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Lisa K. Lundy

Tracy A. Irani

R. Elaine Turner

See next page for additional authors

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Recommended Citation

Lundy, Lisa K.; Irani, Tracy A.; Turner, R. Elaine; Percival, Susan S.; and McPherson, Britton (2004) "GNC University: A Case Study in Partnering Business and Education through Distance Learning," *Journal of Applied Communications*: Vol. 88: Iss. 2. <https://doi.org/10.4148/1051-0834.1320>

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Authors

Lisa K. Lundy, Tracy A. Irani, R. Elaine Turner, Susan S. Percival, and Britton McPherson

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In 2002, General Nutrition Corporation, Inc. contacted the Department of Food Science and Human Nutrition at the University of Florida to collaborate in offering a series of courses in introductory nutrition for GNC employees in order to equip them with basic nutrition knowledge. The purpose of this case study was to describe the GNC University program as a model for business-education partnerships via distance education, to describe student expectations for the GNC University experience, to describe student reactions to the GNC University experience, and to describe the reaction of teaching assistants to their experience with GNC University. There were several key findings in this study. Students' expectations are to increase in nutrition knowledge, professionally and personally, and to increase in their technological skills. There is a need, in future evaluation of this program, to measure whether students feel their expectations of increased knowledge and technological skills are being met. Additionally, focus groups with teaching assistants revealed a need for greater preparation for assisting students with technical difficulties. Overall, this program shows promise for business-education partnerships through distance education.

Introduction

Land-grant institutions were created to extend higher education to a broader population (Kellogg Commission, 2001). More recently, land-grant universities have acknowledged one of the tenets of their mission as providing "life-long learning" in developing extensive infrastructures to facilitate delivery of courses to a diverse community of traditional and nontraditional learners through distance education (Miller & Pilcher, 1999).

Communication technologies continue to provide opportunities for agricultural educators to deliver programs to large numbers of learners, diverse

in background and location (Miller, 1995; Murphy & Terry, 1998). Distance education, according to Bowen and Thomson (1995), allows agricultural education faculty to deliver instruction to audiences not traditionally served through credit courses. In 1998, a panel of 61 distance education experts identified 21 ways distance education technologies improve instruction in agricultural education (Bowen & Thomson, 1995). One improvement identified was increasing opportunities for business/education partnerships.

General Nutrition Corporation, Inc. (GNC), headquartered in Pittsburgh, is a producer and marketer of nutritional supplements and dietary products. As one of the largest specialty retailer of vitamins and supplements, the company manages more than 5,000 retail stores and kiosks in the United States, and its products are available online for purchase. GNC also operates stores in 26 foreign markets, including Canada and Mexico.

In 2002, finding that their managers lacked knowledge of the nutrition concepts needed to help their customers effectively, GNC contacted the University of Florida's (UF) Division of Continuing Education (DOCE) who then contacted the Department of Food Science and Human Nutrition (FSHN) to collaborate in offering a series of three online courses in introductory nutrition for GNC employees over a two-year period.

Theoretical Framework

Researchers stress the importance of understanding the backgrounds and needs of students in designing effective distance education (Kemp, Morrison, & Ross, 1994; Threkheld & Brzoska, 1994; Willis, 1989). Threkheld and Brzoska (1994) emphasize the need for background and descriptive data to guide curriculum decisions and program design. Kemp et al. (1994) stress understanding learner characteristics such as interest, age, and learner maturity as essential for instructional design. Distance learners are often older and juggling job and family commitments with their learning opportunities (Miller, 1995; Willis, 1995).

According to Kirkpatrick (1967), an assessment of student reactions to and student learning in an educational program should precede assessment of behavior changes and learning outcomes. While student reactions are often measured in distance learning, Biner (1997) emphasizes that positive student reactions are not necessarily correlated with learning. The ability to evaluate knowledge acquisition and retention and, consequently, readapt to students' needs is an important characteristic of distance learning programs (Gibson, Brewer, Dholakia, Vouk, & Bitzer, 1995).

The Sloan Consortium's Report (Lorenzo & Moore, 2002) outlines five dimensions or "pillars" of quality online education. They are learning effectiveness, student satisfaction, faculty satisfaction, cost effectiveness, and access. According to the report, "Online learners, like customers, are satisfied when they receive responsive, timely, and personalized services and support, along with high-quality learning outcomes" (p. 4).

According to Katzer, Cook, and Crouch (1982), evaluating an educational program involves participants making a determination of the quality of the experience. However, Yeung (2001) asserts that different stakeholders in distance education (students, faculty, administrators, employers, and government) are likely to have different views about what constitutes quality. Woodley and Kirkwood (1986) offered a framework for considering six categories of evaluation information in distance education, consisting of measures of activity, efficiency, outcome, program aims, policy, and organization.

Measures of activity involve counting the number of people, events, and objects. Bielema (2001) collected information on what types of computers most students used and from where they were accessing the Internet. Parrish and Parrish (2000) asked how many faculty were teaching and how many courses were offered.

Measures of efficiency are closely related to measures of activity. For example, how many students successfully completed the course? Bielema (2001) collected data on the percentage of time dial-up connections for students were busy. She asked students which features of the course management system they used and how often.

Measures of outcome are usually considered the most important for distance learning activities. Interviews and surveys are often conducted to measure students' perceptions about distance learning activities. Questions are asked to determine the impact of distance learning on participants' learning.

Measures of program aims look at what the program was intended to do and whom it is intended to reach. An important consideration is to measure the extent to which the program produces the intended improvements in the social conditions it addresses. In this case, the social condition is that GNC managers lack nutritional concept knowledge needed to help their customers effectively. Thus, this evaluation will measure their gain in nutritional knowledge as well as their ability to apply this knowledge in their job and personal life.

Measures of policy look at access and support for those participating in distance learning. Bielema (2001) looked at several measures of policy in

evaluating the barriers and benefits to students using a course management system. Some of the barriers were lack of computer access from home, lack of basic computer skills, user name and password problems, and lack of experience with active learning / self discipline.

Measures of organization evaluate the entire institution in terms of its internal organizational efforts to support distance learning.

This study focused on measures of activity, outcomes, program aims, and policy.

Purpose and Objectives

The purpose of this case study was to describe the GNC University program as a model for business-education partnerships via distance education, focusing on course implementation, student experience, and the experience of teaching assistants.

The specific objectives of this study were to:

1. Describe the program objectives, implementation, and evaluation of GNC University.
2. Describe the characteristics of participants enrolled in GNC University.
3. Describe student matriculation in GNC University.
4. Describe the expectations of students prior to beginning course one in GNC University.
5. Describe the perceptions of students to their experience at the completion of course one in GNC University.
6. Describe the perceptions of teaching assistants to their experience with GNC University.

Methods/Procedures

Case study research methods (Merriam, 1998; Stake, 1995) were used to identify appropriate sources of data and gather information about delivering distance education to an agribusiness audience by way of a university-sponsored nutrition program. The goal of this case study was not generalizability, rather broadening understanding of best practices in distance education and business-education collaboration through understanding the intricate complexity and idiosyncrasy of one particular case (Jacobsen, 2002). Case studies for the purpose of evaluation are most successful when they rely on multiple sources of evidence, logic models, and the use of qualitative data to help weigh the outcomes of programs (Yin, 1994).

This case study used a sample of participants in the GNC University program, including students, teaching assistants, faculty, and staff. Qualitative questions were asked as part of a larger course evaluation to investigate what students thought they would learn in the course (pretest) and students' reaction to the instruction, technology, and course materials used in GNC University (posttest). Students were also asked about their perceptions of distance education at the end of course one. The researchers conducted interviews face-to-face with GNC instructors and teaching assistants. The interviews were audiotaped and transcribed for accuracy. The population for this study included all GNC managers. The frame for the study included managers who enrolled in the first offering of course one of GNC University in the fall of 2002. The sample was limited to those managers who accessed the course and completed the pretest. The final sample included 448 GNC managers.

Both the pretest and a posttest were administered through the WebCT course management system, which is an educational software package. An expert panel of university faculty established face and content validity for each of the instruments. The questions used for this analysis were open-ended. The pretest provided GNC University's first feedback from the students and was administered as they prepared to begin the first course. The data were analyzed using a grounded theory approach, seeking to designate concrete characteristics of and a meaningful picture of the student experience in GNC University (Glaser & Strauss, 1967). A goal of data analysis was to make hypotheses about the student experience based on the data.

Results/Findings

Objective 1: Describe the program objectives, implementation, and evaluation of GNC University.

The rationale for this educational program was to educate GNC employees in fundamental nutritional concepts. All three courses were developed and delivered using the WebCT course management system and accessed via the Internet. This delivery system was to provide education in a convenient, private setting, where students could work at their own pace. Students could access the course material from any location at any time of day.

All GNC managers were required to participate in a set amount of training for which GNC University courses count. Managers at the top 500 stores (in financial earnings) with at least one year of experience were eligible to enroll in the first offering of the courses. They were not required to complete the courses; however, for each course they completed, they received a bonus. Participants worked on the courses on their own time.

Research

Each course consisted of eight modules to be completed in 10 to 11 weeks. GNC contributed suggestions for topics, including nutrient functions and food sources, effects of nutrient deficiency and excess, nutrient requirements, the role of nutrition in physiologic systems, and the changes in nutrient requirements and nutrition concerns at various life cycle stages. Continuation to the next module required mastery of the previous module. Each module consisted of a reading assignment and a 15-minute narrated visual presentation. Some modules included an activity for the students to complete, e.g., a label-reading exercise, an analysis of food intake for nutrient composition, or a calculation of energy balance or protein needs. Finally, each module included an online quiz to evaluate participants' understanding of the module topic and ability to apply that information in a practical manner.

Each course was assessed with a pretest and posttest evaluation, which measured student perceptions of their nutrition knowledge. Participation in and/or completion of GNC University may lead to a student obtaining instruction on nutritional concepts and demonstrating satisfaction (or lack thereof) with GNC University. Stakeholders in GNC University have expressed that as students demonstrate sound understanding of nutritional concepts, they will be able to apply this knowledge in helping GNC customers and in their personal life.

Objective 2: Describe the characteristics of participants enrolled in GNC University.

The second objective of this study was to describe the characteristics of participants enrolled in GNC University for course one. GNC University students represented all 50 states, as well as eight Canadian provinces. The majority of the students had completed some college coursework, but not a full degree program. The students ranged in age from 18 to 81 years. Approximately 82% of respondents had a computer at home. About 52% of respondents used a computer daily, and nearly all (94.3%) had an e-mail account. Respondents also reported they would be more likely to contact their teaching assistant via e-mail than by phone. Most respondents expected to spend between two and five hours per week on their coursework.

Objective 3: Describe student matriculation in GNC University.

Objective three was to describe student matriculation in GNC University for course one in Fall 2002. There were 1,125 managers eligible for the first offering of course one. The project coordinators expected 80% (900) of those eligible to enroll. Initially, 886 participants enrolled in the course, but only 724 actually accessed the course account in WebCT. Five hundred and

twelve participants completed the first course offered by GNC University in Fall 2002. Therefore, 71% of participants who accessed the course completed the course.

Objective 4: Describe the expectations of students prior to beginning course one in GNC University.

Students' expectations for their experience in GNC University were categorized into three themes: increased professional nutrition knowledge, increased personal nutrition knowledge, and increased technological skills.

Objective 5: Describe the reaction of students to their experience at the completion of course one in GNC University.

Students said more interaction should be built into the course based on pre-existing relationships they have with employees in their store or nearby. Many students said that they did not have time for online student-to-student interaction but would enjoy interacting with coworkers in a more formal way related to their shared GNC University experience. They said that some of the printed material was duplicated online, and they suggested that more of the material focus on what products they sell at GNC. This is contradictory to the objective GNC established for the students, to develop their general knowledge of nutrition concepts.

Students enjoyed the flexibility and convenience of distance learning but realized the need to develop discipline in their study habits. Students' reaction to the technology uncovered several areas of concern for the project coordinators. Students experienced difficulty with media players and network connections. The implication from these comments is an emphasis on technical support, which often fell to the responsibility of the teaching assistants.

Objective 6: Describe the reaction of teaching assistants to their experience with GNC University.

Teaching assistants described their expectations for a distance education course optimistically. One said, "I thought it would be fun and interesting as compared to being a normal TA." The teaching assistants also described their expectations for the students in the course to "enjoy and complete the course," but some TAs expressed frustration that the students were not more enthusiastic, "I thought they would be more excited about learning."

When asked to characterize their experience as a TA for GNC University, the TAs referred to the amount of their effort spent answering technical questions saying, "Didn't really answer any nutrition-related questions, only computer-related, so that was disappointing," and several students said they

thought they would “deal more with content questions than tech questions and problems.” TAs recognized that this experience would be different than other teaching assistant assignments saying, “it is different from a classroom experience and requires effort on the part of both students and instructors to stay engaged.” Finally, the TAs said they communicated with their students mostly through e-mail and, as such, flexible office hours were more appropriate than set office hour times for this type of course.

Conclusions/Recommendations/Implications

The students’ reactions to GNC University implied a need for increased focus on student learning within their own environment. Students expressed a desire to interact with the employees they work with on a regular basis. They also expressed a desire to learn more about the specific products they sell. These reactions may point to some type of experiential learning or hands-on projects that students could complete in localized groups with products on the shelves in their stores.

Finally, while teaching assistants are optimistic about this unique teaching opportunity, their responsibilities are different from those of a traditional face-to-face teaching assistant. Project coordinators should support flexibility in office hours. Additionally, teaching assistants may need further technical training or resources in order to answer the technical questions they encounter.

This partnership represents a promising opportunity for instruction the land-grant institution can provide. Such partnerships may also represent a new channel for educating the public in matters of food and fiber. If consumers are seeking nutrition information through outlets such as GNC, Inc., it is important to make sure the sales representatives are providing consumers with sound nutrition information. These educational programs must be evaluated to demonstrate their effectiveness. Combining qualitative and quantitative evaluation of these educational programs will help in program design and implementation, as well as accountability to stakeholders.

About the authors

ACE member Lisa K. Lundy is an assistant professor in the Manship School of Mass Communication at Louisiana State University. ACE member Tracy A. Irani is an assistant professor in the Agricultural Education and Communication Department, University of Florida. The other authors—R. Elaine Turner, associate professor; Susan S. Percival, professor; and Britton McPherson, project coordinator—are with the Food Science and Nutrition Department, University of Florida. This article is based on a paper presented

at the 2003 Agricultural Communicators in Education Meeting, June 2003, Kansas City, Mo. Lundy's e-mail address is llundy@lsu.edu.

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Designing Across Cultures

Ronnie Lipton

(HOW Design Books, an imprint of F&W Publications, Inc. Cincinnati, OH, 2002. 193 pages. \$35, hard cover, ISBN 581801947)

The world is changing, and design should change, too. This theme is reinforced in the intellectually and visually stimulating book, *Designing Across Cultures* by Ronnie Lipton.

Between 1990 and 2000, the population of white Americans increased 5.9%. This is a small increase when compared to other ethnic groups: African-Americans, 15.6%; Asian Americans, 48.3%; and Hispanic Americans, 57.9%. These figures reveal the need for designers in print, television, and electronic media to develop a better sense of the multiculturalism now prevalent in the United States, Lipton observes.

Designing Across Cultures is vital for designers whose charge is to reach multicultural audiences in the United States. The pages are packed with culture-specific design advice regarding composing visual messages, using color, employing appropriate fonts, using accents, developing bilingual layouts, and using models. Even nondesigners will likely enjoy reading this interesting book to understand more about communication differences among various cultures.

In separate sections the book specifically addresses communicating with four ethnic groups—Hispanic Americans, African Americans, Asian Americans, and European Americans. It also contains a final section on multiculturalism in design. A map at the beginning of each of the ethnic group sections indicates the geographic areas where the ethnic group is most densely populated within the United States. A useful glossary of terms at the end of each section defines culture-specific terms, providing an added reference for cross-cultural communicators.

Lipton stresses one main point when discussing design for different cultural groups: “You can’t assume what’s culturally relevant to an ethnic group (or subset of that group) that you don’t belong to.” This book highlights the important icons, religions, politics, holidays, and traditions of each ethnic group and the subgroups within the larger groups (for example, the Hispanic American ethnic group is further divided into Cubans, Puerto Ricans, and Mexicans). Designers will benefit from the explanations of unique symbolism among ethnic groups, such as the fact that in Hispanic culture, yellow flowers sometimes are used to convey mourning, while poinsettias can be interpreted as a curse.

Reviews

Entertaining anecdotes of real situations faced by communications and public relations agencies illustrate the importance of understanding an audience's culture. Complementing the anecdotes, examples of good and bad design allow readers to see how the traditions of a culture should be respected and acknowledged in communication. Lipton emphasizes that successfully advertising to a targeted American audience with limited or no English-speaking ability requires excellent nonverbal communication.

From adding subtitles to a general-audience television advertisement to designing ads for a specific ethnic subgroup, different levels of targeting ethnic groups exist. As the targeting becomes more specific, communication is more effective, but also more expensive, writes Lipton.

Due to the increasing Hispanic population in the United States, this ethnic group receives special attention in *Designing Across Cultures*. The author highlights the need to avoid stereotypical images such as piñatas, cacti, and sombreros, which can cast a shadow of cultural nearsightedness on the communicator. Lipton points out, "One persistent error in advertising to Hispanics is simplification to the point of insulting the audience's intelligence."

In addition to identifying stereotypes to avoid, the author does list valid assumptions for each ethnic group. Asian Americans (including Chinese, Koreans, and Vietnamese) place value on education, proper behavior, luck and prosperity, enjoyment of holidays, and respect for tradition. Pride, ambition and respect are important values for African Americans; the African American audience is skeptical and prefers "show-me, prove-it" ads. European American ethnic groups (including Russians, Poles, and Ukrainians) are often in the United States to escape religious persecution, so avoiding religion or religious symbols when targeting this audience is advisable, though Europeans—especially western Europeans—assimilate more readily to American culture, so special targeting sometimes is not necessary.

The last chapter, on multiculturalism in advertising design, motivates designers to use different ethnic groups as subjects in ads. Lipton recommends employing multiracial couples in ad designs. "The more white Americans get used to seeing ethnic audiences outside of stereotypes and inside normal life—and the more ethnic Americans see themselves that way—the sooner the U.S. will get to the point where multiculturalism is taken for granted," she explains. However, Lipton warns against designing by quota when different ethnic groups are shown just to be included. Instead she suggests designing to reach the world.

This book is a must read for any designer trying to reach ethnic groups in the United States. Designing visual communications efforts that are specific to different cultural groups shows acceptance of the culture and a willingness to achieve understanding. Although it may not answer every multi-cultural design question designers will encounter, it will suggest an appropriate philosophy that could be applied. *Designing Across Cultures* causes readers to be more discerning in their advertising designs when culture plays a role in the communication, as it almost always does. Most importantly, *Designing Across Cultures* reminds designers that understanding a culture—or recognizing when they don't—will help them avoid making embarrassing and potentially hurtful mistakes.

About the reviewer

Courtney Wimmer is a member of Agricultural Communicators of Tomorrow and a graduate student of Jefferson Miller, an ACE member, at the University of Arkansas.

Reviewed by Courtney Wimmer