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ACHIEVING QUALITY IN INSTITUTIONS THAT FACE SCARCITY

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No educational institution has all the financial resources it would like to. The top administrators of Harvard University - certainly one of the best and richest private universities in the world - are not satisfied with the money they have available; at all times they have an army of over 150 professional fundraisers looking for new money to build buildings, to fund professorships, to provide scholarships and to underwrite general programs.

If Harvard doesn't have enough money, then how can the institutions in the developing world be satisfied with their financial base? They cannot be. And they must constantly search for more funding. However, does insufficiency of resources mean that those of us who work in the poorer countries and poorer institutions cannot aspire to quality? My experience tells me that there are several very modest agricultural schools (at least in Latin America) that provide a high quality education. Could they provide a higher quality education if they had more resources? I am certain that they could. But even as they search for money to improve buildings, increase salaries, provide scholarships and so forth, they are doing a more than adequate job in providing what their stakeholders demand.

A Few Preliminary Definitions

Before getting farther into this presentation, let me provide preliminary definitions of certain key words I have already been using:

- Stakeholders: those individuals and institutions that have a stake or interest in the success of the educational institution and in its impact. Common stakeholders of schools and universities include the parents of the students, employers who hire the graduates, organizations that provide scholarships, the Board of Directors or the Minister that oversees the institution, and the communities served directly by the school or by the graduates.

¹ I have no professional experience in Africa; in fact, my participation in this CIEA conference provides me my first opportunity to visit a continent that has fascinated me from afar for my entire life. I do hope, however, that the comments contained here based on my experience in some of the poorest countries of Latin America will prove to be of some value for the CIEA conference participants.

- Quality: quality means meeting expectations. Quality is achieved when the stakeholder receives what (s)he expects/desires. **Quality is not about doing** the newest, the most sophisticated or the most costly job; it is only about doing that which is expected by the stakeholders. Quality is about relevance and meeting needs. By this definition, some low cost, local agricultural secondary schools may be providing high quality while some high cost, urban universities with sophisticated post graduate programs may not be; it depends in both cases if the stakeholders are satisfied or not. Since quality is a measurement of the degree to which the expectations of particular stakeholders are met, then one must not make the mistake of assuming that granting a higher degree title or creating a longer or a more expensive program will necessarily mean higher quality. For example, quality in secondary education reflects the degree to which graduates obtain adequate paying jobs and satisfy their employers. Quality here has little to do with traditional high academic standards. (The best entomologist is not the one who knows the most scientific names or who can describe in greatest detail insect anatomy, but rather the one who is able to manage most effectively insect pests at the field level.)
- Agricultural education: I believe that this is a term of the past. All "agricultural" institutions, if they aspire to quality, even to survival, must define their mandate more broadly than in the past. We now need to talk about education for agriculture, agribusiness and integrated rural development. This includes all those teaching and learning activities that are related to production of raw agricultural materials, as well as the processing, distribution and marketing of those materials and most broadly, to the quality of life in rural areas. At least in Latin America, it is virtually impossible to conceive of agricultural education as a technical undertaking that does not include the social, managerial, environmental and marketing dimensions as centerpieces of the curriculum.
- As an exercise, we will see what other terms require definition as we cover the ideas contained herein.

Zamorano³

Now let me tell you a bit about the institution where I work; that way you can judge better my biases and point of reference. Zamorano is a private institution of higher learning incorporated as a nonprofit organization in the United States. It operates out of Honduras and enrolls annually almost 800 students from 21 different Latin American countries. The institution was founded 60 years ago as a secondary agricultural school for boys. Most of you would categorize the institution today as a Polytechnic University for rural development.

The curriculum of the undergraduate program focuses on four career areas:

- Agricultural Science and Production, including animal-based systems, crop-based systems and biotechnology

²Don't misunderstand me here. Most schools at all levels are NOT meeting stakeholder needs and therefore are not achieving quality.

³All participants in the conference will receive additional materials on the Zamorano program.

- **Agribusiness Management**, focusing primarily on management and marketing
- **Agro-industry**, with strong interest in food science and technology
- **Socioeconomic Development and Environment**, an approach that focuses on the poor producers, their families and communities; this program emphasizes support to micro entrepreneurs, watershed management, municipal governance, and related subjects.

The pillars of the Zamorano program are:

- **Learning-by-doing**: all students spend half of their time in hands-on, active learning activities in on-campus enterprises, in labs, in extracurricular activities, in off-campus practices and doing their thesis. All learning-by doing activities should be "professionalizing" rather than vocational in nature.
- **Pan Americanism**: students come from many countries, from all social classes and diverse ethnic groups. They live and work under identical conditions and are judged by their productivity and contributions, not their socioeconomic origins.
- **Academic excellence**: students are carefully selected and the rigorous curriculum is extremely demanding; it prepares graduates for advanced studies, especially in areas related to business administration and rural development in the broad sense.
- **Character and leadership formation**: Zamorano puts a premium on the development of mega skills (key qualifications) that are the basis for personal success and social progress. These skills and characteristics include bilingual communications skills, the ability to work effectively in groups, creative problem solving, moral values, and a strong work ethic.

In addition, the Zamorano system avoids all sectarian politics and believes that the private sector plays an important, constructive role in wealth creation and socioeconomic progress.

Zamorano graduates are in general very successful. They have a near 100% employment rate. Almost all graduates work in the for-profit or the not-for-profit private sector. Five years after graduation, 70% are in managerial positions. Two thirds take a postgraduate degree within five years of graduation. Their salaries are much higher than those of graduates of other agricultural programs. Almost 50 of them have served as Ministers or Vice Ministers in their home countries.

In Zamorano, we never have enough resources to accomplish all we want to do, although by Latin American standards we are a well-to-do institution. By world standards we lack many key resources.

Zamorano supports itself from five different sources:

- **Students' families pay tuition that accounts for approximately 20% of the institution's operating budget.**
- **Scholarships that come from many sources, mostly European governments, the US government and the Latin American private sector, provide another 25%.**
- The single largest source of income (roughly 30% of the income) for the institution involves the sale of the byproducts of our learning-by-doing program. I will describe this component in more detail below.
- The outreach program, supported by governments and businesses, provides important social services and impact through training programs, extension and applied research. At the same time these activities provide learning-by-doing opportunities for students and faculty, they also generate substantial income in the form of work-study assistantships, salary substitutions, and capital investments. In a typical year this category provides 20% of the institution's budget.
- The miscellaneous unrestricted donations that come to us other than those given for scholarships or in the grant and contract category. This category, while small, is growing.

As you might understand, we always feel like a juggler trying to keep five balls in the air at once. However, this diversity of financing does increase our ability to generate funds and

buffers the university from the hardships related to a downturn in any particular area or from any particular funding source.

Our success in maintaining the income from all five categories occurs insofar as the stakeholders perceive that our program is of high quality. Parents have to believe that they will receive value for the money they invest in their children's education in Zamorano. Donors who provide scholarships must feel that the students they support will, as graduates, make a difference in the world. Consumers of Zamorano's products - (cheeses, ornamental plants, seeds, meats, vegetables, etc) must perceive that the products they buy on the market are the best quality offered for the price. Finally, donors who give gifts to the institution believe in Zamorano's mission and impact.

Confronting scarcity and providing quality

Based on my observations in Latin America, let me propose that agricultural education institutions in order to be successful even as they confront a scarcity of financial resources, must simultaneously do several things that I divide into two categories: 1. specific, obvious managerial issues, and 2. issues of strategic orientation and alliances. In general the following suggestions move from the concrete and easiest to the most abstract but most important.

Specific management issues

1. Good institutions must be efficient stewards and must use wisely whatever resources they do have. Good stewardship is a key component for two reasons: 1. limited resources go farther if managed efficiently, and 2. stakeholders, especially donors, believe in and support efficient institutions. Donors move away from inefficient ones. Cost controls are very important. One of the especially important items is the number of employees. The productivity of employees has to be a key concern of all administrators. This is especially the case for the most expensive employees, the top administration and the teaching staff. Un- and under-productive personnel cannot be retained.
2. Institutions must have an effective auditing/business management system. Any institution that intends to receive public or private sector support must assure and prove that those resources made available (however limited they may be) are and will be used carefully and efficaciously. A transparent and efficacious business management and auditing capability is essential not only to assure that current limited resources are used effectively but also to inspire confidence so that governments, corporations and other possible supporters will be inclined to invest their own scarce resources in the school's or university's programs.
3. A tight, specific program focus is also a key. No institution can do everything. All effective institutions focus on a limited portfolio of activities that in one way or another are mutually reinforcing. Excessive breadth of programs is often a sign of bad leadership or financial desperation, and is a key factor leading to low quality. Get rid of non-essential programs and low priority activities.
4. Seek double benefits. Even as I restate the need for focus, I want to cite the importance of getting secondary or tertiary benefits from every dollar, franc or pound invested. That is, while our job is education, if we can generate income for the institution from our productive activities then we must do that. If learning-by-doing activities are a part of our program (they should be in any agricultural program), then whenever possible, students should be allowed to learn-by-doing and at the same time produce for the economic benefit of the institution. A key for good management is cost recovery through the sale of the sub-products of learning-by-doing. Additionally, paid in-service training and short courses can be superimposed upon our regular learning-by-doing activities, generating in this way substantial additional income with very little additional expenses.

Issues of Strategic Nature especially alliances

5. An essential element of a modern management approach involves the creation of alliances and sharing of resources with the private sector. The private sector can provide guest lectures, supervise student theses, provide equipment and inputs and do much more.⁴
6. Assure that programs prepare students to accomplish what needs to be done in the present and the future, not what may have been useful in the past. Make sure students are prepared to contribute to productive tasks that create wealth, not just to academics' interests. If we provide a quality service that satisfies stakeholders, then those stakeholders will be supportive of our program. Zamorano's experience as well as that of CODESER in Chile, ENCA in Guatemala and several others is that when we provide quality graduates to society, then local and national entrepreneurs will provide in-kind services as well as scholarship support, used equipment and so forth. They will hire our graduates. On the other hand, those institutions that cannot obtain support from businesspeople are probably providing graduates who are inappropriately trained to meet the demands of the private sector. Both the

⁴ Programs that are designed only to deal with smallholder agriculture, while socially valuable may undercut their own financial capabilities, and minimize their ability to mount high quality programs in those areas that are socially most valuable. When an institution addresses the needs of industrialized (technified) agriculture it can create internal capabilities and experiences that allow it to better address the needs of the poorest of the poor.

curriculum and the very nature of the institution have to be scrutinized in this case.

7. Nurturing of stakeholders, especially of graduates. Open the doors of the institution to the stakeholders and get them involved. In order to maintain levels of support and to increase stakeholder interest, graduates must be supportive of their alma mater. Satisfied, informed, committed graduates are the best ambassadors a school or university can have. Unsatisfied, uncommitted or unhappy graduates can poison the environment and undercut stakeholder support.
8. Do those inexpensive things that are essential. Especially focus on the invisible curriculum. Some kinds of improvements, while desirable, are clearly beyond the financial reach of most institutions in the developing world. However, other changes with huge potential value for the students and graduates are possible at virtually no cost. Especially important are those changes good leadership can induce in the invisible curriculum, the corporate culture and the organizational climate. Good leadership will assure that the environment in which students are growing is conducive to the formation of efficacious habits and attitudes. My observations indicate that an environment of scarcity coupled with a can-do institutional culture can be much more formative than an environment in which resources abound but community members do not feel challenged or motivated.
9. An underlying, even basic or causative issue or mechanism that is central to the efficient use of limited resources involves institutional governance structure. My observation in Latin America has been that those institutions that depend upon private sector advisors or directors are more efficient. If the principal or president of the school or university responds periodically to a Board of Directors or a Board of Trustees (or at least to an Advisory Board) on which successful business people sit, then that institutional leader will be a more effective, capable person who stewards the limited resources more effectively. In contrast, in Latin America those institutions that report directly to a Ministry of Education or a Ministry of Agriculture tend to be concerned much more with politics and professors' benefits than with the efficient and effective use of resources for students' and society's benefit.

Summary

In summary, the efficient and transparent stewardship of limited resources to carry out socially valuable projects that respond to the multiple real needs of stakeholders creates a virtuous spiral. The following factors are interrelated and mutually reinforcing:

- Good governance with strong stakeholder representation
- effective stewardship of resources quality education recruitment of outstanding young people as students relevant curricula a constructive invisible curriculum the graduation of high quality graduates good graduate placement rates involvement with the private sector
- confidence and financial support from the ministries, the private sector and other stakeholders.

On the other hand, negative factors can also be interrelated and mutually reinforcing:

- governance structure that stimulates a political orientation and minimizes stakeholder involvement
- self centered programs that do not focus on stakeholders' needs inefficient, even corrupt utilization of resources
- poor quality of students recruited
- outdated or irrelevant curricula
- a counterproductive invisible curriculum low quality graduates poor placement rates anti-private sector attitudes and behaviors lack of support from ministries, the private sector and other stakeholders.

Governance structure is key. I am certain that cultural differences among different societies, including major differences among continents make any recommendation regarding specific organizational structures risky. However, governance influenced by stakeholders would seem to be the principle worth seeking.

Dr. Keith L. Andrews is a US citizen and a graduate of the University of California, Riverside. His initial academic experience was in Integrated Pest Management and rural development. He has lived and worked since 1978 in Central America, one of the poorest regions in the American Continent. Until 1993, he was Professor of the University of Florida working in Central America. For 21 years he has been a Zamorano professor and for the last 9 years he has been Director General at Zamorano. His current professional interests include the relationship between academia and rural development, institutional change, and the role of the invisible curriculum in quality education.
