the decisions they make. One principal remarked, “You can work on programs and curriculum all you want but it doesn’t matter if the teachers are not good with the students or can’t work with other staff” (p. 120).

Parameters for Selecting Applicants

Arnold (1988), in a study conducted in Owensville, Montana, discussed maintaining a first-rate faculty. He suggested that principals and superintendents who make hiring recommendations to boards of education consider prospective applicants in terms of the following nine criteria: (a) previous failures, (b) personality and values, (c) philosophy of

education, (d) level of education, (e) prior teaching experience, (f) teacher training grades, (g) teaching techniques, (h) discipline methods, and (i) recommendations. Although the final decision to recommend a candidate rests with the principal, Arnold suggested involving other staff members in the selection process.

The Credentials

Principals attach a great deal of importance to the applicant's paper credentials. One question asked by Braun (1987), when studying how school administrators screen and select teachers was, "when a credential file is reviewed, what variables are considered in offering an interview?" The criteria gleaned from a survey of administrators in Wyoming were as follows: (a) proper use of English; (b) letters of recommendation; (c) evaluation of student teaching; (d) previous employment experience; and (e) neat arrangement of materials.

The Interview

Ash (1992), in a study conducted in Wellesley, Massachusetts, credited the employment interview as the most significant component in the selection process. However, he suggested limiting first-time encounters to brief and businesslike 10-minute screening interviews that typically afford time for only six or seven questions or scenarios. Questions and scenarios should be selected to reveal qualities desirable in effective teachers. Qualities mentioned include: (a) a sense of mission and enthusiasm for teaching, (b) oral and written communication skills, (c) an ability to vary instruction and effectively communicate knowledge of a curriculum area, and (d) the capability to serve as an appropriate role model for children. Interestingly, given the importance placed on the interview, Harris (1975) described the personal interview as the most abused selection technique due to inadequate planning, unconscious bias, and the lack of follow-up after the interview to validate the interviewer's conclusions. In any case, the contact between

the interviewer and the candidate during that period of time typically remains a critical influencing factor in making the ultimate decision in the hiring process, as noted by O’Hair (1989), who sampled over 300 school administrators in Texas in this regard. Many of those sampled indicated that the interview was believed to be an indispensable way to assess valued teacher qualities such as enthusiasm. In addition to oral communication, body language can be a strong source of influence during the interview and may suggest to the interviewer some indication of the candidate’s enthusiasm, honesty, and motivation.

Nicholson and McInerney (1988), in writing about the teacher selection process, also were concerned about the critical part that the interview takes in attempting to choose the best teachers. They indicated that “the real crux of the matter is the interview, and the problems are numerous” (p. 90). They stated that:

Too frequently the interview process is not standardized, making comparisons difficult at best and therefore more subjective than is wise. Unsophisticated interviewers fail to listen, interpret answers unevenly, tend to come to premature decisions, and tend to allow personal biases to color their opinions (p. 90).

Kopetskie (1983) also examined the interview process. In a study conducted in Fleetwood, Pennsylvania, Kopetskie offered administrators a candidate comparison instrument to use as a guide in selecting teachers. The chart listed 10 areas of compatibility considered important factors in job performance. Although the original categories remain unchanged, questions within each category vary according to the position vacancy and the candidate interviewed. Categories include: (a) philosophy of education, (b) age and grade level suitability, (c) subject matter competency, (d) discipline and classroom management, (e) lesson planning skills, (f) flexibility within ability levels, (g) adaptability to administrative decisions, (h)

expected relationship with peers, (i) extra-curricular interests, and (j) plans for professional development. Useful questions within categories are determined according to current needs.

Changing With the Times

The basic teacher selection framework, like education itself, is continually changing. Through the years principals have added components to their selection process, such as a portfolio or a videotaped lesson. A professional portfolio is one means of demonstrating competency. Such a portfolio should include "...a demonstration of ability to bring about specific instructional outcomes" (Shalock, 1970, p. 6) as well as evidence of attainment of the competencies most desired in candidates: ability to work cooperatively with others, interpersonal relations and communication skills, ability to work with a wide range of individuals, and leadership skills (Ostroth, 1981). Administrators mentioned they would like to see evidence of the following skills included in the portfolios: (a) knowledge of subject matter, (b) problem-solving skills, (c) curriculum knowledge, (d) knowledge about learners and learning, (e) student-specific pedagogy, (f) class organization and management, (g) rigor in academic standards, and (h) student impressions of teaching effectiveness.

Independent Variables: Variables that Affect Teacher Selection

Principal Bias

There appeared to be a consensus among principals concerning the most important criteria in the selection of teachers (Ash, 1992; Kopetskie, 1983; Schuttenberg, 1976; Swinehart, 1997). But responses from these studies seemed to depend a great deal upon personal preference, biases, and school characteristics such as location and school size (Swinehart, 1997). Merritt (1971), in studying 150 principals as interviewers in Ohio, found these administrators more attracted to candidates with educational perspectives similar to their own. Candidates presenting strong

qualifications were selected by principals “only” if they conveyed attitudes toward education which were similar to the hiring principal’s attitudes. Those candidates who were less qualified were preferred over those who were more qualified if they articulated an attitudinal perspective more like that of the principal. This strongly implied to Merritt (1971) the strength of interviewer bias with regard to attitudinal factors during the selection process and also gave rise to questions regarding the need to be cognizant of objectivity during the selection process.

Influence of Demographics on the Interview

Prior research suggests that interview outcomes are associated with various interviewer and applicant characteristics. For example, Marlowe, Schnider, and Nelson (1996) conducted a study on hiring in a business setting that looked at the relationship between managerial experience in years and gender and attractiveness biases. They found that the more years of experience, the less likely a manager was to exhibit gender and attractiveness biases. Conversely, the less experienced the manager, the more likely he/she was to exhibit gender and attractiveness bias. This brings forth the notion that years of experience may affect hiring decisions. In addition, other studies have found that younger candidates received higher evaluations than older candidates (Avolio, 1982); female interviewers rated all applicants higher than did male interviewers (London & Poplowski, 1976); women generally received lower evaluations than men (Dipboye, Fromkin, & Wibeck, 1975); interviewers rated more positively those applicants whom they liked and whom they perceived to be more intelligent (Keenan, 1977); and qualified and attractive candidates were more likely to be recommended for hiring regardless of sex (Dipboye et al., 1975).

Size of School District and Location of the School

Garman and Alkire (1993) conducted a study of schools to determine the criteria and procedures utilized by hiring officials in selecting beginning public school teachers in small rural schools in Ohio. Significant differences existed for preferred teacher characteristics among various sized school districts. The most important of the criteria listed for the small school districts was vitality and enthusiasm. For the medium-sized school districts, the most important criterion listed was personal integrity. The hiring criterion ranked most important for the large school districts was control of student behavior. Garmen and Alkire also studied hiring criteria in small communities versus large communities and found significant differences as well. Rural school officials looked for teachers who were emotionally well adjusted while urban school officials desired teachers who possessed a variety of instructional strategies and exhibited respect for cultural differences.

Dunathan (1980) also found a difference between criteria desired by rural principals and those desired by urban principals. He found that, due to great shortages of teachers in rural areas, principals desired teachers who possessed dual certification.

Empirical Research on Academic Credentials in Teacher Selection

I will now take a closer look at empirical research done with relation to the teacher selection process. In this section, I will describe the research related to academic credentials desired by principals, studies that reveal the qualities principals want to see in the interview process, and studies that focus solely on criteria desired when hiring career and technical educators.

Schuttenberg (1976) collected responses from 50 Cleveland, Ohio schools to find out what credentials were most important to principals when hiring first-year teachers. The ranking was as follows (with 1 being the most important): (1) comments by the candidate's cooperating

teacher, (2) comments by candidate's university supervisor during student teaching, (3) student teaching grade, and (4) academic grade point average. In the majority of studies done to learn what credentials principals most desire in first-year applicants, the response that ranked in the top three on most lists is comments from the cooperating teacher who observed the applicant in the school environment. Johnson (1976) collected responses from 104 Ohio principals and found that 92% preferred that a candidate have a strong letter of reference from the cooperating teacher to be considered for the position. One principal commented, "An applicant can be an A student in the classroom, but if this person cannot control a group of twenty students, then I don't want that person working in my school" (p. 4). And while Johnson found grade point average to be an important credential, the majority of studies found this not to be the case. O'Hair (1989) researched the teacher employment interview and discussed a survey of more than 300 Texas personnel directors and principals, all who hired recent college graduates. Credentials including test scores and grade point average ranked lowest on a list of 28 employment criteria. Travers (1989) studied employment applications and the interview process in 41 St. Louis, Missouri schools. His goal was to make prospective teachers aware of qualities considered desirable in potential employees. Travers generalized from his data that successful experiences in areas other than academics are important to hiring officials but scholastic achievement is considered insufficient by itself as a criterion for selection as a teacher. Place and Drake (1994) surveyed 320 elementary and high school principals from Ohio and Illinois. In their study, the principals were given a list of nine criteria to rank in order of importance for the selection of teachers. Grade point average ranked last on the list. Swinehart (1997) interviewed principals to discover desired credentials and found that some principals wanted candidates who had been top students in their schools, but most shared this opinion, "it isn't important that the person necessarily be an

A student—it is more important that the enthusiasm for teaching, the desire to learn, and the belief system are there” (p. 84).

Unique Credentials

Swinehart (1997) also found some credentials that principals desired but were not found in other similar studies. In the case of a new teacher looking for a first teaching position, several of the principals specifically wanted to see an evaluation and recommendation from the principal of the building where the candidate was a student teacher. These principals said they would rather see that than an evaluation from a university supervisor. This was a relatively recent study so perhaps we are seeing a shift in what principals want from teacher education programs. Other credentials unique to Swinehart’s study included the applicant having formal diversity training (because of the changing student population), multiple licensure, and experience with novel teaching approaches. The idea of multiple licensure, while not listed as a valued credential in most studies, was mentioned in a few. Natter and Kudor (1983) collected responses to a teacher selection survey from 135 Colorado elementary and high school principals and found that more than 90% of the principals preferred teachers who were certified in more than one subject. In looking at the surveys used in the various studies, I noticed that multiple licensure (as well as other criteria) was not listed as an item to rank. Perhaps if it were on more surveys, the request for this credential would be more prevalent in the literature. Winn (1972) interviewed 33 principals in Northeast Texas and found that administrators preferred locally trained candidates who had attended college in Texas. The majority also preferred applicants with a master’s degree.

Credentials Changing With the Times

Interestingly, the more recent studies found credentials that would not have been thought of in earlier studies due to technological advances and teacher education reform. In a survey of administrators about preferences in screening and selecting teachers, Braun, Willems, Brown, and Green (1992) found that the majority would like to see a videotaped lesson included with other credentials. Bull (1994) conducted a study to describe the perceptions of administrators as to the value of portfolios in assessing teacher performance. Administrators in both special and regular education were in "...total (100%) support of the use of portfolio teacher evaluation" (p.164). In contrast, Swinehart (1997) found conflicting results in her study of credentials preferred by administrators. Of the 20 interviewed, 15 wanted to see a portfolio "sometimes" and 11 never wanted to see a videotaped lesson. Several principals stated that they were generally not useful unless they were very well done. Others mentioned the amount of time screening a teaching portfolio could potentially involve. Several principals stated that bringing in a well done portfolio shows that the candidate is "real motivated...it is very positive...I don't know that the person has necessarily gotten the job every time but it is a plus for them" (p. 89). Only two of the principals interviewed specifically said that they found videotapes of potential candidates helpful to review, even though neither normally required them.

Presentation of Credentials

It should be noted, however, that it is not only important for candidates to have the credentials mentioned thus far, but that they are carefully assembled and presented in an impeccable manner. Braun et al., (1992) surveyed 271 public school administrators in an effort to determine what variables are important in the applicant review process with regard to selecting applicants to fill teaching positions. The first research question in Braun's study addressed the variables that influenced administrators when reviewing a credential file. Variables included

such diverse items as grade point average, typed versus untyped materials, and military experience. Interestingly, two of the top four and three of the top seven highly weighted variables were concerned with the appearance, rather than the content of the credential file itself. The highest rated item was “correct spelling, punctuation, and English usage.” Rated fourth and seventh, respectively, were “neatness of materials (i.e., quality of reproduction)” and “typed versus untyped materials.” All three were rated higher than items concerning letters of recommendation, the candidate’s narrative statement, and the evaluation of the candidate by the university supervisor of student teaching. Administrators were also asked to list three additional factors that they considered when reviewing a candidate’s folder. The largest number of administrators listed volunteer experience.

Empirical Research on the Interview in Teacher Selection

In 1950, Paul Witty surveyed over a thousand students and asked them to write on the topic, “The Teacher Who Has Helped Me Most.” The main characteristics cited, in order of frequency, were: (1) kindness and consideration for the individual, (2) patience, (3) pleasing personal appearance and manner, (4) fairness, (5) sense of humor, (6) enthusiastic disposition and consistent behavior, (7) interest in pupils’ problems, (8) flexibility, (9) use of recognition and praise, and (10) unusual proficiency in teaching a particular subject. Witty suggested principals hire applicants who possessed the majority of these characteristics. Thirty-one years later, Nate Perry (1981) attempted to identify qualities considered by students to be vital for effective teaching and found that students rated openness as the most important quality in an effective teacher. To elaborate on openness, one student said, “an effective teacher gives off a certain warmth that makes that person easily approachable and very likeable” (p. 18). Second on the list was enthusiasm and third was respect for uniqueness. Many of the qualities that students

(and principals for that matter) look for in exemplary teachers can only be assessed through the interview process.

Interestingly, principals look for many of the same characteristics that students have cited in the literature, and at the top of most everyone's study is enthusiasm. Swinehart (1997) found that the energy and enthusiasm level demonstrated during the interview was absolutely key for most of the principals. All principals agreed that interviewing was subjective. One noted, "in a nutshell, it is their overall presence," while another stated, "it is the way they light up the room" (p. 103).

After enthusiasm, the next most popular response from principals concerning criteria they look for when hiring teachers vacillated between communication skills and a student-focused perspective (as opposed to content-oriented). One principal in the Swinehart study (1997) summed this idea up by saying:

The first thing I look for is the person's focus on student growth and learning. That is always the target—a clear mission to help students' learning grow. The most important questions are the ones that help to discriminate between persons who are content-driven and those who are student-driven. Every question I ask is a trick question—I am trying to find out how flexible they are, whether they understand what student-driven means. (p. 98)

The level of past involvement with students was a key factor for several of the high school principals. "I ask them to tell me about their experiences working with young people. Tell me about their highs" (p. 99).

Place and Drake (1994) surveyed 320 principals in Ohio and Illinois and asked them to rank nine criteria in order of importance for the selection of teachers. The principals were asked

to focus on candidates for positions in science, fine arts, or English/social studies. Principals in both states rated enthusiasm as the most important and communication skills as the second most important criterion, regardless of the focus of the position. One principal in Illinois noted, “It’s important that a teacher be knowledgeable in a particular subject but that knowledge is useless if the teacher cannot effectively communicate the information to a diverse audience” (p. 55).

The fourth most popular criterion on principals’ lists was the personal appearance of the applicant. Johnson (1976), who collected responses from 104 Ohio principals, found that 72% of the principals listed physical appearance as a significant criterion while only 70% agreed that good verbal skills, confidence, and enthusiasm are important. In one of the few studies that did not rank enthusiasm in its top five responses, Winn (1972) found, from 33 Northeast Texas principals he interviewed, that personal appearance was listed as the most important criterion, followed by interest in children, the ability to communicate, and the ability to relate to others.

The last response that was a common factor that most principals looked for in an interview was the applicant’s views on classroom management. One principal in the Cartwright study (1973) stated, “It’s important that an applicant be an expert in his/her subject area and be able to teach that subject effectively. But it is also vital that he/she be able to control the classroom and create an environment conducive to learning that subject” (p. 11).

Other criteria that principals looked for in an interview (that were mentioned in more than one study) included honesty of responses (Braun et al., 1987), emotional balance and the ability to provide for individual differences (Johnson, 1976), a sound philosophy of education (Winn, 1972), and respect for diversity of students (Kowalski, 1992). Swinehart (1997) found criteria that no other study cited as important, including knowledge of innovative teaching strategies and interdisciplinary teaching.

Empirical Research on Criteria Desired in Hiring Career and Technical Teachers

While many studies have been conducted that deal with teacher selection, very few have been found that deal specifically with career and technical education. The majority of the studies that were found were conducted over fifteen years ago. The most interesting realization the reader will come to when reading about the criteria necessary to become an effective career and technical teacher is that the criteria, for the most part, are different from any of the criteria mentioned earlier in this review. A possible reason for this might be because no studies were found that specifically asked principals what criteria they desired when hiring career and technical education teachers. All of the studies found in the area of career and technical education concern criteria needed to be an effective career and technical teacher—from the career and technical teacher's point-of-view. But it does appear that there are certain criteria that are career and technical-specific and should be considered by the principal when deciding which applicant to hire for a career and technical position.

Enthusiasm—The Common Denominator

Enthusiasm was the lone criterion cited by both principals and career and technical teachers as a quality needed to be an effective teacher, regardless of an applicant's subject area. Penner and Price (1972) surveyed 943 career and technical teachers and career and technical students and found that the most valued characteristic of a career and technical teacher was exhibiting enthusiasm for the area in which he/she is teaching. One student stated, "if a teacher isn't excited about the subject matter, then students certainly aren't going to be excited either" (p. 54). Meers (1979) concluded from his similar study that effective career and technical educators present the world of work with enthusiasm and a positive, realistic attitude.

Personal Traits

Another interesting contrast I found between the criteria principals desire and the criteria that career and technical educators say are important is that the latter tend to stress more personal traits than such things as classroom management ideas and good communication skills. Hickner (1979) surveyed home economics teachers and found tolerance, self-acceptance, flexibility, and a sense of well being as characteristics most evident in effective home economics teachers. To elaborate, Hickner said, “effective home economics teachers are flexible in the classroom and in their own personalities. The home economics teacher should be able to feel at ease in the wide variety of environments that may be part of career and technical teaching. Rigid teachers are less effective in motivating students with very diverse abilities, backgrounds, aspirations, and skills. Self-accepting teachers with a good sense of well being can be more flexible or less rigid to allow more students to feel good about themselves” (p. 14). Similarly, Condie (1978) surveyed high school home economics teachers and found that this group believed that pride, self-confidence, and enthusiasm for the home economics teaching profession were the most basic qualities of a good home economics teacher. Others listed commitment to home economics, the presence of professional attitudes, and empathy (the ability to perceive the world from the students’ viewpoint) as the most essential characteristics. I found empathy and terms related to the concept to be a recurring theme in the career and technical literature. Resnick and Gardner (1979), in a national survey of career and technical educators, identified sincerity, courage, and tact as the three most important characteristics necessary for the effective career and technical teacher in a rapidly changing society. Lynch (1996) developed 10 principles of career and technical teacher education to ensure that career and technical teachers developed skills needed to prepare students for the workplace. Among them was the belief that career and technical education teachers create an environment where equal treatment, fairness, and respect for

diversity are modeled, taught, and practiced by all. I think that one reason why empathy, sincerity and other “feeling” qualities continue to come to light in the career and technical literature is because the career and technical student may not be the “typical” student that people envision when they think of a high school student. Often, students are enrolled in a career and technical course because they are trying to find the niche in which they fit. They desire a compassionate teacher who understands the problems they face and can give them the attention they need.

Work Experience

Behind enthusiasm, the most needed criterion to become an effective career and technical teacher was work experience. Zirbel (1980) concluded from his research that realistic knowledge of the world of work was necessary for all career and technical teachers, knowledge best acquired by personal experience on the job. Teachers who had a wide variety of successful work experiences and maintained close contact with the world of work were found to most effectively provide students with an accurate picture of the workplace.

Meer’s (1979) findings concurred with this by concluding that from previous work experience, career and technical teachers are able to formulate their own philosophy about the workplace that they can successfully and realistically convey to students. An Omicron Tau Theta panel discussion entitled “What Principals and Career and Technical Directors look for when Hiring Career and Technical Teachers” was conducted at Virginia Tech on March 10, 1999. When asked about the importance of work experience, the majority of the five-member panel felt that it was good to have experience to draw from, but that it was not one of the major criteria they looked for in an applicant.

Demonstration of Skills and Teaching Strategies

The only other criterion that surfaced repeatedly was the need for career and technical teachers to be able to demonstrate skills and behaviors. Zirbel (1980) found that successful career and technical teachers need to be able to competently demonstrate skills and techniques currently being employed in the workplace. This seems to also advocate the need for work experience on the part of the teacher. Penner and Price (1972) in their survey of career and technical teachers, career and technical education coordinators, and career and technical students, found that giving demonstrations and knowing how to implement a variety of teaching strategies was the third most valued characteristic in a career and technical teacher. Interestingly, all three groups named this quality in their top three responses.

Unique Criteria

Many studies yielded criteria that were not found in any other studies researched but were worth exploring further. Meers (1979) found that effective career and technical teachers place a large emphasis on personal growth and lifelong learning. According to the Vocational Education Standards for National Board Certification (1996), accomplished career and technical teachers “regularly analyze, evaluate, and strengthen the effectiveness and quality of their practice through lifelong learning” (p. 56).

Hedges and Papritan (1987) and Ruff (1989) both uncovered themes from two qualitative studies of award-winning high school agriculture and marketing teachers. They found that, while the teachers taught different career and technical content, they shared similar qualities. Both studies reported that outstanding teachers were technically up-to-date, self-motivated and self-directed, reflective, changed their practice based on feedback, were very positive with students and others, and assumed additional professional roles with them, such as counselor. Further, award-winning career and technical teachers worked to motivate and build the self-image of

students and had a high quality, supervised, occupational experience for each student. And lastly, these exceptional teachers used community resources and individuals in business and industry in a variety of capacities to evaluate and improve the program and the performance of the students.

The five Virginia administrators participating in the panel discussion conducted at Virginia Tech, also desired strong technology skills in applicants, along with the ability to integrate academic and career and technical education and to possess an understanding of the Standards of Learning (SOLs). Select members of the panel wanted applicants to be a team player, have the ability to take initiative, and to have a knowledge of special populations and students with disabilities. Other desired criteria mentioned by career and technical educators included a knowledge of adult education (Zirbel, 1980); desire to stay current in the career and technical field and subject matter (Resnick & Gardner, 1979); and teaching, practicing, and enforcing safety (Penner & Price, 1972).

Summary

Teacher selection has been researched enough to create a process for hiring. But as important to education as teacher selection is, it often appears to be based on subjective “hunches” and biases. Principals seem to resort to their own personal preferences when making hiring decisions (Alford, 1993).

The review of literature thus far has revealed that most hiring officials used similar selection criteria. However, administrators often disagreed on prioritization of these common teacher selection criteria. While there is no consensus among researchers as to the ideal profile of an effective teacher, the factors and traits that have been identified have provided material for the development of a number of instruments and models that have been used by researchers and hiring administrators in the selection of new teachers. Most criteria can be grouped under one of

the following three headings: personal characteristics and traits, professional skills and competencies, and academic background. Since little has been found dealing specifically with principals and the selection of career and technical educators, a study specific to this could answer practical questions regarding teacher selection criteria in career and technical education.

Chapter 3

Methods

The purpose of this study was to determine criteria used by public school principals who hire high school career and technical education teachers in Virginia. The study was designed to determine the relative importance of criteria used by hiring officials when selecting first-time teachers and whether years of experience of the principal, school district size, or community size played a role in criteria value. A self-report survey was used to answer the research questions. Details about the sample, survey design, data collection procedures, and data analyses are presented in this chapter.

Research Questions

1. What criteria do principals consider most important when hiring beginning career and technical teachers?
2. Do criteria differ depending on whether the career and technical teacher's job requires or does not require a minimum of a bachelor's degree?
3. To what extent do ratings of criteria differ depending on principal and school characteristics?
 - A. To what extent do ratings concerning academic credentials differ based on community size, school district size, or years of experience as an administrator?
 - B. To what extent do ratings concerning career and technical credentials differ based on community size, school district size, or years of experience as an administrator?
 - C. To what extent do ratings concerning interview content differ based on school community size, school district size, or years of experience as an administrator?

The Sample

The population for this study included high school principals and career and technical school principals in Virginia. To obtain the population, a list of all high school and career and technical school public school principals was obtained from the Virginia State Department of Education. There are a total of 297 principals, including those from career and technical schools. To determine how many of the 297 principals needed to be sampled, the type of statistical analysis used in the study as well as anticipated response rate were considered. Harris (1975) suggested the following formula to be used to determine the appropriate sample size for a multiple regression study: $N > 50 + 8m$, where "N" is the sample and "m" is the number of independent variables. Given the three independent variables in this study, the appropriate sample size would be 74.

Similar studies by Meltzer (1994) and Webb (1980), where surveys concerning hiring criteria were given to high school principals, found response rates of 81% and 70%, respectively. Based on these response rates, I felt as though mailing surveys to 160 principals would yield the appropriate number of 74 needed to obtain the sample. A table of random numbers was used to select the 160 principals who would participate in the study. After the sample was chosen, I checked to make sure that those schools do indeed have career and technical programs, using a list sent to me by the Virginia State Department of Education. In addition to the independent variables (community size, years of experience as an administrator, and school district size), I collected the following demographic information from the principals: (a) gender, (b) type of school in which they work (career and technical school or comprehensive school with career and technical programs), (c) highest degree held, and (d) age. This information provided a profile of the type of people who make up the sample. Surveys were mailed to 160 principals and 146

responded (49% of the population), yielding a response rate of 91%. Of the 14 nonrespondents, 5 were contacted by phone. One nonrespondent said he did not recall receiving the survey and four said they had merely forgotten about it or were too busy to complete the instrument. All five were willing to answer selected items from the survey and provide the demographic information requested. There were no observable differences between the respondents and nonrespondents in terms of responses to items on the survey.

Instrumentation

The three independent variables in this study were: (a) community size, (b) size of school district, and (c) years of experience as a principal. For community size, respondents were asked to name the town in which they work. I then consulted a list of town populations for Virginia and noted the population for that particular town. By doing this, I eliminated the potential problem of incomplete and erroneous data due to respondents not knowing community size. I also asked whether they would characterize the town as rural, urban, or suburban. School district size and years of experience were also continuous variables. The three dependent variables were subscales related to different types of criteria for hiring career and technical teachers. The survey instrument (Appendix A) included 24 criteria recognized as important in the selection of teachers as supported by sources cited in the review of literature (Arnold, 1988; Braun, Willems, Brown, & Green, 1987; Cartwright, 1973; Condie, 1978; Hickner, 1979; Johnson, 1976; Kowalski, 1992; Meers, 1979; Natter & Kuder, 1983; O'Hair, 1989; Penner & Price, 1972; Perry, 1981; Place & Drake, 1994; Resnick & Gardner, 1979; Schuttenberg, 1976; Shoemaker, 1972; Swinehart, 1997; Travers, 1989; Winn, 1950; Witty, 1950; Zirbel, 1980). Criteria were categorized into one of three subscales: academic, interview, or career and technical.

The six criteria categorized into the academic credentials subscale included: (a) recommendation from cooperating teacher, (b) a masters degree, (c) dual certification, (d) a portfolio, (e) standardized test scores, such as PRAXIS, and (f) grade point average. The nine criteria categorized into the interview subscale included: (a) personal appearance, (b) enthusiasm, (c) openness, (d) respect for diversity, (e) classroom management, (f) philosophy of education, (g) communication skills, (h) student centered vs. content centered, and (i) variety of instructional strategies. The seven criteria organized into the career and technical subscale, taken from the literature, included: (a) career and technical work experience, (b) knowledge of adult education, (c) knowledge of special populations/students with disabilities, (d) technology, (e) integration of academics and career and technical education, (f) understanding the Standards of Learning, and (g) desire to develop partnerships with business and industry. Groupings were based on research studies conducted on similar topics (Ash, 1992; Kopetskie, 1983; Schuettenberg, 1976; Swinehart, 1997; Penner & Price, 1972; Zirbel, 1980).

Participants were asked to use a Likert-type scale to rate each selection criterion according to one of the following: (a) very unimportant, (b) unimportant, (c) of little importance, (d) important, and (f) very important. Scale values ranged from zero to four (with four being very important and zero being very unimportant). All participants were given an opportunity to add criteria, which will be discussed in Chapter 4. The instrument was field tested two times with a total of 16 volunteer participants (8 each time), all extremely knowledgeable in career and technical education. Participants in the field test included Vocational and Technical Education professors, graduate students in Educational Leadership and Vocational and Technical Education, and two high school principals in Mississippi and two in Tennessee. The letter requesting participation (Appendix A) was also field-tested. Volunteer participants who

examined the instrument were asked for suggestions regarding: (a) appearance, (b) readability, (c) content, (d) response style, (e) whether they would complete and return the survey, and (f) how long it took them to complete the survey. The same people also evaluated the cover letter for appearance, readability, and content. Suggestions were incorporated into both the survey and the cover letter. The questionnaire to school administrators is found in Appendix B and a copy of the cover letter is found in Appendix A.

Coefficient Alpha was used to determine reliability of each subscale of the instrument. Reliability values for the administrators who responded to the survey for positions that require a bachelor's degree were .70 for the academic subscale, .70 for the interview subscale, and .60 for the career and technical subscale. Reliability values for the administrators who responded to the survey for positions that do not require a bachelor's degree were .75 for the interview subscale and .70 for the career and technical subscale. None of the criteria from the academic subscale were applicable. Survey items were summed for each of the three subscales. Reliability was fairly low, especially for the career and technical subscale. Low reliability can be caused by several occurrences. First, it is possible that one of the items in the scale doesn't belong, causing overall reliability to be low. To address this, I ran an inter-item correlation analysis. I found no item that, if dropped, would change the reliability of the scale. Second, low variance leads to low reliability. This was definitely the case in this study. The majority of the respondents selected the same one or two responses, leading to little variance. It should be noted when interpreting the results of this study that low reliability leads to attenuation, which means the regression analysis underestimates the correlation between variables.

Meltzer (1994) and Webb (1980) created survey instruments with the goal of discovering hiring criteria of elementary and high school mathematics teachers. Their survey was given to

high school principals. Similar to procedures used by Meltzer and Webb, I followed the steps below to validate my instrument:

1. Preliminary versions of the questionnaire were presented before a doctoral seminar class in high school administration, and improvements were suggested by the seminar director and students.
2. Ten school administrators with previous experience in selecting beginning classroom teachers were interviewed to determine their perceptions of selection criteria and characteristics. The questionnaire was then appropriately revised.
3. Twenty-five student teachers in the process of interviewing for their first position were asked to list their perceptions of selection criteria and characteristics.
4. The questionnaire was presented to a faculty committee of three professors and revisions were made.
5. The draft questionnaire was submitted to a panel of judges who examined the instrument for content validity. Judges were asked to place each item under the heading (academic credential, career and technical credential, or interview) they thought the item belonged. Revisions were made based on this. Judges included faculty from the College of Education at the University of Mississippi and principals from Lafayette County Vocational and Technical School, Oxford High School, Lafayette County High School, and Alcorn Technical Center.
6. A pilot study was conducted, in which the questionnaire was submitted to four administrators who were actively involved in the selection of beginning teachers. As a result of this study, final revisions were made.

The items on my instrument that relate to career and technical criteria came directly from the literature written by leaders in the field of career and technical education. My final survey was submitted to four principals of both career and technical schools and schools with Career and technical programs, and principals were asked to review both the items and the scale.

Procedures

Survey packets were mailed to the principals in the sample with the following information: (a) a letter explaining the purpose of the study; (b) a copy of the survey, and (c) a self-addressed stamped envelope for the return of the survey. Measures were taken to increase participation and ensure confidentiality of all participants. Different color paper was used for the two parts of the survey (criteria for career and technical positions that require a bachelor's degree and criteria for career and technical positions that do not require a bachelor's degree). This eliminated confusion and made the survey easier to complete. The questionnaire was relatively short and could be completed in approximately 15 minutes. To ensure confidentiality, respondents were not asked to give their names or the names of their schools. Questionnaires were coded so that follow-up letters and questionnaires could be sent to non-respondents two weeks following the initial mailing. A second and final follow-up was sent two weeks after the first follow-up was sent. Selected nonrespondents were called at their schools to ascertain the reasons for not completing the questionnaire.

Data Analysis

To answer research question 1, I computed the mean scores for each of the hiring criteria and ranked the results from very important to very unimportant. To answer research question 2, I computed the mean ratings for each criteria, and then rank ordered the criteria separately for those requiring a bachelor degree and those not requiring a bachelor degree. I then

ran a series of 2-group t-tests to compare mean ratings for each criterion for those requiring/not requiring a bachelor's degree. The reason for running the t-tests is that it is possible that the rankings might differ a little, but actually the overall ratings might not differ very much at all. I chose to run standard regression analyses to answer research question 3. It is assumed that model has been correctly specified. Subsumed in that is the assumption that the relationship between the two variables will be linear, that all relevant variables have been included in the model, and that there was no inclusion of irrelevant variables. It is also assumed that the distributions of residuals will be normal, and the variances of the distribution of residuals will be equal across all values (homoscedasticity). I ran histograms of the residuals to check for normal distributions and ran scatterplots to address the assumptions of linearity, the inclusion of all relevant variables, and homoscedasticity. A scatterplot is a visual representation that looks at the relationship between two variables. In general, if the scatterplot indicates some sort of pattern, it suggests that an assumption has been violated. The histograms indicated normal distributions while scatterplots indicated that the assumption of linearity was met. However, my scatterplots did show a nonrandom pattern suggesting the assumption of correct model specification might have been violated. Although there is nothing clearly definable, there appears to be a light heteroscedatic pattern. Causes for this will be discussed in Chapter 5. An alpha level of $p < .05$ was used to assess significance in statistical tests. For the multiple t-tests, a Bonferonni-adjusted alpha of .003 was used for each test to maintain an overall familywise error rate of .05 (Glass & Hopkins, 1996). For the regression analyses, a Bonferroni-adjusted alpha of .017 was used.

Chapter 4

Analysis and Discussion of Data

The purpose of this study is to determine what high school principals look for when hiring career and technical education teachers and also whether certain factors (such as school district size, community size, and years of experience as a principal) relate to the opinions toward the selection process. The study is designed to determine the relative importance of criteria used by hiring officials when selecting first-time career and technical teachers. Three research questions were answered utilizing data from 146 questionnaires completed by high school principals in Virginia.

The sample for this study was comprised of 146 randomly selected public high school principals (50% of the population) in Virginia. Descriptive data collected included gender, age, highest degree held, size of the community the principal worked in, school district enrollment, and years of administrative experience. Results showed that the majority of respondents were male (76%) while 23% were female. The majority of respondents were age 47 or older (72%), while 21% were between the ages of 36 and 46. A master's degree was the highest degree earned by the majority of the respondents (78%) while 21% had earned a doctorate. The number of students in the principal's school districts ranged from 375 to 250,000 students. The majority of respondents classified their school setting as rural (78%) while 26% felt they worked in an urban setting. Years of administrative experience as a principal ranged from 1 year to 36 years, with the average being 9 years ($sd=7.45$). The average community size of respondents was 124,652 ($sd=211,646.11$).

The survey instrument attempted to answer the following research questions:

1. What criteria do principals consider most important when hiring beginning career and technical teachers?
2. Do criteria differ depending on whether the career and technical teacher's job requires or does not require a minimum of a bachelor's degree?
3. To what extent do ratings of criteria differ depending on principal and school characteristics?
 - A. To what extent do ratings concerning academic credentials differ based on community size, school district size, or years of experience as an administrator?
 - B. To what extent do ratings concerning career and technical credentials differ based on community size, school district size, or years of experience as an administrator?
 - C. To what extent do ratings concerning interview content differ based on school community size, school district size, or years of experience as an administrator?

The research questions were addressed individually and answered based on data collected from the survey sent to principals.

Research Question #1: What criteria do principals consider most important when hiring beginning career and technical teachers?

This question was answered by computing the mean and standard deviation for all responses on the survey, and then rank ordering them. There were 22 items on the survey for positions that require a bachelor's degree and 16 items on the survey for positions that do not require a bachelor's degree. The last item on both surveys was an open-ended response that enabled the respondent to add any criteria he/she felt was important but not included on the survey. This survey item is discussed separately.

The rank order of criteria most important to principals when hiring career and technical teachers was determined on the basis of the value of the mean on responses to each item. The item with the highest mean was rated most important by principals and ranked first, and the item with the lowest mean, indicating least importance, ranked last. The rank order of criteria viewed as important in hiring career and technical teachers who require a minimum of a bachelor's degree is presented, along with mean scores and standard deviations, in Table 2.

The most desired hiring criterion cited by principals was enthusiasm. The second most important criterion was the applicant's ability to communicate effectively. An applicant who is student-centered, as opposed to curriculum-centered, was the third most desired criterion. An applicant's beliefs on classroom management and their knowledge of a variety of teaching strategies rounded out the top 5 (4 and 5 respectively). Also seen as important criteria were respect of diversity, the ability to integrate academic and career and technical education, technology skills, openness, understanding the Standards of Learning, a desire to develop ties with business/industry, the recommendation from the cooperating teacher, an applicant's personal appearance, knowledge of special populations, and work experience in a career and technical area. Criteria of less importance were dual certification, a philosophy of education similar to the principal's, applicant's grade point average, knowledge of adult education, evidence of a portfolio, an applicant's standardized test scores, and whether he/she has earned a masters degree.

Table 2

Important Criteria for Career and Technical Positions that Require a Minimum of a Bachelor's Degree

Rank	Criteria	Mean	Standard Deviation
1	Enthusiasm	3.93	.25
2	Communication Skills	3.84	.37
3	Applicant is Student-centered	3.82	.41
4	Applicant's Beliefs on Classroom Management	3.82	.38
5	Knowledge of a Variety of Teaching Strategies	3.78	.41
6	Respect of Diversity	3.73	.44
7	Ability to Integrate Academic and Career and Technical Education	3.70	.51
8	Technology Skills	3.69	.47
9	Openness	3.63	.48
10	Understanding of Standards Of Learning (SOLs)	3.57	.57
11	Desire to Develop Ties with Business/Industry	3.56	.59
12	Recommendation from Cooperating Teacher	3.45	.58
13	Appearance	3.39	.53
14	Knowledge of Special Populations	3.29	.57

15	Work Experience in Career and Technical Area	3.19	.64
16	Dual Certification	2.89	.66
17	Philosophy of Education Similar to Yours	2.87	.61
18	Grade Point Average	2.85	.48
19	Knowledge of Adult Education	2.77	.62
20	Portfolio	2.71	.68
21	Standardized Test Scores	2.62	.63
22	Masters Degree	2.31	.64

The rank order of criteria viewed as important in hiring career and technical teachers that do not require a minimum of a bachelors degree is presented, along with mean scores and standard deviations, in Table 3. Enthusiasm ranks as the most important criterion of this group as well. The second most important criterion is the applicant's beliefs on classroom management. Third, fourth, fifth, respectively are applicant is student-centered, communication skills, and respect for diversity. Other criteria in order of importance include technology skills, work experience in a career and technical area, openness, a desire to develop ties with business/industry, knowledge of a variety of teaching strategies, ability to integrate academic and career and technical education, knowledge of special populations, and understanding of the Standards of Learning. Of little importance were knowledge of adult education and sharing a philosophy of education similar to the principals.

Table 3

Important Criteria for Career and Technical Positions that Do NOT Require a Minimum of a Bachelor's Degree

Rank	Criteria	Mean	Standard Deviation
1	Enthusiasm	3.85	.36
2	Beliefs on Classroom Management	3.76	.44
3	Applicant is Student-centered	3.75	.48
4	Communication Skills	3.74	.43
5	Respect of Diversity	3.69	.46
6	Technology Skills	3.66	.49
7	Work Experience in Career and Technical Area	3.64	.49
8	Openness	3.58	.52
9	Desire to Develop Ties with Business/Industry	3.51	.66
10	Knowledge of a Variety of Teaching Strategies	3.49	.57
11	Ability to Integrate Academic and Career and Technical Education	3.43	.62
12	Appearance	3.30	.55
13	Knowledge of Special Populations	3.29	.62
14	Understanding of Standards Of Learning (SOLs)	3.17	.75
15	Knowledge of Adult Education	2.90	.70

Note: The scale used to rate items was: 0= very unimportant, 1= unimportant, 2= of little importance, 3= important, and 4= very important.

The respondents were asked to identify other criteria important in the decision-making process when hiring new career and technical teachers. Ten criteria were specified. The additional criteria important to principals are listed in Table 4. Two items were mentioned by four principals. The first was the importance of determining an applicant's work ethic and the second was the applicant's knowledge of career and technical student organizations. Dedication to teaching and knowledge of effective lesson plan design were mentioned by three principals as additional criteria they considered important in the hiring process. Other criteria mentioned by at least one principal included empathy, willingness to persevere, ability to get along with others, knowledge of assessment of student learning, expertise in subject area, and ability to establish a good relationship with parents.

Table 4

Other Criteria Identified as Important by Principals

Criteria	Frequency of Listing
Work ethic	4
Knowledge of Career and Technical Student Organizations	4
Dedication	3
Knowledge of effective lesson plan design	3
Empathy	1

Willingness to persevere	1
Ability to get along with others	1
Knowledge of assessment of student learning	1
Expertise in subject area	1
Ability to establish a good relationship with parents	1

Research Question #2: Do criteria differ depending on whether the career and technical teacher's job requires or does not require a minimum of a bachelors degree?

To answer this question (Table 5), 16 paired sample tests were run (one for each criterion that appeared on both the survey that required a bachelor's degree and the survey that did not require a bachelor's degree). Using a Bonferroni-adjusted alpha of .003, significant difference was found between 5 of the 16 criteria that appeared on both surveys: ability to integrate academic and career and technical education, knowledge of a variety of teaching strategies, personal appearance, work experience in a career and technical area, and understanding of Standards of Learning (SOLs). The mean rating for the five indicates that these criteria are more important for career and technical positions that require a bachelor's degree than for those that do not. However, the criterion "work experience in career and technical area" had a higher mean rating for career and technical positions that do not require a bachelor's degree, which indicated greater importance. No significant differences were found in relation to beliefs on classroom management, the applicant is student-centered, communication skills, desire to develop ties with industry, enthusiasm, knowledge of adult education, knowledge of special populations, openness,

philosophy of education similar to the principal's, respect for diversity, and technology skills.

Mean ratings for each of the criteria just mentioned appeared to be very similar.

Table 5

Paired Sample Tests for Hiring Criteria Between Positions That Require a Bachelors Degree and Positions That Do Not Require a Bachelors Degree

Pair	Criteria	Mean Bachelors Required	Mean Bachelors Not Required	t	df	Sig (2-tailed)
1	Ability to integrate academic and career and technical education	3.66	3.43	5.04	130	<.0001*
2	Beliefs on Classroom Management	3.80	3.76	1.09	130	.277
3	Applicant is student-centered	3.80	3.75	1.17	130	.241
4	Communication skills	3.82	3.74	2.16	130	.032
5	Desire to develop ties with area industry	3.56	3.51	1.09	130	.276
6	Enthusiasm	3.93	3.84	2.92	130	.004
7	Knowledge of adult education	2.80	2.90	-1.76	130	.080
8	Knowledge of special populations	3.27	3.29	-.30	130	.759
9	Knowledge of a variety of teaching strategies	3.76	3.49	6.40	130	<.0001*
10	Openness	3.60	3.58	.68	130	.493
11	Personal appearance	3.39	3.30	3.32	130	.001*
12	Philosophy of education similar to	2.85	2.81	.96	130	.338

13	your yours Respect for Diversity	3.70	3.69	.49	130	.619
14	Work experience in Career and Technical area	3.21	3.64	-7.45	130	<.0001*
15	Technology skills	3.66	3.66	.000	130	1.000
16	Understanding of SOLs	3.52	3.17	6.36	130	<.0001*

Note: The scale used to rate items was: 0= very unimportant, 1= unimportant, 2= of little importance, 3= important, and 4= very important.

*p<.003.

Research Question #3: To what extent do ratings of criteria differ depending on principal and school characteristics?

- A. To what extent do ratings concerning academic credentials differ based on community size, school district size, or years of experience as an administrator?
- B. To what extent do ratings concerning career and technical credentials differ based on community size, school district size, or years of experience as an administrator?
- C. To what extent do ratings concerning interview content differ based on community size, school district size, or years of experience as an administrator?

With an R Square of .003, ratings concerning academic credentials cannot be explained based on community size, school district size, or years of experience as an administrator, $F(3, 143)=.137$, $p> .017$. With an R Square of .046, ratings concerning career and technical credentials cannot be explained based on community size, school district size, or years of experience as an administrator, $F(3,143)=.078$, $p> .017$. And with an R Square of .011, ratings concerning interview content cannot be explained based on community size, school district size, or years of experience as an administrator, $F(3, 146)=.656$, $p> .017$. Table 5 summarizes the regression

analysis. No significant relationship was found between the predictors and academic credentials or interview content. However, years of experience as an administrator were significant in explaining career and technical credentials.

Table 5

Summary of Standard Regression Analysis for Variables Predicting Differences in Academic, Career and Technical, and Interview Credential Ratings (N=146)

Variable	B	SE B	β	Sig
ACADEMIC				
Years Experience	-2.39	.05	-.04	.557
Community Size	4.20	.00	.02	.866
School District Size	-6.30	.00	.00	.963
CAREER AND TECHNICAL				
Years Experience	-8.70	.00	-.21	.011*
Community Size	-1.21	.00	-.08	.559
School District Size	5.10	.00	.06	.654
INTERVIEW				
Years Experience	-6.73	.00	-.02	.798
Community Size	1.89	.00	.17	.240
School District Size	-6.57	.00	-.10	.457

* p<.017.

Summary, Conclusions, Recommendations, and Implications

This study identified criteria that 146 public school principals in Virginia consider when hiring first-year career and technical education teachers. It also determined which of those criteria were most important and whether variables such as years of experience of the principal, school district size, or community size affected their opinions toward the selection process. This chapter begins with restating the research questions, followed by a brief summary of results for each question. This will be followed by a discussion of the results. I will then discuss the limitations of the study and the problems encountered during the study. The chapter will conclude with implications of the results and recommendations for future research in this area.

Research Questions and Summary of Results

The specific research questions and summaries are as follows:

1. What criteria do principals consider most important when hiring beginning career and technical teachers?

The most desired criteria by principals included (in order of importance): enthusiasm; communication skills; a student-centered applicant; the applicant's beliefs on classroom management; knowledge of a variety of teaching strategies; respect for diversity; ability to integrate academic and career and technical education; technology skills; openness of the applicant; and understanding of the Standards of Learning (SOLs). When principals were asked to list additional criteria not mentioned on the survey instrument, several cited work ethic and knowledge of career and technical student organizations.

2. Do criteria differ depending on whether the job requires or does not require a minimum of a bachelor's degree?

Significant differences in ratings were found between 5 of the 16 criteria applied to jobs requiring and not requiring a bachelor's degree.: ability to integrate academic and career and technical education, knowledge of a variety of teaching strategies, personal appearance, work experience in a career and technical area, and understanding of Standards of Learning (SOLs). The ability to integrate academic and career and technical education, knowledge of a variety of teaching strategies, personal appearance, and understanding of Standards of Learning were considered more important for positions requiring a bachelor's degree. Work experience in a career and technical area was considered more important for positions that do not require a minimum of a bachelor's degree.

3. To what extent do ratings of criteria differ depending on principal and school characteristics?

A. To what extent do ratings concerning academic credentials differ based on community size, school district size, or years of experience as an administrator?

Ratings concerning academic credentials cannot be explained based on community size, school district size, or years of experience as an administrator.

B. To what extent do ratings concerning career and technical credentials differ based on community size, school district size, or years of experience as an administrator?

Ratings concerning career and technical credentials cannot be explained based on community size or school district size. However, years of experience as an administrator were significant in explaining career and technical credentials.

C. To what extent do ratings concerning interview content differ based on community size, school district size, or years of experience as an administrator?

Ratings concerning interview content cannot be explained based on community size, school district size, or years of experience as an educator.

It should be noted, prior to reading the conclusions of this study, that when assumptions were tested for the regression analysis, the residual plots revealed a nonrandom pattern suggesting a possible violation of the assumption that the model has been correctly specified. Consequently, the reader should exercise some caution in interpreting the results from this regression analysis because of the possibility of biased parameter estimates.

Conclusions

Top Five Responses

The results of my first research question were fairly consistent with past research. I found it interesting that criteria did not really change throughout the years even though schools and society today are much different than they were twenty years ago. The most important criterion considered when hiring teachers (with a bachelor's degree or without) was enthusiasm, with communication skills placing second. Place and Drake (1994) surveyed 320 principals in Ohio and Illinois and asked them to rank criteria in order of importance for the selection of teachers. The principals were asked to focus on candidates for positions in science, fine arts, or English/social studies. Principals in both states rated enthusiasm as the most important criterion and communication skills as the second most important criterion, regardless of the focus of the position. Based on the findings in this study, a career and technical position is not viewed differently from an academic position when examining hiring criteria. Penner and Price (1972) surveyed 943 career and technical education teachers and students and also found enthusiasm to be the lone criterion cited by principals and teachers as the quality needed to be an effective teacher, regardless of an applicant's subject area. One student summed up the importance of

enthusiasm by saying, “if a teacher isn’t excited about the subject matter, then students certainly aren’t going to be excited either” (p. 54). My study also found that, regardless of whether the applicant has a minimum of a bachelor’s degree, principals valued communication skills. One principal (Place & Drake, 1994) noted, “It’s important that a teacher be knowledgeable in a particular subject but that knowledge is useless if the teacher cannot effectively communicate the information to a diverse audience” (p. 55). Another important criterion found in my study was that the applicant be student centered. Swinehart (1997) also found this to be an important criterion. One principal in her study summarized the importance of being student centered by saying, “The first thing I look for is the person’s focus on student growth and learning. That is always the target—a clear mission to help students’ learning grow. The most important questions are the ones that help to discriminate between persons who are content-driven and those who are student-driven” (p. 98). Beliefs on classroom management ranked high in my study and that is consistent with past research as well. Cartwright (1973) agreed after interviewing principals who offered the following consensus regarding classroom management: “It’s important that an applicant be an expert in his/her subject area and be able to teach that subject effectively. But it is also vital that he/she be able to control the classroom and create an environment conducive to learning that subject. Without effective management skills, learning cannot take place” (p. 11). The final criterion in the top five responses in my study was a knowledge of a variety of teaching strategies. This criterion was also found to be important in several studies that dealt exclusively with career and technical education (Penner & Price, 1972; Resnick & Gardner, 1979; Ruff, 1989; & Zirbel, 1980). Penner and Price (1972), in their study of Career and technical education coordinators, Career and technical teachers, and Career and technical students, found that giving demonstrations and knowing how to implement a variety of teaching strategies was the

third most valued characteristic in a career and technical teacher. In fact, all three groups named this quality in their top three responses. Interestingly, all five of these criteria are measured during the interview component of the teacher selection process. This validates Ash's study (1992) where he claimed that the interview was the most significant component of the hiring process.

Career and Technical Education Criteria

The most important "career and technical-specific" criterion was the ability to integrate academic and career and technical education. It ranked 7th out of 22 criteria. This finding is consistent with the panel discussion entitled "What Principals and Career and Technical Directors Look For When Hiring Career and Technical Teachers," which was presented at Virginia Tech on March 10, 1999. The five administrators present all strongly agreed in the importance of teachers being able to integrate curricula. The panel also placed a great deal of emphasis on technology skills, which ranked as the 8th most desired criteria. Hedges and Papritan (1987) conducted two qualitative studies of award-winning high school agriculture and marketing teachers and found that one characteristic all had in common was that they were technically up-to-date. However, the high rankings of the ability to integrate curricula and technology skills seem to contradict Zirbel's findings (1980) that the most important criterion for career and technical teachers, behind enthusiasm, was work experience. Work experience ranked 15th in my study. The reason for this, I suspect, is that Zirbel's study was conducted during a time when computers were not in the classroom and the push to integrate curricula was not an educational priority as it is today.

The Bottom of the List

I was not surprised to find grade point average and standardized test scores at the bottom of the list of valued criteria. O’Hair (1989) conducted a survey of more than 300 Texas personnel directors and principals and found that test scores and grade point average ranked lowest on the list of 28 employment criteria. Swinehart (1997) interviewed principals to discover desired credentials and found that some principals wanted candidates who had been top students in their schools, but most shared this opinion: “it isn’t important that the person necessarily be an A student—it is more important that the enthusiasm for teaching, the desire to learn, and the belief system are there” (p. 84).

I was surprised at some of the criteria that were deemed “of little importance.” The presence of a portfolio was not seen as important by the majority of principals, despite their popularity in teacher education programs. Ostroth (1981) said that portfolios were becoming a staple in the teacher selection process across the country. Bull (1994) conducted a study to describe the perceptions of administrators as to the value of portfolios in assessing teacher performance and found administrators to be in total (100%) support of the use of portfolio teacher evaluation. In contrast, Swinehart (1997) found conflicting results in her study of credentials preferred by administrators. Of the 20 interviewed, 15 wanted to see a portfolio “sometimes.” One reason for this may be due to the amount of time it takes to examine portfolios. One principal I interviewed said that portfolios are incredibly time-consuming and that they really don’t distinguish candidates from one another because most portfolios have basically the same content. I was also surprised to see “philosophy of education similar to yours” rated low on the list. According to Siever’s theory for teacher selection (1989), the selection process is heavily influenced by the principal’s belief that the candidate fits within that particular setting. I thought that similar philosophies would be important, since usually the

principals' philosophy would represent that of the school. I conducted some follow-up interviews with select respondents and asked about this item. Of the five principals I interviewed, one admitted that while it is important that philosophies are similar, they did not want to admit it in a formal study. He said, "it's an unspoken thing" but was one component used to assess overall fit. The other 4 confirmed that it really was not an important criterion to them. I believe, based on pauses in the conversations and voice tones, that the principals felt they shouldn't base hiring decisions on matches in philosophies but sometimes they do.

Having a Bachelor's Degree vs. Not Having a Bachelor's Degree

Significant difference was found on 5 of the 16 criteria that appeared on both surveys: ability to integrate academic and career and technical education, knowledge of a variety of teaching strategies, personal appearance, work experience in a Career and technical area, and understanding of Standards of Learning (SOLs). The mean ratings for the five criteria indicated that these criteria are more important for career and technical positions that require a bachelor's degree than for those that do not. However, the criterion "work experience in a career and technical area" had a higher mean rating for career and technical positions that do not require a bachelor's degree, which indicated greater importance. This makes sense because work experience is required for a Technical Professional License. A Technical Professional License requires between two and four years of work experience, depending on the career and technical subject he/she wishes to teach (Virginia Licensure Regulations for School Personnel, 1998). While no studies were found that addressed criteria for those with a bachelor's degree and those without, further interviews with principals in this study seemed to verify findings. One principal said, "If the applicant does not hold a bachelor's degree, we fully expect that person to have a substantial amount of practical experience directly related the course for which he/she is wishing

to teach.” Another principal added, “If the applicant holds a bachelor’s degree, we expect them to possess knowledge on integrating academic and career and technical education. We would also expect that he/she understands and can identify examples of Standards of Learning if he/she was graduated from a teacher education program in Virginia. I can’t imagine that the applicant took a curriculum course and the subject of Standards of Learning was not discussed. We don’t expect applicants without a bachelor’s degree to understand these concepts and terms.” The same sentiment was echoed in relation to knowledge of a variety of teaching strategies. One principal said, “During the interview I expect all applicants (regardless of whether they hold a degree) to be able to explain how they will connect with students and be successful in helping students learn. I just expect those with a bachelor’s degree to be much more knowledgeable in terms of a variety of learning strategies.” The only criterion that could not be explained was personal appearance. Several of the principals seemed uncomfortable when asked why this would be important for one group over the other and no one was able to offer an explanation. While it is possible that principals exhibit gender bias (subconsciously or not) when selecting teachers, according to the U.S. Department of Education, National Center for Educational Statistics, Schools and Staffing Survey (1994), there was almost an even split between the number of males and the number of females teaching career and technical education courses. However, the emphasis placed on personal appearance was not unique to this study. Johnson (1976), who collected responses from 104 Ohio principals, found that 72% of the principals listed physical appearance as a significant criterion while only 70% agreed that good verbal skills and confidence are important. So while few will admit to the importance of personal appearance, studies continue to show that the criterion is considered when hiring teachers, regardless of the subject area (Alford, 1993; Johnson, 1976; Kowalski, 1992).

Variables That Influence Criteria Ratings

Research has shown that factors such as years of experience of the person hiring for a position, community size, and school size have affected how principals view selection criteria. Marlowe, Schnider, and Nelson (1996) conducted a study on hiring in a business setting that looked at the relationship between managerial experience in years and gender and attractiveness biases. They found that the more years of experience, the less likely a manager was to exhibit gender and attractiveness biases. Conversely, the less experienced the manager, the more likely he/she was to exhibit gender and attractiveness bias. This brings forth the notion that years of experience may affect hiring decisions. My study found years of experience were significant in explaining career and technical credentials. I asked several principals to explain this and there was a general consensus that the more years experience a principal has, the better understanding of career and technical education he/she possesses. A new principal often isn't familiar with career and technical education courses, how they differ from academic courses, and the type of skills and traits needed by career and technical teachers. The more they learn about these courses, the more likely they are to make informed decisions in the teacher selection process.

Garman and Alkire (1993) conducted a study of schools to determine the criteria and procedures utilized by hiring officials in selecting beginning public school teachers in small rural schools in Ohio. Significant differences existed for preferred teacher characteristics among various sized school districts. The most important of the criteria listed for the small school districts was vitality and enthusiasm. For the medium-sized school districts, the most important criterion listed was personal integrity. The hiring criterion ranked most important for the large school districts was control of student behavior. Garmen and Alkire also studied hiring criteria in small communities versus large communities and found significant differences as well. Rural

school officials looked for teachers who were emotionally well adjusted while urban school officials desired teachers who possessed a variety of instructional strategies and exhibited respect for cultural differences. My study did not find any significant relationships between community size and school district size and criteria ratings.

Hiring Process

When interviewing principals, I asked them to tell me about the structure of their particular hiring process. The responses were interesting. The 3 principals that worked in small communities had selection processes with very little structure. Credential files were examined and normally 3 applicants were chosen for an interview. There was no set list of questions, though the principals asked the same questions of each applicant. The principal then based his/her decision on who “fit” best with the school personality. This is consistent with the selection theory proposed by Sievers (1989) where he stated hiring decisions were contingent upon the climate of the building, the principals’ perception of the climate of the building, and the personal interview. He also stated that the final decision is grounded in the principal’s belief that the candidate fits the particular circumstances or “context” which the job site presents, and that the candidate understands this fit within that setting. The other two principals had a set list of questions to ask applicants that targeted the knowledge, skills, and abilities required for that particular position. One of the principals said the questions change based on the position. For example, the career and technical programs in his school played a large role in the community so he asked questions related to working with the community. He would not do this if he were hiring an English teacher. The other principal asked questions that related to student recruitment and program development because the career and technical programs in his school had declining enrollments. He wanted to know how applicants would turn the program around. Obviously, he

would not ask this question if he were hiring a science teacher. This is consistent with Campbell's theory (1993) that hiring is based on an analysis of the specific job and the organizational context in which the work takes place.

Limitations and Problems

Perhaps a main reason why my study yielded little significance was because there was very little variance in responses. The majority of respondents normally rated criteria as "very important" or "important." This was not the case, however, when the survey instrument was pilot tested. After interviewing several principals, I concluded that their responses on the survey tended to reflect social desirability. Several principals said, "all the criteria seemed to be very important when I was going down the list." One principal admitted that, while a criterion was not that important to her, she nonetheless marked it as important, believing it should be important in general. In retrospect, I should have added a statement in the directions on the survey that stressed the importance of rating criterion according to how they *really* feel rather than how they *should* feel.

I also found that just using a Likert-type scale lessened the accuracy and honesty of responses. Most principals agreed that the survey should have been done using a ranking system that required them to choose one criterion over another, although with more than just a few criteria, the ranking task would have been much more difficult for them. Several principals thought a qualitative interview would have drawn more variance as well. Interestingly, none of the principals I interviewed used any type of scoring system. Each basically interviewed 2 or 3 candidates for a position and based the hiring decision on his/her memory of the interview, which probably explains why enthusiasm ranked so high on the list of criteria. It is a characteristic that is easily remembered.

A final problem I had was that my residual plots indicated that I may not have included all relevant variables. However, based on the literature, no other variables were suggested. In addition, when I interviewed the principals, none were able to suggest a new variable to be considered. With that in mind, I considered that the “omitted” variable might not have been a new variable, but perhaps an interaction between two variables already in my equation. I conducted post hoc analyses for interactions and found there to be no significant interactions between the independent variables.

Recommendations for Research

The results of this study identified specific criteria used by principals to differentiate among applicants when hiring career and technical Education teacher. Based on these findings, the following recommendations are made.

- 1) This research was based on Virginia school principals. A study could be undertaken to study the criteria used by principals in states where graduates of Virginia commonly seek employment. A similar study could also be conducted in states where identified shortages of career and technical Education teachers exist. Are the same criteria valued in different states? One principal I interviewed had recently moved to Virginia from West Virginia and made the comment, “it would be interesting to see the results of this study if you sent surveys to principals from different states because I just came from West Virginia and criteria valued there is much different from criteria valued in Virginia.”
- 2) A similar study should be done that examines a specific area of career and technical Education to see if findings differ from those found in this study. There may be criteria important to a specific area that were not found in this study. One principal that I interviewed talked about individual differences for teachers who teach business education

courses and building trade courses. He said he hired a teacher in each of the career and technical areas and looked for different criteria for each position. The example he gave was that classroom management skills were not as important when hiring the business education teacher as they were for building trades teacher. He noted that the two courses get totally different types of students.

- 3) This study should be replicated using more extensive interviewing in order to obtain more accurate results. I found when I spoke one-on-one with respondents that it was easier to understand how they viewed criteria importance. For example, one respondent rated two items as “very important” but when I asked him about the items, one was clearly more important than the other. This kind of understanding cannot be achieved merely by using a questionnaire.
- 4) I would also recommend using a combination of rankings and ratings. This was suggested by several principals. Respondents should initially rate items they feel are important and then, from that list, rank the top three in order of importance. This, like interviewing, will help pinpoint how the respondent really feels about the importance of various criteria. This simple ranking requirement will not frustrate or overwhelm respondents as it might if they were asked to rank 20 criteria. I think that by using more interviews and a brief ranking section, the results will be more honest and accurate.

Recommendations for Practice

Several of the principals interviewed discussed areas where a majority of applicants lacked sufficient knowledge. These areas included classroom management, dealing with current issues facing public schools, dealing with parents, and issues relating to diversity. Other principals interviewed felt applicants were not equipped with proper job search skills and often “looked like

deer caught in the headlights.” I would suggest creating a course that focuses on making students more employable (if a similar course does not already exist). A course should be developed with the following purposes: (a) discuss job search strategies, (b) conduct mock job interviews, (c) discuss what a student-centered philosophy means and how one can be developed, (d) discuss how an applicant can convey enthusiasm, (e) deal with issues of diversity as they relate to the classroom, (f) create strategies for classroom management and methods for dealing with “real life” discipline problems that may arise, and (g) developing communication skills that are not directly related to teaching curricula, such as dealing with administrators, parents, and students (who often come to teachers with personal problems).

I also believe these findings should be incorporated in principal preparation programs. I think it would be extremely beneficial for pre-service principals to discuss the selection process and important criteria to look for in that process prior to landing their first jobs. The majority of principals interviewed said that little time was devoted to teacher selection in their master’s programs and all viewed it as a very important aspect of their jobs.

Summary

“What criteria do principals value when hiring career and technical education teachers?”

In an effort to answer this question I asked high school principals in Virginia to complete a 4-page survey. Results showed that the most desired criteria were enthusiasm, communication skills, a student-centered philosophy, the applicant’s beliefs on classroom management, and knowledge of a variety of teaching strategies. Results also indicated that variables such as community size, school district size, and years of experience of principal did not have a significant impact on hiring decisions. Finally, results showed that criteria such as the ability to integrate academic and career and technical education, knowledge of a variety of teaching

strategies, personal appearance, and understanding Standards of Learning were more important for positions that require a minimum of a bachelor's degree. Work experience in a career and technical area was considered more important for positions that do not require a minimum of a bachelor's degree. It is the researcher's hope that the results of this study will be incorporated into teacher education programs so that future educators will be better equipped to enter the job market.

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Appendix A

April 27, 2000

Dear Principal:

I am conducting a study to determine the criteria that principals desire when hiring first-year career and technical teachers. I would appreciate your answering the enclosed survey. It takes approximately **10 minutes** to complete. By responding to each item on the enclosed form you will provide career and technical teacher educators and beginning teachers with insight into what criteria school administrators use to distinguish among applicants when hiring high school career and technical teachers. The results of this study can help career and technical teacher educators design programs that increase the quality of career and technical teachers applying for positions in your school and it will assist teacher-education students to develop those traits.

Please return the completed survey by **May 15**, in the stamped self-addressed envelope enclosed. To eliminate duplicate requests, your school has been assigned a Confidential School Code Number that appears in the upper left corner of the return envelope. To ensure confidentiality, a university colleague will separate surveys from envelopes and note that a response has been received from your school. Thank you for taking the time to share your opinions.

Sincerely,

James Dunton
Department of Teaching and Learning
Virginia Tech

Betty Heath-Camp, Professor
Dissertation Chair
Department of Teaching and Learning
Virginia Tech

Appendix B

A SURVEY OF CRITERIA USED IN THE SELECTION OF BEGINNING CAREER AND TECHNICAL TEACHERS

The purpose of this survey is to determine the relative importance of the criteria used by principals in hiring beginning career and technical teachers. Two parts are included. Use this yellow page to rate criteria for career and technical positions that require a minimum of a bachelor’s degree (i.e. Marketing, Business, Agriculture, Health Occupations). Use the green page to rate criteria for career and technical positions that **do not** require a minimum of a bachelor’s degree (i.e. Trade and Industrial, and Auto).

Criteria for Career and technical Positions that **REQUIRE** a Bachelors Degree

Criteria	Very Important	Important	Of Little Importance	Unimportant	Very Unimportant
1. Ability to integrate academic/career and technical education	4	3	2	1	0
2. Beliefs on classroom management	4	3	2	1	0
3. Grade point average	4	3	2	1	0
4. Dual certification	4	3	2	1	0
5. Masters degree	4	3	2	1	0
6. Portfolio	4	3	2	1	0
7. Applicant is student-centered	4	3	2	1	0
8. Recommendation from cooperating teacher	4	3	2	1	0
9. Standardized test scores (i.e. NTE)	4	3	2	1	0
10. Communication skills	4	3	2	1	0
11. Desire to develop ties with area industry	4	3	2	1	0
12. Enthusiasm	4	3	2	1	0

13. Knowledge of adult education	4	3	2	1	0
14. Knowledge of special populations	4	3	2	1	0
15. Knowledge of a variety of teaching strategies	4	3	2	1	0
16. Openness	4	3	2	1	0
17. Personal appearance	4	3	2	1	0
18. Philosophy of education similar to yours	4	3	2	1	0
19. Respect of diversity	4	3	2	1	0
20. Work experience in career and technical area	4	3	2	1	0
21. Technology skills	4	3	2	1	
22. Understanding of Standards of Learning	4	3	2	1	0

Criteria for Career and Technical Positions that **DO NOT REQUIRE** a Bachelors Degree

Criteria	Very Important	Important	Of Little Importance	Unimportant	Very Unimportant
1. Ability to integrate academic/career and technical education	4	3	2	1	0
2. Beliefs on classroom management	4	3	2	1	0
3. Applicant is student-centered	4	3	2	1	0
4. Communication skills	4	3	2	1	0
5. Desire to develop ties with area industry	4	3	2	1	0
6. Enthusiasm	4	3	2	1	
7. Knowledge of adult education	4	3	2	1	0
8. Knowledge of a variety of teaching strategies	4	3	2	1	0
9. Openness	4	3	2	1	0
10. Personal appearance	4	3	2	1	0
11. Philosophy of education similar to yours	4	3	2	1	0
12. Respect of diversity	4	3	2	1	0
13. Work experience in career and technical area	4	3	2	1	0
14. Technology skills	4	3	2	1	0

Criteria	Very Important	Important	Of Little Importance	Unimportant	Very Unimportant
15. Knowledge of Special Populations	4	3	2	1	0
16. Other criterion not listed (specify):	4	3	2	1	0

1. How many years experience do you have as a principal (including this year)? _____
2. What is the name of the town in which you work? _____
3. Would you classify the town in which you work as:
_____ urban _____ rural _____ suburban
4. Approximately how many students are in your school district? _____
5. Is your school: _____ a Career and Technical school _____ school with career and technical programs
6. Your gender: _____ male _____ female
7. Your age: _____ 25-35 years _____ 36-46 years _____ 47 or older
8. Your highest degree held: _____ bachelors _____ masters _____ doctoral

James C. Dunton III
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OBJECTIVE: To obtain a position in the education field

EDUCATION:

Doctorate of Philosophy Degree in Teacher Education, 2001, Virginia Tech

Master of Science Degree in Higher Education and Student Personnel, 2000, University of Mississippi

Bachelor of Science Degree in Marketing, 1987, Radford University

WORK

EXPERIENCE:

5/00-Present

Georgia Institute of Technology, Atlanta, Georgia

ACADEMIC ADVISOR

- Advised incoming freshman on course scheduling
- Created marketing tools to publicize the School of Psychology
- Planned Graduate Orientation and Recruitment Weekend
- Represented Georgia Tech at College Fairs
- Handled Banner operations and Crystal reports
- Maintained a variety of graduate student databases

8/99-4/00

University of Mississippi, Oxford, Mississippi

COLLEGE PROFESSOR

- Taught EDLD 105: Freshman Seminar
- Taught EDLD 220: Foundation of Leadership Studies
- Coordinated 14 sections of the EDLD 105 course

STUDENT PROGRAMMING STAFF SUPERVISOR

- Created and implemented Health and Wellness programs for students and the community
- Sponsored two student peer educator clubs

- Developed marketing and promotional tools for Health and Wellness events

CAREER CENTER STAFF SUPERVISOR

- Counseled students concerning career planning
- Assisted students in developing resumes and cover letters
- Gave presentations on a variety of career-related topics
- Assisted in organizing recruitment fairs
- Developed programs for the Career Center

8/97-5/99

Virginia Tech, Blacksburg, VA

COLLEGE INSTRUCTOR

- Taught EDVT 4204: Vocational Program Management
- Taught EDVT 3204: Human Relations in the Workplace

STUDENT TEACHER SUPERVISOR

- Served as mentor for 2 student teachers
- Evaluated performance of student teachers
- Recommended student teachers for licensure

RESEARCH ASSISTANT

- Created, piloted, and distributed survey instrument
- Collected and analyzed results of project

CONFERENCE PLANNER

- Planned, organized, and coordinated a conference for teacher educators, Roanoke Public High School teachers, and student teachers to develop projects for integrating academic SOL's and vocational education

ACADEMIC ADVISOR

- Served as academic advisor for undergraduate teaching majors

8/91-8/96

Colonial Heights High School, Colonial Heights, VA

HIGH SCHOOL TEACHER

- Taught four different Marketing Education courses to 10th, 11th, and 12th grade students
- Researched, developed, and implemented an innovative new course into the curriculum (International Marketing)
- Organized and coordinated major events such as Prom, Ring Dance, field trips and community projects