Perceptions of Brazilian Secondary Agricultural School Principals About the Mission of the Schools

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Abstract

Globalization, changes in demographics and in economics, coupled with a remarkable structural educational reform have driven to redefine the mission of Brazilian agricultural schools. The implementation of the reform in the professional education system has fostered the debate on the role of agricultural schools. Principals’ visions of the school’s mission is a critical factor for future development of agricultural schools.

This study conducted during the summer of 2002 deals with 112 Brazilian agricultural school principals’ perceptions about the mission of agricultural schools relative to: 1) the vocational profile of students to be admitted to the programs, and; 2) the educational purpose of agricultural schools in preparing students for immediate employment and/or to pursue higher education.

Overall, Brazilian agricultural school principals perceived agricultural schools as institutions devoted to prepare students to pursue higher education and immediate employment in agriculture, through an integrated academic-vocational curriculum. Students do not need to have interest in agriculture as a requisite for admission to the programs.
Introduction

During its history, Brazilian agricultural schools have been quite stable regarding their mission. They originated in late 1870s as institutions devoted to lessen potential social instability and to prepare practical individuals to operate machinery, equipment, and to take care of domestic animals (Moura, 2000). In other words, agricultural schools in Brazil were conceived as schools that teach how to do, rather than how to think. Schools have grown in number and importance in the same degree that agriculture became important in the country’s economy. The culture created behind agricultural schools in Brazil is intense to the point agricultural education programs never expanded beyond their walls.

With the rising of an industrial economy since late 1950s and the subsequent increase in the use of technology in all areas, debates on the mission of agricultural schools have gained prominence. Some of the main questions in such debates were: Should agricultural schools admit only students interested in careers in agriculture? Should agricultural schools prepare students only for immediate employment in agriculture? To what extent should agricultural schools provide academic subjects in their curriculum?

The so called “green revolution” has stimulated such a debate bringing a need for better prepared professionals to face the advancements in input, process, and knowledge technologies (Solbrig, 2001). In response to this challenge, there was an increase in higher education agricultural programs throughout the country. In addition, there was a change among agricultural students in their expectation to pursue higher education in agriculture. Secondary vocational education in agriculture was no longer the major goal for many students and their parents; it became a step (for some the only way) to get into higher education in agriculture. Since then, Brazilian agricultural schools have, at one time or another, prepared students for immediate employment and/or to pursue higher education.

The globalization process and changes in demographics and in economics are among the leading global forces driving for a need to redefine the mission of Brazilian agricultural schools. A structural educational reform and the changing needs of local communities are the main national forces driving for such a need. In fact, Brazilian agricultural schools are forcefully being requested to redefine their mission to cope with a new legal mandate passed in December, 1996, which promoted a structural reform of the country’s educational system.

All factors consistently identified as characteristics of school’s efficiency and efficacy are related, directly or indirectly, to the effectiveness of principals and their commitment to school mission (Manasse, 1985). As a result, the way principals envision the school’s mission is critical to the success of the changes currently undergoing in the Brazilian educational system in general, and in agricultural schools in particular.

Theoretical Framework

The mission of agricultural education in Brazil has been historically set up by legal mandate. Congruent with its original mission, the Organic Law of Agricultural Education (Decreto No. 9613, 1946) set up the professional preparation of people working in agriculture as the mission for agricultural education. Such a mission remained pretty much unchanged until the inception of the Law of Directives and Basics of National Education (Lei
No. 9394, 1996) in December, 1996. Figure 1 represents the driving forces leading to the change in the school’s mission.

![Diagram showing driving forces towards mission changes in the Brazilian context.]

**Figure 1.** Driving forces towards mission changes in the Brazilian context.

Indeed, the reform brought about by the new legal framework does not allow the integration between academic and vocational education - it institutes a system of professional education in parallel to a system of general education (Kuenzer, 2000). Agricultural education is now part of a broader educational category named professional education. The legal mission assigned to professional education is “to conduct to continuous development of aptitudes to productive life” (Lei No. 9394, 1996, Art. 39). Providing academic education is no longer stimulated as part of the role of agricultural schools. A multitude of courses, programs, and certificates have been created through breaking down the former comprehensive 3-year secondary agricultural programs.

Castro (1999) stated that the reform extinguishes the ambiguity present in the previous secondary vocational education programs. From now on, the academic high school will prepare students only to pursue higher education, and professional high school only for immediate employment (Castro, 1999). On the other hand, Werlang and Faria (1999) saw the mission of agricultural schools in Brazil as transformational in the sense they have the potential to integrate intellectual and manual work to face the challenges of the growing regional and worldwide interdependency.

Educational literature generally points to a mission statement as a definition of the institution, its educational purposes, its students, and its place in the educational community (Chabot-La Positas Community College District, 1990). As the needs of the community change over time, and vary from place to place, so does the mission (Vaughan, 1988). Vaughn (2000) advocates a two-part mission for agricultural education: 1) to prepare students for career success and 2) to create lifetime awareness of the global agriculture, fiber, food, and natural resources system.
To place Vaughn’s (2000) two-part mission in the context for agricultural schools in Brazil implies to consider the transformations undergoing in the Brazilian rural milieu. A new pattern is emerging in rural Brazil since the 1980s from a combination of agricultural and non-agricultural economic activities (Graziano da Silva, 1997). This reflects in the demographics and career expectations of the student pool. As a result, to prepare students for career success, as part of Vaughn’s (2000) agricultural education mission, is no longer to prepare students primarily for career success in agriculture as traditionally had been done in Brazil. Indeed, Brazilian agricultural schools are already incorporating new programs outside of agricultural sciences in their course portfolios, without putting the school’s mission off the track (Silva, 2001). Figure 2 contextualizes and summarizes the dimensions of an agricultural school’s mission and the focus of this study.

Figure 2. The school’s mission in the context of Brazilian agricultural schools
Purpose of the Study

The purpose of this study was to describe Brazilian secondary agricultural school principals’ perceptions about the mission of agricultural schools relative to: 1) the vocational profile of students to be admitted to the schools, and 2) the educational purpose of agricultural schools in preparing students for immediate employment and/or to pursue higher education. In addition, the study describes the principals’ demographic profile and their perceptions about the importance of integrating academic subjects in the agricultural curriculum.

Methods and Data Sources

The population for this study consisted of all Brazilian secondary agricultural school principals (N=256) obtained from the National Agricultural Schools Directory. A two-section structured questionnaire was developed and used in the collection of the data: demographic, educational, and professional information was collected in the first section, while the second section collected data on the perceptions about the school mission. Data on the perceptions about the school mission was collected in two blocks of questions measured on a five-point Likert-type scale (1=Strongly disagree to 5=Strongly agree). The first block of questions collected data on the vocational profile of students to be admitted to the school, and the second block asked about the educational purpose of schools in preparing students for immediate employment and/or to pursue higher education. A separate question requested principals to rate the importance of integrating general education subjects into the agricultural curriculum on a 5-point scale (1=Not important to 5=Very important).

After being validated for face and content by a panel of eight experts (three from Brazil, one from Portugal, and four from the United States), the questionnaires were mailed to all 256 Brazilian agricultural school principals in the summer of 2002. Procedures suggested by Dillman (2000) were followed to collect data. A thank you/reminder card was sent to all participants six days after the first mailing. A follow-up letter with an additional copy of the questionnaire was mailed to all non-respondents 15 days after the original mailing date. No pilot test was conducted. Because the study was a census, we did not have a small group in the same cultural context available to conduct a pilot test. A post hoc reliability analysis indicated that the questionnaire had acceptable reliability (Chronbach’s Alpha = 0.69 on section 2).

A 43.8% response rate (112 questionnaires) was obtained. Early and late respondents were compared on key variables based on procedures suggested by Miller and Smith (1983). To this finality, early respondents were defined as those who respond by the first deadline (14 days after the first mailing date). No significant differences were found between the two groups in key demographic, educational, and professional background variables. However, caution is advised when generalizing the findings to the population, due to the low response rate. Measures of central tendency and variability were employed to analyze the data, using the SPSS computer software.
Findings

Demographic characteristics, educational and professional background

Slightly more than two thirds of the principals are male (67.0%) and middle aged (M=44 years). Principals’ ages ranged from 26 to 60 years, with the great majority (77.9%) in the 31 to 50 years age group. All principals held a college-level degree and 82.6% of them reported having completed some kind of graduate education – specialization, master, or doctoral.

 Barely more than half of the principals (51.4%) had no previous experience in educational administration. However, 70.6% of them reported teaching experience of more than 10 years. Only 2.8% reported as having no experience in teaching.

Perceptions about the vocational profile of the students

Data about principals’ perceptions on the vocational profile of students to be admitted to the schools are summarized in Table 1. About 65% of the principals think agricultural schools should not admit students interested only in agriculture. Slightly more than 66% of the principals think agricultural schools should not admit students only interested in agriculture yet not interested in employment in agriculture.

Table 1. Vocational profile of prospective students

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree* %</th>
<th>Not Sure %</th>
<th>Agree* %</th>
<th>M**</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural schools should admit only students interested in careers in agriculture</td>
<td>65.4</td>
<td>6.5</td>
<td>28.1</td>
<td>2.62</td>
<td>1.08</td>
</tr>
<tr>
<td>Agricultural schools should admit only students interested in agriculture</td>
<td>66.4</td>
<td>7.5</td>
<td>26.1</td>
<td>2.48</td>
<td>1.06</td>
</tr>
</tbody>
</table>

* Disagree corresponds to the cumulative percent of those who responded 1=SD and 2=D.
Agree corresponds to the cumulative percent of those who responded 4=A and 5=SA.
** Mean computed on a scale from 1=Strongly disagree to 5=Strongly agree.

Perceptions about the educational purpose of the schools

About three quarters (74.8%) of the principals see the main objective of agricultural schools as of preparing students for immediate employment in agriculture (Table 2). However, 65.7% of them perceive agricultural schools as having the dual objective of preparing students for immediate employment and for pursuing higher education in agriculture. Principals are split when asked about the objective to agricultural schools in prepare students for pursuing higher education in agriculture. On the other hand, 64.8% of them disagreed that agricultural schools should prepare students to pursue education inside and outside of agricultural sciences.
Table 2. Educational purpose of agricultural schools

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree*</th>
<th>Not Sure</th>
<th>Agree*</th>
<th>M**</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The main objective of agricultural schools is:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. To prepare students for immediate employment in agriculture</td>
<td>21.5</td>
<td>3.7</td>
<td>74.8</td>
<td>3.71</td>
<td>1.10</td>
</tr>
<tr>
<td>2. To prepare students to pursue higher education in agriculture</td>
<td>51.9</td>
<td>6.5</td>
<td>41.6</td>
<td>2.85</td>
<td>1.16</td>
</tr>
<tr>
<td>3. To prepare students to pursue higher education both inside and outside of agriculture</td>
<td>64.8</td>
<td>8.3</td>
<td>26.9</td>
<td>2.49</td>
<td>1.16</td>
</tr>
<tr>
<td>4. To prepare students for immediate employment in agriculture and to pursue higher education in agriculture</td>
<td>26.9</td>
<td>7.4</td>
<td>65.7</td>
<td>3.53</td>
<td>1.12</td>
</tr>
</tbody>
</table>

* Disagree corresponds to the cumulative percent of those who responded 1=SD and 2=D. Agree corresponds to the cumulative percent of those who responded 4=A and 5=SA. ** Mean computed on a scale from 1=Strongly disagree to 5=Strongly agree.

Integrating academic subjects in the agricultural curriculum

Principals perceived as important the integration of academic subjects into the agricultural curriculum. More than eighty percent of the principals (82.4%) rated the integration of academic subjects in the agricultural curriculum as important or very important (Mean=4.26 in a scale ranging from 1 to 5; SD=0.90).

Conclusions and Recommendations

Brazilian agricultural school principals are, in the great majority, male (67%) and have some kind of graduate education (82.6%). Such data indicate they have, as a group, an educational level higher than the universe of the country’s high school principals. According to the Ministry of Education, 8.2% of all Brazilian high school principals have less than college-level education and only 51% of them have some kind of graduate education (INEP, 2000). Brazilian agricultural school principals were experienced in teaching (97.2% have teaching experience and, of those, 70.6% had more than ten years of teaching experience) and about half of them (48.6%) had previous experience in educational administration. This notable teaching experience may imply concepts and beliefs deeply rooted cohabiting with high sensitivity to apprehend benefits for classroom practice that may come with educational innovations. On the other hand, it may also be a source for paradigm conflicts, with unavoidable reflexes to the principal role as a team leader in a time of change. These characteristics should be considered when designing training programs involving Brazilian agricultural school principals.

Which students should be admitted in agricultural schools? On the principals’ views, students interested in agricultural careers are no longer the only target for recruitment in agricultural schools. Even students who are not interested in agriculture can be admitted in agricultural schools. These perceptions are congruent with Silva’s (2001) finding that agricultural schools are already incorporating programs outside of agricultural sciences in their course portfolios. It can indicate the influences exerted by the educational reform and
the changes in the Brazilian rural milieu (local forces) in the school mission. Research in the areas interacting/competing with agricultural programs inside of Brazilian agricultural schools is needed to further clarify this issue.

What is the educational purpose of Brazilian agricultural schools? According to the principals, agricultural schools in Brazil should prepare students for both, immediate employment in agriculture and to pursue higher education in agriculture. Principals envision agricultural schools as a legitimate path to higher education in agriculture. On the other hand, principals do not see as legitimate objective of agricultural schools to prepare students to pursue higher education in fields other than agriculture. Longitudinal studies on the occupational and educational attainment of graduates from Brazilian agricultural schools may provide insights on the social role of these schools.

Finally, the overwhelming majority of principals (82.4%) are in favor of integrating academic subjects in the agricultural curriculum. This can offer a partial understanding of the resistance Brazilian educators have shown in accepting the separation between academic and vocational education, as mandated by the educational reform law (Alaniz, 2002; Araújo, 2002; Kuenzer, 2000; Maués, Wondje, & Gauthier, 2002; Ramos, 2001).

Overall, according to the findings of this study, agricultural schools are institutions devoted to preparing students to pursue higher education and immediate employment in agriculture, through an integrated academic-vocational curriculum. Students do not need to have interest in agriculture as a requisite for admission to the programs. Principals’ perceptions have provided a basis for discussing the broadening of the concept of agricultural education in Brazil beyond agricultural schools and agricultural sciences.

Educational Importance

The globalization process and changes in demographics, economics, and technology are the driving forces that bring new trends to agricultural education. A clear sense of mission helps to organize resources, programs, and activities toward common goals. The way principals perceive the school’s educational purposes and define the students’ profile is critical to establishing a definition for agricultural schools as educational institutions and its place in the educational community.

Further research is needed to assess to what extent principals’ perceptions are shared with the community and reflect its core values. Principals should rethink their perceptions about limiting the future of secondary agricultural graduates to higher education in agriculture. High value should be placed in agricultural awareness, more than in agricultural careers. In a time of structural reforms in the Brazilian educational system, a clear and shared sense of mission is of capstone importance to shape alternative paths to the future of the country’s agricultural education and its programs.

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2. Specialization is a graduate-level course existing in the Brazilian educational structure, with a minimum of 360 hours of instruction, designed to address specific needs of the labor market in a short period of time.
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