
Developing a Competitive Marketing Strategy: The Case of a Complete Fitness Gym

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EXECUTIVE SUMMARY

This case is designed for use in business courses to help students learn about the competitive environment and operation of a typical small business organization. The case presents a situation of an actual organization in which Jim Press and Ed Curl (all names are disguised) have developed a concept for a Complete Fitness Gym (CFG) to be opened in a southern metropolitan area. Despite the high failure rate of such facilities in the industry, Press and Curl believe that they can establish CFG as a successful business organization.

Keywords: Competitive environment, Entrepreneurship, Services marketing, Business strategy

INTRODUCTION

Jim Press and Ed Curl have developed a concept for CFG to be opened in the suburbs of a southern metropolitan area. They have assessed the needs and trends of the target market, and the strengths, weaknesses, opportunities, and threats of establishing a fitness club in one of the smaller cities adjacent to a major city. Demographic information for the target market and several economic indicators suggest that the fitness business in the area would be a viable business undertaking. Press and Curl believe that they can establish CFG as a business organization at the right time and at the right place.

Demand for quality fitness clubs is high, and the disposable income of the target market is also high, a combination which facilitates the success of the organization. Nonetheless, the fitness industry has been plagued by a high degree of failed ventures. Press and Curl have been told that 80% of new fitness clubs go out of business within the first 39 months of operation. Jim and Ed are concerned that this could happen to them. In order to succeed in a very competitive environment, CFG must differentiate itself by the quality of its customer service and the products it offers. In addition, it is imperative that CFG adopt a strong promotion strategy if it is to later expand to other locations around the metro area. CFG must be well positioned to benefit from a growing market and changes in lifestyle, so that it can offer its members the fundamental elements that will determine the success of the organization: customer service, dedication to quality, and value.

During the past decade, Americans have become more consciously oriented towards health and fitness issues, creating a new way of thinking that affects the way they live. This fact is due in part to increased awareness about health issues and concerns, promotion of programs to increase body fitness, and greater availability of information about general health, wellness, and fitness issues.

America is the fattest nation on the face of the earth. Children's obesity is a top concern in the U.S. Health and fitness professionals predict that schools are unlikely to increase time devoted to physical education or nutrition education; thus, providing physical activity for kids may fall in the hands of the health/fitness industry along with fitness professionals.

At the other end of the age spectrum, preventive care is highly important because it involves the baby boom generation which is growing older and living longer, and their physicians are recommending they remain active. Exercise is becoming a larger part of preventive care for older adults to help fight osteoporosis, reduce the risk of everyday injury, and maintain independence. Lawmakers have become very interested in the obesity crisis in the United States, and they suggest that if they can increase the physical activity of Americans, hopefully the end result will be a decrease in health-care costs.

Achieving and maintaining a healthy lifestyle has become an important part of the American society, from early in life to later in adulthood. People are constantly encouraged to develop interests in sports and other exercise activities, which have a good probability of being continued over their entire lifespan. Walking, running, skiing, cycling, rowing, swimming, tennis, racquetball, volleyball, rope jumping, hand ball, are just a few exercise activities which children can expect to carry on into adulthood.

Subsidy of preventive lifestyle programs are now being offered by many health-care providers and business companies. They provide and/or partially subsidize preventive lifestyle programs, such as providing web sites for wellness information, risk assessment, fitness calculators, how to contact a fitness professional, and other services.

FITNESS MARKET TRENDS

Going to a gym has created new opportunities for people to socialize in a different type of environment. This cultural shift has transformed the fitness industry, as people now impart an additional dimension of value to becoming members of a fitness club. Prospects can benefit from finding a gym that meets, not only their fitness needs, but also offers chances of finding others that are close to their age and interests.

The fitness market is evolving at a fast pace, with new business models, training concepts, and trends emerging constantly. The United States is the single biggest market worldwide not only in terms of revenue but in regards to the number of members in health and fitness clubs as well. A professor friend who knows the sector has provided them with some data. He estimated that in 2017 a total of about 38,500 fitness and health clubs were operating in the U.S. with about 55 million members. The industry is estimated at \$30 billion, has been growing by at least 3-4% annually for the last ten years, and shows no signs of slowing down. An increase in public awareness about the dangers of physical inactivity and the health and fitness industry's commitment to making exercise more accessible to Americans are contributing factors to this growth. He stated that about 25% of people in the United States, who work out at least once a month, say that exercise, workout, or sports in general is part of their daily routine. Almost two-thirds of people who regularly exercise are, or have been at some point, a member of a health club or gym. The main reasons for exercising are to stay healthy, reduce weight, optimize strength and/or endurance, to get a better-looking body, and improve overall appearance. Health and fitness clubs provide their customers with the infrastructure for their workouts and physical activity in exchange for a membership fee.

TARGET MARKET

CFG's primary target market consists of individuals living within a five-mile radius from the planned location. The residents of this middle to upper class area are between the ages of 25 to 44, both male and female. The secondary target market consists of people working in business organizations within the 5-mile radius from CFG. CFG could further narrow its focus by selecting a closer area, such as the zip code or, a one- or two-mile radius, which could provide better strategic results, especially during CFG's first year of operations. This narrower target market strategy could help CFG concentrate its efforts on building a loyal core of customers while minimizing promotion costs. However, as CFG's business operations grow, the larger county market could potentially include other professionals who work in the fast growing business organizations in the area, as many of them now offer employees incentives for wellness and fitness programs.

According to the U.S. Census of 2010, the demographics of the primary target market (which is within a 5-mile radius of CFG's

location), include a population size of 196,197, population density of 2,607 per sq. mile, average household income of \$76,768 (state = \$47,881), unemployment rate of 5.0% (state = 6.7%), mean poverty ratio of 2.65, and mean population age of 36.4 years old. The estimated total population for this target market is estimated at 265,309 persons.

An important element of the demographics of this target market is the fact that 81% of the population is composed of families who reside within the five-mile radius from CFG and who have a relatively high household income, in comparison to the state-wide average of \$76,768 versus \$47,881 in the 5-mile radius. Table 1 below summarizes key demographic attributes of CFG’s potential target markets of one- and three-mile radius. This information may be very valuable in determining, for example, an effective promotion strategy for a smaller target market.

CFG is strategically located in a fast growing area between City A and City B which are the suburbs of a major metro area in the U.S. south. Table 2 below shows the demographic information of cities A and B. The projected growth of the local economy is shown in Table 3.

TABLE 1			
TARGET MARKET DEMOGRAPHICS			
SOURCE: U.S. Bureau of the Census, 2010 Decennial Census			
Subject	1-Mile Radius	3-Mile Radius	5-Mile Radius
Population Size	12,788	78,750	196,197
Persons Per Sq. Mile	3,608	2,903	2,607
Average Household Income	\$104,673	\$85,632	\$76,768
Population – Ages 35-44	2,787	15,477	38,702
Percentage of Families	90%	81%	81%
Management, professional & related occupations	60%	53%	46.2%
Unemployment Rate	2.9%	4.5%	5.0%
Mean Poverty Ratio	2.80	2.73	2.65
Current Population Estimate	19,985	113,987	265,309
Population Projections for Jan. 1, 2022	25,798	142,545	318,983

TABLE 2	
DEMOGRAPHIC INFORMATION FOR CITIES A AND B	
City A	City B
Population = 79,943	Population = 73,679
Median age = 37 years old	Median age = 35.5 years old
Average Household Income \$86,231	Average Household Income of \$63,330
Area = 24.5 square miles	Area = 30.5 square miles
27.2% of population is between the ages of 25-44 years old	
Recognized as the “fittest city in the state” for last four years	City is served by several major highways

TABLE 3					
PROJECTED GROWTH OF THE LOCAL ECONOMY					
LOCATION	Population	Growth Rate (Percentage)	Unemployment Rate (Percentage)	Average Household Income (Dollars)	Increase Household Income (Percentage)
Target Market	318,983	20.2	5.09	94,424	23
County	616,807	5.26	6.1	130,000	23
City A	77,326	4.52	6.0	137,328	25
City B	91808	4.82	6.0	159,635	22.8

LOCATION

Proximity and accessibility are key factors considered by customers when choosing a fitness club. CFG’s location offers both of these elements by being conveniently and strategically located in a vibrant and fast growing area between City A and City B. As a large residential area surrounds the location of the facility, residents have the flexibility of stopping by the club on their way to or from work or school. Also, the location of the facility is easily accessible from two major highways in the area.

CFG has leased a 60,822 square feet facility, situated in a very visible location in the center of a large strip mall. The strip mall is conveniently bordered by two major traffic arteries. Since one of the main reasons people join a fitness club is the convenience of its location, CFG is well suited to attract new members because it can offer easy access to residents who live in an area that includes 197 residential subdivisions. For example, CFG’s location is very convenient to a high number of residents who are professional individuals that have to commute daily to other areas of the large metro area. According to the 2010 census, more than 96% of workers within the 5-mile radius commute to work.

A comparison of the strengths and weaknesses of CFG versus Round-the-Clock Gym (the major competition), as it relates to place strategy, is described below:

Strengths

Accessibility - CFG is easily accessible from major highways and other main streets in the area. Because CFG is closer to the residents living in the adjacent neighborhoods, customers benefit in time and money due to reduced driving times to the fitness facility.

Target Market - Although CFG is in closer proximity to large residential areas, it could in time develop a strategy to target professionals working in the adjacent businesses located within the 5-mile radius.

Vehicle Traffic - Almost 28,500 vehicles per day drive by the location of the facility. This element alone can serve as a competitive advantage for CFG’s location, since it promotes the presence of the facility and the surrounding businesses to most of the residents in the area.

Weaknesses

Visibility - CFG has less business visibility in comparison to Round-the-Clock Gym, which has 2 facilities located on a more visible place, one of which is 2 stories high. Further, Round-the-Clock Gym is located on a major commuter route to residents of a nearby county who commute to and from work.

Ambiance - CFG projects an inferior ambiance as compared to Round-the-Clock Gym, which has a professional entrance with a nice reception desk, smoothie drink bar, clothing, and supplements.

Target Market - CFG is less attractive to people who work in the area, in comparison to Round-the-Clock Gym which is located closer, and targets business organizations in the area.

SUPPORTING SERVICES

This is a vital element for the success of CFG, as customers value the personal care and attention, and the outstanding level of service that distinguishes CFG from other competitors. The quality and the consistence of the service offered to customers is a major factor that provides a competitive advantage to CFG in establishing itself in the area.

The small size of the fitness facility is a great strength for CFG, as it promotes greater flexibility for customers and staff, and greater responsiveness/interaction with customers, in comparison to other larger competitors. In addition, the small size of the fitness facility results in lower overhead expenses associated with the maintenance and use of the facility. Most importantly, however, the small size of the facility has a positive effect on the quality of the service to CFG customers, as staff members, trainers, and managers are more capable of assisting and developing relationships with customers. CFG's size is a fact which positively affects the service level of the organization, which in turn, makes a big difference in the process of meeting customers' needs and expectations.

CFG will offer a fully functional 24/7/365 health club with modern exercise equipment, personal trainers, individual and group classes, diet and meal counseling, clean and pleasant ambiance, VIP and full service lockers, child care, and towel service. Exercise is the primary product to be offered at CFG. It will be available on an individual basis or in group fitness programs and provided to members 24 hours a day, seven days a week, 365 days per year. It will distinguish itself from its competitors by the level and quality of customer service. In addition to exercise, CFG will also offer cardio and strength training equipment, weight lifting area, personal training, exercise classes, martial arts classes, hydro massage, tanning, ladies only area, private stretching area.

CFG's core benefit is the promotion of a healthier body and an improved life style of its members. At CFG individuals have the opportunity to achieve positive results with physical exercising and training that will enhance many aspects of their lives, the primary being a healthy body.

The organization will offer state of the art exercise facility, equipment, staff, and programs designed to enhance the physical fitness condition of its members. CFG will offer a diversity of modern exercise machines and specific training programs to meet the specific needs of each club member.

CFG needs to offer pleasant ambiance for exercising, modern, clean, and functional equipment, helpful training staff, friendly customer service, clean and safe facility for exercising, member follow-up, and open 365/24/7. CFG needs to excel in this area, if it is to succeed in contending in a very competitive market.

In order to effectively compete in the fitness industry, CFG needs to offer an experience in body fitness that surpasses that of its competitors. As the awareness and importance of physical exercise grows in the American society, CFG should adopt a strategy that focuses on helping individuals achieve and maintain a healthy life style. For example, a juice bar is a great way to encourage individuals to adopt healthier drinking habits, in comparison to offering vending machines with soft drinks.

As a supplement to its primary products, CFG will offer child care, kid's fitness programs, family fitness programs, wellness programs, certified trainers, group and individual training programs, and towel service. These products are offered in a tiered format that increases based on member interest. Additional augmented products include free child care, VIP locker areas, hydro massage, steam room, and tanning room. There may be a number of additional potential products that CFG could consider. Press and Curl want to be able to identify some of those for future planning purposes.

By providing superior services at a reasonable price that reflects value to its customers, CFG can successfully position itself in a very competitive market. CFG must take advantage of its small size, relative to its competitors, to position itself as a friendly place, where not only customers can have their exercising needs met, but a place where people feel that "everybody knows your name." As the socialization aspect of exercising influences individuals' decision to join a fitness club, CFG will be well positioned to excel in that area. In addition, the experience offered by CFG, of providing physical exercising, training, and education must include the following key elements needed in a positioning strategy:

- Outstanding level of customer service.
- Expert, certified trainers.
- Friendly and knowledgeable staff.
- Moderate pricing structure, relative to competitors.
- State-of-the-art fitness equipment.
- Modern fitness facility located in a convenient location.
- Encouraging and supporting fitness programs.
- Group training based on goals and body type.
- Youth programs.
- Fitness & weight management.
- Nutrition consultation from certified professional.

COMPETITION

CFG's primary competitor in a 5-mile radius is Round-the-Clock Gym, which has two facilities located within three miles of CFG's location. Each of them is located on a major highway. Round-the-Clock Gym is a very large privately-owned and operated fitness center chain, and has hundreds of clubs worldwide. It offers a wide range of fitness programs in five different types of fitness centers: active, sport, super-sport, ultra-sport, and express. In addition, Round-the-Clock Gym offers its members many luxury amenities such as saunas, steam rooms, tanning rooms, body massage, juice bar, and executive locker rooms. CFG's secondary competitors within the five-mile radius include: Sportsman's Center, Top Flight Sports, Forever Fit, LA Weight Loss Centers, Curves, Mega Center.

Round-the-Clock Gym is very active in the promotion of its business in many different ways. One of the ways include the company's involvement in sponsoring key sporting events, which further improves its name recognition as one of the top fitness organizations in the world. Jim and Ed have done a comparison of strengths and weaknesses for CFG versus Round-the-Clock Gym as follows:

Strengths

Flexibility - CFG can offer its members and staff greater flexibility, responsiveness, and personal interaction, in comparison to Round-the-Clock Gym which cannot perform at the same level due primarily to the volume of the business in the organization. *Service* - CFG can provide better quality and consistence of the service offered to its customers. This fact is derived primarily from the smaller size of the organization which allows it to better focus on customer service, in comparison to a much larger, global fitness organization such as Round-the-Clock Gym. The result of a higher level of customer service is a better retention rate. CFG has a retention rate of approximately 90%, as compared to 65% for Round-the-Clock Gym.

Environment - CFG will offer a less crowded environment, and a more relaxing atmosphere. For example, at CFG customers will not have to compete for equipment availability, which results in less wait time. In addition, potential new customers do not have to sign papers to visit the facility.

Weaknesses

Capital - CFG will have less capital available for expansion, promotion, renovation of equipment and facilities, and introduction of special offers. In comparison to Round-the-Clock Gym, CFG is focused primarily on the local market, while Round-the-Clock Gym continues to invest in an aggressive global strategy for growth, as a result of its stronger financial performance.

Locations - CFG has a single location. In contrast, Round-the-Clock Gym has two fitness facility locations within the 5-mile radius of the target market, versus only one facility for CFG.

Name Recognition - CFG will have to gain name recognition, in contrast with Round-the-Clock Gym, which is a well-established and internationally-recognized organization with a very strong promotion strategy.

CHALLENGES

Press and Curl believe that one of the first steps in developing a business and marketing plan is to start with a mission statement for CFG. They understand that this mission statement should reflect the core and fundamental nature of the business, along with its goals, objectives, and value to its members:

The partners recognize the need to develop a marketing plan in order to guide their operation and make their investment successful. They have put together a set of working challenges that will guide them as they develop a marketing plan. Once objectives such as these have been identified there are many tactical elements within these strategies that will need to be established. One of the major issues for the owners is that they must do everything on a relatively limited budget. Therefore, they view their challenge as one of “guerilla marketing” in which they undertake highly effective approaches that are relatively inexpensive.

Jim and Ed have determined that the keys to CFG’s success as a fitness organization depend on the following elements:

Membership - The membership growth projection established by CFG’s owners is to achieve 5,500 members by the end of 2020. However, it may be much more likely and realistic that CFG will be able to meet a slightly lower marketing objective of somewhere between 4,500 and 5,000 members.

Quality of Service – CFG must differentiate itself from the competition by offering superior service and value to its members. A friendly environment, knowledgeable staff, expert trainers, and an outstanding level of customer service are the planned cornerstones for successful operation of the organization. CFG must provide the highest quality of products to its customers with modern, innovative, and affordable products that not only meet, but exceed the expectations of its customers. CFG must strive to achieve and maintain the highest level of customer service and offer the highest product quality. It will be necessary to measure customer satisfaction of club members in order to obtain their perspectives as to the quality of products and services offered by the club. CFG will need to analyze the responses and adjust according to survey results.

Pricing - CFG must implement a pricing strategy that reflects the quality of its products and services, while demonstrating great value to its members. In addition, the pricing strategy needs to help attract members while allowing the organization to become profitable. The pricing strategy should always take into consideration the desires of the customer, and the needs of CFG. CFG needs to adopt a specific pricing strategy in the pricing of its memberships. In order to develop a loyal customer base and stay competitive in the market, they must deliver more value than their competitors by providing superior products and services. CFG plans to offer a variety of membership options for new members, including discounts for currently-enrolled students. This flexibility in pricing is one of CFG’s competitive advantages, in relation to its competitors. CFG’s competitors have enrollment fees, processing fees, month-to-month fees, and child care fees. Competitors’ enrollment fees range from \$79 to \$169, and monthly fees range from \$29.95 to \$49.95. CFG’s main competitor, Round-the-Clock Gym, charges a monthly

fee of \$42.95, plus a processing fee of \$79 and an enrollment fee of \$99. In addition, it also requires its new members to pay the first and the last month's fee, and 60 to 90 days' notice of membership cancellation. In comparison, the fees charged by Round-the-Clock Gym are much higher than those planned by CFG. An initial membership at Round-the-Clock Gym costs \$263.84, but an initial membership at CFG could cost as low as \$39.95 to a maximum of \$151.95. Press and Curl plan to choose a pricing objective that will allow them to achieve a maximum market share. In order to accomplish this CFG must invest in an effective promotion strategy which will reflect the quality of CFG's products and services. Press and Curl will need to estimate the number of memberships which will be achieved in each option category in order to forecast sales revenue. Table 4 below contains a summarized cost of membership at some of CFG's closer competitors.

Promotion - CFG must adopt a promotion strategy that will help it attain brand name recognition in the fitness industry. The results of an effective promotion strategy will enable CFG to successfully enter the target market and attract members. Without a significant promotion budget, CFG will be in a disadvantageous position in relation to its competitors who invest heavily in promotion campaigns. CFG must develop brand awareness with a strong promotion strategy in order to attract members and efficiently contend in a very competitive market. In particular, CFG needs to develop a promotional strategy that will reach the residents of the target market (approximately 265,000 residents). Press and Curl are not certain what methods this should include, but want affordable promotions.

TABLE 4							
COST OF MEMBERSHIP							
<i>Month-to-Month</i>	Process Fee	Enrollment Fee	Monthly Fee	Child Care Cost	Class Cost	Hours	Cancellation Fee
CFG (Option 2)		75	32.95	Free	Free	24/7	NA
CFG (Option 3)		125	26.95	Free	Free	24/7	Na
Round-the-Clock Gym	79	99	42.95	Varies	Free	Limited	30 days
Forever Fit		169	49.95	Extra	Free	24/7	30 days
LA Weight Loss		99	29.95	Extra	Free	Limited	60-90 days
Contract							
CFG (Option 1)			39.95	Free	Free	24/7	NA
Body Power (Pre-paid)		425	-	Free	Free	24/7	NA
Top Flight Sports		99	39.95	Extra	Some Free	Limited	NA
Curves		99	39.95	None	None	Limited	

FINANCIALS

Press and Curl have developed an estimate of the expenses expected to be incurred during 2020 (see Table 5). However, depending on the specific recommendations developed (e.g., for advertising and promotion), there could be some moderate changes in these figures. For example, the owners think it is unlikely that they can launch the facility for less than \$40,000 of advertising and promotion in the first year or two, even with a guerilla approach. Press and Curl need to determine their breakeven point and develop pro forma statements for the next three years. They desire to achieve a 15% return on their investment.

TABLE 5		
COMPLETE FITNESS GYM – 2020 PROJECTED EXPENSES		
DESCRIPTION	Monthly	Annually
Salaries & Wages	\$55,000	\$660,000
Rent	\$40,000	\$480,000
Licenses	\$500	\$6,000
Adverting & Promotions	\$1,250	\$15,000
Internet & Phone	\$1,200	\$14,400
Janitorial	\$1,500	\$18,000
Security	\$0	\$0
Insurance	\$1,835	\$22,020
Utility Services	\$8,000	\$96,000
Laundry Services	\$800	\$9,600
Repairs	\$3,000	\$36,000
TOTAL	\$113,085	\$1,357,020

Online Learning And Competitiveness: Incorporating Teaching Strategies And Software That Encourage Ethical Behavior

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EXECUTIVE SUMMARY

Numerous studies document the link between education and economic development and improvements in connectivity and access to online learning opportunities highlight academic integrity issues that online educators must address. Academic integrity is defined as a moral code that discourages or prohibits any activity perceived as unethical in an academic setting. This moral code should both value and encourage the high academic standards, while suppressing such unethical behaviors as plagiarism, cheating on exams, and contract cheating. The ubiquity and growth in online learning poses new issues for academics with regard to academic integrity in the virtual classroom. In this paper we review unethical academic behaviors, some which are specific to online learning, and offer strategies to mitigate these behaviors.

INTRODUCTION

Isiaka and Egerue (2019) provide a good discussion on the importance of education to developing nations. They find a positive significant relationship between education spending and economic growth in Nigeria over the period 1981 through 2016. Other researchers (Nowak & Dahal, 2016) find similar results in Nepal. Overall, most studies support the link between education and economic development.

Sinha and Bagarukayo (2019) highlight that education is listed as the fourth United Nations 2030 Sustainable Development Goal and the emergence of digital technologies makes access to education far more accessible. Given the importance of education and the advances in online delivery systems it seems appropriate to discuss techniques faculty can use to encourage ethical behavior in the online environment.

The online learning environment poses new problems for teaching and ensuring grade integrity that did not exist prior to the availability of this technology. Students may use the veil of anonymity afforded them in the online classroom to engage in unethical behavior. Given the rapid growth of this delivery method it is useful to review some practices to encourage ethical behavior.

Growth in Online Distance Education

According to 2015 Online Report Card (ORC, 2015) conducted by the Babson Survey Research Group and co-sponsored by the Online Learning Consortium, the number of higher education students enrolled in at least one online distance education course in 2015 is up 3.9% over 2014. The 2015 increase in online enrollment continues a 13-year trend in increasing online distance education enrollment (ORC, 2015). The increase in 2015 brings the portion of students enrolled in at least one online distance education course to over 5.8 million students, or 28.4% of all higher education enrollment. As online enrollment continues to rise, so do the questions and concerns regarding academic integrity in the online classroom. The academic integrity concern about online distance education courses in higher education is evidenced by study findings that show while 71% of

leaders in academic institutions believe that increased online enrollment is vital to their institutions future only 29% of faculty believe in the legitimacy of online course offerings (ORC, 2015).

Academic Dishonesty

Academic integrity is defined as a moral code that discourages or prohibits any activity perceived as unethical in an academic setting. This moral code should both value and encourage high academic standards, while suppressing such unethical behaviors as plagiarism, cheating on exams, and contract cheating. Common methods available for students to cheat in online distance education courses can range from methods available only through the online environment to those that are present for students in the face-to-face learning environment as well. Rigby et al. (2015) state that common academic dishonesty activities present in the online distance education courses are plagiarism, and the recent emergence of contract cheating. Current technologies make the search costs near zero and facilitate rapid “ordering, payment and delivery.” Guyette et al. (2008) find many online students take advantage of other online resources during testing. This paper offers some options available to online instructors that help minimize these unethical behaviors.

LITERATURE REVIEW

Access to Resources

One opportunity for academic dishonesty involves the unauthorized use of textbook or internet resources during the completion of online quizzes and exams due to the high degree of autonomy and anonymity that students have while taking online distance education courses (Trenholm, 2007). This concern is in contrast to a traditional course because students in the face-to-face classroom typically have far fewer textbook and online resources available to them while taking a quiz or exam. Students taking an exam through an online learning management system could access numerous resources while testing. These resources range from a physical copy of the textbook to internet search engines or even a purchased copy of a publisher’s test question bank.

A 2008 study found that online instructors are primarily concerned about students using an open book during an exam, utilizing online sources during the exam, and relying on print reference sources other than the main textbook (Guyette, King, & Piotrowski, 2008). Guyette et al. (2008) also note that the majority of instructors feel that these actions are somewhat or very inappropriate in the online classroom. Online distance education courses that do not implement appropriate test security measures could provide students with the opportunity to exploit a course exam in a way that is not available to them in the traditional face-to-face classroom. Fully understanding the scope of resources available to students enrolled in an online distance education course will help instructors find the most appropriate methods of test security.

Plagiarism

Another opportunity for academic dishonesty in an online distance education course is the act of passing off another’s work as one’s own, which is known as academic plagiarism. While the ubiquitous nature of digital media has blurred the line between what is morally right and wrong when it comes to content from the internet (Harmon, 2016), academic dishonesty in this form is not exclusive to online distance education. Although there is no current consensus to suggest that plagiarism is more prevalent in online distance education, the same factors that make online exams more conducive to academic dishonesty practices apply to the online creation and submission of papers (Greenberger, Holbeck, Steele, & Dyer, 2016).

Plagiarism is a widespread academic dishonesty issue facing higher education as evidenced by the findings of a survey conducted between 2002 and 2015 of over 70,000 university students by the International Center for Academic Integrity. According to this study, 39% of graduate students and 68% of undergraduate students admit to cheating on written assignments in either traditional face-to-face or online distance education course assignments (ICAI). A similar study found that in online institution Ph.D programs 61% of dissertations had an at least 11% plagiarism reading when submitted through plagiarism software, while 57% of traditional Ph.D program dissertations had the same or above reading.

Contract Cheating

The latest and possibly most challenging academic dishonesty opportunity for students comes in the form of using a paid or unpaid surrogate for course assessments (Trenholm, 2007). This is commonly referred to as contract cheating and can range from the commission of one assignment or exam to be completed by the surrogate to the entire course. Parker et al. (2011) states that this practice is becoming so prevalent in some sectors that some prominent business schools now scan the admissions essays of MBA applicants. Rigby et al. (2015) provide a thorough review of this issue with regard to the thriving market for essays.

Contract cheating is not unique to the online classroom, but the level at which the surrogate can assume the duties of the student varies from the online classroom to the traditional classroom. Surrogates in online distance education courses can fulfill more course requirements for the student whereas in a traditional face-to-face course contract cheating can only occur on assignments prepared outside of the face-to-face course meetings. The opportunities for students to solicit the services of contract cheating is also increased due to the impersonal nature of many online courses (Singh & Remenyi, 2016). Contract cheating is a legitimate concern for online instructors and online degree granting programs. White (2016) provides additional evidence on the ubiquity of contract cheating at the graduate level.

TECHNIQUES TO DETER ACADEMIC DISHONESTY

While availability of resources, plagiarism, and contract cheating are cause for concern in online distance education courses there are strategies and software that instructors can employ to close the gap between online and traditional course offerings. It should not be overlooked that academic dishonesty is not specific to online learning. According to Ackerman and White (2008) a study conducted at the University of Missouri shows that 17% of students anonymously self-reported to having committed an ethics violation in a traditional face-to-face course, while 18% anonymously self-reported to having committed an ethics violation in an online distance education course. Ackerman and White's (2008) study suggests that the opportunity gap for academic dishonesty between the two modalities is not as large as many educators believe. However, given the rapid growth in online learning it would be useful to conduct this same experiment to see if this gap has grown wider. In the following section, we review techniques used to deter academic dishonesty.

I. Online Test Security

Time Limits

There are many effective techniques to increasing online test security. One such technique to deter academic dishonesty in the online distance education testing environment is the practice of setting appropriate time limits for assessment activities like tests and quizzes. Time limits deter cheating in the online classroom in the same way that class period length deters cheating in the face-to-face environment. When appropriate time limits are in place only students that have an understanding of the content can be successful. With no other test security measures in place an appropriate time limit can ensure that students do not have time to surf the internet in search of every answer. Likewise, students that are using their textbook during the online exam will not be able to search it quickly enough to find all of the test answers.

For example, online instructors often use a 15-minute time limit for a 10-20 question quiz, depending on whether calculations are involved. Only a student that is fluent in the content will be able to earn a high grade in the allotted time. Instructors may vary the time limit based on the type of material and the type of question. This method may require some trial and error to determine what works best for a particular course or assessment. While appropriate time limits alone will not deter all cheating in an online testing environment they should ensure that students have a good understanding of the majority of the content in order to be successful on the test.

Question Banks

Another effective technique to improve online testing security is to create a repository of exam questions from which to draw the test questions. Large question banks can be created in a learning management system like Blackboard, Moodle, or Canvas, or downloaded from many textbook publisher resources. These question banks allow the instructor to design a test that is randomly generated and unique for each student. For example, an instructor could use a 50-question test bank to randomly generate a 20-question quiz which would have millions of unique combinations. Building a test in this way ensures that no two students will take the exact same test and therefore cannot effectively collaborate by sharing results.

Instructors can also create question sets that function like miniature test banks for each topic such that a 10-question quiz can pull each question from a question set unique to that question type and course objective. For example, if the quiz contains a question covering present value, the exam can be set up to pull randomly from a question set of only present value questions to ensure that each student gets one question of this type. Each student in the class will get a unique quiz using this method which should discourage collaboration on individual work. Creating tests and quizzes using question sets and question banks is an especially effective test security technique when combined with appropriate time limits.

II. Test Security Software and Services

As the online classroom evolves it has created opportunities for software designed to combat issues of academic integrity. In the next few paragraphs we review some of the most common programs designed to deter cheating.

- 1) Respondus Lockdown Browser – Respondus Lockdown Browser is a software that can be integrated with most learning management systems. Respondus Lockdown Browser prevents students from accessing all other applications while taking an exam. This program prevents internet searches and access to other online materials from the same computer which limits a student’s ability to research answers while taking an exam. Unfortunately, there are hacks available that technically savvy students can adopt to circumvent this tool. Lockdown browsers are also notorious bandwidth hogs and can tax a university’s network.
- 2) ExamSoft Exemplify– Exemplify is an online testing software that is similar to Respondus Lockdown Browser in that it locks students out of accessing other applications while taking an exam. Exemplify is also accessible for students using mobile devices to complete an exam. The instructor must create the assessment using ExamSoft software to use the Exemplify system. ExamSoft Exemplify does not offer any additional test security benefit when compared to Respondus Lockdown Browser.
- 3) Respondus Monitor – this tool is a companion tool that can be used with Respondus Lockdown Browser that employs webcams and built in microphones to monitor students while taking an exam. This product integrates with learning management systems and makes non-proctored exams more secure by recording the students while taking an exam. The system utilizes facial recognition and other metrics to flag suspicious behavior when it suspects there are multiple students in the testing room, the student’s head is down viewing other resources, or the student has left the testing room. Once a test has been completed the instructor can review the system flags, view video screenshots, and watch the student taking the test in part or in whole. Faculty often use this resource when they suspect cheating by watching a specific student taking their exam to determine whether inappropriate activity is taking place. Instructors can use the software to require the students to show their ID in order to verify the exam taker is indeed the one enrolled in the course.
- 4) ProctorU – ProctorU is an online testing services that purports to maintain online test security through online proctoring of student testing. ProctorU uses a live proctor via webcam to verify a student’s identity with a three-step process that involves a personal ID, challenge questions, and keystroke analysis. After identity verification, the proctor will observe the student taking the exam through the webcam, and screen-sharing technology. Throughout the exam process the ProctorU proctor can see, speak to, and interact with the student. If the proctor suspects academic dishonesty they will suspend the exam and report the student. The main obstacle associated with ProctorU compared to the Respondus Lockdown Browser and Monitor software is cost and convenience. Students must schedule and purchase their own ProctorU sessions. These barriers make the ProctorU service somewhat impractical for use with several quizzes or tests throughout a semester.

Plagiarism Software

Plagiarism occurs when students use other works and pass those works off as their own. Plagiarism can and does occur in both traditional and online course environments. However, several plagiarism detection resources exist where you can submit passages, or entire papers, for plagiarism checks. These include but are not limited to;

- TurnItIn
- VeriCite
- Grammarly
- Noplug.com
- Dustball
- Plagamme
- Plagtracker
- Writecheck
- Quetext
- Plagly
- Duplichecker
- Others

These software plagiarism detectors all essentially function in the same manner by evaluation percentage matches of the submitted text. The higher the match, the more likely it is the student committed plagiarism. However, keep in mind that properly cited research will show exact matches to other articles citing the same research. For this reason, all papers will have some percentage match. Many of these resources are free while others charge a fee. However, it is common for a university to maintain a subscription to a particular service which makes it free to a faculty member. With university subscriptions student work submitted through the plagiarism detector will be added to the institutional student repository so future student submissions can be checked against those as well. This feature is useful for courses where the major course deliverables remain the same each semester as it will ensure current students cannot use part of a former students work.

Methods to Detect Contract Cheating

Contract cheating poses a real threat to overall grade integrity. However, there are some methods that can be used to detect this form of academic integrity. Pre and post writing samples and two-person papers where each signs swearing original work are two options.

Pre-and-post writing samples – One method that helps deter contract cheating is to have the students complete a 15-minute open response question as an icebreaker activity. This can be implemented online using discussion and blog tools. The rubric should indicate that the student will be graded, or awarded bonus points, based on sentence structure and grammar as well as content. This timed exercise at the beginning of the course provides you with a writing sample that can be used to compare with later work. While not foolproof, it does provide some information when writing styles and ability on the pre and post work differ greatly.

Two-person papers – Another option is to assign papers to be completed by a randomly assigned pair of students. Inform students in advance that they will be required to sign a statement verifying the work is original. If the paper is deemed plagiarized after submission both students will receive a zero grade or other penalty. This method harnesses peer pressure and also forces team members to check each other's work. Absent outright collusion this method should limit both plagiarism and contract cheating. Students should be informed the paper needs to be cohesive and written in the same style and voice.

V. Academic Integrity and Assessment Types

When instructors consider what type of academic integrity tool to implement within the curriculum, they must also consider the scope and focus of the assessment. Assessments can be implemented as learning activities, assessments of progress, and final assessments of knowledge.

Learning Activities

Learning activities are any activity in the course that is meant to encourage comprehension and understanding. Assessments can be used as learning activities as a way to ensure that students are doing the required activities. For example, an instructor might choose to create multiple choice reading assignments each week in the online curriculum as a way to ensure that students are reading the assigned text. However, it may not be important to the instructor that the student memorizes the text, just that the student is reading the text. In this case the instructor may choose to administer the assignment without the use of academic integrity tools. This omission of academic integrity tools would allow students, or even groups of students, to use the textbook while answering the questions. The assessment becomes a guide by which the student will study the textbook. This is a powerful learning strategy.

Assessments of Progress

Some assessments are implemented in courses as a way to check in on the students' progress in the course. These assessments may come in the form of mid-chapter, or mid-module, quizzes. It is important for the instructor to find out their students' level of understanding, but it can also be used as an opportunity for students to grow their comprehension. For example, an instructor might assign a multiple choice quiz using only an extensive question bank, and restrictive time limits. The student will not be locked out of websites or use of the text book, but the time limit will keep them from having the opportunity to search for most answers. In addition the extensive question bank will ensure that no two students will have the exact same quiz, rendering the likelihood of collusion minimal. A quiz administered in this way would be a good candidate for allowing multiple attempts. If the students take the quiz again, they will get a look at a new set of questions, and therefore be learning as well as demonstrating their knowledge of the content.

Final Assessments of Knowledge

Finally, some assessments are meant as final assessments of knowledge, like a unit exam, that the instructor wishes to use as a way to assess the student's true knowledge of the content. The goal of these assessments are to see exactly what each individual student has learned throughout the learning module. In this case full test taking academic integrity tools should be implemented. The instructor may choose to deploy proctoring, lockdown browser, question bank, and restrictive time-limits to this type of final assessment. This will ensure an environment that most closely replicates the test taking environment in the classroom.

Academic Integrity Strategy Decision Matrix

The matrix below will help to act as a guide by which instructors can make decisions for implementation of academic integrity tools, techniques and software.

		Assessment			
Type		Reading Activities and other homework	Quizzes	Papers and Presentations	Exams
	Learning Activity	<i>No Tools</i>	<i>Question Banks, Multiple Attempts</i>	<i>Plagiarism Software</i>	<i>N/A</i>
	Assessment of Progress	<i>N/A</i>	<i>Question Banks, Time Limits, Multiple Attempts, Lockdown Browsers</i>	<i>Plagiarism Software, Writing Samples</i>	<i>N/A</i>
	Final Assessment of Learning	<i>N/A</i>	<i>N/A</i>	<i>Plagiarism Software, Writing Samples</i>	<i>Question Banks, Time Limits, Multiple Attempts, Lockdown Browser, Proctor Service</i>

CONCLUSIONS

Online learning poses both opportunities and threats. More seasoned faculty often express academic integrity concerns and use cheating as our go-to justification for not adopting online technologies. However, cheating is not new and has been used by students since the dawn of formal education. Our job as faculty is to learn how to detect and deter cheating regardless of delivery mode. Implementing the strategies discussed in this paper will function as a deterrent for most students enrolled in online distance education courses as well as increase the likelihood of detecting those that choose to be dishonest. Online learning is increasing in popularity and appears to be here to stay so, as faculty, we need to adopt new methods and technologies that help us ensure learning, and academic integrity, is consistent regardless of delivery mode.

REFERENCES

- 2015 Online report card – tracking online education in the United States.
Retrieved from <https://onlinelearningconsortium.org/read/online-report-card-tracking-online-education-united-states-2015/>
- Ackerman, C. D., & White, J. T. (2008). A descriptive study of the ethical practices of students in both traditional and online environments at a university in Missouri. *Journal of Legal, Ethical & Regulatory Issues*, 11(1), 109-115.
- Australian Government Tertiary Education Quality and Standards Agency, (TESQA). (2015). Report on student academic integrity and allegations of contract cheating by university students.

- Greenberger, S., Holbeck, R. , Steele, J., & Dyer, T. (2016). Plagiarism due to misunderstanding: Online instructor perceptions. *Journal of the Scholarship of Teaching & Learning*, 16(6), 72-84.
- Guyette Jr., R. W., King, C. G., & Piotrowski, C. (2008). Business faculty views of online course cheating: Evidence for a cohort effect. *organization development journal*, 26(4), 25-31.
- Harmon, A. (2016). Digital ethics and plagiarism. Salem Press Encyclopedia, International Center for Academic Integrity (ICAI)
Retrieved from <http://www.academicintegrity.org/icai/integrity-3.php>
- Isiaka, M. A., & Egerue, C. J. (2019). Accelerating economic growth through adequate funding of education in Nigeria. *International Journal of Information, Business and Management*, 11(3), 34-49.
- Ison, D. (2014). Does the online environment promote plagiarism? A comparative study of dissertations from brick-and-mortar versus online institutions. *Journal of Online Learning & Teaching*, 10(2), 272-281.
- Nowak, A. Z., & Dahal, G. (2016). The contribution of education to economic growth: Evidence from Nepal. *international journal of economic sciences*. 5(2), 22-41.
- Parker, K., Lenhart, A., & Moore, K. (2011). The digital revolution and higher education. Pew Research Center, Washington, DC.
- Rigby, D., Burton, M., Balcombe, K., Bateman, I., & Mulatu, A. (2015). Contract cheating & the market in essays. *Journal of Economic Behavior & Organization*, 111, 23-37.
- Singh, S., & Remenyi, D. (2016). Plagiarism and ghostwriting: The rise in academic misconduct. *South African Journal of Science*, 112(5/6), 36-42.
- Sinha, E., & Bagarukayo, K. (2019). Online education in emerging knowledge economies: Exploring factors of motivation, de-motivation and potential facilitators and studying the effects of demographic variables. *International Journal of Education and Development Using Information and Communication Technology*, 15(2), 5-30.
- Trenholm, S. (2007). A review of cheating in fully asynchronous online courses: A math or fact-based course perspective. *Journal of Educational Technology Systems*, 35(3), 281-300.
- White, J. L. (2016). Shadow scholars and the rise of the dissertation service industry. *Journal of Research Practice*, 12(1).