

High School Agriculture Teachers' Career Satisfaction and Reasons They Stay in Teaching Profession

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Abstract The purpose of the study was to evaluate the reasons why high school agriculture teachers remain in teaching. A descriptive census study was implemented on agriculture teachers ($N=252$) utilizing an online validated questionnaire in Iowa. A total of 119 agriculture teachers completed the questionnaire with a response rate of 47%. A four-point Likert-type scale from 1=strongly disagree, 2=disagree, 3=agree, and 4=strongly agree was used to measure reasons why teachers stay in the teaching. Mean and standard deviation was 2.88(.32) for overall reasons to stay in teaching demonstrating these reasons influenced teachers to remain in teaching. Findings shows more than half teachers ($f=54, 45.4\%$) plan to remain in teaching for 11 or more years. Further crosstabulates analysis on years of teaching experience variable with three different plans to stay shows that substantial number of late-career teachers plan to stay in short time (50%), 33.7% mid-career teachers plan to stay for 11 or more years, and newly teachers plan to stay for less than 10 years (42.9%). Findings are consistent with literature that reported years of teaching experience which was a predictor for teacher retention.

Keywords Agriculture Teachers, Intentions to Continue Teaching

1. Introduction

Teacher retention crisis has been widely reported in the United States with the issues of shortage of enough qualified teachers. Retaining qualified teachers is very difficult (Hughes, 2012; Ingersoll, 2001). Thus, the teaching profession has a higher turnover rate than other careers. Data from teacher follow-up study reported that every year there is approximately 3.5 million teacher turnover rates (National Commission on Teaching and America's Future, 2003; Ingersoll, 2001; National Center for Educational Statistics,

2001). Due to this issue, amount of money has been allocated to reduce the shortage by recruiting, hiring, and training new teachers (Borman & Dowling, 2006).

National Agricultural Education Supply and Demand (2016) also reported 66 full-time agriculture teacher positions were needed to fulfill the demand for School-Based Agriculture Education (SBAE) in the United States. Losing of qualified and talented agriculture teachers at school will eventually affects students' success (Mishel, Alegretto, & Corcoran, 2008; Allen, 2005; Ingersoll, 2001).

This study examines high school agriculture teachers' career satisfaction in teaching in Iowa. Until now, there is no research determined the career satisfaction of high school agriculture teachers in Iowa. Understanding agriculture teachers' career satisfaction in the teaching profession will contribute to the increase in retention rate. This study supports one of the priorities from National Association for Agricultural Educator's (NAAE) national research agenda, which aims to produce enough agricultural educators to address the challenges in the 21st century (Roberts & Brashears, 2016).

2. Literature Review

2.1. Teacher Characteristics and Teacher Retention

Numerous studies and literature have been published regarding teacher retention (Borman & Dowling, 2006; Guarino et al. 2006; Inman & Marlow, 2004; Henke, Zahn, & Carroll, 2001; Ingersoll, 2001). Previous research found that teacher characteristics such as gender, age, years of teaching experience, academic background, and ethnicity affect the retention (Hughes, 2012; Hanushek, Kain, & Rivkin, 2004; Ingersoll, 2001).

Several researchers have identified age and years of experience as significant predictors that contribute to teacher retention (Hughes, 2012; Hanushek, Kain, & Rivkin, 2004).

In previous studies on novice teachers, it was found that younger teachers left teaching because of lower job satisfaction, family, and stress problems. While the older teachers left the profession when retired. This phenomenon of attrition is illustrated by U-shaped age and attrition plot (Watson, Harper, Ratliff & Singleton, 2010; Hanushek & Rivkin, 2007; Guarino et al., 2006). Previous findings also showed a positive relationship between age and years of experience with teacher retention (Hughes, 2012). Nevertheless, this finding is contrary to the theory proposed by Grissmer and Kirby's (1991) who found that years of teaching experience is a more accurate predictor for teacher retention than age.

2.2. Reasons Why Agriculture Teachers Remain in Teaching

The National Association of Agricultural Educators (NAAE) categorized agriculture teachers' life cycles into three different significant phases: early-career, mid-career, and late-career, where each phase has its own unique characteristic professional life cycles. At the early-career stage, teachers are in survival mode and carrying out teaching task to impact their students. Mid-career is referring to stabilization and experimentation where teachers have some confidence, expect patterns of teaching, experiment with their education through new activities and approaches, and have more experiences that will reflect their career. The late-career stage is referred as serenity period. Teachers with many years of teaching experience make them feel confident and comfortable with their classrooms and work (White, 2008).

Several studies have reported that school characteristics such as school administrator support, colleague support, and work factors as the main reasons for teacher retention (Ingersoll & Smith 2003; U.S Department of Education, 1999). School administrators are reported to have enormous effects on teacher retention (Kucla – Acevedo, 2009; Wynn et al., 2007; Borman & Dowling, 2006). Wynn et al. (2007) studied on new novice teachers and found out that 43% of teachers agreed school administrative support is the reason for them to stop their career. Likewise, Ingersoll & Smith (2003) mentioned that poor administrative support is a significant reason for beginning teachers to leave teaching profession. Teachers would like to have more autonomy, better administrative support, and effective communications as reasons for them to stay (Hughes, 2012).

In addition, few studies have cited social aspect, such as colleague support as important influencers for teacher retention. Hasselquist, Herndon & Kitchel (2017) found that colleague support was associated with new agriculture teachers' self-efficacy. In US, Colleague support seems very helpful for agriculture teachers who are involved in communities. Similarly, the social aspects of teaching such as collegial collaboration will contribute to teachers' decisions to keep on teaching (Hargreaves, 2001).

Collaboration among agriculture teachers is about working together to develop lessons, managing the national FFA organisation and SAE's as well as having learning opportunities (Greiman et al. 2005; Wenger 2000). Positive school culture and a high level of support would retain teachers more extended (Blackburn & Robinson, 2008).

2.3. Career Satisfaction of Agriculture Teachers

Work factors such as working conditions, salary, fringe benefits, occupational commitment, and work-life balance influence educators' career satisfaction to stay in teaching. Brownell et al. (1994, 1995) stated that workplace conditions influence teachers' decision to stay. Poor working condition is determined as one of the problems faced by agriculture teachers (Boone, 2007, 2009). Furthermore, salary is one of the critical motivations for teachers to teach (Crutchfield, 2013). In a survey conducted by Blackburn and Robinson (2008), 50% of experienced teachers identified salary as the main reason to keep teaching. Ingersoll and Smith (2003) found the main reason for teachers to stay or leave teaching is due to working conditions. Overwhelming workloads and excessive paperwork will affect the teachers to neglect education (Brill & Mc Cartney, 2008; Kersaint et al., 2007). Even further, the work-life balance will influence teachers' decisions to remain in the classroom. Crutchfield (2013) studied agricultural educators and found that work engagement was positively associated with their professional life phases. Educators who have balance career and personal lives will have occupational commitment.

Many studies on agriculture teachers' job satisfaction in the United States have been carried out (Sorenson & McKim, 2014; Tippens, Ricketts, Morgan, Navarro & Flanders, 2013; Kitchel, Smith, Henry, Robinson, Lawver, Park & Schell, 2012; Blackburn et al., 2008; Roca & Washburn, 2006). Agriculture teachers reported they were satisfied with their teaching jobs (Kitchel et al., 2012). Hughes (2012) indicates that teachers have high satisfaction to teach. Salary, administrative support, and working conditions are factors that lead to teachers' satisfaction in teaching. Tippens et al. (2013) found that job satisfaction and gender were significantly different. Meanwhile, job satisfaction and agricultural education level of self-efficacy showed a positive relationship (Blackburn and Robinson, 2008). Easterly and Myers (2018) found years of teaching experience served as a predictor of career satisfaction.

Agriculture teachers' decisions to continue on teaching have been influenced by self-efficacy. Self-efficacy is an important characteristic that develops teachers' confidence and influences them to stay (Darling-Hammond et al., 2002). Study on agriculture teachers showed that job satisfaction and level of self-efficacy has a positive relationship (Blackburn et al., 2008). Whittington and Knobloch (2006) studied the efficacy of agricultural novice teachers in Ohio and found that teachers who express their positive feelings will influence the decision to make teaching as a long-term

career. Meanwhile, Roca and Washburn (2006) found a low association between self-efficacy and years of teaching experience. Together, the literature suggests a teacher and school characteristics, work factors, job satisfaction, and self-efficacy are important factors in determining teachers' long-term commitment to teaching. Studies about engagement are worthwhile in education because the outcome is useful to predict how likely teachers will remain in their career (Mowday, Porter, & Steers, 1982).

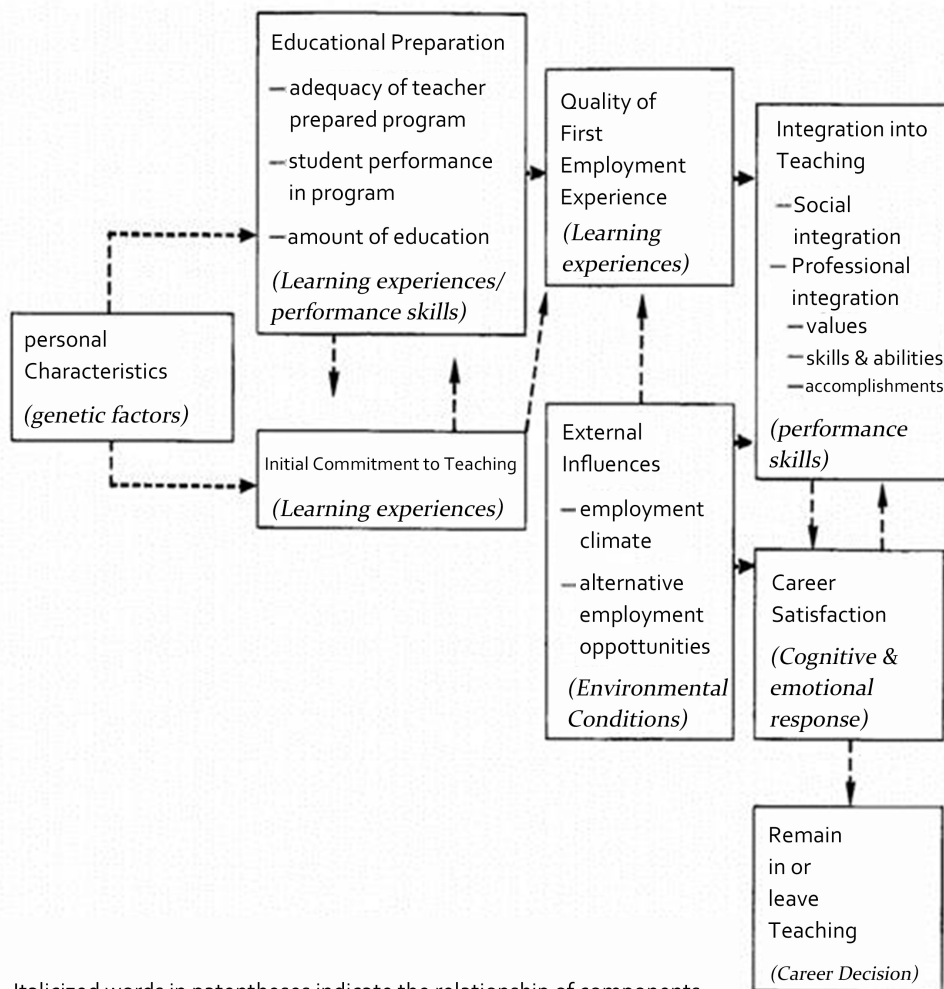
2.4. Conceptual Framework

The conceptual framework is based on Chapman model (1983) of teacher retention or attrition (Figure 1). The Chapman model is grounded in social learning theory. This model explained and expanded social learning theory from Krumboltz and Holland's career choice theory.

Many studies have applied the model to explain predictors that influence teacher retention (Buckley, Schneider, Shang, 2004; Ruhland, 2001; Shen, 1997; Billingsley, 1993; Odell

& Ferraro, 1992). The model was used to predict teacher retention by several variables; personal teacher characteristics, educational preparation, initial teaching commitment, quality of first-year teaching experience, career satisfaction, social and professional integration into teaching, and external influences (Chapman, 1984). This model serves as direction to school administrators and teacher education programs to deal with issues in teacher retention (Ruhland, 2001).

This model is appropriate and relevant to investigate agriculture teacher retention by using personal characteristic components (e.g., age, gender, teaching experience), teacher-training component (e.g., teachers' educational achievement), professional and social integration into teaching components (teachers' involvement in career), and career satisfaction. Career satisfaction variable was an important factor that explained teachers' decision to stay or leave the teaching career (Chapman, 1984).



Italicized words in patentheses indicate the relationship of components of the model to the more general tenets of social learning theory.

Figure 1. A suggested model of the influences associated with teacher attrition or retention. Reprinted from A Model of the Influences on Teacher Retention (pp.47), by D.W. Chapman, 1983, Thousand Oaks, CA: Sage Publications. Copyright [1983] by the Journal of Teacher Education. Reprinted with permission.

2.5. Purpose and Objectives

Objectives of the study were as follows:

1. Describe agriculture teachers' demographics such as gender, age, years of teaching experience, educational levels, ethnicities, and marital status.
2. Describe the career satisfaction of high school agriculture teachers.
3. Describe the relationship between overall career satisfaction in teaching and years of teaching experience.

3. Methodology

The present research used descriptive census study conducted on a target population of high school agriculture teachers (N=252) in Iowa. The accessible population of agriculture teachers was determined in the year 2017. The name list of the teachers was obtained from the Iowa FFA association.

3.1. Instrument

In the present study, a questionnaire that includes four parts of the questionnaire was developed using the Qualtrics web-based system. Only Part 3 and Part 4 were used in this study. The survey instrument was adopted and adapted from Faith Nyambura Mutoria's (2007) study on teachers' perceptions toward retention. The 16 Likert-type items in Part 3 asked the participants to indicate their agreement that the item is a reason for them to stay in teaching. The four-point Likert-type scale ranged from 1= Strongly Disagree, 2= Disagree, 3= Agree, and 4= Strongly Agree. Part 4 of the online survey asked the demographic questions.

3.2. Validity

Three panels of experts helped to determine the instrument's face, content, and construct validity, and all three of the panels agreed the instrument face, content, and construct were valid. The instrument was pilot tested on 10 high school agriculture teachers from Iowa. The reliability of the pilot testing analysis resulted in a Cronbach's alpha of .89, representing a good value of internal consistency.

3.3. Data Collection

Dillman's (2009) tailored design method was used in this study. The tailored design method include a pre-notification e-mail to 252 agriculture teachers, after three days an email containing a link to the Qualtrics survey, a first reminder to non-respondents after 10 days, and a second reminder to ask for help from the non-response participants after a week. A postcard containing the URL link was sent via US Mail as a final contact. After one week of the final contact, the online survey was closed. Completed questionnaires of 119 from the 252 teachers result in a 47% response rate. Given the number of responses, analysis of early to late respondent

comparison was conducted to determine the results represented by the target population (Lindner, Murphy, and Briers, 2001).

3.4. Data Analysis

Data were gathered from Qualtrics, and Statistical Packages for Social Science (SPSS) version 23.0 is used to analyze the data. The Cronbach alpha value for reasons of agriculture teachers decide to stay in teaching was calculated, and the reliability coefficient was = .73

The researcher acknowledges some questions could be raised about whether inferential statistics were appropriate. Only 119 agriculture teachers completed the questionnaire, which ended up as a sample from a population of 252 teachers. It is customary to use inferential statistics in similar situations.

Descriptive statistics (frequency, mean, standard deviation and percentages) were used for the first and second objectives. Pearson correlation coefficient was used for the third objective.

4. Analysis and Findings

4.1. Descriptive Analysis

Objective 1:

Describe agriculture teachers' demographics such as gender, age, years of teaching experience, educational levels, ethnicities, and marital status.

As shown in Table 1, 119 agriculture teachers were responded. There were 63 female and 56 male agriculture teachers.

Table 1. Demographic Profile of Respondents (n=119)

Demographics	M	SD
Age	38.15	13.12
Years of teaching experience	14.11	12.49
	Frequency	Percentage
Gender : Male	56	47.1
:Female	63	52.9
Current Marital Status		
Single	36	30.3
Married	78	65.5
Divorced	4	3.4
Not answered	1	0.8
Ethnicity : White	119	100.0
Highest Academic Attainment		
Bachelors	75	63.0
Masters	44	37.0
Teachers' Plans to Remain in Teaching		
1-5 years	42	35.3
6-10 years	21	17.6
11 or more years	54	45.4

The average age was 38.15, with a standard deviation of 13.12. Sixty-five per cent of agriculture teachers were married, and all of them were white. Table 1 also reports the highest academic attainment for the respondents. A majority (f=75, 63%) of the respondents had bachelor’s degree, and the rest (f= 44, 37%) held a master’s degree. Teachers had an average of 14.11 years of teaching experience with a standard deviation of 12.49. A majority (f=54, 45.4%) of the teachers plan to be in teaching for 11 or more years, whereas 35.3%, (f=42) of agriculture teachers prepare to teach for one to five years. A smaller number (f=21, 17.6%) of agriculture teachers plan to remain to teach for six to ten years.

Objective 2:

Describe the career satisfaction of high school agriculture teachers.

Four satisfactions from 16 items in teaching questions were worded negatively and reverse coded. A decision rule was created to interpret the score values (Table 2).

Table 2. Decision Rule to Interpret the Mean Scores for the Likert-type Scale

Likert -type categories	Mean Score	Interpretation of the score
1	1.00– 1.5	Strongly Disagree (Negative)
2	1.51 – 2.5	Disagree (Negative)
3	2.51 – 3.5	Agree (Positive)
4	3.51 – 4.0	Strongly Agree (Positive)

Table 3. Reasons that Influence Teachers’ Career Satisfaction in the Teaching Profession

Question	Mean	Standard Deviation	Interpretation
Teaching agricultural education has provided me with challenges.	3.33	.51	Positive
I have opportunities to attend professional development meetings.	3.15	.67	Positive
My job lets me entirely use my skills and abilities.	3.12	.59	Positive
I have a reasonable number of students in my classes.	3.10	.53	Positive
I look forward to continuing to teach.	3.03	.59	Positive
I feel satisfied with my job as a teacher.	3.02	.57	Positive
I feel satisfied with the opportunity to develop my skills and abilities.	2.99	.46	Positive
*I feel strained from working with people all day.	2.94	.46	Positive
I have participated in making important decisions at school.	2.80	.74	Positive
I have clear guidelines regarding my job responsibilities.	2.80	.67	Positive
I think the duties of the job are reasonable.	2.78	.63	Positive
*I feel burned out from my work.	2.73	.74	Positive
*I feel emotionally drained from my work.	2.66	.78	Positive
*I feel used up at the end of the workday.	2.63	.81	Positive
Adequate mentoring has been provided to new agriculture science teachers.	2.58	.75	Positive
I feel satisfied with the amount of income I receive.	2.46	.77	Negative
Total	2.88	.32	Positive

Note: Based on a scale: 1=Strongly Disagree, 2= Disagree, 3= Agree, 4= Strongly Agree, (*) Item was reverse coded

Table 3 shows the descriptive statistics for reasons that influence teachers’ career satisfaction in the teaching profession. The overall mean score for the items was 2.88, with a standard deviation of 0.32. This shows that these items positively influenced teachers’ career satisfaction in the teaching profession. For the individual subject, agriculture teachers provided the highest mean score for “Teaching agricultural education has provided me with challenges” (M = 3.33, SD = .51). It was followed by “I have opportunities to attend professional development meetings” (M = 3.15, SD = .67). Teachers provided the lowest mean for “I feel satisfied with the amount of income I receive” (M = 2.46, SD =.77).

Objective 3:

Describe the relationship between overall career satisfaction in teaching and years of teaching experience.

Table 4 shows the correlation between two variables: overall satisfaction in teaching and years of teaching experience. The whole career satisfaction was the average score for 16 Likert-type items used to measure the pleasure in teaching construct. These composite variables approximately met the normality and linearity assumptions. Table 4 investigates the correlations between two variables: overall satisfaction in teaching and years of teaching experience. The variables met the normality and linearity assumptions; therefore, Pearson product-moment

correlations coefficient was calculated. The result shows that the variables were significantly correlated at 0.01 level of significance. The correlation was $r(118) = .24, p < .01$ which was low positive correlations. This indicated that high school agriculture teachers who had high satisfaction in teaching were more likely to have many years of teaching experience from this study. However, the effect size was small (Cohen, 1998).

Table 4. Correlations of Overall Career Satisfaction in Teaching and Years of Teaching Experience of High School Agriculture Teachers

Variables	1	2	<i>M</i>	<i>SD</i>
Overall satisfaction in teaching (1)	-	.24**	2.88	0.32
Years of teaching experience (2)	-	-	14.11	12.49

Notes: **. Correlation is significant at the 0.01 level (2-tailed), $N = 119, df = 118$

5. Conclusion, Implications, and Recommendations

The demographic variables were used to provide a description of the population of agriculture teachers in Iowa. Results that arose from this study regarding the teachers who currently remain in teaching suggested that female agriculture teachers formed greater proportions than males and whites as dominance agriculture teachers in Iowa. This data supported the trend of a substantial increase in the number of female agriculture teachers in the US (Castillo & Cano, 1999). More white teachers turn out to teach due to a higher population of White ethnics in Iowa. However, this research finding cannot be extrapolate that one gender has a higher retention rate than the other. It is therefore recommended that further research should be done to determine retention rate between genders for agriculture teachers. Similarly, Hughes (2012) who studied on teacher retention, found that 83.5% of teachers plan to continue their career until retire. Furthermore, the present data could give a projected number of agriculture teachers that will permanently teach in Iowa after ten years and above.

Objective two sought to describe the career satisfaction of high school agriculture teachers. The results indicate that Iowa agriculture teachers feel teaching agricultural education is challenging, yet it provides them job satisfaction that makes them remain in teaching. This finding supported previous studies which mentioned agriculture teachers have various teaching responsibilities such as teaching subject matter, designing lesson and instruction, reviewing the curriculum, communicating with parents, conducting community work, and conducting Supervised Agricultural Experience (SAE) programs as well as the National FFA Organization (Delnero and Montgomery; 2001 & Phipps & Osborne; 1998). Besides,

the current study found that teachers view the opportunities for professional development as an essential reason that influenced teacher satisfaction in teaching. Smalley and Smith (2017) and Steffy and Wolfe (2001) also mentioned professional development is a need for agriculture teachers, and it is associated with teacher retention. This can be explained by the fact that agriculture teachers want to have networking, reenergizing, and stress management as part of their professional development opportunities to engage with their careers (Smalley & Smith, 2017). It is recommended that the professional development program should be ongoing to teachers' wishes, and fulfil teachers' specific needs.

There was a significant positive relationship between overall career satisfaction in teaching and years of teaching experience. This finding is consistent with studies that found teaching experience has a positive relationship with job satisfaction (Cano, 1999; Grady 1985 & Castillo). However, it is contrasted with Cano and Miller (1992) and Gillman (2012) who found no significant relationship between overall job satisfaction and agriculture teachers' years of teaching experience in Ohio and Georgia respectively. This study provided a possible explanation of inconsistency regarding agriculture teachers' job satisfaction with years of teaching experience in different states. Clark, Kelsey and Brown (2014) found experienced mid-career teachers view teaching as a sustainable career. The perception of sustainability as teachers will cause them to be more satisfied when teaching and they will remain longer. Thus, further research should be conducted, and more attention should be given to years of teaching experience as to how it associates with agriculture teachers' satisfaction in teaching.

Findings of this study supported the Chapman Model (1984) where teaching experience was a significant predictor for teacher retention. It also proved Grissmer and Kirby's theory (1991) which years of teaching experience were a better predictor for teacher retention than age. The implication for future practice is to improve teachers' working environments which can help them to enjoy educational adventures more. Overall, agriculture teachers' satisfaction likely increases based on years of teaching experience. Those who are responsible for hiring agriculture teachers should look for teachers who have more experience in teaching and prioritize them.

In agricultural education, research related to career satisfaction of high school agriculture teachers is vital as it is believed to predict teacher retention and commitment in teaching. Involvement to teaching cannot exist in isolation. Therefore, it is necessary to address any factors or reasons that contribute to teacher retention. Commitment in teaching usually associated with leadership support, teaching experience, career satisfaction and job stress (Billingsley, 2004).

6. Recommendations for Future Research

Further longitudinal studies about the reasons that influence agriculture teachers stay in the profession, and follow up yearly surveys to trace the trends of retention at school in Iowa. Replicate the research in other states to determine the similarities or difference. The stable model of Iowa agriculture teacher retention in the profession would help to increase teacher retention rates.

Continue the NAAE professional development program that cater agriculture teachers needs from three different categories: early-career, mid-career and late-career teachers. The professional development program should also focus to increase teacher satisfaction in teaching in attempt to provide teachers with new knowledge and fulfill their needs.

The mentoring program between new teachers and experienced teacher would help teacher to collaborate in working together. This is important to seek teachers' input that would help understand their needs. The professional development program must have an objective to provide new knowledge and to cater to the existing wishes.

School administrators should continue to provide their support to agriculture teachers physically and emotionally in order to make them feel happier in teaching. School administrators should also encourage creating positive school environments culture that would open up more space for teachers to express their thought, and include them in the decision-making process. Finally, this provides opportunities for teachers to learn.

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