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Why Agricultural Educators Remain in the Classroom

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The purpose of this study was to identify and describe factors that are related to agricultural educator career retention and to explore the relationships between work engagement, work-life balance, occupational commitment, and personal and career factors as related to the decision to remain in the teaching profession. The target population for this study was defined as experienced agricultural educators who had completed a minimum of four years of teaching experience, who were currently employed in a secondary agricultural education classroom for the 2009-2010 school calendar. The accessible population consisted of those experienced agricultural educators in the southern region of the United States: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. The study sought responses from a stratified random sample of those teachers to ensure geographical and gender representation equivalent that of the target population. This study employed descriptive-correlational research procedures. The instrument was constructed utilizing portions of four studies to measure the variables of interest. A linear regression analysis revealed a 25% variance in occupational commitment attributed to work-life balance and work engagement combined.

Key words: attrition; commitment; retention; work engagement; work-life balance

Understanding why agricultural educators leave is an important factor when addressing the retention issue. Former teachers reported an array of reasons to leave: from family circumstances to a low degree of efficacy that led to low motivation, from demoralization to burnout (Borman & Dowling, 2008; Cano & Miller, 1992; Castillo & Cano, 1999; Newcomb, Betts, & Cano, 1987). The loss of practicing educators results in costly annual recruitment and hiring cycles that only temporarily alleviates the symptoms of a much larger crisis. It is a problem continuing to drain tax dollars, undermine teaching quality, and hinder student achievement (Barnes, Crowe, & Schaefer, 2007; National Commission on Teaching and America's Future, 2003).

Good teachers are the most important factors in student success (Mishel, Alegretto, & Corcoran, 2008). Loss of those teachers compromises the quality of instruction and results in a negative effect on student performance (Allen, 2005; Ingersoll, 2001). While difficult to measure, new, inexperienced educators are far less effective than their veteran counterparts (Day, Sammons, Kington, Gu, & Stobart, 2006). Teachers who stay in the profession longer develop a higher degree of self-efficacy (Rocca & Washburn, 2006), leading to greater effort to work with struggling or difficult students (Gibson & Dembo, 1984; Soodak & Podell, 1996).

Grissmer and Kirby (1997) go so far as to blame the teacher shortage on the aging teacher population, identifying a U-shaped attrition rate that peaks during the early years of education careers and again during the retirement years. Ingersoll (2003) reported that the shortage of educators is not due to an increase in student population or the growing number of retirees, it is due to the large number of teachers who leave teaching for other jobs. These conclusions are supported by studies conducted by Allen (2005) and Certo and Fox (2002).

More recently, the common foci of research has included job satisfaction, burnout, school climate and cultural influences, induction, self-efficacy, commitment to teaching, the effects of

school reform efforts, and workload; all looking to explain why teachers leave the profession (Boone & Boone, 2009; Borman & Dowling, 2008; Brill & McCartney, 2008; Clark, Brown, & Ramsey, 2012; Epps, Foor, & Cano, J, 2010; Thieman, Ball, & Kitchel, 2012). Inversely, Inman and Marlow (2004) looked to beginning teachers to identify positive aspects of teaching that lead to retention. The researchers identified external factors such as salary, collegiality, working conditions, and job security as factors that influence early career teachers to remain in the profession (Inman & Marlow, 2004). Nieto (2003) concluded that teachers remained for intrinsic reasons, rather than extrinsic rewards such as salary or prestige. Teachers deeply engaged with their work, committed in all ways, had a common shared view of teaching "as a way to live in the world" (p. 101). According to Day (2008), current researchers need to identify the factors that sustain their commitment, motivation, and effectiveness over the duration of their careers and lead to the decision to stay. Commitment is an outward expression of a teacher's psychological attachment to their profession, motivation, willingness to learn, and belief they do make a difference in the learning and achievement of students (Sammons et al., 2007). Commitment may rise or fall depending on the teacher's life and work experiences (Day, 2008). Table 1 summarizes Day's (2008) stages of professional life that serve as markers for retention.

Table 1

Professional Life Phases (Day, 2008)

Professional Life Phase	Characteristics of the Phase
Early induction, 0-3 years	Developing efficacy, requires high degree of commitment
Induction, 4-7 years	Characterized by increased confidence, development of identity as an educator, and acceptance of additional responsibilities adding to their workload
Early 8-15 years	Managing roles and identity in their professional and personal lives, sustained engagement, making decision about progression of their career
Mid, 16-23 years	Experiencing challenges with motivation and commitment, fighting professional stagnation, managing heavy workloads, facing increased demands in their personal lives, and making work-life balance a focus
Late, 24-30 years	Most challenging period for sustaining motivation, most are holding on but losing motivation
Sunset, 31 + years	High commitment or are looking to retire but are trapped

Note: Day identified the phases by the number of years of experience. The researchers added names to the phases for ease of identification.

A fairly new vein of research, the exploration of work-life balance is an increasingly popular branch of vocational and psychological research (Carlson, Kacmar, & Williams, 2000; Grzywacz & Marks, 2000; Murray, Flowers, Croom, & Wilson, 2011). Greenhaus and Beutell (1985) found that work-family conflict grows when work or family roles are salient and central to a person's image of self. The more important the role is to the individual, the more effort they invest in that role. One should note that teachers' personal lives are intimately linked to their professional lives (Day, 2008). The multiple roles assumed by educators (e.g. guide, friend, coach, surrogate parent, teacher, spouse, parent) influences both the professional life and the personal life (Flores & Day, 2006).Gutek, Searle, & Klepa (1991) examined the two most important domains in adult lives: work and family. The two roles are often in

conflict: work with family (long hours, reduced presence at home, missed activities) and family with work (child illnesses and absenteeism). The more job involvement, the higher the work-family conflict, leading to increased burnout, reduced job satisfaction, and reduced commitment (Adams, King, & King, 1996). The more preoccupied and reduced effectiveness due to that preoccupation, the higher the work-family conflict (Gutek et al., 1991).

Attribution theory attempts to answer the question "Why people do what they do?" (Weiner et al., 1971). In the early years of the theory formation, Heider (1958) developed guidelines that would allow research in the field to provide a picture of the environment that guides decision making and an adequate description to make prediction possible. Weiner et al. (1971) identified locus of control, stability, and controllability as causal dimensions of internal and external attributes. Weiner (1985) further identified ability, effort, task differentiation, and chance or luck as the primary factors that affect attribution. Howard Kelley (1973) focused on conditions that lead individuals to attribute a cause of action to interaction with their environment. Building on Weiner's causal dimensions, Kelley (1973) postulated that attributes co-vary. If the behavior always occurs in the presence of another behavior, they are perceived to co-vary (Kelley, 1973; Kelley & Michela, 1980). Utilizing attribution theory, the researchers sought to answer the question, why do agricultural educators choose to remain in the classroom, through measuring the attributes that contribute to the decision.

Purpose of the Study

The purpose of this study was to identify and describe agriculture teachers on factors related to career retention and to explore the relationships between agriculture teachers' work engagement, work-life balance, and occupational commitment as they relate to the decision to remain in the teaching profession. Knowledge of these relationships may allow for a systematic approach to developing strategies to retain agricultural educators. The following research questions guided this study:

1. How does work engagement relate to agricultural educator retention?
2. How does work-life balance relate to agricultural educator retention?
3. How does occupational commitment relate to agricultural educator retention?
4. What are the relationships between work engagement and work-life balance in relation to occupational commitment influencing agricultural educator retention?

Methods/Procedures

This study utilized descriptive-correlational research procedures to accomplish the purpose (Fraenkel & Wallen, 2006). According to Fraenkel and Wallen (2006), correlational research explores the relationships that exist between one or more variables without any attempt to influence them. The variables of interest in this study were the degrees of work engagement, work-life balance, and occupational commitment experienced by agricultural educators who completed a minimum of four years of teaching experience. The correlational design measured the degree of the existing relationships between the identified factors that influenced the respondents' decision to continue to teach.

Subject characteristics, location, instrumentation, testing, and mortality are viewed as potential threats to interval validity in this study (Fraenkel & Wallen, 2006). Implementation, history, maturation, attitude of subjects, and regression are not applicable to a correlational study because no intervention occurs.

The target population for this study was defined as experienced agricultural educators who had completed a minimum of four years of teaching, who were currently employed in a secondary agricultural education classroom for the 2009-2010 school calendar. The accessible population consisted of 1705 (N = 1705) agricultural educators in the southern region of the United States: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. The researchers compiled a stratified random sample of those teachers to ensure geographical and gender representation. Lists of current agricultural

educators were secured from websites associated with state departments of agricultural education in the southern region. Following Krejcie and Morgan's (1970) formula for determining sample size, the study sought responses from 314 (n = 314) participants to ensure a 95% confidence level and Cronbach's α = .05.

Instrumentation for this study consisted of portions from four different instruments used independently by researchers to measure the independent variables of interest. The study incorporated the Utrecht Work Engagement Scale (α = .94) to measure work engagement (Schaufeli & Bakker, 2003). The instrument was chosen because of its association with job satisfaction rather than dissatisfaction. The instrument measured participant vigor (α = .86), dedication (α = .92), and absorption (α = .80) (Schaufeli, Bakker, & Salanova, 2006).

Chaney (2007) explored work-family balance as a factor influencing the attrition of early career agricultural educators in Texas. Chaney (2007) created five questions that address participant perceptions of balance achievement (α = .95) and the belief that achieving balance influences the decision to remain or leave the profession (α = .76). Chaney's (2007) five questions only measured the perception of balance achievement. As a result, eight items from Gutek et al. (1991) work-family conflict instrument were included. Four items measure work-family conflict (α = .83), while the remaining four items measure family-work conflict (α = .83). The items were reverse coded by the authors so that a high score identified high conflict.

A portion of Blau, Paul, and St. John's (1993) Work Commitment Index (α = .91) was used to measure agricultural educators' commitment to teaching. Blau et al. (1993) defined occupational commitment as one's attitude, including affect, belief, and behavioral intention, toward their chosen occupation. The authors used a confirmatory factor analysis to test the discriminant validity of the instrument constructs, making identification of the 11-job commitment variables possible. Six items were reverse coded so that a high score indicated a high degree of occupational commitment.

Data were collected according to Dillman's (2007) prescription of five contacts to achieve the highest possible response rate. The researchers also referenced Shinn, Baker, and Briers (2007) which concluded response rate frequencies tended to be higher on Tuesdays and Wednesdays. The researchers obtained 56% response rate (n = 176). The responses were analyzed for state of residence and gender to ensure adequate representation of the data. The responses were closely aligned with the desired state representation as well as the gender differentiation. After obtaining less than 100% response, the researchers contacted 20 nonrespondents and conducted the survey by telephone as recommended by Lindner, Murphy, and Briers (2001). Independent samples t-tests yielded differences in the means of responders and nonrespondents for the work engagement factors, vigor (t (174) = 3.36, $p < .05$, r = .25), dedication (t (173) = 4.84, $p < .05$, r = .35), and absorption (t (174) = 3.83, $p < .05$, r = .28). Mean scores revealed that responders (M = 5.79, SE = 0.07) were more vigorous than nonresponders (M = 5.13, SE = 0.17); responders (M = 6.21, SE = 0.06) were more dedicated than nonresponders (M = 5.35, SE = 0.19); and responders (M = 5.91, SE = 0.06) were more absorbed than nonresponders (M = 5.18, SE = 0.20). As a result, interpret these findings with caution beyond the scope of this study.

For the first three research questions, mean scores, ranges, and standard deviations were used to analyze the data, measuring the degree of work engagement, work-life balance, and occupational commitment reported by experienced agricultural educators (n = 176). The data were summated and reported using a seven-point and six-point Likert-type scales. Pearson product-moment coefficients were calculated to identify relationships between the variables of interest, utilizing the professional life phases (Table 1) as the dependent variable. To answer research question four, a linear regression analysis was conducted to explore the extent of the relationships identified in the first three research questions. The alpha level for determining statistical significance was established a priori at .05 (α = .05).

Findings

Teachers who remain in the teaching profession were considered retained, thus *professional life categories* were utilized as the dependent variable. The data analysis revealed 13.0% (n = 176) of the respondents were in the induction stage of their career with 5-7 years of experience, 24.9% (n = 176) were in the early phase with 8-15 years experience, 22.0% were in the mid phase with 16-23 years of experience, 24.3% were in the late phase with 24-30 years of experience, and the remaining 15.3% were in the sunset phase of their career with 31 or more years of teaching experience.

Research Question One

How does work engagement relate to agricultural educator retention? The degree of teacher work engagement was measured using the Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003). The data consisted of three factors, vigor, dedication, and absorption, identified by the authors in the seventeen-item instrument. Participants were asked to rate themselves on a seven-point Likert-type scale: *1) never; 2) almost never/a few times a year or less; 3) rarely/once a month or less; 4) sometimes/a few times a month; 5) often/once a week; 6) very often/a few times a week; and, 7) always/every day*. Table 2 summarizes the mean scores for factors associated with work engagement.

Table 2

UWES—Mean Scores For Work Engagement Factors

Factor	*M*	*Md*	*SD*
Vigor (n = 176)	5.71	5.83	0.84
Dedication (n = 175)	6.11	6.40	0.79
Absorption (n = 176)	5.83	6.00	0.84
Engagement average score (n = 173)	5.87	6.06	0.75

To describe the relationship between work engagement and retention, a Pearson product-moment correlation analysis was conducted. Professional life phase was correlated with the three factors, vigor, dedication, and absorption, and the average score as reported for work engagement. From the sample (n = 173), the data analysis indicated a positive correlation of low magnitude (Davis, 1971) between overall work engagement and professional life phase (r = .19). The data reveal positive correlations of low magnitudes between professional life phase and vigor (r = .17), dedication (r = .19) and absorption (r = .14). Table 3 summarizes the relationship between professional life phase and the factors of engagement.

Table 3

Pearson Product-Moment Correlations (r) Between Professional Life Phase, Factors of Engagement, and Engagement (n = 173)

Characteristic	1	2	3	4	5
1. Professional Life Phase	-	.17	.19	.14	.19
2. Vigor		-	.81	.72	.93
3. Dedication			-	.71	.91
4. Absorption				-	.90
5. Engagement					-

* $p < .05$ a priori

Research Question Two

How does work-life balance relate to agricultural educator retention? The degree of work-life balance was measured using five statements from Chaney (2007) and eight statements from Gutek et al. (1991). Participants were measured on a six point Likert-type scale: *1) strongly disagree; 2) moderately disagree, 3) slightly disagree; 4) slightly agree; 5) moderately agree; and, 6) strongly agree*. Table 4 summarizes the mean scores for factors associated with work-life balance.

Table 4

Mean Scores for Work-Life Balance Factors

Factor	*M*	*Md*	*SD*
Perceptions of creating balance (*n* = 174)	4.69	4.80	0.93
Work interfering with family (*n* = 175)	3.68	3.75	1.31
Family interfering with work (*n* = 177)	1.93	1.75	0.86
Work-life balance average score (*n* = 173)	3.44	3.47	0.54

A Pearson product-moment correlation was conducted to describe the relationship between work-life balance and retention. Professional life phase was correlated with perception of creating work-life balance, work interfering with family, and family interfering with work and the average score as reported for work-life balance. From the sample (n = 173), the data analysis indicated a negligible correlation (Davis, 1971) between work-life balance and professional life phase (r = .02). Phase of professional life yielded negative, low to negligible magnitude correlations with work interfering with family (r = -.12) and family interfering with work (r = -.06). The data does reveal a positive correlation of moderate magnitude between the perception of creating balance and the phase of professional life (r = .25). Table 5 displays the correlations for work-life balance and professional life phase.

Table 5

Pearson Product-Moment Correlations (r) Between Professional Life Phase and Work-life Balance (n = 173)

Characteristic	1	2	3	4	5
1. Professional life phases	-	.25	-.12	-.06	.02
2. Perceptions of creating work-life balance		-	-.41	-.27	.09
3. Work interference with family			-	.31	.75
4. Family interference with work				-	.64
5. Work-life balance					-

* $p < .05$ a priori

Research Question Three

How does occupational commitment relate to agricultural educator retention? The degree of teacher occupational commitment was measured using 11 items from Blau et al.'s Work Commitment Index (1993). Participants were asked to rate themselves on a six point Likert-type scale: *1) strongly disagree; 2) moderately disagree, 3) slightly disagree; 4) slightly agree; 5) moderately agree; and, 6) strongly agree*. The summated mean score for occupational commitment was 4.75 (*SD* = 0.93) (*n* = 170).

To describe the relationship between occupational commitment and agricultural educator retention, a Pearson product-moment correlation was conducted. Professional life phase, an expression of years of experience, was correlated with the average score as reported for occupational commitment. From the sample (*n* = 170), the data analysis indicated a negative correlation of low magnitude (Davis, 1971) between professional life phase and occupational commitment (*r* = -.12). Table 6 summarizes the relationship between professional life phase and occupational commitment.

Table 6

Pearson Product-Moment Correlations (r) Between Professional Life Phase and Occupational Commitment (n = 170)

Characteristic	1	2
1. Professional life phase	-	-.12
2. Occupational Commitment	-	-

* $p < .05$ a priori

Research Question Four

To explore the relationships between work engagement and work-life balance in relation to occupational commitment influencing agricultural educator retention, a Pearson product-moment correlation was used. Positive relationships of moderate magnitude existed between occupational commitment and vigor (*r* = .42), dedication (*r* = .41), and perceptions of work-life balance (*r* = .38). A positive relationship of low magnitude exists between occupational commitment and absorption (*r* = .27). A negative relationship of low magnitude exists between occupational commitment and work interfering with family (*r* = -.24) and family interfering with work (*r* = .31). Table 7 summarizes the correlations between occupational commitment and the factors of work engagement and work-life balance.

Table 7

Pearson Product-Moment Correlations between Occupational Commitment and the Factors of Work Engagement and Work-life Balance (n = 170)

Characteristic	1	2	3	4	5	6	7
1. Occupational commitment	-	.43	.41	.29	.38	-.24	-.31
2. Vigor		-	.81	.72	.40	-.23	-.17
3. Dedication			-	.71	.37	-.18	-.17
4. Absorption				-	.20	-.02	.04
5. Perceptions of creating work-life balance					-	-.41	-.27
6. Work interfering with family						-	.31
7. Family interfering with work							-

* $p < .05$ a priori

Based on the magnitude of the correlations between occupational commitment and the factors of engagement and work-life balance, a linear regression analysis was performed to determine the amount of variance in occupational commitment that could be attributed to the factors of work engagement and work-life balance.

Table 8 showcases how the coefficient of determination yielded 25% variance of occupational commitment as explained by the influence of vigor, dedication, absorption, perceptions of work-life balance, work interfering with family, and family interfering with work ($R^2 = .25$, $p < .05$)

Table 8

Linear Regression of Work Engagement and Work-Life Balance on Occupational Commitment (n = 170)

Variable	*R*	R^2	*B*	*SE*	β
Model	.50	.25			
Vigor			.13	.15	.11
Dedication			.16	.15	.14
Absorption			.08	.12	.07
Perceptions of Balance			.20	.08	.16
Work interfering with family			-.03	.06	-.04
Family interfering with work			-.22	.08	-.20

Adjusted $R^2 = .22$

For Model: $F_{(6, 155)} = 8.74$; $p < .05$

Conclusions, Implications, and Recommendations

Of the respondents, 22% exist in the midcareer phase and are working to manage changing personal roles as well as professional roles. They are at the juncture of making permanent career and family decisions. According to Day (2008) this is where they either reengage or disengage from their profession. As such, there is implication that their ability to maintain work engagement, create balance between their work and family life, and stay committed to their occupation will influence their choice to remain in the profession.

Professional life phase was correlated with the three factors vigor, dedication, and absorption. This sample of agricultural educators' responses revealed positive correlations of low magnitude between professional life phases and vigor, dedication and absorption. There is a positive relationship between work engagement and professional life phase. However, the magnitude of the relationship was low and teachers who had exited the profession were not compared in this study.

Professional life phase was correlated with the three factors, perception of creating work-life balance, work interfering with family, and family interfering with work. Professional life phase yielded a negative, low to negligible magnitude correlations with work interfering with family and family interfering with work. The data does reveal a positive correlation of moderate magnitude between the perception of creating balance and professional life phase. Overall, the teachers believe that creating work-life balance is important and believe they are able to do so. They do experience a degree of work conflicting with their family but did not report the bi-directional conflict of family on work. Perceptions of creating balance were negatively correlated with the conflicts. So as the teachers' perceptions of being able to create balance and finding it important to the profession increased, their degree of conflict between work and family declined. In addition, teachers reported more conflict between work and family than the reverse. This mirrors Gutek et al.'s (1991) findings. Intuitively, the items measuring work interfering with family and family interfering with work seem to be opposites. This study did not support that assumption. It is possible that perception of creating balance plays a larger role than anticipated or revealed in this study. The investigation revealed that the teachers' perceptions of creating balance and the phases of professional life was the only relationship of any magnitude in regard to retention. The relationship is consistent with Day (2008) who reported that teachers' personal lives are linked to their professional roles. While Chaney (2007) found that as work-life balance increased attrition decreased, findings in this study did not make the connection that as work-life balance increased, retention increased. Only a negligible, positive relationship was found to exist between the two.

Regarding occupational commitment, the agricultural educators felt moderately to strongly committed to their occupation. Sammons et al. (2007) defined commitment as the degree of psychological attachment teachers have to their profession. These teachers saw themselves continuing in the profession they feel was a good choice for them and fits their life's work. Sammons et al. (2007) cautioned that commitment declines in later years and new teachers are no less committed than teachers in middle to later phases of their professional career. While this study found a positive relationship between professional life phase and commitment, the magnitude was such that it would support Sammons et al.'s (2007) recommendation for caution.

The final research question explored the relationships between work engagement and work-life balance in relation to occupational commitment influencing agricultural educator retention. Based on the magnitude of the correlations, a linear regression analysis yielded 25% variance of occupational commitment as explained by the influence of vigor, dedication, absorption, perceptions of work-life balance, work interfering with family, and family interfering with work. According to Day (2008), commitment is a predictor of attrition. Inversely, it will be a predictor of retention (Certo & Fox, 2002). Knowing the factors of work engagement and work-life balance impact occupational commitment could assist the profession in retaining teachers. Due to the lack of variability in this

study's data, future researchers should analyze the composite instrument, using factor analysis, to determine the overall validity and reliability for use as an independent research instrument.

Based on the National Research Agenda (Doerfert, 2011) priority for developing strategies for retaining professionals in the agricultural education profession, future research efforts should compare stayers and leavers in an effort to discern the similarities and/or differences in their degree of long term commitment. Grady's (1990) efforts need to be extended and replicated to determine if there truly is no difference in commitment between stayers and leavers, and explore their degree of work engagement and work-life balance.

Future exploration of commitment should include instruments specific to educational settings and teachers, measuring their commitment to the profession, to students, to their subject matter, to creating social influences, as suggested by Tyree (1996).

A path analysis should be conducted to expand beyond the methodologies employed in this investigation. The literature does not suggest a path. However, Kelley and Michela's (1980) summation that the attribution of a person's response to certain stimuli depends on the perception of the degree of consensus and consistency of responses of the person to other stimuli and at other points in time suggests there is a path of co-variance.

Based on the findings of this study, school administrators and state agricultural education staff should increase awareness of the reported conflict that exists when work interferes with the agricultural educators' family life. When teachers assume too much responsibility for activities beyond classroom instruction, there is the potential for negative impact on their commitment to remain.

Agricultural education professional organizations should lead the effort to sustain commitment for the profession. Leaders of the profession should encourage further research, professional development events, and mentoring programs in an effort to share strategies and coping skills for creating balance and reengaging participants in their profession.

While efforts to increase the number of students majoring in agricultural education have appeared to be working in a number of states, those efforts will not sustain educators once they are in the classroom. Post-secondary agricultural education programs should examine their role in providing researched-based professional development events that reengage teachers in the profession and influence implementation of work-life balance strategies.

References

Adams, A. G., King, L. A., & King, D. W. (1996). Relationships of job and family involvement, family social support, and work-family conflict with job and life satisfaction. *Journal of Applied Psychology, 4*(4), 411-420. doi:2048/10.1037/0021-9010.81.4.411

Allen, M. B. (2005). *Eight questions on teacher recruitment and retention: What does the research say?* Denver, CO: Education Commission of the States.

Barnes, G., Crowe, E., & Schaefer, B. (2007). *The cost of teacher turnover in five school districts: A pilot study*. Washington, D. C.: National Commission on Teaching and America's Future.

Blau, G. J., Paul, A., & St. John, N. (1993). On developing a general index of work commitment. *Journal of Vocational Behavior, 42*(3), 298-314. doi:210.1006/jvbe.1993.1021

Boone, H. N., & Boone, D. A. (2009). An assessment of problems faced by high school agricultural education teachers. *Journal of Agricultural Education, 50*(1), 21-32. doi:10.5032/jae.2009.01021

Borman, G. D., & Dowling, N. M. (2008). Teacher Attrition and Retention: A Meta-Analytic and Narrative Review of the Research. *Review of Educational Research, 78*(3), 367-409. doi:310.3102/0034654308321455

Brill, S., & McCartney, A. (2008). Stopping the Revolving Door: Increasing Teacher Retention. *Politics & Policy, 36*(5), 750-774. doi: 10.1111/j.1747-1346.2008.00133.x

Cano, J., & Miller, G. (1992). A gender analysis of job satisfaction, job satisfier factors, and job dissatisfier factors of agriculture education teachers. *Journal of Agricultural Education, 33*(3), 40-46. doi:10.5032/jae.1992.03040

Carlson, D. S., Kacmar, K. M., & Williams, L. J. (2000). Construction and initial validation of a multidimensional measure of work-family conflict. *Journal of Vocational Behavior, 56*(2), 249-276. doi:10.1006/jvbe.1999.1713

Castillo, J. X., & Cano, J. (1999). A comparative analysis of Ohio agriculture teachers' level of job satisfaction. *Journal of Agricultural Education, 40*(4), 67-78. doi:10.5032/jae.199.04067

Certo, J. L., & Fox, J. E. (2002). Retaining Quality Teachers. *The High School Journal, 86*(1), 57-75. doi:10.1353/hsj.2002.0015

Chaney, C. A. (2007). *Work-Life variables influencing attrition among beginning agriscience teachers of Texas* (Doctoral dissertation). Retrieved from Texas A&M University Library Repository.

Clark, M. S., Brown, N. R., & Ramsey, J. W. (2012, May). *The autonomy trap: Why highly successful agricultural education teachers leave the profession, a phenomenological perspective*. Paper presented at the meeting of American Association for Agricultural Education, Asheville, NC.

Davis, J. A. (1971). *Elementary survey analysis*. Englewood, NJ: Prentice-Hall.

Day, C. (2008). Committed for life? Variations in teachers' work, lives and effectiveness. *Journal of Educational Change, 9*(3), 243-260. doi:210.1007/s10833-10007-19054-10836

Day, C., Sammons, P., Kington, A., Gu, Q., & Stobart, G. (2006). Methodological Synergy in a National Project: The VITAE Story. *Evaluation & Research in Education, 19*(2), 102 - 125. doi:10.2167/eri422.0

Dillman, D. A. (2007). *Mail and Internet surveys: The tailored design method* (2nd ed.). Hoboken, New Jersey: John Wiley & Sons, Inc.

Doerfert, D. L. (Ed.) (2011). *National research agenda: American Association for Agricultural Education's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.

Epps, R. B., Foor, R. M., Cano, J (2010). *Keepers, Stayers, Leavers, and Lovers: Are there teacher efficacy and job satisfaction differences between novice and experienced teachers?* Paper presented at the meeting of American Association for Agricultural Education, Omaha, NE.

Flores, M. A., & Day, C. (2006). Contexts which shape and reshape new teachers' identities: A multi-perspective study. *Teaching and Teacher Education, 22*(2), 219-232. doi:210.1016/j.tate.2005.1009.1002

Fraenkel, J. R., & Wallen, N. E. (2006). *How to design and evaluate research in education* (6th ed.). New York: McGraw-Hill.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*(4), 569-582. doi:510.1037/0022-0663.1076.1034.1569

Grady, T. (1990). Career mobility in agricultural education: a social learning theory approach. *Journal of Agricultural Education, 31*(1), 75-79. Retrieved from http://pubs.aged.tamu.edu/jae/

Greenhaus, J. H., & Beutell, N. J. (1985). Source of conflict between work and family roles. *Academy of Management Review, 10*(1), 76-88. doi:10.2307/258214

Grissmer, D., & Kirby, S. N. (1997). Teacher turnover and teacher quality. *Teachers College Record, 99*(1), 45-56. Retrieved from http://www.tcrecord.org/

Grzywacz, J. G., & Marks, N. F. (2000). Family, work, work-family spillover, and problem drinking during midlife. *Journal of Marriage and Family, 62*(2), 336-348. doi:10.1111/j.1741-3737.2000.00336.x

Gutek, B. A., Searle, S., & Klepa, L. (1991). Rational versus gender role explanations for work-family conflict. *Journal of Applied Psychology, 76*(4), 560-568. doi:510.1037/0021-9010.1076.1034.1560

Heider, F. (1958). *The psychology of Interpersonal relations*. New York: Wiley.

Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal, 38*(3), 499-534. doi:410.3102/00028312038003499

Ingersoll, R. M. (2003). *Is there really a teaching shortage?* Seattle, WA: Center for the Study of Teaching and Policy.

Inman, D., & Marlow, L. (2004). Teacher retention: Why do beginning teachers remain in the profession? *Education, 124*(4), 605-614.

Kelley, H. H. (1973). The processes of causal attribution. *American Psychologist, 28*(2), 107-128. doi:110.1037/h0034225

Kelley, H. H., & Michela, J. L. (1980). Attribution theory and research. *Annual Review of Psychology, 31*(1), 457-501. doi:410.1146/annurev.ps.1131.020180.002325

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607-610. doi: 10.1177/001316447003000308

Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education, 42*(4), 43-53. doi: 10.5032/jae.2001.04043

Mishel, L., Alegretto, S., & Corcoran, S. (2008). The teaching penalty. *Education Week, 27*(35), 26-28. Retrieved from http://www.edweek.org/ew/index.html

Murray, K., Flowers, J., Croom, B., & Wilson, B. (2011). The agricultural teacher's struggle for balance between career and family. *Journal of Agricultural Education, 52*(2), 107-117. doi: 10.5032/jae.2011.02107

National Commission on Teaching and America's Future. (2003). *No dream denied, a pledge to America's children, summary report.* Washington DC*:* Author.

Newcomb, L. H., Betts, S., & Cano, J. (1987). Extent of burnout among teachers of vocational agriculture in Ohio. *Journal of the American Association of Teacher Educators in Agriculture, 28*(1), 15-22. doi: 10.5032/jaatea.1987.01026

Nieto, S. (2003). *What keeps teachers going?* NY: Teachers College, Columbia University.

Rocca, S. J., & Washburn, S. G. (2006). Comparison of teacher efficacy among traditionally and alternatively certified agriculture teachers. *Journal of Agricultural Education, 47*(3), 58-69. doi:10.5032/jae.2006.03058

Sammons, P., Day, C., Kington, A., Gu, Q., Stobart, G., & Smees, R. (2007). Exploring variations in teachers' work, lives and their effects on pupils: Key findings and implications from a longitudinal mixed-method study. *British Educational Research Journal, 33*(5), 681-701. doi:610.1080/01411920701582264

Schaufeli, W. B., & Bakker, A. B. (2003). *Utrecht work engagement scale: Preliminary manual*. Electronically published instrument. Retrieved from http:// http://wilmarschaufeli.nl/wp/

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a brief questionnaire: A cross-national study. *Educational and Psychological Measurements, 66*(4), 701-716. doi:710.1177/0013164405282471

Shinn, G., Baker, M., & Briers, G. E. (2007). Response patterns: Effect of day of receipt of an e-mailed survey instrument on response rate, response time, and response quality. *Journal of Extension, 45*(2). Retrieved from http://www.joe.org.

Soodak, L., & Podell, D. (1996). Teaching efficacy: Toward the understanding of a multi-faceted construct. *Teaching and Teacher Education, 12*(4), 401-412. doi:410.1016/0742-1051X(1095)00047-N

Thieman, E. B., Ball, A. L., Kitchel, T. J. (2012) *Resilience: Does it matter? A model of stress, burnout, and resilience in the secondary agricultural educator*. Paper presented at the meeting of American Association for Agricultural Education, Ashville, NC.

Tyree, A. K. (1996). Conceptualizing and measuring commitment to high school teaching. *Journal of Educational Research, 89*(5), 295-304. doi:10.1080/00220671.1996.9941331

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*(4), 548-573. doi:510.1037/0033-1295X.1092.1034.1548

Weiner, B., Frieze, I., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R. M. (1971). Perceiving the causes of success and failure. In E. E. Jones, D. E. Kannouse, H. H. Kelly, R. E. Nisbett, S. Valins & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior* (pp. 95-120). Morristown, NJ: General Learning Press.

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