THE EFFECTS OF THE TOBACCO BUYOUT PROGRAM (TBP) ON THE AGRICULTURAL EDUCATION CURRICULUM, STUDENTS' INVOLVEMENT IN SAE/FFA PROJECTS AND COMMUNITIES IN THREE COUNTIES OF TENNESSEE: A DELPHI STUDY

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Abstract

The purpose of this study was to evaluate the overall impact the Tobacco Buyout Program (TBP) has had on the agricultural education curriculum, students' involvement in SAE/FFA projects and activities, and communities in three counties of Tennessee. Some impacts on the community include: the price has changed for those who will continue to grow tobacco; the tobacco farmer is at the mercy of the tobacco companies; many people depended on tobacco money for Christmas and end of year taxes, but no longer have this money; the number of tobacco growers has decreased; the major cash crop of this area has been taken away; and less tobacco is grown on small farms. The TBP has also had an impact on the agricultural curriculum and choices of SAE/FFA projects and activities. Some of those impacts include: the amount of education dealing with tobacco production has decreased; students will grow crops other than tobacco; students will raise an increased number of livestock; education concerning agribusiness will increase; fewer students are producing tobacco for their SAE projects; and there will be fewer jobs for youth in the tobacco industry. Due to one change made by the government, an entire group of people are being forced to adjust their aims, beliefs, aspirations and agricultural knowledge. Because of the connection between the community and the school system, changes due to the TBP have had a significant effect on some communities and schools. Many teachers of agricultural education have made adjustments to their curriculum and students have adjusted their SAE projects to include various alternative crops.

Introduction

Change…seems to be a common word lately in the United States (U.S.). Since the events of 9/11 so much in our country has changed. For example, we have higher security measures in airports and on farms; technology development and usage is at an all-time high; fuel prices have sky rocketed; the use of agriculture products is becoming more diverse; and globalization is becoming increasingly needed and accepted. So what brings about change? Connor and Lake (1994) described change as a "natural process that occurs regardless if it is interfered with or not" (p.5). The natural process of change is caused by destabilizing forces either within or outside an organization. These destabilizing forces can be caused by individuals, society, culture, or changes in a strategic plan. Whatever force or forces are implied, disequilibrium will occur and cause

some disruptions among individuals, the communities in which we live, and overall our society (Dewey, 1922).

Changes that occur in society are based upon several forces. Examples of those forces are diversity, consumer demand, economic health, and globalization (Connor & Lake, 1994). Diversity in the U.S. has increased with many females, people of color, and the physically disabled taking active roles in the workplace. Consumer demand has risen to include higher quality products and more diversity of those products. In addition, improving economic health within communities has been given much attention. Communities are trying to revitalize so they can attract new, prosperous companies to their area. Furthermore, globalization has become a vital part of the U.S. economy; therefore, there is immense pressure to compete with other countries for agriculture and non-agriculture exports and imports. While all these forces cause change, one in particular, globalization, has caused changes within states and communities in the U.S.

Connor and Lake (1994) utilized a model to assist with change. They outlined four major areas: initiating, envisioning, crafting, and conducting. Initiating the change is recognizing destabilizing forces, formulating problem statements and suggesting solutions to the change. Envisioning the change refers to individuals or groups describing their current and future state and then crafting ideas to develop strategies for the future as it relates to the change. The final phase, conducting change, refers to implementing the change and then evaluating how the change has both positively and negatively effected individual stakeholders.

The provision of the *American Jobs Creation Act of 2004* stated the orderly disposal of existing tobacco pool stocks (Tobacco Buyout Info, 2005) has been demanded. This provision is known as the Tobacco Buyout Program (TBP). This change, implemented by the U.S. government, has impacted states and communities whose primary or supplemental income was obtained from tobacco production. This buyout will eliminate federal price support and supply control of tobacco (Agriculture Policy and Analysis Center, 2002a). As compensation, quota owners and active growers will be entitled to a portion of a $9.6 billion payment over the next 10 years (Tiller, Snell, & Brown, 2004).

In the year 2000, tobacco was the single largest agriculture cash crop in Tennessee. Particularly important was burley tobacco to Tennessee farmers. In 2003, one region of this state accounted for 19.4 million pounds of the state's 47.5 million pound burley tobacco production (Agriculture Policy and Analysis Center, 2002b). Reports released in 2001 indicated that burley tobacco yields averaged 2,250 lbs/acre and sold for $1.90/lb. Therefore, the total dollar production was approximately $1,722/acre. This $1,722/acre return on burley tobacco is considerably larger than returns per acre of corn ($117/acre), soybeans ($139/acre), cotton ($132/acre), or wheat ($29/acre) (Agriculture Policy and Analysis Center, 2002b). Many tobacco producers are now trying to determine how to compensate for the tobacco that they will no longer produce or put on the market.

The communities in Tennessee, in particular, are experiencing drastic changes due to the TBP. A community or society, as Dewey (1944) described, must be made of men who

have the same "aims, beliefs, aspirations, knowledge – a common understanding – like – mindedness as the sociologists say" (p. 5) Therefore, when an economic hardship confronts a community, like the TBP, not only do the community members need to make adjustments but the educational systems do as well.

As Dewey (1944) proclaimed, "we never educate directly but indirectly by means of the environment" (p.19). Therefore, because of the economic importance of tobacco to agriculture communities in some tobacco growing states, the teaching of tobacco production has long been incorporated into the agriculture education curriculum in the public school system. Teachers have included the production of tobacco in many class settings to appeal to students, and they have utilized the production of tobacco to develop their Supervised Agriculture Experience (SAE) programs. In addition, students have proudly displayed the end product of their efforts at local and regional fairs.

As characteristics of the tobacco industry change, agriculture communities and agricultural education programs will most likely be expected to change. In order to assist with the changes taking place, one must first understand how local communities and educational programs have been affected by the TBP. Therefore, the purpose of the study was to evaluate the overall impact the TBP has had on the agricultural education curriculum, students' involvement in SAE/FFA projects and activities, and communities in three counties of Tennessee. In understanding the effects of the buyout, extension agents and educators of those communities can make beneficial adjustments to their programs to assist with the change and promote continued success of the agriculture community.

Purpose and Objectives

The purpose of this study was to evaluate the overall impact the TBP has had on the agricultural education curriculum, students' involvement in SAE/FFA projects and activities, and communities in three counties of Tennessee. Objectives of the study were:

1. To describe changes that have been or will be made in the high school agricultural education curriculum due to the TBP;
2. To describe the impact that the TBP has had on student involvement in SAE and FFA projects; and
3. To determine the impact that the TBP has had on three agricultural communities.

Methods and Procedures

Researchers utilized a modified Delphi technique to evaluate the overall impact the TBP had on agricultural education teachers, students, and families in three counties of Tennessee. The object of the Delphi technique is to obtain the most reliable consensus of opinion from a group of experts who are knowledgeable in the particular area being studied (Helmer, 1966). The technique uses a series of questionnaires to generate input

and gain feedback from the panel of experts (Delbeq, Van de Ven, & Gustafson, 1975). Usually, by the third round of questionnaires consensus is reached (Helmer, 1966).

A total of 15 individuals served on the panel. The panel consisted of six high school agricultural education teachers who were teaching in the three Tennessee counties; six students and three sets of parents. Students and parents who participated in the study were selected by the agricultural education teachers based upon their involvement with the tobacco industry, their knowledge of the TBP, and their involvement with the agricultural education program. The first round questionnaire was validated by two university faculty members in agricultural education and two high school agricultural education teachers. The second and third round questionnaires were comprised of exact statements from panel members (Taylor & Bogden, 1998); therefore, statements were deemed valid for the study. Dalkey (1969) affirmed that the reliability was greater than .80. if responses from more than 13 individuals were collected.

Six agricultural education teachers from the selected counties were interviewed instead of filling out the first round questionnaire. Each interview lasted one hour and teachers were asked how the TBP impacted their community, agricultural education curriculum, and SAE/FFA projects and activities. Tapes were transcribed by the researcher and data was used on the second round questionnaires. Since the agricultural education teachers were interviewed, they did not fill out the first round questionnaire. However, they did complete the second and third round questionnaires.

A series of questionnaires were mailed to panel members. The initial questionnaire, consisted of three open-ended questions – "*How has the TBP effected your community?"; Because of the TBP, what changes do your foresee in the agricultural education curriculum?"; and How has the TBP impacted student participation in SAE and FFA projects and/or activities?* The responses generated from these questions and the interview with each teacher generated data that was utilized on the second round questionnaires.

The second round questionnaires consisted of responses generated from the first questionnaire and was administered to each panel member. Responses from each question asked on the first questionnaire were placed on an individual questionnaire for panel members to complete. There were 33 responses generated from the question – "*How has the TBP effected your community?";* 27 responses generated from the question – "*Because of the TBP, what changes do your foresee in the agricultural education curriculum?"*; and 22 responses generated from the question – "*How has the TBP impacted student participation in SAE and FFA projects and/or activities?* Panel members ranked each response according to their level of agreement in each questionnaire. The statements were quantified using a Likert-type scale consisting of the following choices: 1=Strongly Disagree, 2=Disagree, 3=Uncertain, 4=Agree, and 5=Strongly Agree. Fifteen returned the second round questionnaires which yielded a 100% response rate and once each questionnaire was returned, mean and standard deviation were calculated (Ary, Jacobs, & Razavieh, 1996). Responses were arranged in order from highest (strongly agree) to lowest (strongly disagree) and listed on the third

questionnaire. In addition, statements with (SD $\leq$ 1.0) were identified by researchers as consensus statements among the group but were not identified as such on the questionnaire. A (SD $\leq$ 1.0) was arbitrarily selected because researchers utilized a 5-point Likert-type scale.

The third round questionnaires were primarily utilized to establish consensus among the group (Helmer, 1966). During this round, panel members received questionnaires which contained the overall group and individual ranking to each response from the second round questionnaires and asked to indicate whether they agreed or disagreed with the ranking of each statement. Fifteen panel members returned the questionnaire for a 100% response rate.

Results

In response to the impact of the TBP on the communities within the three counties, respondents agreed to 29 changes within the community. Of these, 24 were agreed upon by a strong consensus (SD$\leq$1.0). As indicated in Table 1, some of the most strongly agreed upon changes were: for those who still grow tobacco, the price has changed; the tobacco farmer is at the mercy of the tobacco companies; many people depended on tobacco money for Christmas and end of year taxes, but no longer have this money; the number of tobacco growers has decreased; the major cash crop of this area has been taken away; and less tobacco is grown on small farms. Meanwhile, the changes that earned the greatest consensus included farmers now have to spend more time searching for a new cash crop; it is more difficult for farmers to survive on the farm; and for those who still grow tobacco, the price has changed. However, there was little support in favor of the idea that it has become harder for those who still grow tobacco to find equipment.

Concerning change within the community, the largest disagreement revolved around the statement that there are less people in the area to work. Many respondents expressed that there were still people to work due to migrant labor. One respondent replied "Nobody in the area wants to work in tobacco because it's too hard labor for them, and they are lazy." Members of the panel also expressed their concern with small farms going out of business before the TBP was in place and farmers did not increase tobacco size in the previous year, due to uncertainty of prices.

Table 1
Delphi Study Round Two: Prioritized list of changes within the community as identified by a cooperating panel of teachers, students and parents

Statement	M	SD
For those who still grow tobacco, the price has changed	4.7	0.49
The tobacco farmer is at the mercy of tobacco companies	4.7	0.59

Table 1. Continued

Statement	M	SD
Many people depended on tobacco money for Christmas and end of year taxes, but no longer have this money	4.5	0.64
The number of tobacco growers has decreased	4.5	0.52
The major cash crop of this area has been taken away	4.5	0.51
Less tobacco is grown on small farms	4.5	0.51
Farmers who no longer raise tobacco have become more dependant on other crops or animal production	4.4	0.51
There is less spending money available for expenses	4.3	0.80
Families have to look elsewhere for income	4.3	0.90
It is more difficult for farmers to survive on the farm	4.3	0.46
A secure source of income is lost	4.3	0.88
Small tobacco farms are no longer in the tobacco business	4.2	0.56
Tobacco farmers are going to receive less profit per acre	4.2	0.86
Farmers now have to spend more time searching for a new cash crop	4.2	0.41
Part-time tobacco producers are being put out of business	4.1	0.92
Some farmers are experiencing financial problems	4.1	0.80
Increased the number of tobacco contracts with large companies	4.1	0.88
Tobacco payoff money has been used for beef cattle and to pay of notes	4.1	0.74
Due to lower income for most farmers, the economy will be effected	4.1	0.64
A way of life is gone	4.1	0.88
The overall amount of tobacco being produced has decreased	4.1	1.03

Table 1. Continued

Statement	M	SD
People who help with tobacco production have lost their jobs	3.9	0.83
Hay production has increased	3.9	0.96
Small farms do not have the capital for other enterprises	3.9	0.92
There is an increase in disapproval of the government	3.7	0.59
Large tobacco farms have increased acreage	3.7	1.11
Support industries of tobacco (warehouses, trucking, etc.) are out of business	3.7	1.18
Many farms have been put out of business	3.5	1.06
Small farms are being sold	3.5	1.13
Equipment dealers are suffering because it has effected the buying power of the farmer	3.4	0.99
Farmers who are growing tobacco have increased the acreage size	3.4	1.35
Less people are in the area to help work	3.4	1.35
It has become harder for those who still raise tobacco to find equipment	2.3	1.11

Note: 1=strongly disagree 2=disagree 3=uncertain 4=agree 5=strongly agree

As indicated by Table 2, respondents agreed upon 12 changes within the agricultural education curriculum and reached a strong consensus in regards to 11 statements. Those statements with the strongest agreement included: the amount of education dealing with tobacco production has decreased; students will grow crops other than tobacco; students will raise an increased number of livestock; and education concerning agribusiness will increase. On the other hand, there were strong disagreements to statements that family farms will become non-productive and tobacco production will be omitted from the agriculture curriculum. Likewise, respondents acknowledged that fewer students will come from an agriculture background but not because of the TBP; therefore, production agriculture will in fact still be taught but within the context of another enterprise.

Table 2
Delphi Study Round Two: Prioritized list of changes within the agricultural education curriculum as identified by a cooperating panel of teachers, students and parents

Statement	M	SD
The amount of education dealing with tobacco production has decreased	4.3	0.62
Students will grow crops other than tobacco	4.3	0.49
Education concerning agribusiness will increase	4.1	0.70
Students will raise an increased number of livestock	4.1	0.96
The agriculture curriculum will become more diversified	4.0	0.65
Teachers will focus on the idea that FFA is not just farming anymore	3.9	0.70
Curriculum will focus on alternative occupations	3.9	0.74
The TBP has opened opportunities to teach and grow other crops	3.9	0.64
Teachers are teaching more diversified crop production	3.9	0.80
The number of livestock classes has increased	3.7	1.05
Agriculture will become technology driven with large corporations responsible for production of not only crops but also livestock	3.7	0.88
Teachers are teaching more diversified livestock production	3.6	0.83
Tobacco is not taught as much due to a loss in interest of production agriculture	3.4	1.06
Fewer students will come from an agriculture background	3.2	1.32
Most curriculums have already eliminated tobacco	3.2	1.15
Curriculums will focus more on farm equipment	3.1	1.03
The agricultural curriculum is based on the sciences, so the curriculum will not be affected	3.1	1.03

Table 2. Continued

Statement	M	SD
No Change	3.0	1.13
Curriculum will go away from production agriculture to specialty areas	3.0	0.93
Tobacco will be taught as a crop of the past	2.9	0.83
SAE programs with tobacco production will be cut	2.9	1.46
Education focuses more on production quantity as opposed to quality	2.9	1.23
Tobacco production will be omitted from agriculture curriculum	2.9	1.30
Teachers will focus on the TBP as opposed to tobacco production	2.9	0.99
Tobacco will not be taught in the agricultural curriculum	2.8	1.08
Agriculture education will be changed from production agriculture to service agriculture	2.7	0.98
Family farms will become nonproductive	2.1	0.83

Note: 1=strongly disagree 2=disagree 3=uncertain 4=agree 5=strongly agree

Responses, regarding the impact on SAE and FFA projects and/or activities, surfaced that students who focused an SAE in the area of tobacco would continue to grow the crop. Respondents also indicated there was a decrease in the number of crop production proficiency winners who grew tobacco prior to the TBP. Fewer students are producing tobacco and there will be fewer jobs available for youth in the tobacco industry were two responses that obtained strong consensus from the group. However, respondents disagreed with the idea that student involvement had decreased and the TBP had caused little change within the student SAE and FFA projects and activities.

In response to the question concerning student participation in SAE and FFA projects and/or activities, considerable disagreement was found with the statement “the TBP made it hard to base an SAE on tobacco production.” One respondent stated that after the TBP, anyone could raise tobacco. Two respondents pointed out that some students will continue to grow tobacco and will be able to use tobacco for an SAE. Considerable disagreement with the statement “there will be a decrease in the number of crop production proficiency winners who grow tobacco” was expressed. Some respondents felt the decrease was occurring prior to the TBP.

Table 3
Delphi Study Round Two: Prioritized list of changes within SAE and FFA projects and/or activities as identified by a cooperating panel of teachers, students and parents

Statement	M	SD
Fewer students are producing tobacco.	4.3	0.49
Tobacco was once a crop which was raised on every farm.	4.3	1.05
There will be fewer jobs for youth in the tobacco industry.	4.2	0.41
Students, who have a tobacco SAE, also have additional FFA and SAE activities. Thus, there has been very little change.	4.0	0.85
There is more focus on other agricultural money makers.	4.0	0.38
FFA projects have moved away from tobacco.	3.9	0.74
The focus of FFA has moved to a more general aspect of agriculture.	3.9	0.59
Students have steered their SAE projects away from tobacco.	3.8	0.68
Fewer students have background in tobacco.	3.7	0.88
Students have been forced to explore a wider range of projects.	3.7	0.62
The number of projects dealing with tobacco has decreased.	3.7	0.96
There will be a decrease in the number of crop production proficiency winners who grow tobacco.	3.6	1.21
Fair exhibits at the regional and local fairs were approximately 60 to 70 percent lower than usual.	3.5	0.99
SAE programs in tobacco production have declined by 50% over the last five years.	3.5	0.83
Some students will not have as much money to support their SAE projects.	3.3	0.90
The TBP made it hard to base an\ SAE on tobacco production.	3.2	1.26
Due to the fact that many farms have had to seek alternative crops, the number of SAE projects will increase.	3.2	0.86

Table 3. Continued

Statement	M	SD
Many students have no SAE and are not affected.	3.1	0.99
Little change.	2.5	0.64
The student enrollment has decreased.	2.0	0.85

Note: 1=strongly disagree 2=disagree 3=uncertain 4=agree 5=strongly agree

Conclusions and Summary

This study evaluated three areas in which the TBP had an impact on agricultural education programs, SAE/FFA projects and activities, and communities within three counties of Tennessee. Each area revealed a different level of interest expressed by those who chose to respond. Among these three areas, the overlying concept seemed to be that many changes were already in place before the TBP. As Connor and Lake mentioned (1994), change is inevitable. However, after the initiation of change within the tobacco industry, farmers envisioned, crafted and conducted the appropriate measures to respond to the change. In support of the change model of Connor and Lake (1994), most respondents were optimistic that farmers will successfully adjust to the changes of the TBP.

The changes foreseen within the community seem to work simultaneously. In relation to the average tobacco farm in the three counties, many small farms will no longer grow tobacco due to price changes and uncertainty. As a result, small farms are looking elsewhere to compensate for the loss (e.g. hay production). In the meantime, tobacco production is shifting towards large farms who will sell directly to the tobacco company. These changes lead to a complete change in the way of life for many farmers. Primarily, these changes lead to a change in the economy of the area. As small farms go out of business and large farms take over the industry, small farmers are forced to experiment with alternative crops, search for alternative sources of income and deal with financial situations without the aid of tobacco money.

The agricultural education curriculum has seen some changes due to the TBP. However, most respondents agree that changes to the curriculum were in order before the TBP. Teachers had started to teach more diversified agriculture because students did not originate from a farm background. In conjunction with this idea, teachers had already changed their curriculum because of a new state mandated curriculum and a decrease in interest of tobacco production. Regardless of the decrease of interest in tobacco production, family farms will not become nonproductive.

As for SAE and FFA projects and/or activities, while the number of students using tobacco for these projects and activities will decrease, the number of students participating will not. To the contrary, students will explore a wider range of options. For those students who continue to grow tobacco, their projects will become stronger due

to the likely increase in the size of their operations. In this manner, students will benefit from the TBP by searching for alternative options to crop production.

Due to one change made by the government, an entire group of people are being forced to adjust their aims, beliefs, aspirations and knowledge. Because of the connection between the community and the school system, changes due to the TBP have had a significant effect on some areas and schools. Many teachers of agricultural education have made adjustments to their curriculum and students have adjusted their SAE to include various alternative crops.

The findings of this study could serve as a guideline to extension agents within the counties studied. Extension agents in these counties can look at the changes within the community which were indicated, and prepare education programs to fit the occurring and future changes. This study can also serve as a guide for high school and college educators who teach students in agricultural education by indicating how much tobacco knowledge is needed before entering the classroom. Upcoming agricultural students may also utilize the information from the study while planning an SAE or FFA activity.

A few questions were raised during this study. Future research questions should answer the following:

1. How much change, in regards to tobacco, had taken place prior to the TBP?
2. Which enterprises will take the place of tobacco on traditional tobacco farms?
3. What are the long term effects of the TBP on the tobacco farmer?

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