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Journal of Applied Communications

The Journal of Applied Communications

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The *Journal of Applied Communications* is:

- Focused specifically on issues and topics relevant to agricultural and applied communication professionals.

- Peer-reviewed to ensure accuracy and quality.

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ACE develops professional skills of its members to extend knowledge about agriculture, natural resources, and life and human sciences to people worldwide.

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All submissions are peer-reviewed (blind).

Research

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The New Social Learning: A Guide to Transforming Organizations Through Social Media

Nacer Aounallah

Introduction

When it comes to social media, several perspectives are prevalent among those who have knowledge of the subject. Unfortunately, prior to quite recently, I would have been classified as one of those who view the phenomenon as an entertainment tool riddled with trivial information. Thankfully, this book has contributed to rectifying many preconceived misconceptions and expanded upon potential avenues of basic communication by both showcasing applications of successful utilization and introducing technologies that might not necessarily be at the forefront of applied communication.

Key Words

Media, Education, Micro Sharing, Misconception

Summary

The text begins by addressing the common misconceptions associated with social media and its usage. By associating said notions with easy-to-understand analogies, the authors successfully mitigate many of the aforementioned misconceptions and successfully showcase how even current usages are not complete. For example, the text references that when instant messages were initially introduced, the author thought it was a novel solution for communication deficiencies experienced by the hearing and speech impaired, thereby failing to see the larger potential usage that has come to be associated with the technological advancement.

While broad adoption of instant messaging for common communication has become the norm, the similar premise for broad adoption postulated by the book for social media is the adoption for educational usage. For social media to be utilized effectively for educational purposes, communities first must be formed so an appropriate focus and goals can be attributed for social media to be applicable. This is not to say specific organizations need be created with social communication methods embedded as a tool, but rather that existing entities must understand the inherent advantages applicable to social media and adopt them in an appropriate fashion.

After the case for educational usage as applied to organized groups is made, methodologies and groups of similar technological features sets are discussed. Media sharing is emphasized as one of the important features of the social media toolset but an unorthodox approach is taken. As traditional benefits associated with media (such as invoking personal responses, utilizing visual imagery, and emotionally involving individuals) are highlighted, the book takes a novel approach in stating that those very established methods are made fundamentally easier to access with tools such as social media. Aside from new media features and mechanisms, social media provides the ability to access existing content on a greater scale.

In addition to or in tandem with media sharing, micro sharing is also heavily promoted. A case

is made that educational methods are somewhat outdated, but the solution presented is not total replacement with socially derived curriculum. Rather, a heavily supplemented media-rich feature set that involves micro sharing as the primary means of disseminating information and providing appropriate networks to relevant links and media is suggested. Due to the inherent limits of micro sharing, a new emphasis on concise abbreviations and limiting excess domain name space is advocated. To address the limited resources, an almost completely new symbolic method of communication is necessary, but it is apparently workable as many cases highlighting successful usage in organized events and seminars are presented.

Compounding on media-rich and micro-sharing tools is an aggregate effect referred to as a collective intelligence quotient. Using personification, social media is compared to a nervous system rapidly sending messages to necessary sensors for the good of the organism. By connecting the dots of existing information utilizing a web of social media, information is not merely a blind search being conducted by one individual; many participants are actively involved utilizing their collective knowledge in synchronization toward common tasking.

Critique

A great deal of useful information is presented by the text to promote the usage of social media in the realm of education. Unfortunately, aside from successful implementations of particular media sets and key descriptors, much of the text was focused on dispelling those with serious reservations about adopting social media. Considering the audience for such a book is more than likely ready to adopt, it might have actually been more productive to highlight particular models and strategies for emulation to occur.

While the message of the text was generally composed to present the topic in a positive light, not all of the content fits well with the premise. For example, in one instance the author presented NASA's social Spacebook site as an industry specific example of how such media has fostered growth. Unfortunately, Spacebook was shut down due to a lack of function and ready participation, which can either go to show how fast the industry evolves or that the example might have been inflated to a degree to fit the tone of the book. In addition, the entire premise of hosting virtual environments could not be adopted as readily and utilized in education as many of the other methods that were presented. Experiencing topics such as schizophrenia through manipulation of inputs is not truly the same to a mind that is prepared and the potential for wasted productivity increases substantially.

As the last point highlighted, a lot of negative aspects of social media were left out of the text. While it is briefly discussed, productivity issues are not mentioned, oversaturation is not present, and while misuse is touched upon — stating the need for loose guidelines and urging readers not to blame the tools, but rather those engaging in mischief — not much is expanded upon. That is not to say the text has a ready bias, but rather that its focus was primarily upon informing of social media potential and elaborating on methodologies for educational purposes. To that end, the book was a good and informative read, recommended for anyone interested in the subject matter.

About the Author

Nacer Aounallah is a graduate student at Texas Tech University, pursuing an advanced degree in agriculture. He is also employed by the U.S. Department of Agriculture to assist individuals and entities in revitalizing communities through rural development.

Communication Audits: Adding Value and Social Impact to Agricultural Communications

Joy N. Goodwin, Andrea Davis, and Ricky W. Telg

Abstract

Communication audits can enhance the communication efforts of agricultural organizations. Communication audits identify what is being done well, what is not being done well, and how communication efforts can be improved. In addition to communication audits, usability testing adds value to understanding the use of communication materials by a target audience. Taking steps to improve communications, based on the findings of communication audits and usability testing, can help organizations improve their brand consistency, social impact, and overall communication. This paper provides a rationale for communication audits and provides procedures, tips, and experiences for the communication practitioner.

Keywords

communication audit, usability testing, branding, identity guide

Introduction

Agricultural communication programs throughout the nation are well positioned to help agricultural organizations to communicate more effectively. Traditionally, the agricultural industry has not communicated effectively with non-agricultural audiences, especially when compared to organizations opposing agricultural practices and issues (Goodwin & Rhoades, 2011). One step toward improving communication efforts and reaching a desired social impact among agricultural organizations is to conduct communication audits (Root Cause, 2011). Communication audits can be very costly and organizational leaders commonly do not see the cost as justifiable (Holland & Gill, 2006). However, at the university level, agricultural communicators have the opportunity to provide communication audit services to agricultural organizations at a fraction of the cost they would pay elsewhere. A reduced cost is possible when conducted as a freelanced academic research project or student assignment in a university setting. Offering this service at the academic level would allow agricultural communicators to contribute to Priority Area Three of the American Association for Agricultural Education National Research Agenda. The priority area includes contributing to a "sufficient scientific and professional workforce that addresses the challenges of the 21st century" (Doerfert, 2011, p. 9). By conducting communication audits for agricultural organizations, agricultural communicators have the ability to help these professionals develop skills and knowledge that will enable them to communicate more effectively with their stakeholders and the public while also developing a consistent brand. This paper provides rationale for the need of communication audits. The paper also provides communication audit procedures, tips, and experiences.

Communication Audits

At all levels — interpersonal, organizational, and international — effective communication is of vital importance. People rely on good communication to solve problems; however, good communication can be taken for granted until problems arise (Downs & Adrian, 2004). Many organizations commonly utilize too many communication channels when communicating with stakeholders, making it difficult for an organization to understand which communication channel is the most effective (Special Libraries Association, 2004). To ensure effectiveness, it is important that organizations periodically monitor the effectiveness of their communication and communication channels to identify potential problems. Because organizations have a life cycle and are constantly evolving, they must renew themselves and their communication to survive and, ultimately, prosper (Downs & Adrian, 2004). Therefore, communication audits are crucial to the existence of an organization.

Communication audits are formally defined as "a systematic assessment, either formal or informal, of an organization's capacity for, or performance of, essential communications practices" (Communications Consortium Media Center, 2004, p. 1). Communication audits identify communication that is working and what can be improved (Communications Consortium Media Center, 2004). A communication audit should be viewed as an ongoing, dynamic process. This means many communication components should interact together. Additionally, the outcomes of these interactions are determined by unspecified contingencies and have no finite beginning or end (Downs & Adrian, 2004). In essence, all communication should be understood as being rooted in both a historical and current situational context.

A communication audit involves evaluating, examining, and monitoring an organization's communication system. Ideally, a communication audit is used to assess what "is" versus what "ought to be" in an organization (Downs & Adrian, 2004). This can be done by providing internal comparisons over time, benchmarking with other similar organizations, and analyzing the performance levels of competing organizations. Holland and Gill (2006) suggested communication audits should be done by people outside of an organization to increase credibility and objectivity.

Usability Testing

Similar to communication audits, usability testing can be a vital source of evaluation in any organization. However, unlike communication audits, usability testing focuses specifically on the users of a particular product or organization. Usability explicitly means when someone uses a product, it allows them do so "quickly and easily to accomplish their own tasks" (Dumas & Reddish, 1999, p. 4). Therefore, to ensure "usable" communication materials, one would want to focus on and understand the users of the communication material.

To understand the users of communication materials accurately, usability testing can be employed. This process uses participants representing the target audience of an organization to evaluate the degree to which the organization's communication meets specific usability criteria (Rubin & Chisnell, 2008). Usability testing is a research tool that can involve both qualitative and quantitative studies, from focus groups to classic survey methodologies. The ultimate goal of usability testing is to gather data on current usability deficiencies in an effort to maintain communication materials seen as useful and valuable by the target audience as well as satisfying to use (Rubin & Chisnell, 2008).

The Contributions of Communication Audits and Usability Testing to Branding

Branding involves all aspects of an organization, including the organization's employees and stakeholders as well as the organization's products, communications, values, mission, and culture (Kolter

& Armstrong, 2006). The successful development of a brand for an organization is imperative. Both communication audits and usability testing can be used in an organization's branding efforts.

Communication audits help organizations to better understand the state of their organization — what is being done correctly, what is being done incorrectly, and what, if anything, needs to be changed (Communications Consortium Media Center, 2004). These audits allow an organization to understand how effectively information is being communicated to stakeholders. Communication audits can help organizations to develop a brand that is more appealing, consistent, and attractive to their specific target audience (Kolter & Armstrong, 2006).

Usability testing in this context allows organizations to determine how "usable" their communication materials are to their stakeholders. Usability testing can help an organization to brand itself in a positive manner, ensuring its audience views the organization as providing quality services and communication (Kolter & Armstrong, 2006).

Conducting A Communication Audit

The Center for Public Issues Education in Agriculture and Natural Resources (PIE Center) has been collaborating with agricultural commodity organizations to help them improve their communication through communication audits. The PIE Center is a non-profit center with a mission "to enhance public understanding of issues in agriculture and natural resources through practical research in education, communication and leadership development" (UF/IFAS Center for Public Issues Education in Agriculture and Natural Resources, 2011, para. 4). The PIE Center has conducted four communication audits to date and has others scheduled in the near future. Since conducting the first communication audit, the PIE Center's procedures have evolved to create a sound and beneficial communication audit process.

The general process of conducting a communication audit should begin by gaining an understanding of the target audience that the organization is trying to reach and the organization's communication goals (Root Cause, 2011). The next step in the audit process involves collecting a representative sample of communication materials from the organization being audited. Once communication materials have been gathered, the examination and evaluation of the communication materials can begin (Downs & Adrian, 2004). Evaluation and examination will vary slightly according to the organization being audited, the communication materials provided, and the purposes or goals of the organization. However, these processes should always include an assessment of consistency in look, feel, and design across all materials. Additionally, the information provided in the materials should have a consistent message in line with the organization's mission and purpose (Root Cause, 2011). Assessing consistency will help the organization solidify its brand and image, ultimately increasing its social impact. In addition to looking at the communication materials provided, it is important to look for missing pieces in a communication audit. Auditors should think about communication pieces or messages that currently are not being used by the organization. Identifying holes in an organization's communication processes can help benefit the overall effectiveness of a communication audit.

The basic processes mentioned above are the audit steps the PIE Center initially took when conducting communication audits. However, it was recognized that in addition to auditing hard copy communication documents, websites and social media also were important communication tools that needed to be audited in today's culture. This prompted the PIE Center to build basic website usability testing and social media assessment into the communication audits that it completes for agricultural organizations. Now when conducting a communication audit, the PIE Center will

evaluate and examine a website according to the standard communication audit process and then will take a second step to test the basic usability of the website. Basic website usability is assessed by the PIE Center staff. This process involves evaluating the accessibility of the website, the inclusion of worthwhile content, sensible arrangement, and a clean page design (Lannon & Gurak, 2011). When assessing the usability of the website, the skimming pattern of websites, amount of scrolling, and interactive options are considered. Most commonly, interactive elements will include links to click on and materials to download. Regardless of the type of interaction, ensuring these components work properly is essential. To assess the worthwhile content of the website, an auditor must assess what information the target audience wants and needs and if this information is present on the Web page (Lannon & Gurak, 2011).

Another important component of website usability is ensuring a search tool is easy to locate and functioning appropriately. A large majority of website usability has to do with sensible arrangement. Sensible arrangement includes easy-to-use website navigation. This includes clearly and consistently labeled navigation features as well as the ability to get to a desired page in as few clicks as possible. Lastly, the page design is evaluated. Page design can impact the usability of a website if it is too crowded, distracting, or imbalanced (Lannon & Gurak, 2011). By testing the basic usability of an organization's website, the PIE Center has been able to add value to the communication audit process; however, it is important to note that this is basic usability testing that could be enhanced by designing and administering a test of the website with the organization's target audience (Nielsen, 1993). The PIE Center currently does not carry out complete and expansive usability testing as part of a communication audit, but it does recommend complete usability testing to organizations as further steps to enhance their communication process.

The last component of the communication audit process the PIE Center has incorporated over time is the analysis of the organization's social media outlets. If social media links are provided by the organization, the PIE Center evaluates those pages and searches for other pages with the same name. If social media links are not provided by the organization, the PIE Center will search for the organization on common social media sites such as Facebook and Twitter. This practice has been adopted because past audits have shown multiple pages for an audited organization on one social media site as well as pages made with an organization's name without any organization affiliation or connection. This step allows the PIE Center to ensure communications are remaining consistent and effective in the social media world and ensures organizations are not being represented without their knowledge.

The final step of the communication audit process involves compiling a report of findings and recommendations for the audited organization. In this report, inconsistencies, design problems, problematic language, and other findings are identified clearly in a language understandable to the organization. The PIE Center has found it helpful to report findings for each document individually in the communication audit as well as the website and social media. In addition to these specific findings, it is common for the PIE Center to have a few general and overarching findings. When making recommendations, the PIE Center makes recommendations specific to each document and develops overarching recommendations. It is common for the PIE Center to provide benchmarks and examples as part of the recommendations to add understanding to the report (Downs & Adrian, 2004). For example, when improving logo consistency is a recommendation, the PIE Center uses Susan G. Komen for the Cure as an example and a benchmark. In the past, Susan G. Komen for the Cure had many different logos representing different branches of the same organization (see Figure 1.) However, after a re-branding effort it developed a consistent-looking logo (see Figure 2) that still provides flexibility according to the specific branch (Susan G. Komen for the Cure, 2006).

Figure 1. Susan G. Komen for the Cure
Logo Variations before Re-branding

Figure 2. Susan G. Komen for the Cure Logo
after Re-branding

The Susan G. Komen for the Cure logo examples help organizations understand the need for logo consistency and helps them brainstorm ways they can make their logo consistent. In addition, a common recommendation has been for the organization to create an identity guide. The purpose of an identity guide is "to establish a consistent application of the brand identity across all marketing efforts" (Hearden, 2010, para. 3). Common components of an identity guide include the mission statement, key messages, taglines, logo, color palette, typography, paper stock, imagery, and examples of what to do and not do (Hearden, 2010). The PIE Center has provided to client organizations both the PIE Center's and the University of Florida's identity guides as examples. Clarity of results and examples provide audited organizations with a complete guide to help them improve their future communications.

Additional Communication Audit Tips

In addition to the steps mentioned above, these additional tips will help enhance communication audits:

- Consider in-depth interviews, focus groups, or surveys with an organization's management and employees to gain their perspectives on communication within the organization. This will ensure any internal communication problems are resolved before implementing new communication processes based on the audit findings (Holland & Gill, 2006).
- Encourage commitment from the audited organization to use the results to improve its communication efforts (Holland & Gill, 2006).
- Encourage the organization to share the communication audit results with employees and, in some cases, membership to not only gain buy-in from the constituents but also to make them aware their feedback is valued (Holland & Gill, 2006).
- Recommend a communication audit every two to three years. This will allow any changes from the previous audit time to be implemented but also ensure communication efforts are still relevant (Holland & Gill, 2006).
- Recommend the creation of an identity guide, if one is not already in place, to ensure past communication materials are revised to be consistent and future communication materials will be created in the same way, leading to a consistent and recognizable brand (Root Cause, 2011).
- Encourage further usability testing on the organization's website with an external group of individuals from the organization's target audience. The individuals should not be previously

familiar with the website and should be given certain tasks to complete on the organization's website. Individuals' ability to complete a task and the time it takes them to complete it can provide great insight to the usability of a website (Lannon & Gurak, 2011).

Impact of PIE Center Communication Audits

The results of the communication audits that the PIE Center has conducted have allowed agricultural organizations to improve their communication materials and create a more consistent brand. The agricultural organizations value the communication audit because they understand it is based on facts and existing communication materials (Holland & Gill, 2006). Audits completed at the PIE Center have helped these organizations improve their communication processes. The communication audit completed for one organization was an integral part of increasing its membership by more than 800 people following a communication audit and membership survey. Additionally, the PIE Center has received favorable feedback from all organizations regarding the communication audit results. The impact of these communication audits will be able to be measured and assessed in full once the organizations have had time to implement suggested improvements.

Outcomes of Communication Audits

As demonstrated by the increased membership following one communication audit, communication audits can help increase the social impact of an organization (Root Cause, 2011). Additionally, identifying communication weaknesses and areas for improvement can help an organization satisfy the needs of its audience and improve its brand recognition (Kolter & Armstrong, 2006). If agricultural organizations are able to work toward improving their communication process through practices such as communication audits, it is possible for the industry to become more effective in communicating not only to its stakeholders but also to the public, as well. However, the process of conducting a communication audit does not automatically lead to communication improvement. The process must be followed up with action to improve the problematic areas identified in the audit (Holland & Gill, 2006). If no action is taken following a communication audit, then the audit is nothing more than an exercise that wastes time and money. To influence the potential impact of the communication audit process, the PIE Center stays in contact with client organizations to encourage action and follow-up and offers further assistance if needed.

Conducting communication audits for agricultural organizations has opened the door for additional research and communication improvement among agricultural organizations. The organizations that have used the PIE Center for communication audits have expressed satisfaction and gratitude. Several of the organizations have expressed they knew their communication materials needed improved, but they were too close to the materials and did not have the time to identify the problems themselves. Additionally, many organizations are returning to the PIE Center for employee or membership surveys, focus groups, and communication training. Organizations that have been audited by the PIE Center are sharing their experiences with other organizations, who have, in return, sought the services of the PIE Center. Organizations are committed to improving their communication and are willing to enlist the help of affordable, trusted, and proven resources, which in this case have been academically based. Offering communication audit services to agricultural organizations not only allows agricultural communicators in academia to impact the communication process, but also it allows agricultural communicators to extend their expertise to practical application. This ability gives industry communicators the tools and skills necessary to improve the communications surrounding agricultural topics, thus addressing the challenges of the 21st century and

contributing to Priority Area Three of the National Research Agenda (Doerfert, 2011).

Discussions/Conclusions

Improving the communication of agricultural organizations and the industry as a whole is an evolving process that will take time. However, communication audits and basic usability testing are simple steps toward improving communication. By identifying what is being done correctly, what is being done incorrectly, and what needs to be changed, agricultural organizations can better understand the quality of their current communication and how to improve upon it for the future (Communication Consortium Media Center, 2004). Adding value and usability to an organization's communication materials, will, in return, help it create a consistent brand and increase its social impact (Kolter & Armstrong, 2006; Root Cause, 2011). Agricultural communicators in academia have the knowledge and ability to help agricultural organizations improve their communication processes and can extend their knowledge to industry professionals. Additionally, building relationships with industry professionals can offer further research opportunities for academic agricultural communicators.

University-level agricultural communicators interested in conducting a communication audit should build a strong relationship with the client organization. This relationship will be essential throughout the process, but it is especially important when providing results, which may be difficult for an organization to accept. However, a foundation of a strong relationship allows organizations to view the results as credible and trustworthy. When conducting a communication audit, it is also helpful to be clear and straightforward with clients from the beginning. Explain to them the process, expectations, the timeline, and the cost to ensure the organization's expectations are closely aligned with yours. Additionally, maintaining contact with the client throughout the process is crucial. Communication throughout the process allows the client to know that their project is valued and allows them to stay connected and current on the project's progress. Strong relationships and continuous communication with clients have led to the PIE Center's continued success with communication audits, resulting in organizations returning to the PIE Center for further research and recommending communication audits to others.

For additional resources on some of the topics discussed in this paper, please see the resources below.

Additional Sources

In addition to the resources referenced in this paper, the following resources provide additional information in regard to communication audits, usability testing, branding, and identity guides.

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A Central American Success Story: Innovation in International Distance Education

Donald W. Poucher and Dave King

Abstract

Based on actual workshop experiences, faculty at the Honduran Zamorano University in Central America created an effective, size–neutral, world–class distance education (e–learning) program for serving learners throughout Latin America through online and distance learning technology. The program is known as PAC @ D (Programa de Aprendizaje Continuo a Distancia or Life Long Learning Program at a Distance). It is administered by Zamorano's global center for distance learning.

The establishment of PAC @ D in 2010 was preceded by workshop efforts begun in 2004 by the authors. The workshop efforts focused on bridging the cultural uniqueness of educational programs in Latin America and the United States. The goal was to assist local faculty and staff at Zamorano University to build their own digital platform effectively and extend academic and outreach programs through that digital platform.

The use of online and distance learning technologies can help extend intellectual capital beyond the limits of the physical campus in fulfilling the teaching, outreach/extension, and, to a limited extent, research missions. However, as we shall see in this professional paper, distance learning is more than turning on the technology with a click and a keystroke. At Zamorano, the development of PAC @ D required many hours of a full range of pedagogical and technological training, spread over 18 months. This professional development paper provides the rationale for PAC @ D, outlines its development, and provides suggestions for enhancing the educational experiences of distance learners.

Keywords

e-learning, distance learning, continuing education.

Introduction

During the late 1900s and into the 21st Century, online and distance learning/education technology has blossomed into a major teaching tool for adult education as well as for educating young people. Online education popularity is attributed to the emphasis on computer and Internet technologies, facilitation of interactive communications between instructors and learners in an online learning environment, use of electronic text and multimedia learning resources, the access to global learning resources and communities, and applications in both traditional as well as distance education courses.

The increasing popularity of online learning also is based on a changing communications paradigm: marketplace access versus distribution. In the information marketplace, learners can access any number of educational sources for their needed information as opposed to the delivery model where educators presented what they thought learners needed in a situation that afforded little choice of the information source or the information received (Poucher & King, 2007).

The popularity and utility of online learning continued to increase during the first decade of the 21st Century. In the United States, 3.5 million university-level learners were participating in online learning in 2006 (Ambient Insight Research, 2009). The Sloan Foundation reports an average increase of 12% to 14% per year in fully online enrollments between 2004 and 2009 among university-level learners as opposed to about 2% overall increases (Allen & Seaman, 2008). Kim and Bonk (2006) reflect that

> Institutions of higher education have increasingly embraced online education, and the number of students enrolled in distance programs is rapidly rising in colleges and universities throughout the United States. In response to these changes in enrollment demands, many states, institutions, and organizations have been working on strategic plans to implement online education. (para. 1)

Kim and Bonk also report that in the future, online learning will continue to be combined with face-to-face teaching, forming a blended environment. Furthermore, the quality of online education will improve in the future. Some 60% of respondents expected the quality of online courses will be identical to traditional instruction. Also, a majority of the respondents predicted the quality of online courses will be superior to (47%) or the same as (39%) that of traditional instruction by 2013. Only 8% predicted the quality of online courses would be inferior to courses taught by traditional instruction (Kim & Bonk, 2006).

In a Pew Internet/Elon University study, 60% of Internet experts, researchers, observers, and users agreed that in U.S. institutions by 2020, "there will be mass adoption of teleconferencing and distance learning to leverage expert resources … a transition to 'hybrid' classes that combine online learning components with less-frequent on-campus, in person class meetings" (Pew Research Center, 2012, para. 14).

Other studies support the supposition that the quality of online education will improve in the future. According to a U.S. Department of Education study, there are data indicating that among U.S. K–12 students, the older learners in online situations performed moderately better on average than those learning the same material through traditional face-to-face instruction (U.S. Department of Education, 2010). Florida is currently considering development of a totally online university much like that found among several private institutions and public ones in other states such as Colorado.

A so-called "flipped classroom" concept enables teachers to utilize recorded video lecture presentations for student viewing as homework assignments, reserving classroom sessions for problem solving applications in practice sessions. In one reported case, flipping resulted in a 33% decline in high school failure rates and after a year of use, a 66% drop in the number of disciplinary incidents from the previous year (Huffingfton Post, 2013).

The use of online and distance learning technologies can help you and your institution extend intellectual capital beyond the limits of the physical campus in fulfilling not only the teaching mission but also in succeeding in outreach/extension and, to a limited extent, research challenges. However, as we shall see, online and distance learning is more than a click and a keystroke. A case in point: The use of online and distance learning technologies has helped Zamorano University in Central America extend teaching and outreach programs beyond its physical campus. However, the Zamo-

rano experience involved more than turning on the technology. The development of the Zamorano digital platform required many hours of a full range of pedagogical and technological training, spread over 18 months.

The Case of Zamorano

Zamorano is an international university in Honduras with an academic focus on agricultural and natural resource development. Since its inception in 1941, Zamorano University has served more than 6,500 resident students (learners) from more than 20 countries throughout the Americas. About 1,100 resident learners live and study on a 7,000 hectare (more than 17,000 acres) campus and forest reserves located some 30 kilometers (19 miles) southeast of the Honduran Capital of Tegucigalpa.

Using online learning practitioners and developers from land-grant universities throughout the United States, volunteers Don Poucher and Dave King helped establish the foundation for an effective, size-neutral, world-class online and distance learning program at Zamorano. The project began in 2004 and assisted Zamorano faculty and staff in building their own program effectively, and, at the same time, creating a network of resources they can call on well past the completion of the first year for information and support as the Zamorano online and distance learning effort became a reality. The program aimed at supporting resident as well as distance academic programs and outreach.

Workshops

A series of eight two-day workshops over 18 months were designed and conducted to help Zamorano faculty and staff develop and implement effective e-learning programs throughout Honduras and other parts of Latin America. The workshops were hands-on and interactive, and they included outcomes or deliverables that could be replicated in an ongoing fashion after the workshops ended. The workshops were led by Poucher and King, who were primary resources in the 18-month Zamorano e-learning effort. Poucher and King engaged a high-level design team known as Technologia, Informacion, y Communicacion. Through that team, some 35 faculty, staff and student-learners were engaged in developing e-learning modules in support of campus activities. The workshops also included direct involvement of notable U.S. expertise in the e-learning area from several land-grant universities, industry, and professional organizations and covered the following elements:

Guiding Principles

Several sets of guiding principles currently offer support to a myriad of e-learning programs in the United States and around the world. *The Roadmap for Effective Distance Education Instructional Design* (Telg, Anderson, Bielema, & Dooley, 2005) was a primary resource tool. The workshop reviewed sets of guiding principles and how they could be adapted and implemented as customized sets relating directly to Zamorano's individual programs.

Needs Assessment

In higher education, faculty tend to assume they are the experts and overlook needs assessment, because as experts they know what their learners need. While faculty know much about what they think their learners need, they also tend to look at learner needs from a singular perspective. Needs assessment must take into account what people need as well as their wants, desires and motivations. The workshops included hands-on use of the detailed needs assessment matrix developed by Purdue University called Proposal Enhancement Tools (Purdue University, 2005).

Planning

Once the fundamentals were in place and well understood, a baseline was established and a long-term plan created that could be tested against the baseline over time. The ongoing program must be constantly redefined and refocused to address a relentless expansion and evolution of needs. In planning exercises, to accommodate programs that inevitably expand and increase with success, participants established a process that is size neutral and developed as deliverables a step-by-step timeline, including immediate next steps, dependencies that must be accomplished before moving on, a series of bench marks for periodic review, and a long-term set of attainable goals.

Content Adaptation and Development

Selecting content that matches and satisfies the identified learner needs, adapting that content, and developing the interactive environment in which learners can thrive requires a team approach with a broader understanding of the all of the factors — technology, instructional design, and subject matter expertise — to be successful. For content adaptation and development, participants reviewed the basic program management options and conducted hands-on testing of those options by a faculty and development team.

Evaluation

Evaluation is critical to the ongoing success of any e-learning program because work is never really completed with any project or learning opportunity. As one section concludes, what has been learned must be recycled, refined, and refocused for the next opportunity. As integral parts of the evaluation stage, participants reviewed multiple evaluation processes and identified ones that will provide the most appropriate decision data for Zamorano programs.

Workshop Outcomes

Participating faculty members and staff were intensely involved and able to apply what they learned to a greater degree than expected. The participant development process was well conceived, considering their early-adopter status and difficulties carving out the necessary time while maintaining ongoing faculty and staff duties and responsibilities. Expectations were met and exceeded by the workshop participants. The university's success in applying the workshops' lessons was demonstrated in the precipitation of major funding for the e-learning effort through a significant grant and a major gift from a private donor. In the final analysis, after the 18-month workshop effort, Zamorano University demonstrated the workshops' utility as faculty began building a global online and distance learning program.

e-Learning Center Launched

In June 2007, Zamorano President Ken Hoadley announced that Zamorano embarked on the task of launching its Global e-Learning Center with nearly $1 million (USD) pledged in support of the e-learning project at Zamorano from the Inter-American Development Bank and individual donor support. Hoadley recommended — and the Zamorano Board of Trustees approved — the conversion of existing space at Zamorano as well as construction of new space to accommodate the Zamorano University Global e-Learning Center. With additional extramural support augmenting the original nearly $1-million gift and grant funding, Zamorano was able provide a workable blueprint for e-learning development throughout Latin America as information technology was applied to engage learners, create new communities of interest, and enhance the Zamorano experience.

PAC @ D: Zamorano's Distance Education (e-Learning) Program

Zamorano University faculty created an effective, size-neutral, world-class distance education (e-learning) program for serving learners throughout Latin America through digital access. The program is known as PAC @ D (Programa de Aprendizaje Continuo a Distancia). The program is administered by Zamorano's Global e-Learning Center and is an online training program. PAC @ D helps Zamorano and its corporate and individual partners develop or improve the professional and business skills of Latin American agribusiness and agro-industrial interests and also improve the competitiveness and sustainability of the agricultural and natural resource sectors within current and future economic and market models. PAC @ D is part of the overall education program offered by Zamorano. PAC @ D is open to entrepreneurs, producers, developers, technicians, and professionals as a tool for creating in them a culture of continuous life-long learning. PAC @ D uses a pedagogical model focused on capacity development and use of information technology for self learning and decision making. PAC @ D seeks to continuously improve the efficiency and effectiveness of processes, solve problems, and minimize risk. The diversity of experience and eco-geographic origin of teachers and participants contribute significantly to provide a global perspective to learning and potentially create international communities of business and long-term collaboration.

Teachers, Tutors, and Technical Support

PAC @ D program participants enjoys the ongoing support of a professional team consisting of specialist teachers, tutors, and a technical support unit.

Specialist teachers are the experts who develop the content and course activities. They generally participate as guides in the lectures, discussions, and video sessions; they advise, review, and provide feedback the learners' work, and respond to technical questions related to the course.

Tutors are experienced professionals in the study area, dedicated to assisting and guiding participants in the daily work. Tutors streamline the process of learning. Throughout the course, the tutor is the main bridge between learners and Zamorano.

The **technical support unit** answers any technical question or addresses any technical difficulties related to the management of the Blackboard© platform or any other technology-based tool used during the course. This unit ensures open access and satisfactory interaction and learning opportunities for the program. From the technological point of view, all these facilities are managed by the information technology unit at Zamorano, also known as Informatica. From an academic technology standpoint, this unit supports all activities of teaching, learning, and communication associated with both the residential program and the PAC @ D. Zamorano is continually making significant investments to improve the ability of the technology infrastructure and thus ensure it is updated constantly to help improve the quality of its offerings to learners both resident and at a distance.

Courses

Zamorano began offering distances courses through PAC @ D in September 2009. Resident learners are not permitted to enroll in the distance courses. The cost of participating in the program is $450 (USD) per learner per course. The cost includes academic and technical support, specialist teacher and tutor, access to the learning platform Blackboard©, tools and content, and a certificate of participation. During 2009-10, some 380 distance learners were enrolled in 13 courses.

Zamorano's Progress

Since the e-learning workshop series began at Zamorano in 2004, the university has made excep-

tional progress in building a sound distance learning program through PAC @ D. Utilizing gift and internal resources, PAC @ D generated program income of $171,000 through the end of 2010. From program income received, Zamorano supports a PAC @ D staff of one instructional designer, two graphic artists, two programmers, and one information technology specialist. The tutors for course offerings are compensated from PAC @ D revenues, and on-campus departments and units involved in the courses also receive nominal support. Zamorano's direct investment includes space for the distance program, general support from the Informatica unit, and salaries of the overall PAC @ D director and his assistant, who also functions as an instructional designer.

Satisfaction Survey

Zamorano's distance courses through PAC @ D's have enrolled a variety of students since 2009. For purposes of evaluating the program, the PAC @ D director provided to Poucher and King the names of 300 students who have been or currently were enrolled in the distance courses. Most of these students are those who completed Zamorano's three-year Agronomo Ingeniero certificate program prior to Zamorano's addition of the fourth-year bachelor's degree program. Their obvious goal is to complete the fourth year at a distance and obtain their bachelor's degrees.

From the list of 300, Poucher and King randomly selected a sample of 50 students to be surveyed. Of the 50, 45 had correct e-mail addresses. These 45 students were first contacted by email on November 1, 2010, and were asked to complete a satisfaction survey, which consisted of 11 questions designed to benchmark their views on the PAC @ D effort. The survey was translated to Spanish and asked if the students had previously attended Zamorano as a resident student, their present employment situation, the number of courses they had taken, if they had completed the courses, if they were now taking courses, and their attitudes toward the courses, including why they were taking the courses, if they would recommend the PAC @ D courses to friends, and if they were pleased with their course experience. They also were asked to describe their course experiences and indicate how the PAC @ D courses could be improved. Of the 45 students surveyed, 32 provided responses (69%) over a three-week period during which they were reminded twice to return their replies to the email survey. Faculty participating in PAC @ D also were surveyed. The names of 13 faculty who were teaching PAC @ D courses in October 2010 were also provided by the program's director and simultaneously with the student survey, the 13 faculty were contacted by email and asked to complete the Spanish-translated satisfaction survey from their perspective. Of the 13 faculty, 12 (92%+) completed the survey that asked for their views on the PAC @ D distance program and for them to provide data on student performance and participation.

Survey Results

In general, Zamorano learners and faculty support the distance education efforts of Zamorano University through PAC @ D. They like or strongly like the distance learning concept and believe it should be expanded. Learners registered a 94% satisfaction rate with PAC @ D; faculty expressed a lower but still high satisfaction rate of 75%. Both groups believe the PAC @ D program deserves increased support from the Zamorano administration and believe the distance education effort should be more aggressive than at present and utilize full video technologies.

Conclusions and Recommendations

Several important recommendations are evident in the comments by learners enrolled in PAC @ D and by their faculty. Faculty attention to students and feedback, learner tracking, course expecta-

tions, and expanded distance tools were mentioned as important for improving course offerings. The Zamorano experience teaches that more than a click and a key stroke is involved in building successful online and distance education programs.

As a result of the faculty, staff, and student evaluations, Poucher and King recommended that the Zamorano administration embrace the fundamental concept that pedagogy and marketing are just as important as the technology as follows:

- Guiding principles, needs assessment, planning, content adaptation, and evaluation should be initial considerations in the development of programs.
- Faculty and staff should pay close attention to the needs of learners. Course subjects, schedules, and opportunities for the access and applications of knowledge gained are important considerations, along with costs.
- Learners should receive better feedback from faculty and staff, and learners' progress should be tracked on a course-by-course basis much in the manner of campus-based learners in face-to-face instructional situations.
- Course expectations should be clearly outlined by faculty and staff and explained thoroughly to learners at the onset of each program offered.
- A wide range of technology, such as two-way video, should be more broadly incorporated into programs to improve the interactivity with learners. The use of two-way video also will improve learner feedback and the ability of tutors and faculty to track student progress.
- Faculty and staff who participate in online and distance learning programs should be rewarded with either extra compensation or reduced resident teaching assignments. It is not reasonable to expect them to accommodate an extra workload without commensurate compensation.
- Faculty should receive increased information technology support from the campus unit in course design and implementation. Faculty should make use of all available technology and need direct assistance in assessing and applying tools.
- Programs should not only consider learner needs, but also they should employ aggressive methodology and tactics in marketing courses to prospective learners.

The Zamorano University experience will be reproduced in other parts of Latin America. Currently, projects are underway with the University of Costa Rica, San José. Undoubtedly, the UCR project will demonstrate effective online and distance learning is more than a click and a keystroke.

About the Authors

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Employee Perceptions of the Brand Salience and Differentiation for a State Forestry Organization

Quisto Settle, Lauri M. Baker, and Tracy Irani

Abstract

A survey was conducted of employees of the Florida Forest Service (FFS) to determine their perceptions related to the brand's differentiation and salience as well as what they believed public perceptions were. Employees' perceptions are important to the FFS brand. As a service-oriented organization, FFS employees will largely affect public perceptions of the organization and its activities. Employees believed all FFS activities were important but that wildfire-related activities and functions were more salient and more important for differentiating the FFS brand from similar organizations. The employees believed the public was not well informed of FFS's functions, with the exception of wildfire functions. Employees also believed the public perceived wildfire activities were more important for brand differentiation that FFS's other activities. Because FFS is a public organization with a variety of functions and activities, it risks its credibility if it is not able to represent the full scope of its activities and functions to the public. It was recommended to make salience and differentiation a priority for the FFS brand. The FFS brand needs to increase the public's exposure to the FFS brand and represent the full scope of its activities and functions to ensure credible representation of the brand. For research, it was recommended to study tactics for affecting employee perceptions of the organization's activities and employees' perceptions of public opinion.

Keywords

branding, brand differentiation, brand salience, public organization, employees

Introduction/Literature Review

The Florida Forest Service (FFS) began in 1927 "to gather and disseminate information on forests, their care and management, to prevent and extinguish forest fires, and to enforce all laws pertaining to forests and woodlands" and was organized by the Florida Board of Forestry to protect and develop forests in Florida (Florida Forestry Association, n.d., para. 5). FFS's activities include suppression and prevention of wildfires, managing state forests, and providing assistance to landowners (Florida Forest Service, n.d.).

Branding

"A brand is a complex, interrelated system of management decisions and consumer reactions that identifies a product (goods, services, or ideas), builds awareness of it, and creates meaning for it" (Franzen & Moriarty, 2009, p. 6). While they are not tangible entities, brands are social constructs that have increased in importance over the past 100 years (Loken et al., 2010). A specific product

or service exists temporarily until it is replaced or upgraded, but a strong brand continues beyond the lifespan of an individual product or service (Goodson, 2012). Branding does not happen by accident; communication professionals work to strengthen the brand and continue to demonstrate its value over time. Branding is "psychology and science brought together as a promise mark as opposed to a trademark" (Goodson, 2012, para. 1). Successful branding occurs when a brand has the ability to endure over time by continually providing a quality product or service (Ehrenberg, Barnard, & Scriven, 1997).

Branding & Employees

While the external components of brands, such as logos and names, are the most visible, it is the members of the organization and their actions that create the largest component of the organization's brand (de Chernatony, 2001; Veloutsou, 2008). Through their interactions with members of the public, employees act as the face of an organization and affect the public's overall perceptions of the organization (Franzen & Moriarty, 2009). Branding of service organizations and businesses is an even more unique process in which the employees contribute significantly to the brand. Literature on service marketing indicates employees' exchanges and views of brand components can instill brand values and affect the overall brand while creating special meaning of the brand in the minds of the public (Bitner, Booms, & Mohr, 1994; Bitner, Booms, & Tetreault, 1990). Due to the need of a service-oriented brand to provide continued interactions with the public, branding models often include internal and external perceptions of the brand in an effort to strengthen the brand from the viewpoint of all stakeholder groups (de Chernatony & Harris, 2000; Schneider & Bowen, 1993).

Brand Differentiation

For an individual to make a choice of one brand over another, the brand must have differentiating characteristics. Brand differentiation is the extent to which a brand can separate itself from other brands in the perceptions of the public (Franzen & Moriarty, 2009). Differentiation can be physical or functional in that a product or service is distinctly different in form or what it delivers. The differences also may be smaller between two brands, such as one brand of bread differentiating itself by claiming it is made with more wholesome flour than another brand. These differences may be emotional or even inconsequential to the actual product like packaging differences (Ehrenberg et al., 1997). A goal of communication professionals is to differentiate through increased knowledge about the brand while eliminating confusion with similar brands (Baker, 2003). One strategy for increased differentiation is brand imprinting, which is the idea of strengthening memory and recall of a brand name through exposure of the brand name. Research indicates exposure to a brand name prior to learning of a product or service offered by the brand aids in the public remembering the brand and the product or service provided (Baker, 2003). Thus, brand name and prominence can be a differentiating characteristic.

With service organizations and business, the employees play an important role in differentiation. Differentiating characteristics of a brand can be the employees' attitudes and behaviors (Kimpakorn & Tocquer, 2010). Thus, it is imperative that employees understand the brand and its value and they are committed to its success through every interaction with the public. In service organizations, the brand is built internally with the employees as a foundation, so if brand differentiation is not clear to the employees, it will not be clear to the public (Kimpakorn & Tocquer, 2010), and the public will not be able to clearly identify one brand choice from another.

In differentiating a service-oriented brand, trust is another essential component. The public needs

to feel it can trust the brand to deliver the same quality experience time and time again (Kimpakorn & Tocquer, 2010). In addition to the employees, organizations can differentiate through their values and culture, their programs, and their assets and skills (Aaker, 1996).

Brand Salience

Salience refers to the overall accessibility of a brand in the minds of the public (Franzen & Moriarty, 2009). If a brand is salient in the minds of the public, the public can recall the brand easily and name products or services provided by the brand (Ehrenberg et al., 1997). If a brand reaches salience with an individual, the individual chooses the brand over another and has positive associations with the brand including the desire to use the brand again (Ehrenberg et al., 1997). Brand salience provides a sense of assurance for members of the public, reducing their uncertainty (de Chernatony, 2001; Franzen & Moriarty, 2009; Keller & Lehmann, 2006; Romaniuk & Sharp, 2006; Tybout & Cornelius, 2006). Success of a brand is determined by how many people have positive regard for the brand or see it as salient (Ehrenberg et al., 1997). When brands are extremely similar, communication efforts may be all that distinguish the brand and establish salience (Ehrenberg et al., 1997), making communication about the brand's attributes, products, and services essential in increasing brand salience.

Salience and differentiation are related to each other. By improving its differentiation and standing apart from others, a brand can improve its salience with the public (Franzen & Moriarty, 2009). At the same time, characteristics that help improve differentiation from other brands are often the same characteristics that are salient with members of the public (Franzen & Moriarty, 2009).

In service-oriented brands, relationships between employees and the public become important in brand salience (Garbarino & Johnson, 1999). For individuals who have a strong relationship with the brand through salience, trust is the most important factor for determining continued commitment (Garbarino & Johnson, 1999) and employees are often the driving factor in ensuring continued trust (Kimpakorn & Tocquer, 2010). For relationships to be strong, it is imperative that trust be built over time and partnerships established (Fournier, Dobscha, & Mick, 1998). It has been argued that services must market themselves differently because the public has a need for increased trust and are prone to loyalty and brand salience if successful relationships have been established (Leonard, 1995). The connection of relationships to brand salience indicates employees are a key factor in increasing brand salience in the long and short term.

Public Organizations

Public organizations are funded by the public and mandated through governmental and political processes (Moore, 1995). Public organizations increasingly use marketing techniques due to increases in consumerism and competition in the public sector (Walsh, 1994). For public organizations to remain viable, they must have public value, which occurs when a public organization provides a service or product that cannot or is not reasonably met by private organizations and satisfies both the general citizenry and those who immediately benefit from the service or product (Hoggett, 2006; Moore, 1995). The importance of public value is amplified when public organizations face funding decreases because of public debt and budget deficits (Chernew, Baicker, & Hsu, 2010). Economic downturns, such as the Great Recession that began in late 2007, have effects that last more than five years because of decreasing tax revenues due to unemployment and declining housing prices (Reinhart & Rogoff, 2009). Funding increases are unlikely to become available in the near future because of this.

Branding offers the opportunity for public organizations to go beyond just having public value to a point of fostering relationships with the public, which can improve public satisfaction with the

brand (Whelan, Davies, Walsh, & Bourke, 2010). The employees of the organization foster these relationships with members of the public, shaping the public's perceptions of the organization and its brand (Bitner et al., 1994; Bitner et al., 1990; Franzen & Moriarty, 2009). Part of improving the brand's success through its employees is improving the sense of shared identity within the organization (de Chernatony, 2001).

While marketing in the public sector has received attention in recent decades, there is a lack of branding literature for public organizations (Wæraas, 2008). In general, the application of private-sector strategies, such as branding, is not well understood for public organizations (Butler & Collins, 1995; Laing, 2003; Moore, 1995; Walsh, 1994). Part of the reason application of private-sector strategies is not well understood is that public organizations are typically more complicated than private organizations. They must have approval from the general public, not just individuals who receive the service or product (Hoggett, 2006; Moore, 1995). Public organizations also have multiple roles and identities that need to represented to avoid hurting the brand's credibility (Hoggett, 2006; Wæraas, 2008, 2010).

Settle (2012) addressed public perceptions of the Florida Forest Service (FFS), which is the organization being addressed in this study. The results showed the FFS brand lacked salience and differentiation with the public. While the brand lacked salience, there were characteristics of the brand that were salient, particularly wildfire activities. While wildfire-related activities were particularly salient, the public wanted to know the full scope off FFS's activities because it is a public organization and depends on public funds. The public also wanted to be sure that FFS's activities and functions were distinct from those of other public organizations to avoid the misappropriation of public funds.

Purpose & Objectives

The purpose of this study was to assess FFS employees' perceptions of the organization's different activities and functions and their importance for the FFS brand. To address the purpose of this study, the following objectives were used:

1. Determine employee perceptions of FFS activities and functions related to salience and the FFS brand.
2. Determine employee perceptions of FFS activities and functions related to differentiation and the FFS brand.

Methods

A survey was used to assess the perceptions of all full-time employees of the organization ($N = 1,175$), which was the target population for the study. To solicit participation in the study, the director of FFS sent the employees an e-mail asking employees to participate, with a reminder e-mail being sent four days later. There were 593 responses (50.4%), which does not include incomplete responses. Because the e-mails soliciting participation were sent from the director of the organization, it was not possible to ensure contacts completely adhered to the recommendations of Dillman, Smyth, and Christian (2009) to send successive e-mail waves until the number of new responses was no longer great enough to warrant further contacts.

Early respondents were compared to late respondents to address the potential for non-response error (Lindner, Murphy, & Briers, 2001). Operationally, early respondents were those who completed the questionnaire before the reminder e-mail was sent, and late respondents were those who completed the questionnaire after the reminder e-mail was sent. There was not a statistically significant difference between responses of early and late respondents, indicating the results can be generalized

beyond the respondents to the entire population, which included all full-time employees of the organization.

The questionnaire was researcher-developed to address the purpose and objectives of the study. The instrument was tailored to meet the needs of understanding employees' perceptions of FFS, so the expert panel served as the source of information for developing the instrument. The expert panel consisted of individuals familiar with branding, survey design, and FFS. The results in this paper were part of a larger questionnaire that also addressed morale, internal communications, and external communications.

Seven sections were addressed: (1) employees' perceptions of the importance of FFS activities, (2) employees' perceptions of the importance of differentiation of FFS from similar organizations, (3) employees' perceptions of the importance of FFS activities for differentiation, (4) employees' perceptions of FFS's primary function, (5) employees' beliefs of what the public perceived to be FFS's primary function, (6) employees' beliefs of the public's perceptions the importance of FFS activities for differentiation, and (7) employees' beliefs of how informed the public is of FFS's functions. With the exception of the section addressing the importance of FFS differentiating itself from similar organizations, each section had six items. The six-item sections used five-point scales for each item, except for the section addressing perceptions of the main function FFS where respondents selected one item. The section for the importance of FFS differentiating itself from similar organizations had two items that used five-point scales: one for the employees' perceptions of the importance of differentiation and one for the employees' beliefs of the public's perceptions of the importance of differentiation. Frequencies were used to report all results.

The instrument was evaluated by the expert panel for face and content validity. Because of the specificity of the questions to this organization, a pilot test of the instrument was not practical. Reliability was assessed post hoc using Cronbach's alpha. Reliability scores were as follows: .77 for employees' perceptions of the importance of FFS activities, .86 for employees' perceptions of the importance of FFS activities for differentiation, .92 for employees' beliefs of the public's perceptions the importance of FFS activities for differentiation, and .87 for employees' beliefs of how informed the public is of FFS's functions. A .80 reliability score is more ideal (Norcini, 1999), but .70 is considered acceptable (Kline, 1998).

Results

Objective 1: Determine employee perceptions of FFS activities and functions related to salience and the FFS brand.

The majority of employees perceived all of the listed FFS activities as being important (see Table 1). The activities the highest number of employees perceived as important were wildfire protection and multiuse management of state forests. Personalized urban and rural landowner assistance was considered important by the fewest employees.

FFS employees had mixed responses of how informed they believed the public to be for FFS's various functions (see Table 2). The highest number of employees believed the public was informed about wildfire prevention and suppression, while the fewest employees believed the public was informed about non-wildfire emergency response.

The majority of employees' believed wildfire prevention and suppression (70.9%) was the primary function of FFS and the majority believed the public (59.6%) perceived it as the main function also (see Table 3). Forest management of state forests was the second-highest response for employees (15.1%) and employees' beliefs of public perceptions of FFS's main function (18.7%).

Table 1

Employees' perceptions of the importance of FFS activities to the state.

	Unimportant	Slightly Unimportant	Neither Unimportant nor Important	Slightly Important	Important
Wildfire Protection	0.7	0.3	1.9	4.8	**92.3**
Multiuse Management of State Forests	1.4	0.9	3.8	13.7	**80.4**
Revenue Generation	2.7	2.6	6.0	21.6	**67.1**
Forest Management for Private Landowners	2.7	3.2	6.1	20.8	**67.1**
Opportunities for Recreation	2.4	2.4	5.8	23.2	**66.3**
Personalized Urban and Rural Landowner Assistance	2.1	5.0	7.9	24.1	**60.9**

Table 2

Employee perceptions of how informed the public is of FFS's functions.

	Uninformed	Slightly Uninformed	Neither Uninformed nor Informed	Slightly Informed	Informed
Wildfire Prevention and Suppression	7.0	11.0	6.0	34.5	**41.4**
Forest Management of State Forests	11.5	16.8	16.3	**41.6**	13.7
Provide Outdoor Recreation Opportunities	12.2	18.4	17.5	**41.6**	10.3
Forest Management for Private Landowners	16.5	20.6	11.0	**43.6**	8.4
Laws and Regulations	19.1	21.9	20.7	**30.8**	7.6
Non-wildfire Emergency Response	**39.3**	18.9	19.8	18.2	3.8

Table 3

Comparison between what employees believe to be the main function of FFS and what the employees' believe the public views as the main function of FFS.

	Employees		Public	
	%	Rank	%	Rank
Wildfire Prevention and Suppression	70.9	1	59.6	1
Forest Management of State Forests	15.1	2	18.7	2
Forest Management for Private Landowners	2.2	3	3.7	4
Provide Outdoor Recreation Opportunities	0.9	4	6.3	3
Laws and Regulations	0.2	5	2.9	5
Non-wildfire Emergency Response	0.2	5	0.5	6

For the other FFS functions, the employees' beliefs and the employees' perceptions of public beliefs were similar, except for providing outdoor recreation opportunities. While low in both categories, employees were more likely to believe the public (6.3%) perceived it as the main function of FFS than the employees (0.9%) were to perceive it as the main function.

Objective 2: Determine employee perceptions of FFS activities and functions related to differentiation and the FFS brand.

The majority of employees believed it was important for FFS to differentiate itself from similar organizations (see Table 4). The employees' beliefs for the public's perception of the importance of differentiation for FFS resulted in a majority of responses ranging from unimportant to neither important nor unimportant.

Table 4

Comparison between employee's perception of the importance of FFS differentiating itself from similar organizations and the employees' perceptions of the public's perceptions.

	Unimportant	Slightly Unimportant	Neither Important nor Unimportant	Slightly Important	Important
Employees	3.6	2.2	8.1	18.9	**67.2**
Public	14.4	6.8	**35.9**	18.2	24.8

Table 5 shows employees' beliefs of the importance of various FFS activities for differentiation.

Table 5

Employees' perceptions of the importance of FFS activities for differentiation

	Unimportant	Slightly Unimportant	Neither Important nor Unimportant	Slightly Important	Important
Wildfire Protection	3.0	0.5	3.0	7.9	**85.6**
Multiuse Management of State Forests	4.4	1.6	7.0	23.0	**64.0**
Forest Management for Private Landowners	5.2	2.4	8.6	22.7	**61.0**
Revenue Generation	5.3	2.6	11.2	25.0	**55.9**
Personalized Urban and Rural Landowner Assistance	5.3	4.9	9.6	27.0	**53.2**
Opportunities for Recreation	6.2	3.2	12.9	27.6	**50.2**

Table 6 shows employees' beliefs of public perceptions of the various activities for differentiation. A higher number of employees believed each activity was important compared to the number of employees who believed the public perceived the activities as important for differentiation. The majority of employees of believed all of the activities were important for differentiation. The only activity employees' believed the public perceived as important for differentiation was wildfire protection. For the remaining activities, fewer than 40% of employees believed the public perceived the activities as important for differentiation.

Table 6

Employees' perceptions of the public's beliefs of the importance of FFS activities for differentiation.

	Unimportant	Slightly Unimportant	Neither Important nor Unimportant	Slightly Important	Important
Wildfire Protection	6.2	3.0	12.4	17.5	**60.9**
Forest Management for Private Landowners	11.6	4.2	23.6	24.5	**36.0**
Opportunities for Recreation	11.0	5.0	25.3	23.3	**35.4**
Multiuse Management of State Forests	10.9	4.6	24.6	26.0	**34.0**
Personalized Urban and Rural Landowner Assistance	11.5	5.0	25.5	26.4	**31.7**
Revenue Generation	13.3	5.3	27.7	22.2	**31.4**

Conclusions

As indicated by the results of this study, wildfire activities of FFS were the most salient and considered most important for differentiation by the FFS employees, who also believed the same was true for the public's perceptions. These results are consistent with the results of Settle (2012) that showed that the wildfire functions of FFS were salient and aided FFS's differentiation for members of the Florida public. The next highest function in terms of salience and differentiation for the employees was for FFS's role in the management of forest land. This function was also something valued by members of the Florida public (Settle, 2012). While wildfire and forest management were important for salience and differentiation, the organization's other activities and functions were not perceived as highly. Because FFS has a variety of functions and activities and it is a public organization, FFS's credibility is at risk if it is not able to successfully represent its full scope to the public (Wæraas, 2008).

While the wildfire and forest management functions of FFS were perceived as salient and important for differentiation, the other functions were not considered as salient or important to the employees, who believed the public was uninformed of the other FFS functions and therefore would not view the other functions as important for differentiation. This lack of public awareness of FFS's other functions is reflective of results from Settle (2012), but the members of the public did want to be informed of the other functions of FFS, indicating disparity between the employees' beliefs of public perception and the public's actual perceptions.

It is important for a public organization to represent all of its varying functions to avoid negative public perceptions, specifically a loss of credibility (Wæraas, 2008). If the organization is unable to create salience and differentiation based on all of its activities and functions, FFS risks losing support overall or losing support for those individual functions, which could negatively impact the organization. As it relates to the overall brand of the organization, while the employees believed all of the functions of FFS are important, there was a marked difference between their perceptions of the organization's functions, particularly the elevated importance of wildfire activities for salience and differentiation. The results of this study indicate FFS employees in their shared identity are emphasizing the wildfire function and not focusing on its other functions, which are important and need to be represented as a component of the organization's identity to maintain credibility (Settle, 2012; Wæraas, 2008).

Employees perceived differentiation as more important than they believed the public perceived differentiation of FFS to be. Their belief that they perceived differentiation as more important than the public did also extended to their perceptions of the importance of different FFS activities for differentiation. These perceptions contradict the findings of Settle (2012) that showed Florida residents wanted public organizations to have differentiated purposes, including FFS. While employees' beliefs of public perceptions may not be reflective of the public's actual perceptions, both groups believe differentiation to be important. In a time of cuts in public spending, FFS can use differentiation to ensure its viability when there is increased competition between public organizations (Chernew et al., 2010; Reinhart & Rogoff, 2009; Walsh, 1994).

Brands are important for public organizations to foster long-term relationships with the public (Goodson, 2012; Whelan et al., 2010). Employees are important for this process because they form the base of the brand through their choices and interactions with the public (Bitner et al., 1994; Bitner et al., 1990; de Chernatony, 2001). Their importance extends to salience and differentiation for the brand. For differentiation to occur with members of the public, it needs to be clear to employees in service-oriented organizations like FFS (Kimpakorn & Toucquer, 2010). As for salience, positive interactions between employees and the public are needed to establish trust, which is necessary for

a service-oriented brand to attain salience (Garbarino & Jones, 1999; Kimpakorn & Tocquer, 2010; Leonard, 1995). Because the employees are emphasizing wildfire activities, it will only make sense for the public to have similar perceptions at the expense of FFS's other functions and activities, potentially harming FFS's brand credibility (Wæraas, 2008). This loss of credibility is particularly perilous because FFS depends on public support (Hoggett, 2006; Moore, 1995) and there is a decrease in the availability of public funds that is unlikely to return to previous levels in the near future (Chernew et al., 2010; Reinhart & Rogoff, 2009).

Recommendations
For Practice

The broad recommendation is to make salience and differentiation a priority for the FFS brand. Because of the interrelated nature of salience and differentiation, it is difficult to improve one without also improving the other (Carpenter et al., 1994; Franzen & Moriarty, 2009). The wildfire functions and activities of FFS were considered more salient and important for differentiation to the employees. The employees expected a similar emphasis from the public's perspective. While results have shown that the public is not well informed of FFS's non-wildfire functions and therefore used wildfire functions as one of the means of differentiation from similar organization, the public did want to be informed of all of the organization's activities, particularly forest management (Settle, 2012).

If the brand is not salient with members of the Florida public, they will be less likely to value the organization and support it during a time when public spending is declining (Chernew et al., 2010; Hoggett, 2006; Moore, 1995). As for differentiation, the employees perceived it as important for the FFS brand but did not believe the public perceived differentiation as being important for FFS, which contradicts results by Settle et al. (2012) that indicated the public believes differentiation is important for public organizations. These perceptions of differentiation are especially important for FFS because it is a public organization that depends on public support (Hoggett, 2006; Moore, 1995).

A specific means of accomplishing the emphasis on differentiation and salience is by increasing the public's exposure to the FFS brand, such as imprinting by increasing exposure to the brand name (Baker, 2003). One of the means FFS can use is increasing the interactions between the public and FFS employees. Because FFS is a service-oriented organization, these interactions will be the major source of perceptions of the brand, including establishing its salient and differentiating characteristics (Aaker, 1996; Garbarino & Johnson, 1999; Kimpakorn & Tocquer, 2010; Leonard, 1995).

During times of interaction with the public or visibility in the media, FFS and its employees need to represent the full scope of FFS's activities and functions. This is necessary to satisfy the public's desire to understand the full functions of public organizations and to maintain brand credibility (Settle, 2012; Wæraas, 2008). To accomplish the full and accurate representation of FFS and its functions, employees need to represent all of FFS's functions, not just wildfire activities, because the employees are the representatives of the brand with which the public interacts, shaping the public's perceptions of the brand and what brand characteristics are salient and differentiated (Franzen & Moriarty, 2009; Kimpakorn & Tocquer, 2010). Having all of the employees on the same page in their perceptions of the organization's functions and activities is also important because it can strengthen the brand by building a shared identity among employees, who are the basis of the brand (de Chernatony, 2001).

For Research

The first recommendation for future research is to assess tactics for effecting change in employees' perceptions of an organization's activities and functions. Because public perceptions are likely to be

affected by interactions with employees (de Chernatony, 2001; Franzen & Moriarty, 2009; Veloutsou, 2008) and the functions of public organizations are dictated by public and political mandates (Hoggett, 2006; Moore, 1995), it is important to understand how to affect employee perceptions' of the importance of all activities, including their importance for the brand's salience and differentiation (Wæraas, 2008). Aside from the direct effect of changing employee perceptions, it is also likely to alter public perceptions through their interactions with employees.

The second recommendation is to assess tactics for effecting change in employees' perceptions of public opinion. This study indicated employees do not always have accurate perceptions of public opinion. The importance of accurate perceptions stems from the potential that misperceptions could adversely affect employee interactions with the public. More specifically, brands are basically the relationship between the public and organizations (Franzen & Moriarty, 2009), and these relationships are primarily managed by employees, particularly in service-oriented organizations (Bitner et al., 1994; Bitner et al., 1990; de Chernatony & Harris, 2000; Schneider & Bowen, 1993). If employees' perceptions of public opinion are not accurate, they may not engage with the public in a manner that is beneficial for aiding the organization's brand.

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Improving Communication in Agbiotech Projects: Moving Toward a Trust-centered Paradigm

Obidimma Ezezika and Justin Mabeya

Abstract

Communication with end users about agricultural biotechnology does not necessarily lead to commensurate adoption of biotech crops. Agbiotech communication implies challenges like disagreement between proponents and opponents of genetically modified (GM) technology and media influence on public opinion, both of which can negatively impact public trust in, and thus adoption of, biotech crops. We argue that communication strategies for introducing biotech crops should focus on building and fostering trust between project partners developing biotech crops and the community they intend to serve to facilitate effective adoption of the crops. Strategies should include a combination of knowledge dissemination; early and continuous communication; provision of training; emphasis on end–user benefits; and transparency about agbiotech projects – all with the aim of building and fostering trust between partners of agbiotech projects and the community.

Keywords

agricultural biotechnology, biotech crops, communication, trust

Introduction/Literature Review

In 2008, an application by the Agricultural Research Council (ARC) of South Africa for general release and farmer participatory trials of a new Bt potato variety (genetically modified SpuntaG2) was denied by the Directorate of Biosafety, Department of Agriculture, Forestry and Fisheries (Institute of International Agriculture, 2008). The Directorate cited a number of socio-economic and technical reasons (Agricultural Research Council, 2009) for its decision. On its part, Potatoes South Africa (PSA), a farmers' organization and a collaborator in the project, publicly opposed the application by ARC, saying the industry believed the potential damage of commercializing this technology would far outweigh the expected benefits (Pieterse, 2008). This example demonstrates the need for effective communication that goes beyond dissemination of accurate information through formal and legal channels (like agreements between project collaborators) on biotech crops to one that is focused on building and fostering trust in the process and the product.

This paper outlines strategies for applying a trust-centered communication model for biotech crops. These strategies emerged from an analysis of case studies data collected by the authors from 81 key informant interviews, one focus group discussion, and one farm visit with agricultural sector stakeholders involved in eight agbiotech projects in Burkina Faso, Egypt, Kenya, Nigeria, South Africa, Tanzania and Uganda. The purpose of the study was to understand the role of trust in public-private partnerships (PPPs) operating agbiotech projects in Africa. For each case study, interviews

were conducted during the period between 2009 and 2012 in the aforementioned countries, including Zanzibar and the USA at the convenience of the interviewees. The interviews explored the interviewees' perceptions of trust among the partners and with the public, apparent challenges to trust building, and observed trust-building practices. Finally, interviewees were asked for their suggestions on how trust in agbiotech PPPs can be improved. Data for each case study was analyzed independently. Using the objectives as theoretical propositions, the data were analyzed by reading through the interview transcripts and generating recurring and emergent themes. The analysis was completed by reviewing relevant project documents and research articles. All the data were triangulated to create a comprehensive narrative on how trust is understood and built among the partners and with the community.

Individual case study findings presenting lessons on trust building have since been published. One cross-cutting emerging theme (which is the subject of this article) from the data analyzed was the need for a model of agbiotech communication that encompasses strategies that seek to build and foster trust between the project and the public rather than merely delivering information. Table 1 presents a preliminary summary of the key emerging themes discussed by interviewees with respect to a trust-centered communication model.

Table 1
Key emerging themes from interviewee responses

Theme		Interviewee responses per theme (%)
Clear and correct information	Have active communication between all stakeholders	41
	Provide sufficient information to the public	
	Information delivery should focus on building trust	
	Use communication experts for clarity	
Transparency about the project	Transparency builds trust among stakeholders	14
	Openness about the capacity of organizations to deliver	
Provision of training	Reduces complaints and mistakes by stakeholders	18
	Improves biotech communication and information delivery	
Benefits to the user	Knowledge of benefits improves trust in the technology and its adoption	13
	Benefit must be of significant magnitude to the farmers	
Early and continuous engagement	Constant and open communication builds trust	14
	Incorporate stakeholders views	

A trust-centered communication paradigm

In this paper, we posit that trust-centered communication — that is, communication focused on building and fostering trust — is more effective than plain delivery of information on agricultural biotechnology, which is the typical strategy of agbiotech communications. Trust-centered communication goes beyond awareness creation and dissemination of information about biotechnology to

the end users. While these involve spreading knowledge about the intentions and promises of the technology, they are not sufficient in and of themselves (Ezezika & Oh, 2012). Trust-centered communication focuses on building and fostering trust between the technology developer and end user. In this paper, we discuss five strategies of trusted-centered communication (see Figure 1): provision of clear and correct information; training of stakeholders on how to communicate; awareness creation by ensuring early engagement with the end-users; emphasis on how the end users can benefit from the technologies; and transparency within the project. Together, these strategies seek to address the challenges observed in agbiotech communication in Africa.
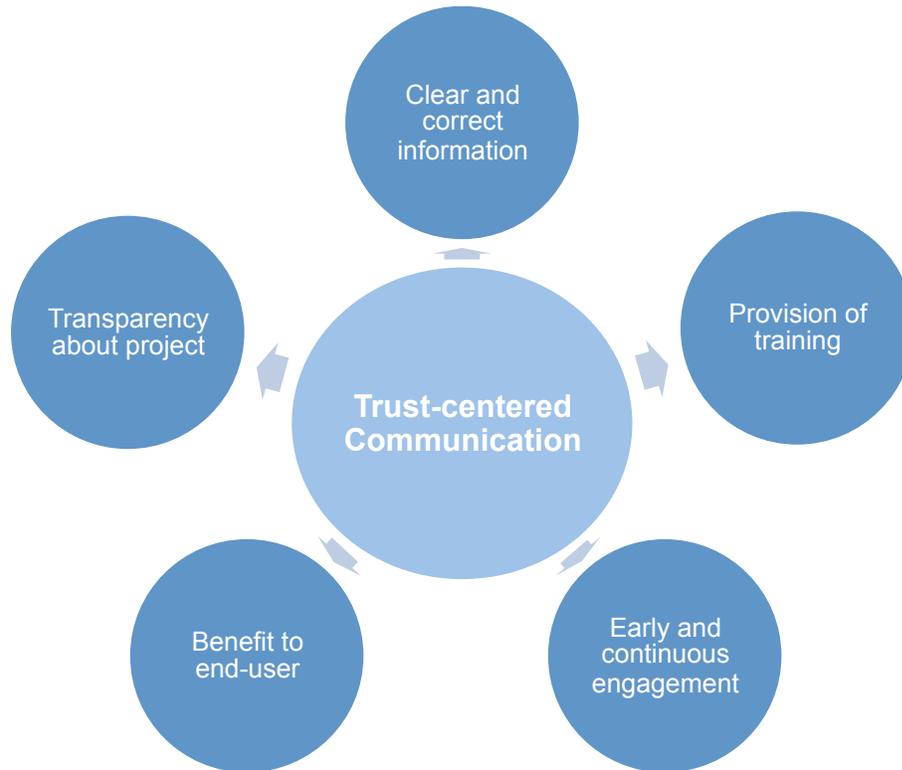
Figure 1: Strategies for implementing a trust-centered communication model

Effective communication on agricultural biotechnology is challenging

Communication in the field of agricultural biotechnology implies several challenges to the building and fostering of trust among agbiotech project partners and with the public. Such challenges include: polarization between the proponents and opponents of agricultural biotechnology; limited understanding among some scientists about what GM technologies consist of and their value to society; limited funding and low prioritization of the communication component of agbiotech projects; and negative public perceptions that arise from sensationalized media reporting.

Disagreements are prevalent between proponents and opponents of GM technology (Cooke J. G. & Downie, R., 2010; Mabeya & Ezezika, 2012). These disagreements may be caused in part by limited understanding or information on the part of scientists about genetic modification and its potential products. A lack of understanding by scientists — the would-be communicators — leads to skepticism about the technology and, in turn, the public's withdrawal of support for agbiotech development.

Limited understanding or information about the potential product can be a result of insufficient funding for agbiotech projects to hire, retain, and equip communication experts with the knowledge and tools to enable them to share information effectively about agricultural biotechnology (Mabeya

& Ezezika, 2012; Lundy, Ruth, Telg, & Irani, 2005). Limited funding may be attributed to low prioritization of the communication component during the planning stages of the projects, as was found in the Virus Resistant Cassava for Africa (VIRCA) project in Uganda and Kenya (Ezezika, Mabeya, & Daar, 2012a). In this study, it was found that agbiotech projects typically involve a variety of components — such as product development, communication, and regulatory — each of which are managed by teams of individuals from diverse backgrounds. One of the inherent challenges to managing projects with diverse membership is the inability to project a cohesive voice across the project teams. Occasionally, one component of the project is emphasized less than the others — such as communication and outreach, which are sometimes relegated to the periphery — which, as a result, can skew knowledge about the project.

The media also has been found to have a negative influence on how the public perceives partners in agbiotech projects (Sengooba et al., 2009). The public tends to have less trust in the private sector partners involved in agbiotech projects because of the way they are portrayed in the media. In some instances, the media's sensationalized reporting on biotech crops has been coupled with inaccurate information disseminated to the public. For example, there are cases of selective reporting on confrontations, rather than agreements, between proponents and opponents of biotech crops, and on public concerns about environmental safety (Sengooba et al., 2009).

Communication on agricultural biotechnology rarely focuses on trust

In recent years, there has been a surge in the number of agbiotech development initiatives because of the recognition that growing biotech crops is a potentially viable method to alleviating rising food scarcity and poverty in developing countries (Spielman, Cohen, & Zambrano, 2006). These initiatives often rely on the collaboration between private multinational corporations and public research institutions within the framework of a PPP (Denning et al., 2009; Pinstrup-Andersen & Cohen, 2000; Zheng, Roehrich, & Lewis, 2008).

However, one of the challenges to the successful implementation of agbiotech PPPs is distrust between the public and the private sector partners (Spielman & Grebmer, 2006; Ezezika et al., 2012). This distrust has been attributed partly to failure on the part of the latter (who are the technology developers and promoters) to target their communication efforts at building and fostering trust with the public; rather, they simply pass to the public facts about the technology. We observed that this failure may contribute to the public becoming susceptible to views that are in opposition to agbiotech crops, thereby heightening their distrust in the technology.

Building on the Cartagena Protocol's recommendation for awareness creation, public consultation, and information delivery (Center on Biological Diversity, 2000), many communicators have built their agbiotech communication strategies on a "knowledge deficit model" (Brossard & Shanahan, 2007). The knowledge deficit model works on the assumption that the more knowledge about biotech crops is shared with the public, the higher the likelihood for acceptance and adoption of the technologies. However, effective communication must include not only information delivery through public awareness and engagement measures but also building and fostering trust with the public, alongside risk communication (about the potential risk and science-based management) and mediated discourse (interaction in the media about agricultural biotechnology) (Brossard & Shanahan, 2007).

Since public trust is critical for adoption of biotech crops, there is a need for partners in agbiotech PPP projects to put in place practices for communicating with stakeholders, not only to ensure clarity of information about the technology, but also to enhance public trust in the technology.

Strategies of a trust-centered communication model for agbiotech projects

We propose five strategies that comprise a trust-centered communication model. The first strategy is the provision of clear and correct information about GM technology to the public. Disagreement between proponents and opponents of GM technology implies, to some extent, failure to agree about certain aspects of biotech crops. As found in the Insect Resistant Maize for Africa (IRMA) project (Mabeya & Ezezika, 2012), provision of sufficient, clear, and correct information about GM technology to the public is likely to enable individuals to make independent, informed decisions without having to engage them in the divisive debate on GM technology. The use of multiple channels of communication — such as using professional communications organizations, holding stakeholder workshops, and distributing brochures and leaflets to the various stakeholders — may enable information about biotech crops to reach more people.

This strategy presumes that once the members of the public have received the information it will empower them with the knowledge needed to make their own judgment and thereby address misconceptions that may exist about the technologies. However, it was found in the Bt cotton project in Burkina Faso (Ezezika, Barber, & Daar, 2012) that this strategy needs to be supplemented with other strategies, which we elaborate on below.

The second strategy of trust-centered communication is the training of specific stakeholders on enhancing the delivery of knowledge and information on agricultural biotechnology to other project stakeholders and the public. For example, the training of journalists and scientists on effective communication about the science of agricultural biotechnology was carried out in the Bt cotton project in Burkina Faso (Ezezika et al., 2012). These trainings often have led to a reduction in inaccurate and sensationalized reporting, thus contributing to improved delivery of information (Sengooba et al., 2009).

The information delivered must also be harmonized, in terms of accuracy and consistency, to ensure the end users (farmers) are not led to confusion by information coming from multiple sources. For example, an initiative referred to as the National Biotechnology Awareness Creation Strategy (BioAware Kenya) (ISAAA Crop Biotech Update, 2011) was set up to coordinate and improve access to balanced (harmonised) findings and to demystify biotechnology. BioAware Kenya provides training to experts on how to provide accurate and consistent biotech information to stakeholders in a coordinated manner.

A third strategy for trust-centered communication is provision of early, proactive, and continuous communication. This strategy was used by the partners in the Bt cotton project in Burkina Faso (Ezezika et al., 2012). Currently, a number of agbiotech projects in Africa are in the research and development (R&D) phase. During this phase, there is a tendency for the projects to proceed with R&D while neglecting the need to pursue active communication with the public. Project management components, including R&D, communication, and others, need to be carried out in tandem to prevent perceptions among project partners that one project component is being favored over another and instead encourage project partners to build team spirit. This will contribute to building trust among the partners and with the community.

A fourth strategy is to communicate how the end users specifically will benefit from the technologies and to listen to their concerns. The importance of this was found in the case of Bt maize in South Africa (Ezezika, Lennox, & Daar, 2012), in which it was reported that when the promoters of the technology showed how the technology could improve farmers' socio-economic status, there was a higher likelihood for farmers to form trust in the products and its promoters. However, when the focus was only on the gains made by the promoters of the technology — which is often represented

by their recouping of the costs of technology development — then trust was compromised (Ezezika, Lennox et al., 2012). Further, the community wants to be listened to, not preached to. The project partners should listen to the community's fears and feelings pertaining to the technology. Listening to the end user can be enhanced by using the local language, which will result in better understanding and retention of information by the community, as was observed in the Bt cotton project in East Africa (Ezezika, Mabeya, & Daar, 2012b).

The fifth strategy is ensuring transparency within agbiotech projects. Trust-centered communication espouses transparency about all of the project's activities, engagements, and experiences. This involves informing the public of challenges and risks in the project and those implied by agricultural biotechnology in general as well as of the possible risk-mitigation strategies in place. Stakeholders also want to know the status of intellectual property ownership of the technology. Differences in opinions should be carefully and openly discussed so the stakeholders are able to build confidence and respect for each opinion. A study on the role of trust building in agbiotech PPPs in Africa found that transparency in communication must entail reporting about bad results, even if they may be damaging to the reputation of the project (Ezezika & Oh, 2012). That way, honesty is proven and trust among the communicating parties enhanced.

Conclusion

Agbiotech projects continue to engender scepticism and distrust among stakeholders for reasons ranging from its involvement of the private sector to questionable merits of agricultural biotechnology. This has, as a result, had a negative impact on the development and adoption of biotech crops. To address this challenge, the communicators of agricultural biotechnology have devised communication strategies such as the 'knowledge deficit model,' which assumes the end users will adopt biotech crops if they have knowledge about them (Brossard & Shanahan, 2007). While these strategies emphasize knowledge dissemination and awareness creation among the stakeholders, we believe they can be further enhanced by also focusing on building and fostering trust. Trust-centered communication strategies build on awareness creation with targeted stakeholder training; early, proactive and continuous communication; emphasis on how the end user benefits from the technologies; and transparency about the processes and products of the agbiotech projects.

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