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The Effect of Human Capital on Principals' Decisions to Interview Candidates in Agricultural Education: Implications for Pre-service Teachers

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The purpose of this experimental study was to determine which factors of human capital were valued most by principals regarding their decisions to interview candidates, based on teacher resumes. The findings of this study point to the fact that principals desire teachers who are academically rigorous. That is, they desire teachers who have strong grade point averages, have been recognized in honor societies for their academics, and have taken elevated, rigorous coursework above and beyond what a typical agricultural education major would be required to take. The sex and certification route of teacher candidates had no bearing on principals' decision to offer an interview to the candidates. The fact that principals placed little value on certification type is concerning. It is recommended that this study be replicated in other states across the country to determine the prototypical agriculture teacher. It is assumed that the needs will vary from state to state. However, additional research is needed in this area.

Keywords: human capital, teacher candidates, principals' perceptions

"One of the most important roles a building administrator plays is recommending the employment of teachers to the superintendent of schools" (Sulaver, 2008, p. 58). Unfortunately, principals do not always hire the best, most qualified candidates (Ballou, 1996; Wise, Darling-Hammond, & Berry, 1987). Sometimes principals make bad hiring decisions due to their own personal bias. Other times they miss out on possible, effective teachers due to the system's *red tape* (Wise et al., 1987). Regarding personal bias, principals can and do make biased decisions on the hiring process of teachers. In fact, principals tend to select teachers who have similar academic backgrounds as their own (Baker & Cooper, 2005). Unbiased factors contributing to not hiring the best candidate include a lack of strong recruitment strategies, cumbersome and ineffective screening processes, and lengthy decision processes (Wise et al., 1987). Goldhaber and Brewer (2000) opined "it may be the case that states do not have a significant effect on the quality of teachers in the classroom because they are actually doing little to screen out poor candidates" (p. 131). Therefore, principals should make efforts to tighten their requirements and screenings to obtain the best, most qualified, and effective teachers possible (Wise et al., 1987).

Determining what constitutes a *quality* teacher is somewhat contradicting (Baker & Cooper, 2005) and challenging to define (Feistritzer & Haar, 2008). The dilemma of whether or not teachers should experience teacher preparation programs has been ongoing. Mixed results exist as to whether *effective* teachers are those who have learned pedagogy in teacher preparation programs or who have learned content-specific knowledge in undergraduate programs (Wilson & Floden, 2003). According to the report, *What Matters Most: Teaching for America's Future,* published by the National Commission on Teaching and America's Future (NCTAF) (1996), quality teachers are those who are astute at pedagogy. However, a study by Goldhaber and Brewer (2000) found that no statistically significant difference existed in student performance regarding those who

were taught by teachers trained in pedagogy versus those who were not.

Wayne and Youngs (2003) found that students who had a traditionally certified mathematics teacher statistically outperformed those students who had a mathematics teacher who was alternatively certified. Yet, when comparing other disciplines, no difference in students' test scores was found.

Roberts and Dyer (2004a) conducted a study to determine what characteristics embodied an effective agriculture teacher. They found that to be effective, agricultural educators should be proficient at advising the local FFA program, supervising supervised agricultural experiences, building community relations, marketing the local program to community patrons, exhibiting professionalism, planning and managing the total program, and being a quality person. Although, agriculture teachers who are alternatively certified believe they are sound in implementing effective pedagogy (Duncan & Ricketts, 2008; Roberts & Dyer, 2004b; Robinson, Krysher, Haynes, & Edwards, 2010; Rocca & Washburn, 2006), Robinson et al. (2010) found that there was a statistically significant difference regarding student achievement indicators in favor of traditionally certified teachers when comparing them with their alternatively certified counterparts. Regardless of certification type, pedagogical experiences such as lesson planning, lifelong learning, curriculum design, assessment strategies, professionalism, and classroom management are crucial skills for entry-level teachers to possess (Rosenfeld, Reynolds, & Bakatko, 1992; Rosenfeld & Tannenbaum, 1991).

Retaining quality teachers has been a major issue in education for years (Hess, 2000; Ruhland & Bremer, 2002). Because of the lack of certified teachers, the demand for teacher quality continues to escalate (Feistritzer & Haar, 2008; Good, McCaslin, Tsang, Zhang, Wiley, Bozack, & Hester, 2006). As such, ensuring that today's school children are equipped with quality teachers is an imperative task (Goldhaber & Brewer, 2000). Because principals can set the precedence for the school's culture by the type of teachers they hire (Baker & Cooper, 2005), it is important to determine which factors appeal to them most when screening applications.

In a literature review to determine which factors appeal most to principals when making hiring decisions regarding potential teachers, it was found that, typically, female principals place greater emphasis on learning about the potential teachers' background and experiences than do their male counterparts (Sulaver, 2008). These areas of emphasis include the "candidate's dedication to the profession, ability to build relationships, knowledge of teaching and learning, and information received from reference calls" (p. 48).

Experience and knowledge appear to play a vital role in a candidate's success at advancing through the screening committee and landing an interview (Sulaver, 2008), as they are strong predictors of student achievement (Wayne & Youngs, 2003). However, a teacher's knowledge should not be misconstrued to indicate grade point average (GPA). In fact, in a study of female and male principals, they both had the least amount of value regarding candidates' honors and awards listed on their application, and as such, tended to devalue a candidate's GPA as well (Sulaver, 2008). Therefore, being strong academically does not always lead to employment for aspiring teachers (Ballou, 1996; Weeks, 2006). Ballou (1996) noted that some principals have little regard for teachers' with strong academic backgrounds. Rather, they desire individuals who can build relationships with students and teach them to think.

Understanding the perceptions of the principal regarding the agriculture program and its teacher is important because the "principal's perceptions influence whether or not an agricultural education program exists" (Smith & Myers, 2012, p. 160). To determine which criteria were most important to administrators who employ high school agriculture teachers in Oklahoma, Cantrell and Weeks (2004) found that agricultural subject knowledge was preferred most. Administrators desired teachers who were *well rounded* in the program with experiences in classroom and laboratory instruction, FFA, and SAE. However, they had little regard for teachers' general education knowledge. In a similar study, Weeks (2006) found that administrators preferred candidates who expressed an enthusiastic attitude to teach and could develop positive relationships within the community.

The criteria valued least by administrators were teachers' experiences in production agriculture, involvement in activities while in college, and GPA.

Given the opportunity to compare, do principals prefer candidates with teacher preparation credentials (traditionally certified) or life experiences (alternatively certified) (Wilson & Floden, 2003)? Cantrell and Weeks (2004) found that administrators in Oklahoma preferred agricultural education teachers who were traditionally certified (TC) to those who were alternatively certified (AC). TC teachers have pedagogical preparation (Robinson, 2010) whereas AC teachers do not (Darling-Hammond, 2000; Feistritzer & Haar, 2008; Lynch, 1996; Walsh & Jacobs, 2007). However, generally, AC teachers have industry experiences (Ruhland & Bremer, 2002) whereas TC teachers do not. Therefore, which set of experiences, skills, knowledge, and education leads to employability for those who have a desire to teach? Answering this question has implications for how teacher preparation equips aspiring teachers for employment.

This study was framed using the human capital theory. Human capital is based on a person's acquisition of knowledge, skills, experiences, and education (Becker, 1964; Little, 2003; Shultz, 1971; Smith, 2010; Smylie, 1996). Human capital is used widely to explain employability (Becker, 1964); thus, as people increase their human capital, they become more employable, especially when their human capital deals with learning new, "sector-specific" skills (Smith, 2010, p. 42). As individuals develop and acquire these skills, they should become more competent at performing their trade (Heckman, 2000). Employees are more valuable if their human capital results in increased profits within their job (Lepak & Snell, 1999). Although human capital has been used widely in economics literature, it can also be used to describe the value of teachers in school systems (Smylie, 1996).

Human capital is based on how unique an individual's skills are regarding a potential job and how much the employer values those skills (Lepak & Snell, 1999). However, research determining which areas of human capital is most valued and unique within teacher development and preparation is lacking. Hess (2000) stated, "there is some agreement on what teachers should know but no consensus on how to . . . ensure that they have mastered essential skills or knowledge" (p. 169). Therefore, the question remains – which factors of human capital are valued most by school principals?

Purpose of the Study

The purpose of this experimental study was to determine which factors of human capital were valued most by principals regarding their decisions to interview candidates, based on teacher resumes. The following objectives guided the study.

1. Describe the variance in factors of human capital that principals desire most.
2. Describe the interaction between factors of human capital in assessing *fit* of a teacher candidate.
3. Describe the association between the factors of human capital and principals' decisions to interview the candidates or not.
4. Describe what type of teacher candidate receives an interview.

The following hypotheses guided the statistical analysis of the study:

H_0 1: There is no variance in overall mean resume scores due to the interaction of rigor, certification, and sex.

H_0 2: There is no difference in the overall mean resume score between academically rigorous and non-rigorous teacher candidates.

H_0 3: There is no difference in the overall mean resume score between traditionally and alternatively certified teacher candidates.

H_0 4: There is no difference in the overall mean resume score between male and female teacher candidates.

H_0 5: Rigor has no association with principals' decision to interview.

H_0 6: Certification type has no association with principals' decision to interview.

H_0 7: Sex has no association with principals' decision to interview.

Methods

This experimental study employed a completely randomized factorial two-by-four (CRF-24) design (Kirk, 1995), and focused on all principals who worked at schools that have an existing agricultural education program (N = 351) in Oklahoma during the 2011-2012 academic year. The frame for the study was adopted from a database used and shared by state staff program specialists at the Agency of Career and Technology Education in Oklahoma. Within the database were principals' names, phone numbers, school name, mailing addresses, and electronic mail addresses. In the case of three principals, incomplete data existed. As such, the researchers conducted an Internet search and made phone calls to the schools to obtain the appropriate electronic mailing address to update the database and reduce frame error. A MANOVA was utilized to ensure homogeneity of principals assigned to each group based on age, years of experience, and school size, which was non-significant (V = .05, $F(7, 74) = 1.605$, $p < .05$).

Using the human capital theory as a frame, the researchers developed the instrument used for this study (see Figure 1). Because resumes are generally the first step to a candidate being selected for a job interview (Cole, Field, & Giles, 2003), eight "fictitious" resumes were created and various treatment variables were manipulated for comparisons. Each resume contained one of the completely crossed treatment combinations of two variables related to human capital – characteristics and sex. For instance, the resume for *James Smith* (see Table 1) was designed so that the candidate was traditionally certified and strong in academic rigor. Specifically, the resume for James Smith consisted of having a high grade point average, being a Truman Scholar finalist, and serving on the Dean's List. In contrast, the resume for *Susan Martin* was designed so that the candidate was alternatively certified and exhibited weak academic rigor. In particular, no student teaching experience was denoted on the resume. Rather, a degree in animal science and experiences as a ranch manager were listed, indicating alternative certification status. Each of the ensuing resumes was altered so that a combination of treated variables existed. So as not to be biased in name selection, the website, http://www.census.gov/genealogy/names/names_files.html, that represented the top ten male and female names of 2011 was used to determine the names found in the candidates' resumes. Each resume was kept at a one-page minimum to avoid taxing the principals and ensure consistency.

The researcher-designed resume instruments served as the medium by which the various treatment combinations were administered (see Table 1). Each resume consisted of four sections that would be identified in a typical resume: education, relevant experience, FFA experience, and college and university involvement (see Figure 1). Polarity of both academic rigor and type of certification were sought through manipulations in the *education* and *relevant experience* sections of the resume. The resumes of candidates who were academically rigorous included a 4.0 Grade Point Average (GPA), demanding coursework, and recognition associated with academic success. Candidates who were academically non-rigorous reported a 2.0 GPA, introductory coursework only, and no academic recognitions. Candidates who were certified through a traditional route had an agricultural education degree and listed their student teaching experience. Candidates who were certified through an alternative route had a degree in animal science and listed their experience working in the agricultural industry. Both the *FFA experiences* and *college or university involvement* sections were identical on all eight resumes, as they were not of interest to this study. Thus, they were controlled and used for assessing for reliability.

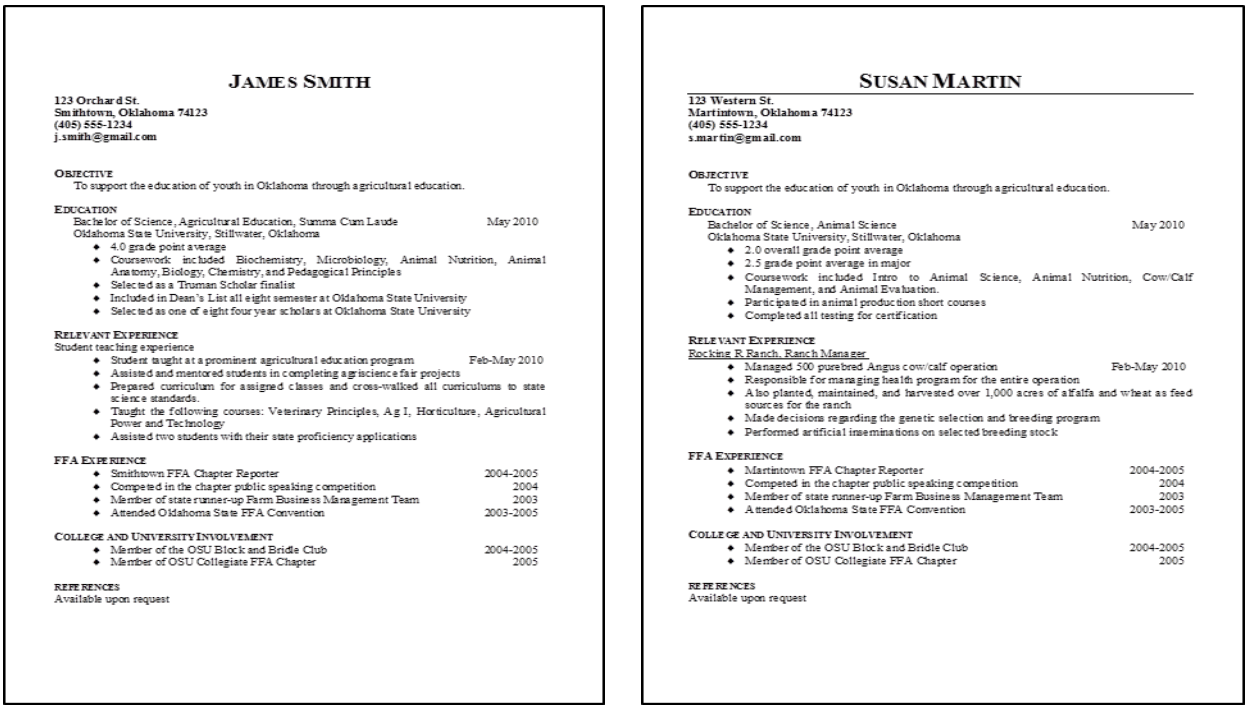
The researchers were careful to ensure that each of the four sections of the resume consisted of 16 bullet points and followed the same overall format. Further, each resume contained 184 to 197 total words and followed strict formatting guidelines as to prevent principal bias (see Table 1).

Table 1
Overview of the Treatment

	Sex		Certification[1]		Academic Rigor	
Resume # - Name	Male	Female	TC	AC	Rigor	Non-Rigor
1 – James Smith	X		X		X	
2 – David Anderson	X		X			X
3 – Robert Brown	X			X	X	
4 – Michael Miller	X			X		X
5 – Mary Johnson		X	X		X	
6 – Barbara Wilson		X	X			X
7 – Linda Davis		X		X	X	
8 – Susan Martin		X		X		X
Totals	4	4	4	4	4	4

Note. [1]TC = Traditionally Certified; AC = Alternatively Certified

Part one of the instrument consisted of a resume scoring rubric where principals were asked to utilize a scale of 1 to 10, with 1 being *worst* and 10 being *best*, to score each section of the resume. The four scores were added to calculate an overall resume score. Part two of the questionnaire consisted of selected, personal characteristics data of the principals. The researchers were interested in both homogeneity of principals' characteristics between groups and future analysis of how their previous experiences, such as sex, years of experience, disciplines in which they taught, disciplines in which they were certified to teach, and FFA membership history as a youth, affected the way in which they screened the resumes. Thus, for the purpose of this study, the researchers reported only the quantitative data collected in Part I of the questionnaire.



JAMES SMITH

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OBJECTIVE
To support the education of youth in Oklahoma through agricultural education.

EDUCATION
Bachelor of Science, Agricultural Education, Summa Cum Laude — May 2010
Oklahoma State University, Stillwater, Oklahoma
- 4.0 grade point average
- Coursework included Biochemistry, Microbiology, Animal Nutrition, Animal Anatomy, Biology, Chemistry, and Pedagogical Principles
- Selected as a Truman Scholar finalist
- Included in Dean's List all eight semester at Oklahoma State University
- Selected as one of eight four year scholars at Oklahoma State University

RELEVANT EXPERIENCE
Student teaching experience
- Student taught at a prominent agricultural education program — Feb-May 2010
- Assisted and mentored students in completing agriscience fair projects
- Prepared curriculum for assigned classes and cross-walked all curriculums to state science standards.
- Taught the following courses: Veterinary Principles, Ag I, Horticulture, Agricultural Power and Technology
- Assisted two students with their state proficiency applications

FFA EXPERIENCE
- Smithtown FFA Chapter Reporter — 2004-2005
- Competed in the chapter public speaking competition — 2004
- Member of state runner-up Farm Business Management Team — 2003
- Attended Oklahoma State FFA Convention — 2003-2005

COLLEGE AND UNIVERSITY INVOLVEMENT
- Member of the OSU Block and Bridle Club — 2004-2005
- Member of OSU Collegiate FFA Chapter — 2005

REFERENCES
Available upon request

SUSAN MARTIN

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OBJECTIVE
To support the education of youth in Oklahoma through agricultural education.

EDUCATION
Bachelor of Science, Animal Science — May 2010
Oklahoma State University, Stillwater, Oklahoma
- 2.0 overall grade point average
- 2.5 grade point average in major
- Coursework included Intro to Animal Science, Animal Nutrition, Cow/Calf Management, and Animal Evaluation.
- Participated in animal production short courses
- Completed all testing for certification

RELEVANT EXPERIENCE
Rocking R Ranch, Ranch Manager
- Managed 500 purebred Angus cow/calf operation — Feb-May 2010
- Responsible for managing health program for the entire operation
- Also planted, maintained, and harvested over 1,000 acres of alfalfa and wheat as feed sources for the ranch
- Made decisions regarding the genetic selection and breeding program
- Performed artificial inseminations on selected breeding stock

FFA EXPERIENCE
- Martintown FFA Chapter Reporter — 2004-2005
- Competed in the chapter public speaking competition — 2004
- Member of state runner-up Farm Business Management Team — 2003
- Attended Oklahoma State FFA Convention — 2003-2005

COLLEGE AND UNIVERSITY INVOLVEMENT
- Member of the OSU Block and Bridle Club — 2004-2005
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Figure 1. Sample of Resume #1: Male, Rigorous, Traditionally Certified Candidate; Resume #8: Female, Non-Rigorous, Alternatively Certified Candidate.

Face and content validity was established on the resumes by faculty in teacher preparation and statistics at Oklahoma State University. Reliability was established through a pilot test of the instrument to principals not randomly selected to participate in the study. Because rhetoric is especially important when writing effective resumes (Amare & Manning, 2009), it was important to determine if principals could distinguish between *traditionally certified* and *alternatively certified* resumes. As such, two resumes, one being TC and the other being AC, were sent electronically to 30 principals as a pilot study. Principals were asked to evaluate and score the four sections of the resumes. Once completed, access to the resumes was suspended and the principals were asked to identify whether each candidate was traditionally or alternatively certified. Specifically, once principals had scored the resumes in the pilot study, they advanced to a page with a question asking about the certification status of the candidates. They were unable to go back and review the resumes when responding to this question, and therefore, had to answer the question based on memory. This question was especially important to the researchers as aspiring teachers in this state receive a *standard teaching certificate* regardless of certification route, often making it confusing to principals when assessing candidates' teaching certificates. Anecdotal evidence exists that suggests principals do not always know if the candidates they interview are alternatively or traditionally certified. Therefore, aside from the interview itself, the resume is the only distinguishable artifact that would inform principals of a teachers' certification route. On completing the pilot study, it was determined that over 70% of principals were able to identify correctly teachers' certification route based on the education and experiences listed within the respective resumes. Therefore, the certification route was included in the larger study.

Each principal received an electronic mail message with the purpose of informing the principal of the study and soliciting participation. Because the study was conducted electronically, a computer system was employed to handle the random assignment of resumes to the participants. For instance, once a principal agreed to participate in the study, his or her identification number was accepted into the system automatically, and a resume was submitted for him or her to review and score. The system added resumes numerically (resume #1 through resume #8) in an attempt to ensure that equal numbers of resumes were reviewed and scored throughout the study.

To determine the number of principals needed for the study, a statistical program known as G*Power was used (Faul, Erdfelder, Lang, & Buchner, 2007), which is used to inform researchers on how many participants are needed for a particular study (Cohen, 1988; Faul et al., 2007). G*Power takes into consideration the number of people in the population, the number of variables in the study, and the amount of power desired. "Power . . . is the probability that its null hypothesis (Ho) will be rejected given that it is in fact false" (Faul et al., 2007, p. 175). When considering this study's population (N = 351), the number of variables in the treatment (three), and a power base of .80, it was determined that 76 participants were needed (Faul et al., 2007).

The researchers followed Dillman's (2004) recommendations for conducting electronic mail surveys. In all, principals were contacted a total of five times with an invitation to participate in the study. Specifically, an electronic mail message, complete with the resume questionnaire, was sent to all principals who were randomly selected for the study. Twenty-eight messages bounced back as *undeliverable* due to certain schools' firewall protection systems. In those cases, the researchers faxed a copy of the electronic mail message to those principals soliciting their participation. The principals were asked to type the hyperlink into their web browser and participate in the study. Three additional contacts were made to principals until enough responses had been gathered necessary to detect an effect without committing a Type II error (Faul et al., 2007). In all, 83 principals participated in the study.

Findings

The first four null hypotheses sought to describe the variance in factors of human capital that principals desire most and any interaction of

those factors. To that end, an omnibus analysis of variance (ANOVA) was utilized and is summarized in Table 3. Complete reporting of descriptive statistics is found in Table 2. Levene's test of equality of error variance was used to ensure the assumption of equal variances and was not violated, and it yielded F (7,75) = .627, p = .732. Thus, homogeneity of variance was established. In addition, the examination of a histogram demonstrated an approximately normal distribution of the data.

Each principal provided an overall resume score using the researcher-developed instrument, and those scores were used to look for significant interactions between sex, certification type, and academic rigor. The maximum resume score was 40, and the grand mean was 26.92 (SD = 6.82, n = 83). Null hypothesis one was tested using the ANOVA procedure. The interaction effect of sex, certification, and rigor yielded an F (1,75) = .205, p = .652, η_p^2= .000, sex and certification yielded an F (1,75) = .012, p = .915, η_p^2= .000, sex and rigor yielded an F(1,75) = .588, p = .446, ^{2}= .008, certification and rigor yielded an F (1,75) = 1.05, p = .308, η_p^2= .014; thus, all interactions were determined to be non-significant, and null hypothesis one failed to be rejected.

Table 2
Descriptive Statistics

Treatment Combination	*M*	*SD*	*n*
Male – Traditional – Rigor	30.60	5.74	10
Male – Traditional – Non-Rigor	22.43	7.34	14
Male – Alternative – Rigor	28.07	5.58	14
Male – Alternative – Non-Rigor	24.20	6.30	10
Female – Traditional – Rigor	30.63	5.76	8
Female – Traditional – Non-Rigor	26.00	7.64	10
Female – Alternative – Rigor	29.10	6.64	10
Female – Alternative – Non-Rigor	26.14	6.01	7
Total	26.92	6.82	83

Table 3
Analysis of Variance Summary Table

Source	*SS*	*df*	*MS*	*F*	*p*	η_p^2
Sex	53.21	1	53.21	1.28	.262	.017
Certification	5.65	1	5.65	.135	.714	.002
Rigor	475.06	1	475.06	11.38*	.001	.132
Sex * Certification	.48	1	.48	.012	.915	.000
Sex * Rigor	24.54	1	24.54	.588	.446	.008
Certification * Rigor	43.93	1	43.93	1.053	.308	.014
Sex * Certification * Rigor	8.55	1	8.55	.205	.652	.003
Error	3129.99	75	41.73			
Total	63940.00	83				

*p < .05.

The second, third, and fourth null hypotheses stated that there were no statistically significant differences in resume scores when comparing sex, certification type, and level of academic rigor respectively. Mean scores of female resumes were 27.97 (SD = 6.65), and males mean score was 26.15 (SD = 6.90). There was a non-significant main effect of sex on the overall resume score, F(1,75) = 1.28, p = .262, η_p^2 = .017 with a power of .200. Traditionally certified candidate resumes scored a mean of 27.41 (SD = 1.02), while alternatively certified candidates mean score was 26.88 (SD = 1.04). Again, there was a non-significant main effect of certification type on resume scores, F(1,75) = .14, p = .714, η_p^2 = .002 and a power of .065.

Resumes indicating high academic rigor scored a mean of 29.60 (*SD* = 1.02), and those of low academic rigor scored a mean of 24.69 (*SD* = 1.04). There was a statistically significant difference between the level of academic rigor and the principals' scores of the resumes, $F(1,75) = 11.38$, $p = .001$, $\eta_p^2 = .132$, and a power of .915. As a result of these analyses, the second and third null hypotheses were retained, and the fourth null hypothesis was rejected.

The fifth, sixth, and seventh null hypotheses sought to determine if the level of academic rigor, sex, and certification type is independent of the principals' decision to interview a candidate. Once the principals scored their respective resume, they were asked a simple question, "Would you invite this candidate for an interview based on this resume?" These *yes* and *no* answers were used as categorical data in the employment of Chi-Square tests of association. The Chi-Square tests of association are presented in Tables 4, 5, and 6.

Table 4
Contingency Table by Interview Decision and Sex of Candidate

	Interview Decision		Total
	Yes	No	
Male Candidate	30 (62.5%)	18 (37.5%)	48
Female Candidate	22 (62.9%)	13 (37.1%)	35
Total	52	31	

$\chi 2$ (1, n = 83) = .001, p = .974

Table 5
Contingency Table by Interview Decision and Academic Rigor of Candidate

	Interview Decision		Total
	Yes	No	
Rigorous	31 (73.8%)	11 (26.2%)	42
Non-Rigorous	21 (51.2%)	20 (48.8%)	41
Total	52	31	

$\chi 2$ (1, n = 83) = 4.525, p = .033

The 83 principals agreed to interview 62.5% of the males, and 62.9% of the females (see Table 4). The Chi-Square yielded a value of .001, which was statistically non-significant. Teacher candidates whose resume indicated a high level of academic rigor were given an interview 73.8% of the time, while only 51.2% of the academically non-rigorous candidates received an interview (see Table 5). Academic rigor was statistically significantly associated with the principals' decision to provide an interview, as made evident by the 4.525 Chi-Square score (p =.033). Finally, 64.3% of teacher candidates who were traditionally certified received an interview, and 61.0% of the alternatively certified teachers received interviews (see Table 6). The Chi-Square yielded a statistically non-significant score of .097, which indicated that certification status made no difference in principals' decisions to interview candidates.

Table 6
Contingency Table by Interview Decision and Certification Type of Candidate

	Interview Decision		Total
	Yes	No	
Traditional Certification	27 (64.3%)	15 (35.7%)	42
Alternative Certification	25 (61.0%)	16 (39.0%)	41
Total	52	31	

$\chi 2$ (1, n = 83) = .097, p = .755

Objective four was to describe the type of teacher candidate resume that leads to an interview. Traditionally certified males and females, who exhibited a high level of academic rigor, received the highest interview percentages of 80% and 88%, respectively (see Table 7). Non-rigorous, alternatively certified females, along with non-rigorous, traditionally certified males, received the lowest rate of interviews at 43% each (see Table 7).

Table 7
Percentage of Candidates in Each Resume Category that Received an Interview (n = 52)

	Traditional Certification		Alternative Certification	
Sex	Rigor	Non-Rigor	Rigor	Non-Rigor
Male	8/10 (80%)	6/14 (43%)	10/14 (71%)	6/10 (60%)
Female	7/8 (88%)	6/10 (60%)	6/10 (60%)	3/7 (43%)

Conclusions

The purpose of this experimental study was to determine which factors of human capital were valued most by principals regarding their decisions to interview candidates based on teacher resumes. It is clear that principals in this study prefer academic rigor to that of all other factors of human capital. Although not overly shocking, this finding contradicts numerous studies (Ballou, 1996; Sulaver, 2008; Wayne & Youngs, 2003; Weeks, 2006) that found academic rigor (i.e., GPA and academic awards and honors) was devalued by principals when hiring teachers.

Sex had no bearing on principals' decisions to interview candidates. In fact, principals were willing to interview almost identical numbers of males (62.5%) and females (62.9%), respectively. This finding is encouraging as only roughly 13% of the statewide population of agricultural education teachers in Oklahoma is female, currently (K. Murray, personal communication, September 4, 2010). Anecdotally, some aspiring female teachers in Oklahoma have expressed concern over whether or not they will be taken seriously for future jobs. They believe teaching agriculture is a male-only profession in Oklahoma and that they will struggle to obtain a teaching job. However, the findings of this study are encouraging. Regardless of sex, it was apparent that principals seek aspiring teachers who were academically rigorous as students, not whether they were male or female.

Regarding certification status, there was no statistically significant difference between the proportion of traditionally and alternatively certified teachers that principals were willing to interview. Specifically, principals were willing to interview 64.3% (f = 27) of candidates who were traditionally certified and 61.0% (f = 25) of candidates who were alternatively certified. Cantrell and Weeks (2004) determined that administrators in Oklahoma preferred TC candidates to AC candidates. However, the same claims cannot be made from this study. Although two more TC candidates were selected to receive interviews, the differences between them and AC teacher candidates were not statistically significant, indicating that principals

have no bias toward candidates who student taught and are experienced in pedagogy. Finally, when combining all factors of human capital, candidates who were traditionally certified and had strong academic rigor were most likely to receive interviews, which refutes the assertions of Weeks (2006) and Ballou (1996). The second most likely to receive interviews were those candidates who were alternatively certified and had strong academic rigor.

Recommendations for Research

This study sought to determine which factors of human capital are valued most by principals regarding the resumes of teacher candidates. However, resumes are but one artifact used to apply for a job. Teachers also submit applications and cover letters, which are important components to the screening process (Sulaver, 2008). Cantrell and Weeks (2004) noted that being strong academically does not ensure employability as a teacher. Therefore, what does? Future research should assess principals' ratings of various cover letters and application materials to determine the decisions principals make regarding these artifacts.

The findings of this study are limited to Oklahoma. However, each state's teacher certifying institution(s) should understand more about how its hiring officials make decisions regarding teacher employability. Therefore, it is recommended that this approach to collecting data be replicated in other states to determine themes deemed most important for agricultural education teachers. Further, it is acknowledged by the researchers of this study that a principal is not the sole person who does all of the decisions when hiring new teachers. As such, further studies should assess individuals such as superintendents, school board members, and other stakeholders who have a role in the hiring of agricultural education teachers in Oklahoma and beyond.

The resounding finding of this study is that principals desire candidates with strong academic rigor. However, what is not clear is the *type* of academic rigor principals value most. For instance, do principals desire candidates who have double-majored in another technical area over those with a degree only in agricultural education? Likewise, do principals seek individuals who have minored in another technical area versus those who have not? Further research should explore these areas. Also, is it the college coursework taken by candidates in which principals place the most amount of emphasis, or is the candidates' GPA the most important factor regarding academic rigor? To achieve the greatest amount of treatment effect per the academic rigor section of the resumes used in this study, GPA and coursework were combined. However, future research should manipulate and test those variables (i.e., high GPA and *basic* coursework versus high GPA and *advanced* coursework) to determine exactly how principals view, value, and reward academic rigor.

Recommendations for Practice

These findings should be shared with principals in Oklahoma at their annual conference. Based on the pilot data, it is assumed that some principals "default" to believing every teacher aspirant is traditionally certified and prepared pedagogically. It is also clear that a few principals are not able to distinguish which teachers are traditionally certified and which ones are alternatively certified based solely on the resumes. This is problematic. As such, principals should be made aware of and trained to recognize these differences so that they can make the best decision possible during the screening process.

Based on the findings of this study, faculty in agricultural education at Oklahoma State University should encourage students to improve their human capital in the area of academic rigor specifically. Students should be encouraged to improve their GPA and scholastic standings by receiving free tutoring and taking advantage of the writing center provided to increase students' literary skills at Oklahoma State University. Further, students should be advised to take advanced coursework in science and mathematics.

Implications and Discussion

The findings of this study indicate clearly that principals seek aspiring teachers who are

competent, smart, and determined – as evidenced by their overwhelming desire for interviewing teachers with elevated GPAs, academic honors and awards, and rigorous coursework. Yet, this finding contradicts previous work done by Cantrell and Weeks (2004), which found that a candidate's GPA was not a significant factor in principals' decision to hire an agriculture teacher. Yet, this study showed that, with all things being equal, academic rigor was the lone aspect of human capital that made a statistically significant difference. However, rarely in life are *all things equal*. For instance, the adage, "It's not *what* you know but *who* you know that matters," applies here. Therefore, an implication exists that politics plays a large role in the hiring process of individuals in various sectors. As such, perhaps there are other factors (i.e., geographic location of the candidate) to consider regarding aspiring teachers' human capital.

What is somewhat concerning is the lack of attention these principals placed on teachers' certification status. With all things being equal, principals selected traditionally certified teachers. However, when given options, it appeared as though principals were willing to compromise the student teaching experience and pedagogical preparation for a more well-rounded candidate. Why is that? Could it be that the pressure to have students perform on end-of-instruction, standardized tests is so great that principals are willing to forgo the pedagogical experiences of candidates to find a teacher who has high, overall, general intelligence? If so, perhaps pre-service teachers should be encouraged to not only take more rigorous coursework, but also to minor or double major in other areas in addition to agricultural education. The findings of this study revealed that principals were willing to issue interviews to candidates at all costs so long as they had been academically rigorous while in college.

The preparation of teachers is a difficult endeavor. It is a struggle for teacher educators to ensure that pre-service teachers receive enough rigorous coursework and pedagogy while being required to maintain student credit hours to under 124. Are there ways in which pre-service teachers can learn pedagogy while taking upper-level coursework that is rigorous in nature? If so, how? Discussions are needed to understand how to accomplish this dilemma better.

It is refreshing that principals desire teachers who are academically astute. However, efforts should be made to improve teacher pay and increase incentives to teach for those who are in the *upper echelon* regarding academic rigor. Too often, students do not consider teaching seriously due to the fact that they can find industry jobs that pay better and have enticing incentive programs based on their skills and abilities. Although this issue likely will not be resolved any time soon, teacher educators at this institution will continue to recruit students to the major who are academically rigorous. Further, all current students at Oklahoma State University will be encouraged to provide their best efforts while at college, by taking advantage of the free tutoring sessions offered at this institution, and gain as many robust experiences as possible prior to applying for teaching jobs.

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