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Haitian Agricultural Faculty Preparation for Their Academic Roles

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Abstract

Food insecurity is widespread in Haiti. The tertiary agriculture institutions have the great challenge of educating the future professionals who will help in meeting the growth needs of the Haitian agriculture sector. The extent that faculty are prepared for the teaching roles is unknown. This study examined this topic using a basic qualitative study that consisted of interviews with 37 lecturers working at five leading agricultural universities in Haiti. Data were analyzed using a basic thematic analysis. Results revealed the majority of participants generally felt well-prepared for their academic roles. The institutional climate for professional development is variable across the universities represented by the participants of this study. Incentives for participating in professional development were primarily intrinsic. There were 56 specific topics suggested by participants for professional development trainings.

Keywords: professional development, higher education, Haiti, faculty

Introduction

Food security is a concern in developing countries. According to the Global Hunger Index (GHI) in 2016, seven countries still have an alarming level of hunger and as many as 43 others fall under the serious level of hunger (Von Grebmer et al., 2016). Most countries in the Latin America and the Caribbean (LAC) region have a low or moderate GHI, but a few still have serious (Guatemala) and alarming (Haiti) levels of hunger (Von Grebmer et al., 2016).

The definition of food security, according to the 1996 World Food Summit is the “physical and economic access to sufficient safe and nutritious food that meets [people’s] dietary needs and food preferences for an active and healthy life” (FAO, 2003, p. 28). This definition underlines the four dimensions of food security, which are (a) food availability determined by the level of production, (b) household access to food through sufficient income and physical accessibility, (c) utilization of safe food for optimal nutritional status, and (d) the stability of these three dimensions over time. If these dimensions do not occur simultaneously, there is food insecurity (FAO, 2008). Food insecurity is either chronic or transitory. The real concern is chronic food insecurity, which is persistent over time.

Education is linked to food security in that universities play a role in the supply of knowledge and skills to ensure sustainability of food production and throughout the entire value chain (Mutimba, Knipscheer, & Naibakelao, 2010; Pierre, María Eugenia, Liberio, Gladys, & Oliverio, 2014). The necessary knowledge and skills are diverse, and agricultural education must emphasize on curricular revisions that target the rapid scientific and technical changes as well as the need for a review of educational processes (Pierre, 2015; Van Crowder,

Lindley, Bruening, & Doron, 1998). However, who is to make those changes? Are faculty members from developing countries capable and empowered to deliver the new curricular content? From 1981 to 2006, the number of agricultural researchers in the LAC region has increased 1.4% per year with significant differences across countries (Stads & Beintema, 2009). The same study found only 33% of researchers in a 15-country sample from the LAC region were PhD-qualified, 32% were trained to the MSc level, and 34% held a bachelor’s degree. Generally, researchers from Central American countries have less qualified staff than neighboring Mexico and other South America countries and the smaller countries in the region generally depend external reserachers (Stads & Beintema, 2009). The need to respond to higher enrollment demand has caused the academic profession and qualifications of lecturers to decline in many countries; with half of the world’s university teachers only earning a bachelor’s degree (Altbach, Reisberg, & Rumbley, 2009). Further complicating the situation, in Latin America approximately 80% of university faculty are employed part-time (Altbach et al., 2009). Although some data exists about the LAC region as a whole, little is known about Haiti. This study will help fill that gap and better understand the efforts of Haitian educational institutions to provide agricultural education that prepares students to enter the workforce and effectively address the food security needs of the country.

Literature Review

Teachers’ experiences include a wide range of activities that may increase knowledge and skills while improving teaching practices and contributing to personal growth (Desimone, 2009). Not all of this teacher experience, however, qualifies as professional development

(Desimone, 2009). Many terms are used interchangeably to refer to this increased knowledge and skills such as: (a) faculty development; (b) instructional development; and (d) professional development. However, organizational, career, and personal development are terms used when the emphasis is put on the institutions or the teachers themselves (Camblin & Steger, 2000). Faculty development's objective is to continually improve the education system; but defining how to deliver for developmental needs of diverse faculty is challenging (Camblin & Steger, 2000). It is sometimes believed that faculty members could self-educate, but that assumption is not taking into account the recent rapid knowledge advancement (Camblin & Steger, 2000). Institutionalized faculty development therefore becomes crucial.

According to an analysis of nine studies in teacher development, professional development varies more in content and substance than in form (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Fortunately, there seems to be a research consensus about what main outcomes of professional development may be relevant: teachers' changes in knowledge and practice have been identified and to a lesser extent student achievement (Desimone, 2009). There is a consensus about what is critical to reaching these professional development outcomes. The most critical factors are (a) subject matter's content focus, (b) opportunities for teachers to engage in active learning, (c) coherence between teacher learning and teachers' beliefs and knowledge, (d) collective participation, and (e) sustained and intensive duration of faculty development activities (Desimone, 2009). All of these factors influence teachers' behavior change in knowledge, practice and student achievement while recognizing that faculty development is an evolving plan that is linked to both the faculty and the

institution (Camblin & Steger, 2000). Spindler and Ogwo (2014) emphasized the importance of developing professional development programs that "emerge from the ranks of the participants in ways that eliminate a top down expression of preconceived concepts" (p. 44).

In the LAC region, tertiary education has been mostly public but with the recent higher demand from students, new private universities in the region have emerged (Torres & Schugurensky, 2002). Most higher education institutions do not conduct research and do not offer graduate-level education. Although this expansion may increase the overall capacity in a country, they are not necessarily conducive to high quality education as the proliferation of privatized institutions have not been properly regulated and the requirements for setting up a higher education program in not always respected in these countries (Torres & Schugurensky, 2002; Urzúa, 2002). LAC's contribution in the scientific and scholarly publication worldwide is modest; most of it comes from the Spanish/Portuguese-speaking larger and richer countries as opposed to the smaller French/English-speaking countries in the region (Delgado & Weidman, 2012). As a complicating factor, many of the professors in these new private universities are either also working in the public colleges or are practicing professionals who want to teach on the side. Therefore, the quality of the education given to these accrued numbers of students remains a major challenge (Urzúa, 2002). As mentioned by a study in the LAC, when the concept of quality is viewed from the institutional or educational system's perspective, it is multidimensional and includes efficacy and efficiency of teaching, research, and extension (González González & Santamaría Ambriz, 2013). The requirement for a quality shift in LAC's agricultural higher education is undeniable,

as shown by the strong need for transformation of the agricultural sector which includes technological improvements both human and material (Alcortaa & Peresb, 1998; Kendall & Petracco, 2009).

Haiti's situation on higher education is quite similar. Each year 28,000 students enroll in the Université d'Etat D'Haïti (UEH) and only 12,000 in the private institutions (Wolff, 2008). Quality seems to be a major issue also, as suggested by the enrollment ratio in Haiti being one of the lowest in the world, and the fact that the students with educational qualifications and funding for higher education choose to study in other countries (Wolff, 2008). Very little information exists about Haiti's tertiary agriculture institutions. The Caribbean Council for Higher Education in Agriculture (CACHE) lists six main universities with agriculture programs. Anecdotal evidence shows at least nineteen are recognized by the national Ministry of Education and Professional Training, and perhaps many more operate without accreditation. Very little research has been conducted on these institutions, so there much unknown about the faculty and the curriculum. Two recent studies did begin to explore these institutions. The first one analyzed the curriculum of the main public college of agriculture (Faculté d'Agronomie et de Médecine Vétérinaire; FAMV) and a private university (Université Caraïbe; UC). This study concluded a curricula change was needed to lead to sustainable agricultural development in Haiti. This study also acknowledged public policies needed revisions to reach this goal (Pierre, 2015). The second one examined the social capital of teaching faculty comparing those that teach at one university with those who teach at multiple universities (Albert, 2016). There were no differences observed.

Purpose and Objectives

The purpose of this study was to explore the preparation of Haitian agricultural faculty for their academic roles. Specifically, we sought to (a) understand how faculty were prepared for their duties, and (b) explore opportunities for professional development with these faculty.

Methodology

This study was implemented as a part of a larger USAID funded development project. This study used a basic qualitative design (Flick, 2007). Interviews were conducted with Haitian faculty using a semi-structured interview guide with eight open-ended questions. The interview guide was developed based on the literature review and on expertise of the research team. The interview guide was then translated to French and back-translated to English by a second translator to ensure the translated version maintained content validity. A panel of experts familiar with the Haitian context reviewed the instrument and it was revised as needed for cultural appropriateness. The lead Haitian researcher facilitated two practice interviews with Haitian faculty and made additional revisions to improve clarity and the overall quality of the data obtained. All activities in this study were approved by the University of Florida IRB.

Participants

Based on goals of the larger project, five agricultural universities were identified for this research based on their membership in the Caribbean Council for Higher Education in Agriculture (CACHE). These included (a) Université d'Etat d'Haïti - Faculté d'Agronomie et de Médecine Vétérinaire (FAMV), (b) American University of the Caribbean (AUC), (c) Université Caraïbe (UC), (d) Université Notre Dame d'Haïti (UNDH), and (e) Université Quisqueya (UNIQ). At that time

of data collection these institutions employed a total of 277 lecturers, of which 61 were full-time and 216 were part-time. Over half of the full-time lecturers worked at FAMV.

A snowball sampling technique was used to identify individual lecturers to interview (Merriam, 1998). The Deans at each institution provided an initial list of lecturers and each participant was invited to nominate additional peers. Recruitment of participants continued until redundancy in the data was achieved (Merriam, 1998). In total, 37 lecturers were interviewed, 11 from FAMV, seven from AUC, one representing UC, and nine from both UNDH and UNIQ. It is not uncommon for faculty in Haiti to work for more than one institution simultaneously and our sample was no exception to this norm. Only a third (32%) of participants were employed with just one institution at the time of our research, 35% worked for two institutions, 24% for three institutions, and 8% worked for four different educational institutions. Participants were coded by their primary institution of employment (U1, U2, U3, U4, or U5) and assigned a number in the order they were interviewed. The majority of participants were male (75%) and approximately 30% held an administrative appointment in addition to their teaching roles.

Data Collection

Data was collected using face-to-face interviews at locations determined by each participant. Interviews collected data for this study and a related study. The portion of the interviews pertaining to this study lasted approximately 20 minutes and the entire interviews lasted approximately 1 hour. Interviews were conducted in French by a Haitian researcher. A research assistant was also present. The researcher and research assistant took detailed field notes during the

interview. Following each interview, the researcher created a detailed case file. The research assistant verified accuracy of the case file. Once the case file was finished, it was sent to each participant to review as a form of member checking (Merriam, 1998).

Data Analysis

Guided by the purpose of the research, data was analyzed using a basic thematic analysis approach using line-by-line coding (Gibbs, 2007). A constant-comparative approach (Glaser & Strauss, 1967) was used to identify initial codes (sub-themes) and then organized in larger themes of related codes. To improve reliability of the analysis, two researchers collaborated on the initial analysis, the Haitian researcher who facilitated the interviews and an American researcher working on the project as well (Lincoln & Guba, 1985). Each researcher analyzed the same 10 case files, one in French and the other in translated English versions. Results were compared after each case file was analyzed to refine the coding techniques until the two researchers were coding nearly identical.

Trustworthiness

The trustworthiness of this research was established through multiple measures. First, a thick-rich description of participants is provided (Lincoln & Guba, 1985). Second, member checking was accomplished by allowing participants to review the case files from their interviews (Merriam, 1998). Dependability was established by using two researchers to establish the coding process (Lincoln & Guba, 1985). Finally, credibility was established through regular peer debriefing between the Haitian researcher collecting and analyzing the data with the remaining research team in the U.S. (Lincoln & Guba, 1985).

Subjectivity Statement

This research and manuscript was developed, implemented, and written by a large team of researchers. This research was funded by a USAID project. Interviews were conducted by a Haitian researcher employed by the project. This researcher had previously worked at one of the universities featured in this study completed previous research on two of the universities. This researcher conducted the data analysis, in cooperation with another researcher from the U.S. The researcher in the U.S. had no prior interactions with these universities, but had extensive experience in faculty development in higher education. Other researchers on the team who contributed to the writing and interpretation of the data included a Haitian graduate student funded by the USAID project attending school in the U.S., and two additional researchers from the U.S. The final members of the team included a U.S. researcher who serves as the overall USAID project director and a Haitian researcher employed by the project who had previously worked at one of the universities in this study. The last two members of the team were not involved in the implementation of this study, but helped make initial contacts to make the study possible. Collectively, we believe enhancements in the higher education system in Haiti will have positive impacts on the long-term food security of the country. Having a large team with diverse backgrounds allowed us to interpret the data in a way that minimized the influence of any one person's biases.

Findings

Academic Preparation

Homegrown satisfaction. Twenty-two interviewees (60%) graduated from the institution where they currently work (U5-001-002-003-004-005, U1-009-010-014-015-017-018-019-020-021-022, U3-011,

U2-016-026-027-035-036, U4-037). Most of them believe their institution adequately prepared them to do their job. As some examples, U4-037 believed his institution trained him very well to be the academic secretary at the college of agriculture, especially skills related to scientific reading and research. This was also true for U2-036 who believed his institution taught him everything he needed, particularly *learning to learn*. Another U2 graduate (U2-035) indicated his institution has adequately prepared him to perform his current job duties. It taught him some skills like leadership, communication, confidence, and self-esteem. For U4-033, her institution taught her communication, leadership, and professional ethics. As an indicator, she shared she was managing 400 students at the time of the interview. U1-021 affirmed too that, in general, this college of agriculture prepared him adequately to do his actual job. He learned to be hardworking and patient. He also learned a sense of duty. U3-011 worked at the institution where he graduated and today has become the Dean. He believed that his institution trained him adequately. However, he recognized that there were some weaknesses on which they needed to work.

Cross-institutional satisfaction.

Fifteen interviewees (40%) graduated from other institutions in Haiti or abroad (U5-006-007-008-012-013, U4-023-024-025-029-030-032-033-034, U2-028-031). For instance, U4-034 graduated from a university in Venezuela. For him, his institution prepared him very well to do his job. He specifically mentioned the leadership skills he learned were very valuable for his current job. U4-032 earned his diploma from a university in Italy. He also completed some additional studies in education in Paris. He was very complementary about what he learned from these institutions. He specifically talked

about how they helped him develop a pragmatic philosophy, focusing on the usefulness of education. He was pleased with how those institutions helped him develop his research skills and the ability to organize his thoughts. U2-031 graduated from a university in Cuba with a degree in Economics. She later earned her master's degree from a research institute in Costa Rica and received a diploma in gender. She believed these institutions adequately prepared her for her professional duties. Other examples are U4-030 graduated from a non-agriculture university in Haiti and thought that his institution did a good job. He specifically recalled how he learned professional ethics. This was the same case for U5-013, who graduated from U1 and was generally complementary. However, he recognized thought that U1 only partially contributed to his education because he has received additional trainings from other institutions, especially in aviculture and small mammals.

Inadequate preparation. Not all participating faculty were satisfied with their preparation. U1-015 affirmed that it was difficult to say if his institution prepared him adequately to do his actual job. According to him, it would be better to ask this question to the people he works with. U5-006, graduated from U1 and works at U5. He was very clear that U1 did not adequately prepare him for his current professional responsibilities. He was dissatisfied with the curriculum and pedagogy at U1. He shared this experience was a primary motivator for trying to change things at U5. U5-004 believed his institution provided him the bare minimum in terms of skills needed to perform his current duties. He took it upon himself to continue learning. U5-003 also believed his prior education gave him the minimum skills to fulfill his professional responsibilities. He went on to share about the contribution of his family as an

additional source of professional growth. Cultural understanding (apply values and good principles such as honesty, respect, etc.) and critical thinking (establish strategic partnerships, networks and manage stakeholders) were some skills he learned from his family that were helpful to him in his professional responsibilities.

Mentorship. Evidence of mentorship was not prevalent in this study, but was important for at least one of the participants. Overall U1-014 believed his institution did a really good job. Although he did share that he learned to teach on the job when he worked as a new Assistant Professor. At that time, he had a mentor who helped him, a Professor with whom he worked. This mentorship helped him learn the basics of teaching and his mentor gradually gave him additional tasks and more responsibilities as time passed. His mentor used a *laissez-faire* approach, but was present to correct and to clarify. Depending on how he progressed, he would let him practice with the students until he was able to manage a classroom by himself.

Institutional Climate for Professional Development

No institutional priority. Many lecturers complained their institution did not formally or systematically offer professional development programs (U5-001-002-003-004). Some of these faculty had participated in programs from other institutions, but their institution had not helped with the costs. They all agreed that those programs were important to their personal and professional development. U5-001 complained her institution did not offer any improvement programs and continuing education to its employees at the executive level. She further lamented about the institution not recognizing the increased value of faculty after receiving more training. For example, she shared that if an employee got a master's

degree and returned to his or her initial position at the university there would be no increase to his or her pay. An increase in pay would be applied only if that employee got a higher position when he or she came back. She thought there should better pay for an employee who seeks to improve his or her professional competence. Lastly, she exclaimed with better pay the employee would be more motivated.

Outside opportunities. U5-002 indicated his institution had no official professional development programs. His colleague U5-004 criticized that those programs were generally left at the employees' personal initiative while they could have a positive impact on their development and their institution. U3-011 benefited from a two-month professional improvement program at a university in the Virgin Islands where he learned about leadership. For him, this was really helpful because he used this skill every second, every minute. Indeed, according to him, every second we need to constantly make a decision. He learned to think, to listen and to understand before making a decision. U1-008 confirmed that his institution offered professional development programs. He had previously participated in a previous faculty development program that had positive impacts on his teaching methods. He learned how students received information, transmission, and agricultural entrepreneurship.

U1-009 participated too in an excellent program in France. He benefited from a scholarship on professional placement. He learned enough skills and competencies from that program to be able to advise graduating students and helped them to be ready for employment. An integrated model had been developed in this program. This model was designed based on the institutional structure in order to place the students of Montpellier on the job

market. He confessed that a U1 faculty might not be rewarded for participating in development program. However, they could be supported by a partner institution that could cover the cost. For him, the stipend helps meet some basic needs. But, even without that, they might still participate. U1-010 thought the same too. He talked about a two-month program he participated in Israel with great satisfaction. The program was about *integrated pest management*. Since then, he shaped his work as a plant pathologist. He loved the relativistic method used to perceive the reality. In fact, he insisted that the same causes do not always lead to the same outcomes. U1-010 did not have financial resources to help cover living expenses. He thought it was important for this college of agriculture to gain the financial resources to help cover living expenses for professors.

Another interviewee (U1-014) thought that even with limited resources, his institution supported those who wanted to participate in a professional development activity. He remembered participating in a program in Jamaica on tissue culture. He explained that there are some plants, like roots and tubers, whose quick multiplication is difficult. He saw direct connections between his professional development and food security in Haiti.

U1-018 explained very well that his institution did not systematically offer those programs: usually this is an opportunity. At a university in the U.S., he remembered having participated in a program on plant biological nutrition. By that time, they should develop *leguminosae* in Haiti. By the mercy of this program, he had his laboratory. He learned from this program to manage some tools and instruments that he did not know to manage before. That helped him a lot. With his students, he got more to say or to teach. He made more contacts with other colleagues. All this was to say that

participating in those programs help him to have new knowledge and tools of analysis. This is the same thing for U1-019 who thought that those programs were really important for a professional to recharge his battery, to go deeper in their knowledge. An example of how it is important to participate in professional development program is given by U1-022. She participated in a program in Belgium on Electrochemistry. As a result of this training, she improved the chemistry lab of her institution which ultimately impacted the larger community in Haiti.

U2-026 believed that his institution supported professional development training. He participated in some training on agroforestry and in a seminar on extension and morphologic characteristic of the cacao in Grand'Anse in Haiti. But, he loved the last one the most because he loved this field. He learned how to renew cacao plantation, particularly the canopy.

Faculty Incentives for Participating in Professional Development Activities

Reward. U5-002 shared faculty were not rewarded for taking part in any enrichment program. He or she might gain the skills to move to a new position after a training or enrichment program, but this change did not automatically come with monetary compensation. He stressed that both the economic aspect and professional development had to be considered. U5-003 did not even know if his institution usually rewarded its personnel for participating in professional development programs. U5-004 believed that even without reward, faculty might be interested in participating to professional improvement training. U5-005 thought attending a training was more important than any reward for attendance. For him, even without money or any kind of rewards, faculty would participate in a professional development program. U3-011

believed the skills learned, the exchange, and the participation were the most important. In fact, he felt strongly that he represented his institution and his country. So, even without financial support, he believed faculty would participate in such programs. U4-032 suggested an institution might support faculty would be the opportunity for internal advancement. But, he believed he would still participate in professional development without reward from his institution. U4-023 said with or without support, it was important to participate in professional development because "we never finish learning." But his colleague, U4-034 thought that being supported for participating in training created enthusiasm to participate.

Financial compensation. Many of the faculty would still attend professional development training even though compensation was not offered. U5-011 thought that participating in a program, even without compensation, might be a way to learn new competencies. For U5-012, it was important to take in account faculty who had to leave their families to attend a professional development program. Expenses incurred to attend a training may be especially difficult for faculty with families. If the institution is not capable of providing compensation, the organizers of the training should consider assisting. U1-014 thought that it was important to support all faculty to participate because everyone incurs expenses. Although he acknowledged for some trainings, a faculty might choose to participate without any support. U1-015 thought one solution could be cooperation (*Jumelage* in French) between some colleges of agriculture in Haiti and abroad. U1-017 and U1-018 indicated their institution should consider a *per diem* for faculty. U1-018 recalled the ministry of agriculture assisting with travel costs in the past, but no longer assists. U3-011 reported

his institution does provide compensation in the form of an airline ticket and up to \$100 USD a day to encourage participation in a professional improvement programs. According to U2-016 and U2-026, their institution provided financial support for professional development programs. Depending on the duration of the training, they might receive up to 5,000 Gourdes (less than \$100 USD) per day. For U2-026, the benefit of attending the training was the only thing that counts. She believed that even without financial support, she would participate. U4 faculty reported receive 750-1000 Gourdes per day if the training was in Haiti, which was typically not enough to cover expenses (U4-024, U4-025, U4-032). Regardless, U4-024 and U4-025 believed the training was more important than financial compensation. U4-032 also added they could receive up to \$120 USD if a training was abroad.

Specific Professional Development Topics

Faculty expressed interest in many specific topics. This is summarized in Table 1 below. In *social sciences*, 14 different topics were suggested by 14 different participants. Human resource management (5 participants) and leadership (4 participants) were the most frequently suggested topics. For *plant science/production*, 11 participants suggested 15 topics. Soils and plant pathology were the most frequent suggestions with three participants suggesting both topics. *Environmental science/natural resources* had ten topics suggested by seven faculty. Climate change, environmental protection and environmental protection each was suggested by two participants. For *research methods and approaches*, eight topics were suggested by six faculty. Only biometry was suggested by more than one participant. *Food science,*

safety, and nutrition had four topics identified by four faculty. Food safety was the most suggested topic (three participants). For *animal production* topics, three participants suggested five topics. Only animal feeding was suggested by more than one participant.

Conclusions and Discussion

Several conclusions can be drawn about the preparation of this group of Haitian agriculture lecturers. Conclusions and discussion are organized around the identified themes of academic preparation, institutional climate, incentives, and specific topics.

Related to *academic preparation*, the majority of participants generally felt well-prepared for their roles whether they received their degrees from the institution they currently work (60% of participants) or another institution (40% of participants). A few participants stressed they had recognized deficiencies and sought out additional learning opportunities. The role of informal (on-the-job) learning was mentioned many times. It appears many of the participants are exhibiting information seeking behaviors expected from adult learners (Knowles, Holton, & Swanson, 2015). Given that many lecturers work at multiple universities (Albert, 2016), it is unclear as to how their perceptions might differ. Future research could examine this topic. Additionally, with 60% of the participants working at the institution in which they studied, it is plausible they may not have sufficient perspective to recognize deficiencies. Additional research should examine this phenomenon. Additional research should also examine the extent to which teaching-related topics are addressed in graduate programs in Haiti.

Table 1

Specific Professional Development Topics Identified by Haitian Faculty

Topic	Number of Faculty
Social Sciences (14 topics; 14 faculty)	
• human resource management (U5-002; U4-023; U4-024; U4-025; U4-032)	5
• leadership (U5-002; U2-035; U2-036; U4-024)	4
• agricultural extension (U5-003; U5-005; U2-035)	3
• teaching methods (U2-016; U2-035)	2
• curriculum development (U1-021; U2-035)	2
• communication (U2-016; U4-024)	2
• agricultural entrepreneurship (U4-033; U4-037)	2
• career management (U5 -002)	1
• organizational behavior (U4-025)	1
• ethics (U2-036)	1
• gender and agricultural development (U2-031)	1
• agricultural economics (U4-037)	1
• enterprise management (U4-023)	1
• marketing (U5-003)	1
Plant Science/Production (15 topics; 11 faculty)	
• soils (U2-026; U4-032; U1-008)	3
• plant pathology (U4-006; U2-026; U4-033)	3
• improvement of crop varieties (U5-004; U1-014)	2
• genetics (U2-027; U1-017)	2
• crops production (U1-008)	1
• horticulture (U1-014)	1
• green house management (U1-017)	1
• bio fertilizer (U1-018)	1
• plant nutrition (U2-027)	1
• plant biotechnology (U1-018)	1
• agroecology (U1-018)	1
• phytopathology (U4-032)	1
• nematology (U2-026)	1
• agricultural machinery (U4-006)	1
• fruticulture, (U1-021)	1
Environmental Science/Natural Resources (10 topics; 7 faculty)	
• climate change (U2-031; U1-008)	2
• environmental management (U5-001; U1-008)	2
• environmental protection (U5-001; U1-008)	2
• environment and biodiversity (U5-001)	1

• environmental degradation (U1-017)	1
• systemic approach and importance of the ecosystem (U5-001)	1
• wild fauna management (U5-007)	1
• marine ecology (U3-011)	1
• oceanography (U3-011)	1
• topography (U1-020)	1
Research Methods and Approaches (8 topics; 6 faculty)	
• biometry (U4-006; U1-021)	2
• population dynamics (U2-011)	1
• advanced statistics (U3-011)	1
• agricultural experimentation (U4-006)	1
• analysis and data management (U1-014)	1
• modeling system in computer (U1-020)	1
• statistic applied to research (U1-021)	1
• lab practice (U4-033)	1
Food Science, Safety, and Nutrition (4 topics; 4 faculty)	
• food safety (U1-015; U1-022; U4-033)	3
• food sovereignty (U2-031)	1
• nutrition (U4-033)	1
• epidemiology (U1-015)	1
Animal Production (5 topics; 3 faculty)	
• animal feeding (U1-017; U2-028)	2
• animal biodiversity (U5-007)	1
• animal environment (U1-017)	1
• cow production (U2-028)	1
• animal biotechnology (U2-028)	1

The *institutional climate* for professional development is variable across the universities represented by the participants of this study. None of these universities seem to have organized professional development for their faculty. However, many participants had been encouraged and had participated in professional development offered through a variety of sources, including those sponsored by universities outside Haiti and some organized international development agencies. A common thread mentioned by

participants was their personal stories about how much they had learned and the impacts

these opportunities had on them. Spindler and Ogwo (2014) discussed the importance of seeking input from faculty in developing appropriate faculty development programs. It is unclear how current professional development programming for Haitian faculty are developed. Future programs should begin by assessing the needs of faculty. Results of the current study can begin to serve this purpose and should be shared widely.

Incentives for participating in professional development were primarily intrinsic. Receiving additional training did not automatically result in any additional recognition or financial reward. Several participants emphasized that the opportunity of attending a professional development program was itself a form of reward. Participants were generally encouraged by their institution to attend professional development. However, they were not typically provided sufficient financial support to cover all the expenses. Intrinsic motivation for professional development is consistent with adult learning theory (Knowles et al., 2015). Despite the intrinsic motivation, lack of financial support appears to be a barrier. Institutions should examine models for providing lecturers with resources to participate in professional development.

There were 56 *specific topics* suggested by participants for professional development trainings. The most topics ($n = 15$) were in plant science/production. The most faculty ($n = 14$) suggested topics in the social sciences. The two most suggested topics were human resource management ($n = 5$) and leadership ($n = 4$). Thirty-nine topics were suggested by only one participant. Only three lectures suggested professional development on curriculum development or teaching methods. A focus on technical content only partially captures what a professional development program should deliver (Desimone, 2009). These topics do, however, provide some direction for future professional development programs.

This study only captured perceptions of lecturers. Additional research should examine the perceptions of students about their experiences as students. Another study should examine employers' perceptions of the preparedness of graduates. Collectively, this data could be triangulated to provide a

comprehensive look at the curriculum and teaching at these universities.

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