

Pyrex Journal of Educational Research and Reviews Vol 1 (1) pp 001-007 January, 2015.
http://www.pyrexjournals.org/pjerr
Copyright © 2015 Pyrex Journals

Original Research Paper

RELATIONAL SATISFACTION WITHIN AN AGRICULTURAL EDUCATION INFORMAL MENTORING AMONG LECTURERS IN TERTIARY INSTITUTION

Olatomide Waheed Olowa* and Omowunmi A. Olowa

Department of Agricultural Education, Federal College of Education (Technical) Akoka, Lagos

Accepted 2nd January, 2015

The blame for the decline in standard of education has been placed at the doorstep of teachers. In search of a remedy to the appalling situation, policy makers looked towards building capacity in terms of implementing a mentoring Program design to help early career lecturers. One of the challenges facing mentoring Programs is the process of creating successful pairs. The purpose of this study was to determine if mind styles of mentors and mentees influenced satisfaction with the mentoring relationship. Delineator as well as the Mentoring Relationship Questionnaire was administered to elicit information on demographics, Mind Styles, and relational satisfaction from 28 mentors and 25 early career lecturers. The data collected were analyzed using frequency, percentage, mean and standard deviation. The average age of mentors was 40.83 with the average Mentee being 25.28 years of age. The mentor group was 80% male, while Mentees were 69% male. The group was largely Concrete Sequential, but all styles did appear at least once. Differences in relational satisfaction based on Mind Style combinations were found for three different combinations. A large effect size was found for Concrete Sequential mentors paired with Abstract Random Mentees, indicating a difference in satisfaction.

Keywords: Mentor, Mentee, Pairs, Agricultural Education, Relationships, Mentoring, Nigeria

INTRODUCTION

The National Commission for Colleges of Education (NCCE) in early 2011 suggested as part of its proposal for restructuring colleges of education a mentor/mentee relationship as strategy for supporting beginning lecturers and shoring-up decline standard of teacher education. In fact, mentoring beginning lecturers was rated as one of the two most critical issues for improving teacher education (Buttery, Haberman, and Houston, 1990). According to Kram (1985), mentors are described as individuals with experience who are committed to providing support to a Mentee. Mentoring has been shown to have a positive impact on both job satisfaction (Koberg, Boss, Chappell & Ringer, 1994) and teacher retention (Archer, 1999; Fideler & Haselkorn, 1999). Conversely, poor induction experiences contribute to high attrition rates and low levels of teacher effectiveness.

There are two types of mentoring: formal and informal (Ragins & Cotton, 1999). Informal mentoring develops from a perceived competence and interpersonal comfort between two professionals (Kram 1985). Members of informal mentoring partners with self-select partners with whom they enjoy working with and ultimately build a relationship, but formal

mentoring partners are often assigned on the basis of an application (Douglas, 1997; Gaskill, 1993). In many cases of formal mentoring, the mentor and Mentee do not even meet until after the match has been made. Recognizing the benefits of informal mentoring, many organizations have attempted to replicate it by creating formal mentoring Programs (Burke & McKeen, 1989; Geiger-DuMond & Boyle, 1995). However, formal mentoring Programs are being developed without the benefit of empirical research and often do not yield the same benefits as informal relationships.

In the United States, a formal mentoring Program has been established a long time ago to address issues encountered by beginning teachers. Specifically, the Excellence in Education Act passed in 1985 by the legislature. The act required school districts to not only provide professional development for all teachers, but also to assign a formal mentor to beginning teachers. To comply with the policy, many school districts paired beginning teachers with mentors from within their school district. As a consequence, most beginning agriculture teachers were matched with mentors. In such situations, beginning teachers are able to

obtain Programmatic advice relating to specific topics in agricultural education from mentors. Specifically, in the state of Missouri, legislation requires and finances a mandatory mentoring Program for all "novice" teachers. According to the minutes of the May Missouri Agricultural Education Joint Staff meeting (Minutes, 2007), requirements for the mentoring Program stipulate that all new teachers who have not completed a formal mentoring Program must participate. Mentors for beginning teachers are selected by district supervisors with specific guidelines serving as parameters for the selection. The parameters for mentor selection include the following requirements: (a) must be from the same area of the state; (b) must not be a cooperating teacher during that year (c) should advise a superior FFA chapter; (d) must have buy in from the Mentee; (e) must attend the same professional meetings as their Mentee; (f) a maximum of two Mentees may be assigned per mentor, and if more than one Mentee is assigned to a single mentor, both Mentees must be in the same year of the Program. The key to a successful mentoring Program is the mentor-Mentee relationship (Gray & Gray, 1995).

Although, the proposal on mentoring by NCCE has not become operational formally, informal mentoring has long existed among lecturers in tertiary institutions in Nigeria. There have been complaints on the approach adopted by senior colleagues for corrections or advice on various aspects of agricultural Education programs. While some early beginning lecturers say senior colleagues are oppressive some says they are lackadaisical in approach and thus they are not being helped in their teaching/ career progression. Could this have a consequence when looking at Mentor and Mentee relationships? If Mentees were paired with more similar mentors, would the mentoring process be more successful? To address this question, the study seeks to determine if a difference exists between relational satisfactions based on Mind Style and pioneer a study of the relationship in informal mentoring already existing among lecturers based on the proposed NCCE structure for mentoring contained in the Form C of the proposal presented in figure 1. As a formal mentoring program is non-existent now in Colleges of Education, this study in informal mentoring will be a stethoscope for an expected outcome at the commencement of the formal mentoring program in Nigerian Colleges of Education.

Theoretical Framework

Kram (1985) described mentoring as a developmental relationship in which mentors provide functions that enhance both an individual's growth and advancement. According to Kram's mentor role theory; there are two functions of a developmental mentoring relationship: career functions and psychosocial functions. This classification provides a theoretical framework in which mentoring relationships can be evaluated. Psycho social functioning serve to build up the identities, competence, and effectiveness of Mentees and mentors in their professional roles. These functions include acceptance, counseling, friendship, and role modeling. Kram (1985) also suggested that the more functions provided by the mentor, the more beneficial the relationship is to the Mentee. It is also important to note that mentoring is not an all or nothing phenomenon; mentors may be meeting all or just some of the Mentees needs (Ragins & Cotton, 1999). Additionally, mentoring may not have an immediate impact; benefits may continue to appear over time.

This study utilized the Gregorc Style Delineator (Gregorc, 1982a) which is designed to reveal two types of mediation abilities; perception and ordering. Gregorc defined perceptual abilities as the means through which individuals grasp information. These perceptual abilities emerge on a continuum, which consists of abstractness and concreteness at opposing ends. Concrete people tend to grasp concepts that they can experience through their physical senses of touch, taste, sight, smell and hearing. In addition, people who are concrete, often see the world as right or wrong and black or white. Generally, abstract people see shades of gray and recognize areas in which things could be right and wrong. Gregorc (1982a) also described the way an individual arranges, systematizes, and reference information. This is known as their ordering abilities. Ordering abilities are represented by Lambert, Smith & Ulmer continuum ranging from sequenced to random. For example, some individuals can only process information if it is given in a logical, ordered manner (sequenced). If information is not presented in this way, they will typically have to put the information into some kind of sequence before processing it. Meanwhile, a random person can process information in an atypical and seemly "random" manner. By placing a person's learning style within this continuum, they can be classified into one of four learning styles: Concrete Sequential (CS), Abstract Sequential (AS), Abstract Radom (AR), or Concrete Random (CR). These learning styles also called mind styles are adopted in studying relational satisfaction between mentor and mentee. While Gregorc (1982a) identified four separate Mind Styles, no one style is considered to be better or worse than the others. Every individual can learn in any situation. However, everyone has a preferred Mind Style. Gregorc noted that very few learners are flexible enough to reach far beyond their own perception and ordering abilities.

Related Research

Interestingly, within agricultural education, much research has been done on the effects of preferred mind styles. Personality type has been used to assist lecturers in understanding learning styles, communication styles, relationships, teamwork, and leadership (Hammer, 1996). Dyer and Osborn (1996) explored the idea that instructional methods correspond to preferred styles, and found that by matching instructional styles to learning preference, the quality of instruction was improved. Further, it was reported that students enrolled in a college of agriculture were primarily field independent learners when completing the Group Embedded Figures Test (Cano, 1999). It should be noted that a field independent learner is the equivalent of a CS/CR on the Gregorc Style Delineator (Myers & Dyer, 2006). A study of beginning lecturers and mentors by Greiman, Birkenholz and Stewart (2003) sought to determine the satisfaction of both mentors and mentees with the mentoring process and the similarity of their relationship. This study showed that mentors were more satisfied with the mentoring process than beginning lecturers. In addition, mentors also perceived more of a similarity among the pair than did beginning lecturers. Data showed a significant positive relationship between perceived satisfaction and perceived similarity among both mentors and mentees. Nonetheless, in most mentor/mentee pairings, little to no consideration is given to identifying similarities between mentors and mentees. Quite often, other factors, such as location, availability and other convenience-related factors seem to play a larger role in the selection.

Greiman, Birkenholz and Stewart (2003) investigated mentoring in agricultural education, specifically addressing the perceptions of formal mentors and novice lecturers in terms of psychosocial assistance. Peiter, Terry and Cartmell (2003) found that many first year agricultural educators experience problems during their first year of teaching and receive no help from a mentor. Certainly, the outcomes of informal mentoring partnerships are best. However, Nigeria currently does not have a formal mentoring Programmed. Therefore, the question becomes how we can create formal mentoring partnerships to most closely mimic informal partnerships? If more consideration was given to selection criteria and characteristics of the individuals, would the satisfaction with the relationship be improved?

Research Questions

Four research questions were developed to guide the study:

1. What are the demographic characteristics of agricultural education mentor/mentee pairs?
2. What is the level of relational satisfaction of mentors and mentees?
3. What is the Gregorc Mind Style (AS, CS, AR, CR) of agricultural education Mentors and Mentees?
4. What is the difference in the level of relational satisfaction based on the Mind Style combination between mentors and mentees?

Objectives

The purpose of this study was twofold. First, the study sought to describe the relational satisfaction of agricultural education mentors and Mentees in selected tertiary institutions. Second, the study sought to explain the difference in satisfaction with the relationship based on Mind Style. The specific objectives are:

1. Describe demographic characteristics of agricultural education mentor/Mentee pairs in selected tertiary institutions in Lagos state.
2. Examines the level of relational satisfaction of mentors and Mentees in an informal mentorship that already existed.
3. Properly situate this existing informal mentorship in the Gregorc Mind Style (AS, CS, AR, CR) of agricultural education mentors and Mentees.
4. Assess the difference in the level of relational satisfaction based on the Mind Style combination between mentors and Mentees.

Methodology

The study was described as a survey research. The subjects for the study were all agriculture lecturers in Federal College of Education (Technical) Akoka and Lagos State Polytechnic, Ikorodu; SL – CL (n = 28), taken as mentors and AL – L111 classified as Mentee (n = 25). The two instruments used in the study included the Gregorc Style Delineator (GSD) and the Mentor Relationship Questionnaire (MRQ). When completing the GSD, users rank their feelings regarding 40 words specially chosen to elicit a positive or negative psychological association (Gregorc, 1997). The values are then tallied to reveal a style profile, which includes a score for perceptiveness ranging from

Abstract (A) to Concrete (C) and a score in ordering ability from Random (R) to Sequential (S). These two scores create four possible style combinations: AS, CS, AR, CR (Gregorc, 1997). Because the GSD is a commercially available instrument, its validity and reliability have been previously established. Gregorc established validity for the GSD and reported reliability with alpha coefficients from 0.85 to 0.88. In addition, Gregorc published internal consistency reliability coefficients ranging from 0.89 for the AS scale to 0.93 for the AR scale (Gregorc, 1982b). The relational satisfaction of the mentors and Mentees was collected using the MRQ, an instrument developed by Greiman in 2002 and revised in 2004. Section one of the beginning teacher (here, beginning teachers are AL – L111) version of the instrument asked subjects to identify the extent to which their mentoring relationship met their psychosocial needs. There were 15 statements in this section, representing each of the 5 psychosocial functions (acceptance, counseling, and friendship, role modeling and social). The next section addressed the extent to which mentor, met the psychological needs of Mentees. The third section required the user to rate their perceived likeness and their perceived level of satisfaction with the relationship. The final section of the MRQ collected demographic information. For mentors, an alternate form of this instrument was created following the same design. Validity for both forms of the MRQ was established through prior research by a panel of experts (N = 8) with an identifiable research focus on mentoring (Greiman, 2002). Reliability estimates for the perceived satisfaction section of the instrument were reported as alpha coefficients equaling .99 for the beginning teacher version and .98 for the mentor version (Greiman). This section of the MRQ was the only section utilized in this study.

The GSD was administered to both mentors and Mentees after an interaction that taught the participants about their Mind Style and how they could use that knowledge to have a better relationship with one another almost on an individual basis. As Mind Style is not time sensitive according to Salter, Evans & Forney (2006), data collection lasted three months, September to November, 2011, with a few others collected in 2012. Participants were requested to indicate who they see as mentor/mentee in order for pairing to be easy. The resulting response rate was 100% (n = 28) for mentors and 78% (n = 25) for Mentees. For the purposes of data analysis, however, the only complete data sets could be utilized, yielding 23 pairs of usable data (mentors: n = 23, 82%; Mentees: n = 23, 72%).

To address research questions one, two and three, descriptive statistics were calculated as appropriate. Based upon the type of data involved, frequencies, percentages, means, standard deviations and ranges were calculated. To address research question four, mentor/Mentee pairs were identified by the Mind Style combination. For comparisons with more than one pair, Cohen's d (Theheimer & Cook, 2002) was calculated to identify differences in relational satisfaction.

Results

Research question one sought to describe the demographic characteristics of agricultural mentors and Mentee (see tables 1 and 2).

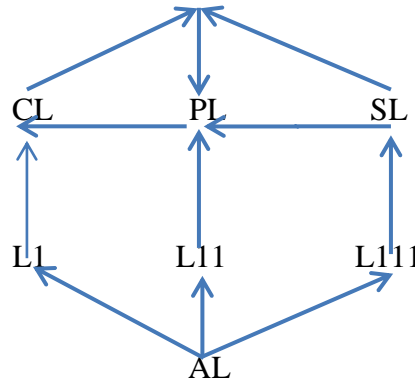


Fig. 1, Mentoring Framework (NCCE Form C)

Key:
 CL - Chief Lecturer
 SL - Senior Lecturer
 LIII - Lecturer Grade Three
 PL - Principal Lecturer

LII - Lecturer Grade Two
 LI - Lecturer Grade One
 AL - Assistant Lecturer

Table 1: Demographic Characteristics of Mentors (n = 23)

Characteristics	F	&	M	SD	Range
Male	17	73.91			
Female	6	26.09			
Age			40.30	9.51	36-60
Years Taught			15.24	7.86	2.5-30

Table 2: Demographic Characteristics of Mentees (n = 23)

Characteristics	F	&	M	SD	Range
Kind of School					
FCE(Tech.)	3	87.00			
LASPOTTECH	20	13.00			
Sex					
Male	15	65.21			
Female	8	34.78			
Age			25.30	3.86	25-40
Number of Students			92.26	58.53	25-280
Number of Instructors/Lecturers			1.52	0.59	1-3

Table 3: Descriptive Statistics for Perceived Relational Satisfaction of Mentoring Program Participants (n = 46)

Questions	Mentee (n = 23)						Mentor (n = 23)					
	Disagree		Neutral		Agree		Disagree		Neutral		Agree	
	f	%	f	%	f	%	f	%	f	%	f	%
The relationship has been a positive experience	1	4.35	0	0.00	22	95.65	2	8.70	1	3.35	20	86.95
I am glad I had the opportunity to interact with my mentor/Mentee	1	4.35	0	0.00	22	95.65	1	4.35	2	8.70	19	86.95
The relationship has been successful	1	4.35	0	0.00	22	95.65	2	8.70	2	8.70	19	82.60
If I had it to do over again, I would want the same mentor/Mentee	2	8.70	0	0.00	21	91.30	23	8.70	3	13.04	18	78.26
I was satisfied with the interaction	2	8.70	0	0.00	21	91.30	2	8.70	0	0.00	21	19.30

Note: Scale: 1 = Strongly Disagree, 3 = Disagree, 5 = Agree, 7 = Strongly Agree

Table 4: Descriptive Statistics for Summated Mentoring Relationship Satisfaction (n = 46)

Participant	n	M	SD	Range
Mentor	23	5.64	1.38	1.00 – 7.00
Mentee	23	6.20	1.33	1.40 – 7.00

Note: Scale: 1 = Strongly Disagree, 3 = Disagree, 5 = Agree, 7= Strongly Agree

Table 5: Mind Styles of Mentoring Programme Participants as Measured by the GSD (n=23 pairs)

Style	Mentors (n = 23)		Mentees (n = 23)	
	F	%	F	%
Concrete sequential	14	60.87	17	73.91
Concrete Random	5	21.74	1	4.35
Abstract Sequential	3	13.04	2	8.70
Abstract Random	1	4.35	3	13.04

Table 6: Comparison of Mentor and Mentee relational satisfaction within Mind Style Pairs (n = 23 pairs)

Combination			Mentors		Mentees	
			M	SD	M	SD
CS – CR	1	4.35	5.00	-	6.00	-
CS – AR	2	8.70	5.50	0.71	7.00	0.00
CS – CS	11	47.83	5.42	1.72	5.80	1.76
AS – CR	2	8.70	6.50	0.71	6.30	0.42
AS – CS	2	8.70	6.80	0.00	6.70	0.42
CR – AS	1	4.35	4.00	-	7.00	-
CR – AR	1	4.35	6.60	-	7.00	-
CR – CS	3	13.04	5.53	1.29	6.27	1.10

Note: No pairing for CS – AS, AS – As, AS – AR, AR – AR, AR – AS, AR – CS, or CR – CR.

A total of 46 participants completed the demographic component of the questionnaire. The ages of mentors ranged from 36 to 60 years (M = 40.30; SD = 9.51). Ages of Mentees' ranged from 25 to 40 years (M = 25.30; SD = 3.86). A total of 17 (73.91%) mentors were male. Similarly, with regard to Mentees, 15 (65.21%) were male, while 8 (34.78%) were female. The mentors' years of experience ranged from 2.5 to 30 (M = 15.24; SD = 7.86) years.

A total of 20 (87%) Mentees taught in LASPOTTECH as it has about 6 departments in its School of Agriculture. The Mentees taught in departments ranging from 1 to 3 (M = 1.52; SD = 0.59) lecturers. The Mentees had an average of slightly more than 92 (SD = 58.52; Range = 25 – 280) students in their Program.

Research question two sought to describe Mentee. Responses to five items included in the level of relational satisfaction of mentors and the MRQ were used to describe the level of relational satisfaction using a seven-point Likert Scale, ranging from Strongly Disagree to Strongly Agree. For ease of interpretation, responses were reduced into three categories: disagree, neutral and agree. As shown in Table 3, a higher percentage of Mentees responded favorably to the items than did mentors. When asked about the informal mentoring experience or their job relation with their Senior Colleagues, approximately 87% of mentors agreed it was positive. Within Mentees, 95.65% agreed it was a positive experience. Nearly 87% of mentors agreed that they appreciated the opportunity to interact with their counterpart. Approximately 65% of Mentees agreed that it was a glad experience. Mentors and Mentees were also asked if the relationship was successful. Over 95% of Mentees indicated that the relationship was, while just over 82% of mentors indicated the same. Approximately 9% of Mentees and mentors indicated that they would not want to be associated with people of the same disposition, while over 91% of mentors and Mentees were satisfied with their

respective pair.

Overall, both Mentees (M = 6.20; SD = 1.33) and mentors (M = 5.64; SD = 1.38) were satisfied with their relationships, as indicated by mean summated scores within the range of the Agree and Strongly Agree categories (see Table 4).

Research question three sought to describe the Mind styles of informal mentoring amongst these lecturers. Frequencies and percentages for each of the four Mind Styles described earlier are shown in Table 5. Based on the descriptive statistics provided, the largest proportion of senior cadre (mentors) involved in the study is classified as Concrete Sequential (CS) (58.62%). Conversely, only one mentor was classified as Abstract Random (AR). Similarly, the majority (76.92%) of Mentees were classified as Concrete Sequential. Only six Mentees were not Concrete Sequential, with two as Abstract Sequential and one classified as Concrete Radom, three classified as Abstract Radom.

In order to further analyze the pairings of Mentees and mentor and assess similarities in Mind Style, Table 6 provides a listing of mentor/Mentee combinations, and the frequencies and percentages for each pairing. The most frequent combination is CS – CS (47.83%). Although 13% of participants were categorized as CR – CS, half of the possible combinations did not appear in this study. It should be noted that the combinations reflect mentor/Mentee pairs, in that order.

Research question four investigated the difference in summated relational satisfaction scores as measured by the MRQ, based upon the GSD combination of mentor/Mentee pairs. Due to the small number of subjects, several Mind Style combinations had few, if any, pairs represented. For combinations that had only one pair, differences can only be compared through observation. The CR – AS combination appears to have a large difference in relational satisfaction with

the mentor indicating a 4.00 summated total and the Mentee indicating 7.00 totals. The other combination with a noticeable difference was the CS – CR combination. The mentor's summated total was 5.00, while the Mentee had a 6.00 summated total. For the combinations with more than one pair, Cohen's *d* was calculated to determine effect size. The CS – AR combination had a large effect size with a Cohen's *d* of 3.05. The combination of CS – CS had a small effect size with a Cohen's *d* of 0.16. The Cohen's *d* for the AS – CR combination was 0.35 creating a small effect size. Likewise, the AS – CS combination had a small effect size with a Cohen's *d* of 0.34. The CR – CS combination had a medium effect size with a 0.63 Cohen's *d*.

Conclusions

Mentoring is most common among males, with males constituting over 80% of mentors and nearly three-quarters of all Mentees. With regard to age, perhaps the most interesting finding was the range of ages among both mentors and Mentees. Age for mentors ranged from 36 – 60 with Mentees ranging from 25 – 40. This large range of ages among mentors could be a result of the fact that years of experience count and embargo placed on appointment / employment by previous administrations in public service in Nigeria which has created wide range in years among the calibers of mentors. The age range for the Mentees could indicate increased lateral entry or second career professionals entering the field.

The study found out that with respect to satisfaction, the current informal mentoring relationship indicate that both mentors and Mentees are satisfied, although Mentees are more satisfied than mentors. Approximately 10% of Mentees would not choose the same mentor if they could choose again. Although they would not choose the same mentor, overall relational satisfaction was still high, implying that the Mentees still benefitted from the mentor despite a less than perfect experience. The GSD results indicating 59% of mentors and 77% of Mentees were Concrete Sequential is not surprising. Majority of the lecturers used in the study is from the LASPOTTECH and most of their lecturers are former students of the LASPOTTECH's School of Agriculture. The GSD results for the group studied thus seemed to support the Cano's (1999) findings which indicated that many students in colleges of agriculture are field independent. As Myers and Dyer (2006) indicated, a field independent learner according to the GEFT is the equivalent to a Concrete Sequential or Concrete Random on the GSD.

The findings from our study further indicated that Mind Style did not affect relational satisfaction. Since the transfer of knowledge and/or information was not measured within this study, it could be said that the mentors and Mentees were satisfied with the relationship and that Mind Style was not a factor in the relationship. Although some differences were found amongst participants used in this study in terms of satisfaction based on mind style, the small sample size was a limitation. The study revealed further that mentors were less satisfied with the relationship in the CS – CR combination and the CR – AS combination. The lower satisfaction for the mentors may indicate that Concrete Sequential mentors have difficulty working with the Abstract Random Mentees. Perhaps, the Abstract Random Mentees don't mind the structure of the mentors, but the Concrete Sequential mentor has a hard time dealing with the Mentees. The large effect size for the CS – AR combination indicates a potential disconnect in the

relational satisfaction between individuals in these pairs. This finding is supported by Clawson (1979) who found good mentors prefer abstract concepts and Alleman (1982) who found that good mentors are flexible. Based on the findings of this study, we recommend formal mentoring Program to commence in tertiary institutions, especially as proposed by the NCCE to formalize the process of assigning mentor to Mentees. In this process, flexibility should underpin assigning of mentee to a mentor such that a mentee would be given the freedom of nominating a desired mentor. However, since our findings were based on small sample size, we suggest modifications to the mentoring selection process could be made using large sample sizes of mentor-Mentee pairs to substantiate these findings. Also further study is necessary to investigate if Mind Style could be a factor in the process of teaching and learning that occurs in a mentoring relationship.

REFERENCES

- Alleman E (1982). Mentoring relationships in organization's behavior, personality characteristics and interpersonal perceptions (unpublished doctoral dissertation). University of Akron, Akron, OH.
- Archer J (1999). New Lecturers abandon field at high rates. *Education Week*, 18(27): 1-21.
- Burke RJ, McKeen CA (1989). Benefits of mentoring relationships among managerial and professional women: A cautionary tale. *Journal of Vocational Behaviour*, 51: 43 – 57.
- Buttery TJ, Haberman M, Houston WR (1990). First Annual survey of critical issues in teacher education. *Action in Teacher Education*, 12 (2): 1- 7.
- Camp WG, Broyles T, Skelton NS (2002). A National study of the supply and demand for lecturers of agricultural education in 1999 – 2001. Blackburg: Virginia Tech. College of Agriculture and Life Sciences. Retrieved from <http://aaaeonline.org/files/lecturersupply2002.pdf>
- Cano J (1999). The relationship between learning style, academic major, and academic performance of College Students. *Journal of Agricultural Education*, 40 (1): 30 – 37.
- Clawson J (1979). Superior-subordinate relationships for managerial development. (Unpublished doctoral dissertation). Harvard University, Boston, MA.
- Douglas CA (1997). Formal mentoring Programmes in Organizations: An annotated bibliography. Greensboro, NC: Center for Creative Leadership.
- Dyer JE, Osborne EW (1996). Effects of teaching approach on achievement of agricultural education students with varying learning styles. *Journal of Agricultural Education*, 37(2): 43 – 51.
- Fideler E, Haselkorn D (1999). Learning the ropes: Urban teacher induction Programmes and practices in the United States. Belmont, MA: Recruiting New Lecturers.
- Gaskill LR (1993). A Conceptual framework for the development, implementation and evaluation of formal mentoring Programmes. *Journal of Career Development*, 20: 147 – 160.
- Geiger-DuMond AH, Boyle SK (1995). Mentoring: A practitioner's guide. *Training and Development*, 49: 51 – 54.
- Gray WA, Gray MM (1985). Synthesis of research on mentoring beginning lecturers. *Educational Leadership*, 43(3): 37 – 43.
- Gregorc AF (1982a). An adult's guide to style. Columbia, CT: Gregorc Associates, Inc.
- Gregorc AF (1982b). Gregorc Style Delineator™: Development, technical and administration manual. Columbia, CT: Gregorc Associates, Inc.
- Gregorc AF (1997). *Relating with Style*. Columbia, CT: Gregorc Associates, Inc.
- Greiman BC (2002). Providing professional and psychosocial assistance for beginning agriculture lecturers: the perceptions of formal mentors and novice lecturers. *Dissertation Abstracts International*, 63 (07): 2434A. (UMI No. 3060100).
- Greiman BC, Birkenholz RJ, Stewart BR (2003). Providing psychosocial assistance for beginning agriculture lecturers: the perceptions of formal mentors and novice lecturers. *Proceedings of the 30th National Agricultural Education Research Conference*, 191- 202. Retrieved from <http://aaaeonline.org/uploads/allconferneces/694103.proceedings.pdf>.
- Hammer A (1996). MBTI applications. Palo Alto, CA: Consulting Psychologists Press.

- Koberg CS, Boss RW, Chappell D, Ringer RC (1994). Correlates and Consequences of Mentee mentoring in a large hospital. *Group and Organization Management*, 19: 219 – 239.
- Kram KE (1985). *Mentoring at work*. Boston, MA: Scott, Foresman and Compan.
- Miller LE, Smith K (1983). Handling non-response issues, *Journal of Extension*, 10:45-50,
- Minutes (2007, May). Missouri Agricultural Education Joint Staff Meeting. Northwest Missouri State University, Maryville, MO. Missouri Center for Career Educaiton (MCCE). Retrieved from <http://Missouricareereducaitn.org/pd/emtpromg/omdex.html>.
- Myers BE, Dyer JE (2006). The influence of student learning style on critical thinking skills. *Journal of Agricultural Education*, 47 (1): 43 – 52).
- National Commission for Colleges of Education (2011). Proposal on Restructuring of Colleges of Education in Nigeria. Abuja: Unpublished.
- Peiter RL, Terry R, Cartmell DD (2003). Identification of mentors for first year agricultural education lecturers. Proceedings of the 30th National Agricultural Education Research Conference. Retrieved from <http://aaaaonline.org/uploads/allconfernece/694103.Proceedings.pdf>.
- Ragins BR, Cotton JL (1999). Mentor functions and outcomes: A comparison of men and women informal and informal mentoring relationships. *Journal of Applied Psychology*, 84(4): 529-550.
- Ragins BR, McFarlin DB (1990). Perceptions of mentor roles in cross gender mentoring relationships. *Journal of Vocational Behavior*, 37: 321 – 339.
- Salter DW, Evans NJ, Forney DS (2006). A longitudinal study of learning style prefernces on the Myers-Briggs type indicators and learning style inventory. *Journal of College Student Development*, 42 (2): 173 – 184.
- Thelheimer W, Cook S (2002). How to calculate effects sizes from published research: A simplified methodology. Retrieved from <http://www.work-learning.com/catalog/index.htm>.