Online Learning for Female Golf Professionals: A Sport Association Learning Intervention

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Abstract

This paper provides an expanded report concerning a Ladies Professional Golf Association's (LPGA) online education initiative to determine its impact on pass rate and academic performance for their highest level of certification. The article outlines the LPGA's certification structure and continuing education opportunities, previous research involving online learning for organizations, and the LPGA's online review session. Findings identify the study population's general demographics, their background experience in online education, and the pass rate percentages for test takers. Conclusions, recommendations, and strategies are offered for future LPGA online training initiatives supporting both LPGA and non-LPGA members.

Keywords: online learning, distance education, sport educational training, professional development, learning theory, constructivist learning theories

Introduction

Qualified professionals with required certifications are needed to service and support the diverse golf population. Two major professional golf associations currently offer leadership distinctions and certifications for the golf professional; the Professional Golfers Association of America (PGA) and the Ladies Professional Golf Association (LPGA). The focus of this study is on the LPGA's recent online education initiative designed to improve the pass rate percentage for the Class A (top level) certification. This article provides an overview of the golf industry and online education research, followed by how learning theories and design have been applied to online education. The article continues with the purpose of the research, the methodology, the findings, and the implications of the study.

Golf is global. There are an estimated 60 million golfers worldwide (Palmer, 2004; Readman, 2003) and an estimated 28.6 million golfers domestically (National Golf Foundation, 2009). There are present day initiatives designed to continually grow the game, such as Play Golf America and the First Tee Junior Program (Golf 20/20, 2009). Golf also produces economical, social, and environmental benefits. The total economic impact of golf in America has been approximated at $195 billion while providing two million jobs (Golf 20/20, 2009). Golf generates approximately $3.5 billion for charitable causes, raised primarily by fundraising events benefiting local communities and citizens. In 2008, professional golf tournaments generated more than $135 million for charity. The game of golf has also been used as a vehicle to teach life skills to young people, such as sportsmanship, respect, integrity, honesty, and self-control (First Tee, 2009) while providing a place to recreate and socialize in local communities. Environmentally, there are nearly 16,000 golf courses providing green space to local communities and wildlife habitats (Golf 20/20, 2009). It is assumed that golf management positions and golf related job opportunities are

widespread throughout the industry just described. The PGA and LPGA are two professional organizations supporting the professional development and training for the golf industry. As with many associations, members of the PGA and LPGA look to their respective associations' current programming and credentialing practices to enhance their performance and positioning in the golf industry.

The PGA and the LPGA

The Professional Golfers Association of America (PGA), founded in 1916, is comprised of 28,000 men and women golf professionals who grow, manage, and teach the game of golf throughout 41 PGA sections nationwide (PGA, 2009). The PGA's mission is two-fold; to elevate the standards of the profession and to grow interest and participation in the game of golf. The PGA has certifications ranging from apprentice level to Class A professionals. The certification process begins at the qualifying level. The qualifying level has three basic courses. Each applicant must complete the courses and related knowledge tests. Golfers must also pass a Playing Ability Test (PAT) prior to registering for Level 1 of the PGA curriculum. Each level consists of pre-seminar activities, participation in seminars, and a post-seminar knowledge test. Each level must be successfully completed prior to advancement to the next level. There are three levels of curriculum, with successful completion of Level 3 leading to Class 'A' PGA Membership. The PGA seminars are face to face training sessions.

The Ladies Professional Golf Association was founded in 1959, and is comprised of approximately 1,200 female golf professionals. These individuals are dedicated to the advancement of golf through teaching, coaching, and managing golf facilities (LPGA T&CP). LPGA T&CP members teach and support the LPGA's various grassroots programs that are working to increase the involvement of women and youth in golf, as well as contribute to the growth of the sport overall (LPGA, 2009). The LPGA's highly respected national education programs include teaching, coaching, business management and leadership skills training programs and conferences. Other programs include tournaments: employment services, online education and junior golf programs. All programs are open to LPGA members and non-members.

The LPGA T & CP offers certification evaluations that ensure high quality professional standards among its members. The certification process and testing programs provide required skills in areas of teaching, coaching, and club professional activities. The certification process features successful completion of three classification levels. The beginning level labeled as apprentice, followed by Class B, and culminating with a Class A certification credential. The Class A credential is the highest level according to golf industry standards. Throughout the entire certification process, both written and practical evaluations must be successfully completed. The LPGA T & CP Membership has traditionally delivered educational material through face-to-face (F2F) interaction.

Unfortunately, but a precursor to the study, is the seemingly high proportion of LPGA T&CP members that do not pass the Class A written evaluation on the first attempt, consequently affecting the number of golf professionals qualified to service and support the global golf industry. The leadership of the LPGA T&CP was aware of the low pass rate and the potential career advancement and career path consequences to its members. In response, the LPGA T&CP supported an online preparatory class initiative to potentially impact pass rate of the Class A written evaluation. This was intended to lead to the certification of more LPGA members who attained the highest credentials in the industry. The online modality was chosen due to the widespread geographical locations of the potential participants. An exploratory study was conducted in 2005 to identify whether pass rates would improve for test takers who participated in an online review session in preparation for their written evaluations. The study proved successful in that it resulted in improving the pass rate and academic performance on written evaluations (Fjelstul & Tesone, 2006). A limitation to the initial study, however, was the minimal number of participants. Therefore, the aim of the present study was to expand the LPGA's online education initiative with more participants to determine its impact on pass rates and academic performance. The intent was to increase the number of LPGA professionals qualified and competitive for golf management and golf related positions.

Online Education Environments

Convenience, according to the literature, is an influence for participation in online education. Convenience was reported by engineers seeking online professional development opportunities (Kariya, 2003) and Flowers and Cotton (2003) noted the elimination of travel expenses for both instructors and students as the major convenience benefit. A more recent meta-analysis was conducted by Tamim et al (2011) that drew this conclusion along with information from empirical studies that compared distance learning outcomes with those of traditional classroom methods.

Online education typically offers learners more control over their study level, involvement, and time on task, as flexibility is noted as a motivating factor for enrollment in asynchronous online learning courses (Chang, Hung, Keh, Chang, & Shih, 2005). Such benefits allow for professional and career development while juggling responsibilities between family and work. The absence of scheduling conflicts affords learners an opportunity to partake in learning opportunities for degree completion goals where traditional face to face environments may otherwise prevent participants from attending classes, completing degrees, and achieving advanced certifications.

Research has indicated that, although students may be more engaged during an actual face to face discussion, flexibility of time and thought in an online environment may result in enhanced critical thinking responses which may directly influence learning effectiveness (Sweeney & Ingram, 2001). Lee and Witta (2001) suggested a certain level of comfort with web technologies was required to engage in an online learning process while Cheurprakobkit, Hale, and Olson (2007) stated that a lack of computer proficiency would become a barrier to learning.

Studies have focused attention on associations and general industry in their quest of designing and implementing online opportunities for their constituents nationwide. In sport, for example, Biddington et. al (2005) studied athletic trainer behaviors in emergency situations and Wiksten (2004) studied specialties within the athletic training credential. Industry related research included Burgess and Russell (2003) providing an extensive review of distance learning initiatives in organizations, including recognizable companies such as Pfizer, DaimlerChrysler, General Motors, Boeing, Dunkin Donuts, Kinko's, Hilton Hotels, and Nike.

Learning Theories and Design Applied to Online Education

Fjelstul and Tesone (2006) incorporated learning theories during the design phase of the inaugural academic review session modules. Considerations from four learning theories offering pedagogical advancement to online learning design aided in the process; Cognitive Flexibility Theory, Dual-Coding Theory, Elaboration Theory, and Transactional Distance Theory.

A brief overview of each theory and the connection to the LPGA online academic modules are provided. Cognitive Flexibility Theory prescribes that learners understand the interconnection of content knowledge areas within 'complex' areas of intended learning (Godshalk, Harvey & Moller, 2004). Learning outcomes associated with the theory would encourage 'open thinking' and avoid oversimplification of subject knowledge (Spiro, Vispoel, Schmitz, Samarapungavan, & Boerger, 1987). Each learning module in the study offered discussion postings that requested participants to share their field experiences regarding the subject matter along with discussions regarding their preparation techniques of each respective area for their approaching written evaluation. Dual Coding Theory is also referred to as dual processing for learning. It suggests that two systems (e.g., verbal and nonverbal) comprise working memory of learned knowledge (Mayer, 1999). The two systems are connected and when both are used in parallel fashion producing information processing that may be maximized by the learner (Paivio, 1990). This theory supports the use of combined visual, auditory and kinesthetic (VAK) modes of instruction to appeal to all learning styles and to expose the learning to variations concerning subject matter in order to enhance comprehension. The LPGA utilizes the VAK approach throughout their student-centered curriculum via classroom engagements and practical experiences. The VAK was utilized in the online modules linking participants' insights and experiences to classroom engagement.

Elaboration Theory is focused on course design and somewhat overlaps the tenets contained within Cognitive Flexibility Theory in that it advocates a simple-to-complex approach in developing instruction modules (Chou, 1999). Elaboration Theory also touches upon the content of Dual Coding theory by advocating a double learning process consisting of knowledge expansion and then condensation. This implies that initial presentation of knowledge and then exposure to more difficult topic examples enhances learner comprehension and applications (Reigeluth & Stein, 1983). The theory also suggests that combining the two in a teaching environment produces optimal outcomes. The online review session was designed with eight learning modules. The beginning module provided an orientation session to introduce the online course and to provide details of the approaching four week session.

The Transactional Distance Theory poses direct implications for online learning environment course designers. It articulates the concepts of interaction (transaction) and autonomy (distance). The theory suggests that increased levels of learner autonomy will result in improved learning abilities (Stein, Wanstreet, Calvin, Overtoom, & Wheaton, 2005). Advocates of the theory focus on course structure,

dialogue, and autonomy. They suggest that a balance should be created among the variables to facilitate learning within a course (Kanuka, Collet, & Caswell, 2002). The LPGA online course offered online practice quizzes to assess learning and to facilitate further discussion clarifying areas yet to be mastered.

The academic online review session was designed for strong community engagement between participants. Studies have also shown that designing online education courses with a sense of community increase perceptions of learning as well as generating lesser feelings of isolation (Liu, Magjuka, Bonk, & Lee, 2007). A learning community can be designed as one with a shared goal, membership, and boundary (Rovai, 2002; Shea, Li, & Pickett, 2006).

Methodology

LPGA T&CP members who were eligible to take their Class A written examinations were invited to participate in one of two online review sessions designed for Class A written evaluation preparation. The senior certification coordinator for the LGPA T&CP identified and notified the 149 eligible Class B members. Eligibility was determined by their completion of a two year cycle as a Class B member and their completion of all education related requirements. Each participant was informed that their participation in the online review session was voluntary and that the online review session was self-paced. They were further notified that the program was designed with a four week suggested timeline. The four week online review session included the following: Intended learning outcomes for each of the seven major topics covered in the written evaluation, asynchronous threaded discussions reflecting the related subject matter, and online practice quizzes similar in style and content in preparation for their approaching written evaluation. During the fourth week of the online review session, participants were asked to share their thoughts of the four week online review session experience and/or their thoughts leading into the online education experience. Participants in the online review session along with test takers who did not participate in one of the two online review sessions subsequently sat for the 100 point Class A written evaluation. The exam was administered at a single nationally scheduled test site. A score of 80 or higher indicated successful pass completion. Tests were scored by the LPGA officials.

Results

Online review session participants ranged in age from 26-70 years old, with the mean age of 45. This mirrored the characteristics of the control group (those preparing on their own).Characteristics of the "control" group? Approximately 89% of the participants reported little or no online education experience prior to their experience in the LPGA online review session. There were a total of 42 participants in the online review session with a total of 137 members of the LPGA electing to take the written evaluation.

The purpose of this follow-up study was to determine the impact of online education to outcomes concerning pass rates and academic performance. The study revealed a 71% pass rate for participants in the online review session. The pass rate for those that did not receive the online academic intervention was 54%. Table 1 provides a summary of the findings.

Table 1: LPGA T&CP Class A Written Evaluation

	Mean Test Score	Sd	# of Successful Participants	# of Unsuccessful Participants	% Passed
Online Review Session Participants	78.2	7.7	30	12	71%
No Educational Intervention	78.3	8	51	44	54%

The LPGA T&CP does not limit the number of attempts a member is allowed to pass the Class A written evaluation. Table 2 displays the pass rate percentage corresponding to the number of written attempts.

Discussion

The study proved to be successful at improving pass rates on the Class A written evaluation utilizing online education interventions. This resulted in substantially more certified LPGA golf professionals qualified to meet the needs of the golf industry. As already stated the overall pass rate for participants in the online review session was 71%. Further analysis also revealed that the pass rate percentage of

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participants in the online review session were consistently greater when compared with the same number of attempts by participants who did not receive the online intervention, as reported in Table 2. Such findings are consistent with the literature, supporting the notion that online education provides an effective learning environment.

Table 2: LPGA T&CP Rate Percentage by Number of Attempts

	Online Review Session Participants	No Educational Intervention
1st Attempt	71% (17 of 24)	51% (26 of 51)
2nd Attempt	62% (8 of 13)	56% (18 of 32)
3rd Attempt	100% (3 of 3)	67% (6 of 9)
4th Attempt	100% (3 of 3)	33% (1 of 3)

The study also offered strong findings from the generated comments by participants regarding their experience during the online session and/or leading up to their online education experience. A common concern reported by the online review session participants was their lack of comfort due to little prior experience with online education. Almost every participant indicated some degree of anxiety about navigating the course and not feeling comfortable with their computer skills. This was not surprising. As previously reported, the average age of the online participant was 45 years old. The oldest online review session participant was 70 years old. Early interventions were implemented to eliminate these anxieties, which is appropriate practice in any online program. There is a great likelihood that online education was not afforded to most of the participants during their formal education programs. Findings from the present study appear to contradict previously cited literature (Cheurprakobkit, Hale, and Olson, 2007) given that anxieties were present at the onset of the online training. Despite the initial anxiety levels pass rate percentages were higher than the control group for the online participants. There were no statistically significant differences between the groups. However, the anecdotal differences were positively embraced by LPGA officials. Rahman (2001) reported that internal change on the part of an educator is most often required when introduced to teaching in an online learning environment. It would also seem reasonable that some level of change would be required on the part of the learner. It is quite possible that participants experiencing lack of comfort invested additional effort into their learning.

There were noted factors leading to voluntary involvement in the present study. Aside from potential academic benefits, there were frustrations related to travel costs associated with going to face-to-face seminars and loss of income while away from work. As mentioned earlier, participants were located in diverse geographic locations. It is important to note that many LPGA members are self-employed in the golf industry. Online education closes the distance gap, eliminates travel costs, and provides learning opportunities that are convenient to their schedules.

Conclusions

The leadership of the LPGA demonstrated a commitment to meeting an educational need of their members and supporting the advancement of their membership. (LPGA T&CP).This demonstrates a willingness to provide an investment in human capital for their respective industry. In this case they supported the online initiative that was articulated in the present study. A strong case can be made to the

LPGA for the continued development and expansion of online education programs for both its membership and non-members globally. The present study may also serve as a catalyst for future LPGA educational activities, as well as related hospitality organizations pursuing similar interests through their respective associations. Numerous mainstream training and education institutions intend to use online learning environments for some level of course delivery.   The following considerations might be addressed as the LPGA moves forward with advanced training initiatives.

A recommendation would be to develop Class B and Apprentice level written evaluation online review sessions. The online review session already developed for the Class A written evaluation may be used as a template for the Class B and Apprentice level written evaluation online review sessions. Another recommendation would be to develop portions of the existing LPGA National Education Program Seminars as online professional development courses. The pursuit of such initiatives would not be intended to replace all traditional instruction sessions. Instead, the alternative delivery method would increase educational online offerings for the LPGA membership, which will address the travel and financial concerns expressed by participants.

At the current time, all of these evaluations are delivered utilizing the traditional written format. A third recommendation would be to consider converting the written evaluations into online examinations. A final recommendation is to develop LPGA-based online educational and certification programs for non-LPGA members, thus serving as an outreach to potential professionals pursuing golf related career paths globally. At the present time, only members of the LPGA and PGA have the opportunity to acquire leadership distinctions and certifications from their respective associations but non-members may attend education offerings, as well.

References

Bernard, R., Abrami, P., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., Wallet, P., Fiset, M., Huang, B. (2011). How does distance education compare with classroom instruction? A meta analysis of the empirical literature. *Review of Educational Research, 81*(2), pp. 302-41.

Biddington, C., Popovich, M., Kupczyk, N., & Roh, J. (2005). Certified athletic trainers' management of emergencies. *Journal of Sport Rehabilitation*, *14*(2), pp. 185-94.

Burgess, J.R.D. and Russell, J.E.A. (2003). The effectiveness of distance learning initiatives in organizations. *Journal of Vocational Behavior*, *63*, 289-303.

Chang, F.C., Hung, L.P., Keh, H.C., Chang, W.C., and Shih, T.K. (2005). Design and implementation of a SCORM-based courseware system using influence diagram. *International Journal of Distance Education Technologies, 3*(3), 82-94.

Cheurprakobkit, S., Hale, D. F., and Olson, J. N. (2007). Technicians' perceptions about web based courses: The University of Texas system experience. *The American Journal of Distance Education, 16*(4), 245-258.

Chou, C. (1999). Developing hypertext-based learning courseware for computer networks. The macro and micro stages. *IEEE Transactions on Education, 42*(1), 39-44.

First Tee (2009). Retrieved August 30, 2009 from http://www.thefirsttee.org

Fjelstul, J. and Tesone, D.V. (2006). Online training for sport professionals: Lessons learned from an inaugural initiative. *Journal of Online Learning and Teaching*, 2(4), 260-267.

Flowers, J. and Cotton, S. (2003). Master of arts in career and technical education-now 100%. *Tech Directions*, *63*(2), 22-28.

Godshalk, V. M., Harvey, D.M., & Moller, L. (2004). The role of learning tasks on attitude change using cognitive flexibility hypertext systems. *The Journal of the Learning Sciences, 13*(4), pp. 507-526.

Golf 20/20 (2009). Retrieved October 10, 2009 from http://www.golf2020.com

Kanuka, H., Collett, D. and Caswell, C. (2002). University instructor perceptions of the use of asynchronous text-based discussion in distance courses. *The American Journal of Distance Education, 16*(3), 151-167.

Kariya, S. (2003). Online education expands and evolves. *IEEE Spectrum*, *40*(5), 49-54.

Ladies Professional Golf Association (2009). Retrieved September 20, 2009 from http://www.lpga.com .

Lee, C., & Witta, L. (2001). *Online students' perceived self-efficacy: Does it change?* Paper presented at the national convention of the Association for Educational Communications and Technology, Atlanta, GA.

Liu, X., Magjuka, R. J., Bonk, C. J., and Lee, S. (2007). Does sense of community matter? *Quarterly Review of Distance Education*, *8*(1), 9-24.

Mayer, R. E. (1999). Designing instruction for constructivist learning. In C. M. Reigeluth (Eds.), *Instructional-Design Theories and Models Volume II: A New Paradigm of Instruction Theory*. Hillsdale, NJ: Erlbaum.

National Golf Foundation (2009). Retrieved September 24, 2009, from http://www.ngf.org

Paivio, A. (1990). *Mental representations: A dual coding approach.* New York: Oxford University Press.

Palmer, C. (2004). "More Than Just a Game: The Consequences of Golf Tourism". In *Sport Tourism: Interrelationships, Impacts and Issues*, edited by B. Ritchie and D. Adair, Cleavedon: Channel View, 117-134.

Professional Golfers Association of America (2009). Retrieved October 2, 2009 from http://www.pga.com

Rahman, M. (2001). Faculty Recruitment Strategies for Online Programs. *Journal of Distance Learning Administration.* IV (IV*).*

Readman, M. (2003). "Golf Tourism". In *Sport and Adventure Tourism*, edited by S. Hudson. New York, NY: Haworth, pp. 165-201.

Reigeluth, C. M., and Stein, F.S. (1983). The elaboration theory of instruction in C. M. Reigeluth (Eds.), *Instructional Design Theories and Models: An Overview of Their Current Status.*Hillsdale, NJ: Lawrence Erlbaum**:** 335-382.

Rovai, A. P. (2002). Sense of community, perceived cognitive learning, and persistence inasynchronous learning networks. *The Internet and Higher Education*, *5*(4), 319-332.

Shea, P., Li, C., and Pickett, A. (2006). A study of teaching presence and student sense of learning community in fully online and web-enhanced college courses. *The Internet and Higher Education*, *9*(3), 175-190.

Spiro, R. J., Vispoel, W.L., Schmitz, J., Samarapungavan, A., and Boerger, A. (1987). Knowledge acquisition for application: Cognitive flexibility and transfer in complex content domains. In B. C. Britton, & S. Glynn (Eds.), Executive control processes. Hillsdale, NJ: Lawrence Erlbaum Associates.

Stein, D. S., Wanstreet, C.E., Calvin, J., Overtoom, C., and Wheaton, J.E. (2005).   Bridging the transactional distance gap in online learning environments. *The American Journal of Distance Education*, *19*(2), 105-118.

Sweeney, J.C. and Ingram, D. (2001). A comparison of traditional and web based tutorials in marketing education: An exploratory study. *Journal of Marketing Education*, *23*(1), 55-62.

Tamim, R.M., Bernard, R.M., Borokhoyski, Abrami, P.C., Schmidt, R.F. What forty years of research says about the impact of technology on learning. *Review of Educational Research, 81*(1), 41-28.

Wiksten, D. (2004). Specialty certifications in athletic training. *Athletic Therapy Today, 9*(4), p.1.A.1 Tables 1 & 2.