

THE USE OF CASE ANALYSIS TRAINING AND COMPETITIONS TO ASSURE LEARNING AND SCHOOL-WIDE QUALITY

Sid Howard Credle, Hampton University
Ruby L. Beale, Hampton University
Sharad Maheshwari, Hampton University

ABSTRACT

Accrediting agencies have mandated that member schools provide evidence of the assurance of learning of students in the educational process. This study describes a learning structure based on student participation in case study analysis. After training 103 business students in case method analysis an assessment test of concepts underlying case analysis was administered. Students were given two opportunities to pass the assessment test with a score of 80 percent or higher. The first assessment had an overall pass rate of 87 percent. It was found that upperclassmen performed significantly better than underclassmen with an average score of 91 versus 84 percent. The authors validate the use of the case analysis by engaging students in national case competitions. Based on the portfolio outcomes of the case competitions the authors create an annual Key Performance Index for the School. This index assesses the School's overall success in competing in and winning national case competitions. It is suggested that the combination of case analysis training, followed by competitive case performance, provides important student competencies and skills and that the data gathered from such activity outcomes can be used to assess the quality of the educational delivery system of the School.

JEL: A-2; M00

Keywords: Case analysis, Case competitions, Assurance of Learning, Communication Skills Development, Student Competencies, Key Performance Index

INTRODUCTION

University accrediting bodies are focusing on outcome based- assessment of academic programs offered by the nation's business schools. This is largely done by assessing students' skill sets or core competencies. Each program is judged based on how well its curricula is designed and supported, to deliver the core competencies. The problem is that each program needs a valid and reliable assessment of students' performance based on these competencies. This paper examines the use of case studies in course curricula and the performance of students in national case competitions to assure the following competencies: (1) the ability of students to integrate various business disciplines into a solution set, (2) the ability of students to present results in a concise written and oral technology-based presentation, (3) the ability to convert data collected from various sources into information to support decisions and facilitate problem solving and (4) the ability to work as an effective team, with poise.

First, we separate the training aspects of case analysis from the competitive case structure. Later we combine the theoretical with simulations and practical applications to form a new construct. In the non-competitive case analysis area, the emphasis is on the development of student educational competencies (theoretical) as outlined above. Although there is overlap, we suggest that subsequently engaging students in case competitions (application) further develops competencies such as initiative, confidence, creativity, resourcefulness, resiliency, focus, and the ability to perform under pressure both individually and as a team. Additional benefits accrue in the form of prestige, and self-esteem. School-wide reputation is also enjoyed due to a student team's winning place in a national case competition. The extrinsic value of this

activity is not unlike the enhanced self image that flows from a winning football, chess, or tennis team. It is argued that these benefits also accrue to the greater student population of the institution.

The remainder of the paper proceeds as follows: We begin with the review of literature regarding non-competitive case analysis and competitive case structures. In the next sections we outline the background and methodology used in the School to teach case analysis and the method used to assess and assure learning. A section regarding the employment of case teams in national competitions follows. And, we complete this research with a suggested approach for continuing enhancement of the School by presenting a model to monitor the performance outcomes (or returns) of the School's case teams from the portfolio of competitions attempted. The conclusion and suggestions for future research in this area immediately follows.

LITERATURE REVIEW

Non-Competitive Case Analysis

The case study method was developed by Harvard University as a way to expose business students to “real” corporate problems. Since its introduction the case method has gained notoriety for its ability to enhance students’ critical thinking and analytical skills. Good case based learning is designed to assure that students do more than memorize information for the purpose of an assessment, but actually learn material to apply it to real world situations (Wood, et al. 2001). Harvard Business School expanded the use of cases (Shulman, 1986), and “the case study method continues to be the most effective teaching technique because of its applicability to real management situations”. Ballantine (2004) amplifies this statement as follows:

“Those who practice business are in the real world making decisions that have real consequences. The case method is intellectually engaging for students because they acquire the knowledge, skills, and tools to deal with the kind of problems they will encounter in their careers. Because they go through this inductive reasoning process to arrive at answers, the learning process is more powerful.” (Ballantine, 2004, p. 173)

Shugan, (2006) although reluctant to embrace the case method, indicates that case analysis allows students to “sift through the irrelevant details and determine the relevant facts”. Cases may also help learners to develop problem-solving skills and collaborative skills that are recognized as key outcome skills which students will need in their future professional lives (McNaught 2005). After case based learning was implemented in junior and senior classes of liberal arts and education majors it was shown that the method is an effective way to develop higher order cognitive and effective learning and critical thinking ability, especially as it relates to learning, unlearning, and relearning (Wood, et al. 2001). Case-based learning can also be helpful in teaching accounting, because accounting is a discipline, subject to “generally accepted principles” and is full of situations that require sound judgment in response to loopholes and ethical dilemmas (Hassell, 2004, Anthony, 1974). Based on a survey of accounting professors, the common theme throughout professor responses was that cases are considered valuable learning tools to develop competencies needed for today’s accounting students as dictated by professionals (Hassell, 2004).

Researchers have also found that there is an improvement in student collaborative skills such as the ability to engage in academic conversations and to pay mutual respect to each other after going through a case-based learning experience (Lee, 2007). However, there have been critics of the case study method who believe that some cases provide too much information which does not allow students to make decisions in an environment of uncertainty. The major complaint was that MBA graduates could not solve on the job decisions without perfect information (Gloeckler, 2008). On the other hand, Cochran (2000), states that the

Harvard case study method allows graduate students to step into the shoes of decision makers in real organizations and deal with the issues managers face.

Case Competitions

Credle (2007), states that case analysis and in particular case competitions should not be the equivalent of putting together a puzzle, but a requirement that forces students to “scratch out” information from various data sources, to provide supportable assumptions, etc. that have a bearing on the solution or the decision at hand. Case competitions can be stressful and the pressure of competition can be overwhelming. Many students agree that case competitions are, at times indeed stressful, but the pay-off makes it worth it, Gardiner, (2005).

Case competitions are considered important in developing a real life format to solve organizational or managerial problems in an intense competitive environment (Rynn, 2001). The other benefits of the case competition is the monetary rewards , the possibility of networking, and opportunities such as student internships or offers of permanent employment. Moreover, the host school of the winning team, also benefits from the annual bragging rights and the direct assessment and perception of the institution’s quality, Gardiner (2005).

An article by Dunham (2003), entitled “Business-School contests give job hunting students an edge,” seeks to identify a relationship between participation in business case competitions and internship and job placement. The basis of the theory is that case competitions allow for networking and give companies the opportunity to observe and hire those candidates who have the capacity to solve real business problems (Dunham, 2003). The competencies illustrated during case competitions have a significant impact on the hiring process of many companies resulting in job offers to many case competition participants.

The literature regarding the use of and the value of case analysis is mixed. To many the use of the approach enhances the educational experience and develops desirable student attributes. Others believe the case approach is lacking and in some examples is a weak teaching methodology. There is also disagreement among scholars regarding the value of case-based competitions. As indicated in Figure 1, we believe a viable solution to this disagreement is to incorporate both the education case analysis training structure with the deployment of national case competitions. This assures that students not only understand case-based concepts, but that they are also capable of applying these concepts in a competitive environment

BACKGROUND

Colleges and universities are measured according to several criteria including, graduation and retention rates, SAT and ACT scores, job placement, alumni contributions, etc. In recent years, Hampton University’s School of Business (HU) students have participated in numerous nationally recognized case competitions against several top ranked institutions. Many organizations sponsor case competitions in which students from business schools around the nation display their skills sets. These national competitions are usually awarded with cash, prizes, and the positive publicity associated with winning against leading business schools. Sponsoring organizations have included the National Black MBA Association, The Institute of Supply Management, PricewaterhouseCoopers, The National Urban League, and the Executive Leadership Council, to name a few. HU has made a lasting impact in the business education arena by achieving first or second place in many of the competitions it has entered in the past few years. This phenomenon has increased external stakeholder interest and has reinforced the School’s emphasis on case analysis as a part of the curriculum. The use of the case analysis training as presented in this research results in a construct which assures the development of desired students competencies.

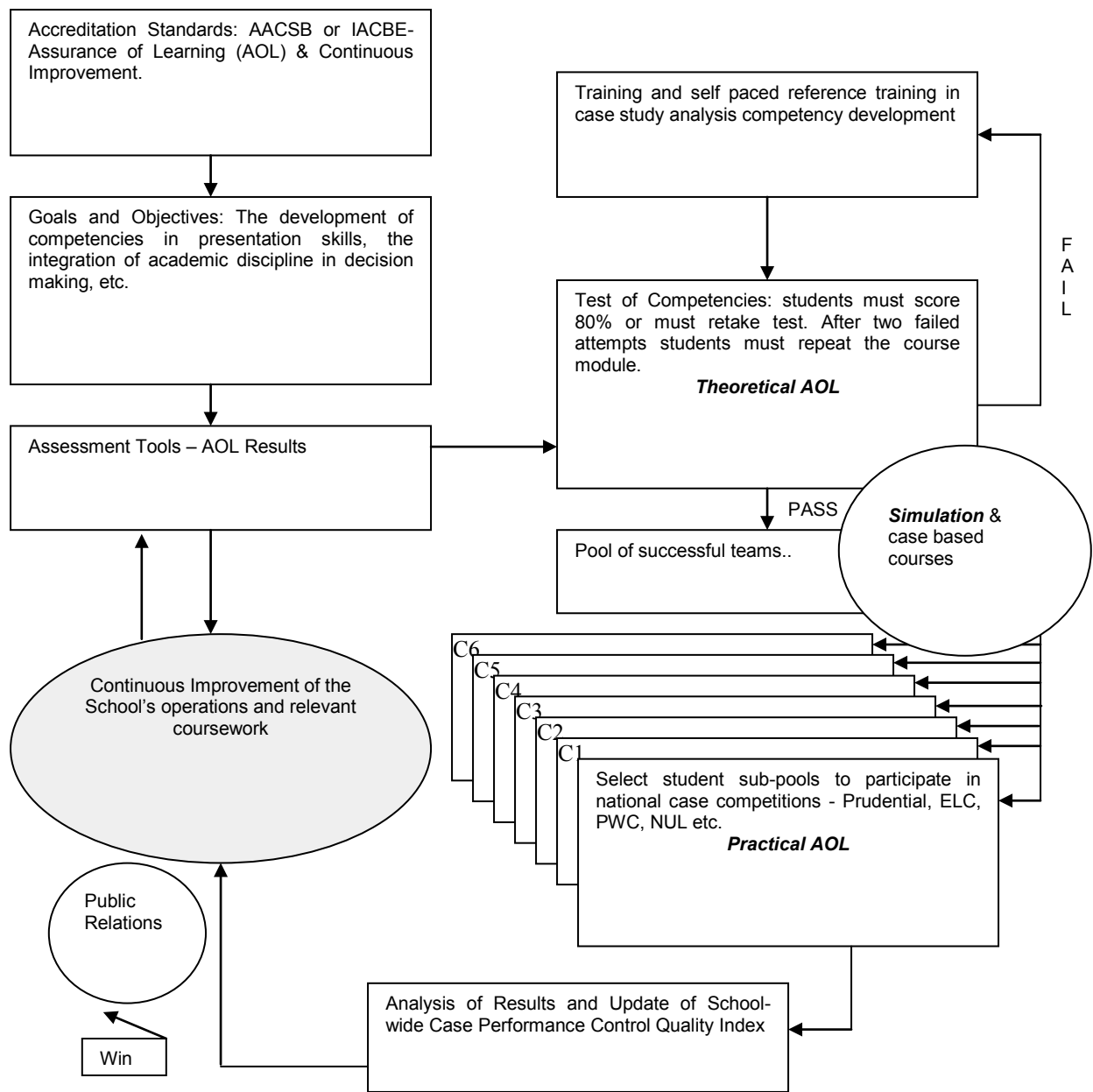
We believe that case study analysis provides students with competencies that are crucial to their subsequent success as business professionals. However, a methodology is needed to measure these competencies and to assure that such learning has actually taken place. The authors have developed a methodology that adequately trains and assesses a student's understanding of case studies and provide evidence of such by subsequent student performance in examination(s) and, the validation of such training from actual competitive case performance results. This process is illustrated in Figure 1.

After completing the training module with a successful score, students are filtered into pools and may be selected to compete in national case competitions. When the competition is announced, select students are identified to work on a team for the specific case competition. (See Exhibit A for the portfolio of competitions). For example: the Executive Leadership Council's (ELC) annual case competition is by invitation only. The case is sponsored by a fortune 500 corporation such as Shell Oil Company. The case was sent to 29 business schools (which included Ivy League or major schools such as Harvard, Columbia, NYU, Dartmouth, etc.). The first level of competition is on the written case. Each team writes their response to the case problem and offers an analysis which includes strategies for improvement. The panel of expert judges selects the best three case analyses for presentation at the national headquarters of the host corporation.

The three finalists present their case analyses in this competitive and challenging environment using and demonstrating high technical presentation proficiency. Immediately following there is a question and answer session conducted by experts in the field. ELC representatives as well as several employees from the host corporation are in attendance at this event. Based on the presentation and answers to the questions, an award ranking of first, second and third place is announced. The winners are announced in the print media and on the web site of the ELC. Hampton University earned second place in the 2007 competition and was awarded \$12,000.00. The Wharton School of Business was awarded first place and Emory University placed third. The Hampton University team was the first HBCU and the youngest team to ever make it to the finals in the ELC competition.

The first examination was administered in the beginning of October 2006, to 103 students of the HU's Department of Business Administration. The test was given to sophomore to graduate level students. Students were primarily African American, Native American and Hispanic Americans between the ages of 18-23. Students were given 45 minutes to complete the assessment. A second examination was administered at the end of October 2006. This examination included students who failed to take the first test as well as those who did not pass the first test with a score of 80 percent or higher. In total, twenty students took the second exam. The second assessment consisted of a different though equally difficult set of questions. The next assessment period will be held during fall semester 2009 including students that were freshman during 2006 and subsequent classes.

Figure 1: Case Training and Competitions: Assurance of Learning and School Quality Performance Index



This figure provides a conceptual view of the case training and competition process and ends with the use of the outcomes from the case competitions to provide one of a number of the School's key performance indexes which are used to monitor the School's progress. As can be seen, following accreditation guile-lines, the School first trains students in the conduct of case analysis. Next, these students are provided two attempts at a proprietary case analysis examination. The outcomes of which provide information regarding the accreditation assurance of learning objectives. From data derived from the testing apparatus the School subsequently selects participants to compete against the leading schools in national case competitions. Participation in the portfolio of cases competition provides data which is then formulated into an annual performance quality index. The index includes the number of teams competing, the rankings of competing teams and the amount of awards received, etc. The index has been calculated for the past 6.5 years.

ANALYSIS

A summary of exam one performance is presented in Table 1.

Table 1: Case Assessment 1 Pass Rates and Test Averages by Classification

Case Assessment: First Attempt				
Year	Students Who Attempted	Students Who Passed	Pass Rate > 80%	Average Score
Sophomores	37	29	78%	84%
Juniors	21	20	95%	89%
Seniors	27	24	89%	88%
Graduate Students	18	17	94%	93%
Total	103	90	87%	88%

In this table we summarize the student scores received on the first test subsequent to case training by classification. We expect at least 80 percent of students to pass on the first attempt. As the table indicates 88 percent of the 103 students taking the test passed. As expected the sophomores had the lowest pass rate at 84 percent and graduate students had the highest average score of 93 percent.

As noted in Table 1, surprisingly students in the junior year had the highest pass rate, at 95 percent. Students in the graduate year had the highest average score at 93 percent. As expected, the lowest pass rate of 78 percent and the lowest average score of 84 percent were received by the sophomore group. To further analyze the data the class levels were divided by lower and upperclass student’s categories. The histograms noted in Figure 2 compare upperclass and underclass performance test scores to the normal distribution.

Figure 2: Case Assessments Normal Distribution of Upperclassmen and Underclassmen

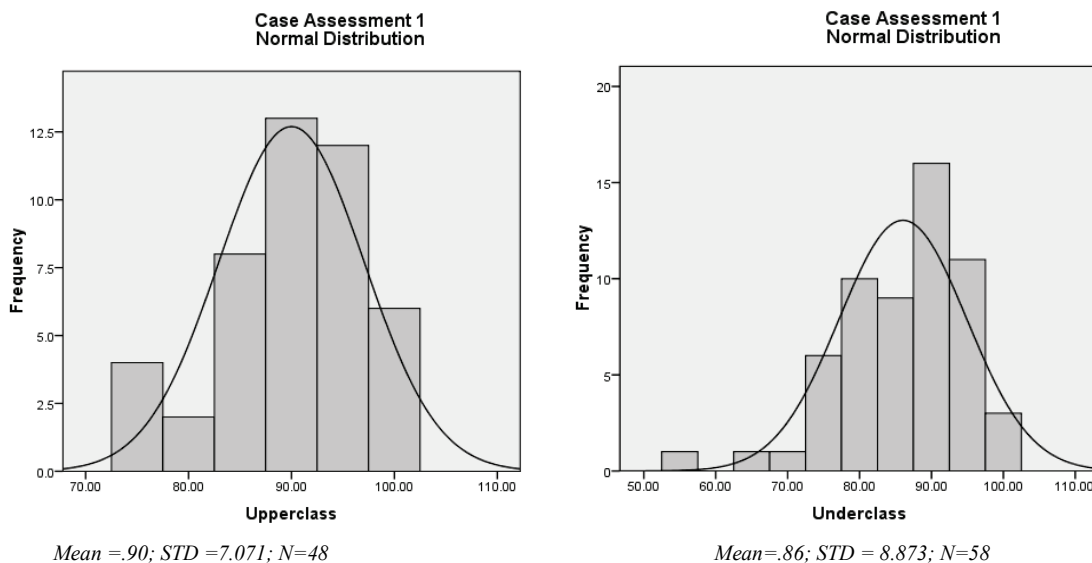


Figure 2 summarizes the distributions of the results of the student performance on the case analysis test segmented by upperclass and lower class students. The results indicate that the 48 upper-class students had a mean of .9 with a standard deviation of 7.07 and the 58 lower-class students had a mean of 86 percent and a standard deviation of 8.87 percent.

It is observed in Figure 2, that the 48 upperclass students scored higher on the examination than the 58 underclass students. For the upperclass students, we observe a mean score at 90, and observe a standard deviation at 7.071. The distribution of the sophomore and junior scores exhibit a similar pattern to the upperclass student scores, but with a mean of 86 and a higher standard deviation of 8.873. Table 2 presents the results for the first assessment, comparing students in the sophomore and junior year (underclass) with, senior and graduate year (upperclass) students. As can be seen, 90 students of the 103 students who attempted the examination passed.

Table 3 presents the results for the second assessment. The table indicates that only 7 of the 20 students or 35 percent passed the second assessment. This indicates that of the 110 students (123 data points) that sat for the two examinations, 97 passed, and 13 had to repeat the course module.

Table 2: Case Assessment 1: Pass rates and Averages by Class Level

Case Assessment: First Attempt				
Year	Students Who Attempted	Students Who Passed	Pass Rate	Average Score
Sophomores & Juniors	58	49	84%	86%
Seniors & Graduate Students	45	41	91%	90%
Totals	103	90	87%	87%

Table 2 indicates the pass rates and averages score on the case assessment test by upper-class and lower-class students. As noted, the fifty eight lower-class students had an average score of 86 percent and a pass rate of 84 percent with 49 students passing. The 45 upper-class students had a passing rate of 91 percent. Forty one students passed the test with an average score of 90 percent.

Table 3: Second Assessment Pass Rates and Averages Scores by Classification

Case Assessment: Second Attempt				
Year	Students Who Attempted	Students Who Passed	Pass Rate	Average Score
Sophomores	11	3	27%	68%
Juniors	0	0	-	0%
Seniors	6	4	67%	78%
Graduates	3	0	0%	65%
Totals	20	7	35%	71%

Table 3 provides data by classification for the second attempt at the case test. Seven of the 20 students taking the exam passed.

Data was also segmented into upper and lower class student groups for the second examination attempt. Upper class students again out-performed the under class students as noted in Table 4. The results collectively indicate that learning is taking place moving from lower division to upper division with respect to the case analysis set of competencies. These results would hold, lacking the measurement and impact of other non-observable confounding factors. For example it must be considered that upper classmen are simply better test takers due to maturity or alternatively that the group, as a whole have a greater experience with case studies. However, the structural results indicate that 97 of 110 students (88 %) possess in a theoretical sense the competencies necessary to conduct case analysis. To further test this result select students from the pool of trained students were engaged in case competitions to validate the development of these competencies. The question is whether these select students can compete (and win) with those of other nationally ranked business schools in national case competitions.

Table 4: Second Assessment: Pass Rates and Average Scores by Class Level

Case Assessment: Second Attempt				
Year	Students Who Attempted	Students Passing	Pass Rate	Average Score
Sophomore & Juniors	11	3	27%	68%
Seniors & Graduate Students	9	4	44%	74%
Totals	20	7	35%	71%

Table 4 summarizes the second assessment pass rate on the case analysis test by upper-class and lower-class students. In this test 20 students took the test and 7 students or 35 percent passed. The average score was 71 percent.

CASE COMPETITION QUALITY PERFORMANCE MODEL

Case competitions provide an opportunity to measure a student's performance against their peers from other universities and to validate the case analysis training model. Although the case study method is known for its ability to increase students' analytical and problem solving skills, there are few, if any, tools available that can accurately measure increased student performance in this area. Lacking a current methodology to assess the impact of the case study method on the performance of HU students in case competition, we have developed a relative index of performance.

A model was developed of student's performance in business case competitions using this relative measure, based on the formula noted below.

$$\text{Quality Performance Index} = \rho*(W_1*\alpha + W_2*\lambda + W_3*\varphi + W_4*\eta + W_5*\kappa + W_6*\mu) \quad (1)$$

Where:	ρ :	=	1 if the school participated in the competition during current year.
	α :	=	Normalized contribution based on the team's success in reaching the final round.
	λ :	=	Normalized contribution based on the team's placement in the competition.
	φ :	=	Normalized contribution of the quality of the case competition based on the overall ranking of the participating schools.
	η :	=	Number of teams in the competition.
	κ :	=	Normalized contribution based on type of competition e.g. open, invitational or HBCU only.
	μ :	=	The ratio of the total prize fund to the prize amount won by the HU teams.
	W_i :	=	The subjective weight assigned to each of the factors, where (i=1, 2 ...6)

The case annual performance (or quality) index is derived by multiplying the final placement of the School's teams in the competition, the number of teams competing, the number of teams in the final competition, and the average ranking scores of the schools competing. A scale of 1, 0 and -1 is used to calculate a value for placement of first place, second place, and third place, respectively in each competition. The average ranking score is calculated using The U.S. NEWS & WORLD REPORTS Annual Rankings of Business Schools, and the BLACK ENTERPRISE'S Annual "Best Schools for Minorities" rankings. The BLACK ENTERPRISE rankings are used in competitions that were restricted to Historically Black Colleges and Universities (HBCU) rather than the US NEWS & WORLD REPORT rankings. BLACK ENTERPRISE rankings most accurately reflect the quality of education at HBCUs according to Credle, Maheshwari & Davenport (2008).

Each school in the rankings is assigned a point score reflecting the quality of the school. For either ranking type the top rated school receives a score of one. Each ranked school's score is two percentage points lower than the previous score. For example, Harvard received a score of one while Stanford, the second ranked school, received a score of .98, and so on.

The average of all the school scores competing in the various competitions is calculated and inputted into the model. The various factors were then weighted to express the objective of the School. The School's objective was to compete against the best schools, win, and secure much needed scholarships for our students. In doing so our expectation was an enhancement of the stature of the School and a validation of our teaching model. It is expected that other universities may reflect other weighting scales to align with

their particular mission. The weight of the various factors was determined by those attributes considered important from both a student and a school point of view. Weights attached to each attribute are presented in Table 5 below:

Table 5: Weights Used in the Case Competition Performance Quality Index Score

Factor	Weight	Weight Percentage
Finalist (α)	W_1	3%
Rank (λ)	W_2	35%
Quality (ϕ)	W_3	30%
Team (η)	W_4	5%
Type (κ)	W_5	2%
Money Ratio (μ)	W_6	25%
Total		100%

In table 5 the weights used in the quality index score are provided. The weights range from 3 to 35 percent, with the highest weights assigned to the winning placement of case teams, the quality of the competition at 30 percent and the amount of awards received at 25 percent.

As noted in Table 5, the quality of the teams that the School competes with is weighted 30 percent and the final placement of the HU team is weighted 35 percent. The proportional amount of award or scholarship monies received is weighted 25 percent. It should be noted that students of the school do not have to win every contest to receive a positive score. Weight is assigned for the type of contest, the number of teams competing and whether the schools team makes the finals. It is expected that competing in a case competition is an experience for which there is educational value added to each participant,

The composite scores for each of the competitions in a given year are summed to create a Performance Quality Index Score. The index score value is calculated each year and compared to previous years. This provides a year by year comparison of the student’s success or failure in applying the case analysis training, the case competitions entered and won and indirectly assesses the quality of the School’s educational delivery system. It is expected that the Performance Quality Index Score will either remain constant or increase each year.

ANALYSIS

The case method of teaching is a widely used to expose students to real world problems and to increase the analytical ability of business students. These skills insure the student’s ability to integrate various disciplines, such as, accounting, finance, engineering, operations, marketing, management and entrepreneurship into a problem solving construct. The desire for measurement and the validation of the approach to enhancing these skills has resulted in the author’s efforts to create a universal model or test, to measure the performance of its business students in case competitions. It is believed that the resulting index can accurately (albeit relatively), measure the HU students’ performance in case competitions over a period of time. And, in so doing validate the case training model employed at the School. Table 6 presents the HU competition performance results since academic year 2002.

In recent years, HU has been very successful in competing in business-related competitions on the graduate, undergraduate or mixed classifications, using differing teams primarily from those students who successfully completed the case method training. HU has placed first or second in at least seven national competitions over the past two years.

This string of success has been attributed to the rigorous curriculum and the widely used case method of teaching. As can be seen in the last column of Table 6 with the introduction of case method teaching the School’s success has increased monetarily from \$25,000 noted in 2006 to \$33,000 for the first *half year* of 2009.

Table 6: Number of National Case Competitions, Wins and Awards

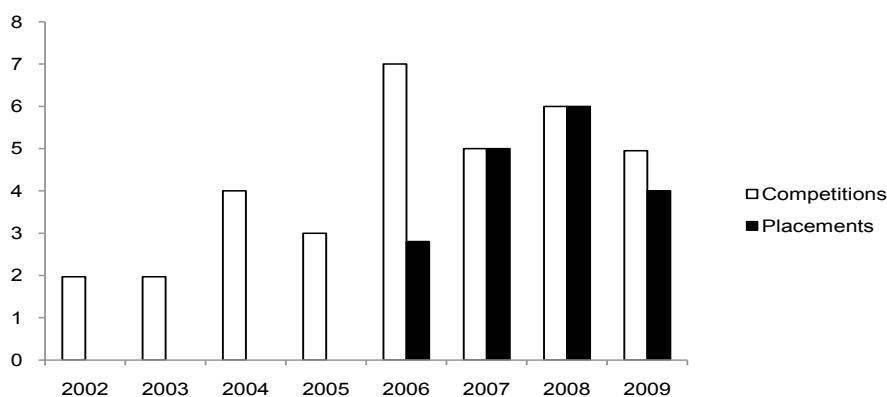
Year	Competitions	First	Second	Third	Total Wins	Amount Won
2002	2	0	0	0	0	0
2003	2	0	0	0	0	0
2004	4	0	0	0	0	0
2005	3	0	0	0	0	0
2006	7	1	2	0	3	\$25,000
2007	5	2	2	1	5	\$45,000
2008	6	1	4	1	6	\$41,000
2009 (Half Year)	5	1	2	1	4	\$33,000
Totals	34	5	10	3	18	\$145,000

Table 6 indicates the number of case competitions that the school’s students competed in since 2002 and the place that the school’s teams earned. For example it can be seen that between 2002 and 2005 the school competed in 11 national competitions and did not place in any of these contests. The awards received were zero. In contrast, from 2006 to July 2009 the School competed in 23 case competitions and came in first, second or third a total of 18 times winning approximately \$145,000.

A total of \$145,000 has been awarded to student teams of the school since the case training module was employed. (Please see Exhibit A for additional information). As noted in Figure 3 the school has competed in case competitions since 2002.

What is most significant is that first to third award placement was not achieved until 2006, after the cases analysis emphasis was placed in the curriculum. For example in 2006, the School’s team won first place in the National Urban League’s national case competition hosted by the United Parcel Service (UPS) and repeated the first place performance in 2007. The incorporation of case analysis into the overall curriculum with associated assurance of learning assessments began during the 2006-07 academic year. As can be seen, in Figure 3, the number of first, second or third final placements jumped from three to six, in 2006 to 2008. During the half year ending June 2009, the School has placed in four events.

Figure 3: Annual Participation and Placements in the Case Competitions (Number of Competitions and Placements)



In figure 3 we provide a graphical summary of the number of national case competition that the school competed in annually between the years 2002 and the half year of 2009. The range in competitions was from two in 2002 to seven in 2006. The school’s team started placing first second and third in 2006. In 2007 and 2008 the school placed in 100 percent of the five and six contests entered respectively.

CONCLUSION

The Goal, Data and Methodology

The goal of this paper was to present an innovative approach to assure learning in the competences associated with case analysis and case competitions. The results of which indicate that case analysis can be both taught and provide evidence of increased student competence, confidence critical thinking and presentation skills. We have also found that case training can provide students with the capability to perform in a competitive and challenging environment. Moreover we have demonstrated that performance in case competitions can be accurately monitored and measured year after year through the creation of a Quality Performance Index. The creation of this index can be used by the School to measure student team performance over time, and thus, indirectly, provides information for continual improvement of the process and to assess the educational delivery system employed.

For data and methodology, we initially trained 103 students in case analysis and then tested them to assure that the theoretical concepts of case analysis training were actually learned. Students were given two chances to pass the test with a score of at least 80 percent. Based on this scoring hurdle, 90 students passed the test on the first attempt with an average score of 88 percent.

Primary Findings

The primary findings of this study provides empirical evidence that the use of educational based case analysis provides a platform to assure the following competencies: (1) the ability of students to integrate various business disciplines into a solution set, (2) the ability of students to present results in a concise written and oral technology-based presentation, (3) the ability to convert data collected from various sources into information to support decisions and facilitate problem solving and (4) the ability to work as an effective team, with poise. We also find evidence of other desirable competencies by subsequently engaging students in case competitions which further refines students' initiative, confidence, creativity, resourcefulness, resiliency, focus, and the ability to perform under pressure both individually and as a team.

In our assessment, the value of this research lies in the fact that the use of case analysis coupled with case competition adds a greater level of competency than either method alone. An empirical proof of sorts is evidenced by the data provided by the Quality Performance Index. While an assessment is a viable way to assure student knowledge of case analysis, it is believed that the observed performance of students in national case competitions strengthens and validates the competencies that were developed during case analysis training. For example, it was found that upper level students performed higher on case analysis than lower level students. This indicates increased understanding of case analysis and evidence of assurance of learning as students move from early classes to upper divisional coursework. The longer students are in the program, the more case analyses and competitions they have been exposed to, which although somewhat "fuzzy" leads to observable evidence of desired competencies. The quality of this growth is illustrated with the increase in the Performance Quality Index over time as noted in Figure 4 below.

The figure 4 indicates that since the School began incorporating case analysis in the curriculum in 2004-05 and began the assessment of this area during 2006-07, there has been a continual increase in the School-wide Quality index. As can be seen the School has competed in a number of case competitions, against high quality schools while placing first, second or third, since the direct emphasis on case training in (2005-2006). We suggest that the Quality Performance Index can be used by many of the nation's schools that participate in case competitions, to provide a methodology for the continual improvement of the school.

Figure 4: Annual Case Competition Quality Index by Academic Year as of July 2009

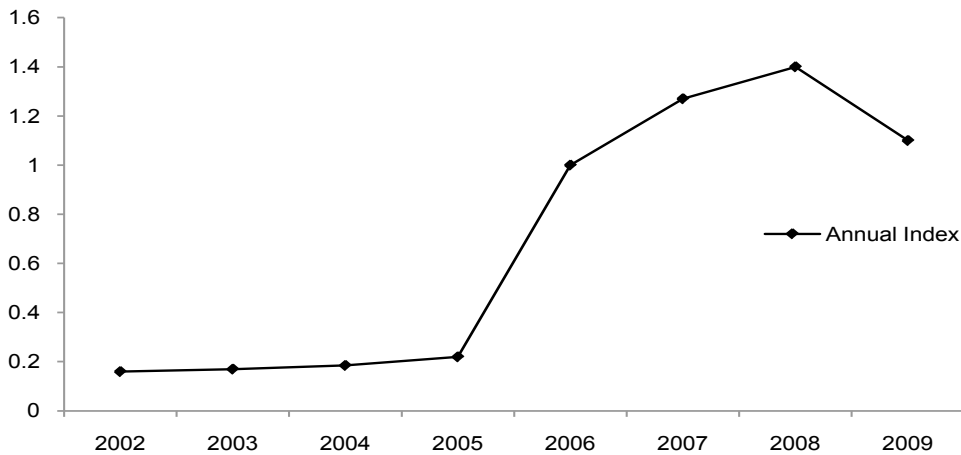


Figure 4 presents the quality performance index based on formula (1) of the School's student team's case competition outcomes for the years 2002-2009 (half year). The index indicates that the School has done increasing well in securing high placement, and financial awards against increasing competition against the leading business schools in the nation. The index has increased each year with the most prominent jump from .20 to 1.00+ during 2006.

Limitation

The methodology and the test of the impact of the case training of students, results in a fuzzy indication of assured learning since it can be argued that not all of the results can be attributed to the case training *per se* but to the maturity or test taking skills of its participants. The paper is limited in this sense. However, even though there may be limits to the test methodology and confounding factors with respect to the test results, the subsequent performance of a sample of trained (and tested) student teams in case competitions indirectly validates the conclusion that the case training was very effective.

Future Research

It is suggested that future research possibilities would compare students' participation in case analysis training and competitions with their GPA or SAT/ACT scores. A possible research question would be; "Does student participation in case competitions, result in a material difference in cumulative grade point averages?" Or, do students with high GPA or SATs do a better job in case competitions? Another research question would be "Does a higher proportion of students that compete in case competitions, receive job or internship offers at a greater frequency than those students who do not"?

This measurement may support the assumption that case based learning is beneficial to student development regardless of whether they compete in case competitions. Or, it may be consistent with the author's view that the combination of the two approaches (where case analysis is followed with simulation and practical application in case competitions) provides additional competencies not found in the separate approach.

APPENDIX

Exhibit A: Case Competition Award Money Won Since 2002

Year	No.	Name	Rank (λ)	Competition's Quality (φ)	Number of Participating School Team (η)	Money Won by Hampton University
2002	1	National Black MBA Association	0	4494	40	\$ -
	2	Opportunity Funding Corporation	0	2924	20	\$ -
2003	1	Opportunity Funding Corporation	0	2924	20	\$ -
	2	Johnson and Johnson	0	4317	11	\$ -
2004	1	National Black MBA Association	0	4494	40	\$ -
	2	Opportunity Funding Corporation	0	2924	20	\$ -
	3	PWC Extreme Accounting	0	4387	60	\$ -
2005	4	Johnson and Johnson	0	4317	11	\$ -
	1	Executive Leadership Council	0	4801	25	\$ -
	2	Opportunity Funding Corporation	0	2924	20	\$ -
2006	3	PWC Extreme Accounting	0	4387	60	\$ -
	1	National Urban League	1	3109	10	\$ 3,000.00
	2	Executive Leadership Council	0	4801	25	\$ -
	3	Federal Reserve Challenge	0	3783	12	\$ -
	4	National Black MBA Association	2	4470	40	\$ 12,000.00
	5	Opportunity Funding Corporation	0	2924	20	\$ -
	6	PWC Extreme Accounting	2	4387	60	\$ 10,000.00
2007	7	Students For Free Enterprise	0	3199	31	\$ -
	1	National Urban League	1	3188	18	\$ 3,000.00
	2	Executive Leadership Council	2	4801	25	\$ 12,000.00
	3	Opportunity Funding Corporation	0	2924	28	\$ -
	4	Prudential Financial	1,2 &3	4000	1	\$ 30,000.00
2008	5	PWC Extreme Accounting	0	4387	60	\$ -
	1	Goldman Sachs	2	3880	5	\$ 1,000.00
	2	Opportunity Funding Corporation	0	3014	20	\$ -
	3	PWC Extreme Accounting	2	4387	84	\$ 10,000.00
	4	SAM Management	0	3644	6	\$ -
	5	Students For Free Enterprise	2	3186	5	\$ 500.00
2009	6	Prudential Financial	1,2&3	4000	1	\$ 30,000.00
	1	Goldman Sachs Portfolio	0	4350	4	\$ -
	2	Opportunity Funding Corporation	0	2924	28	\$ -
	3	Institute of Supply Management	2	3657	4	\$ 3,500.00
	4	Prudential Financial	1	4000	1	\$ 30,000.00
	5	Key Bank	0	4631	16	\$ -
Total Money Won Since 2002						\$ 145,000.00

Exhibit B: LAP Case Study Assessment Plan Fall 2007

Purpose

The purpose of case study analysis in the Business Administration program is to prepare students with the tools to act as business problem solvers and decision makers. Case study analysis moves beyond merely summarizing business issues by allowing students to evaluate and make sound recommendations to complex business issues. While creating solutions to complex issues is the focus of case study analysis, students learn a wide array of other skills such as collaboration, organization, critical thinking, oral and written communication, and the application of discipline specific concepts and theories.

Plan

To expose students to the components of case analysis, students will read and review *The Case of Pirate Pandemonium*. This scenario describes a team of students, the Pirate Pride Team, who have an assignment to analyze a case as a requirement in their Business Simulation course. As students read and analyze the dilemma of the Pirate Pride Team, they will identify issues related to case study analysis. At the end of the story, there are open-ended questions that students will need to research to answer. The questions will help students prepare to complete the assessment on “how to analyze a case study”.

The Case of the Pirate Pandemonium

The date is November 15, 2006. The location is the fourth floor study room of the campus library. It is one week before the Thanksgiving break and the Pirate Pride case study team is eager to complete the assignment due in their Business Simulation class. The assignment, as everyone understood it, required the team to analyze the Wycoff Company case study. The company is seeking to expand in global markets in the toy industry. Prior to the meeting, the team agreed that before the team meets, everyone should read and analyze the case independently. At today’s

team meeting, each member is expected to report on their finding after analyzing the case. The team agreed this approach would make the meeting more productive.

The team began the meeting at 8:00 pm. After a little casual conversation and a few members strolling in a little late, the meeting finally began at 8:30 pm. Janie volunteered to be the team leader and began the meeting by asking everyone what they thought the professor meant by case study approach. Sandra replied “I believe it means that we have to read the case and summarize what we think it is about”. Marcus chimed in and agreed with Sandra, but added “Sandra, I agree, but with this being a 300 level course I’m sure there is more to it than just summarizing”. Sandra replied, “Why do you always create more work than necessary? I bet you read this case at least ten times. Let’s just keep it simple”. Janie, a star student of the business school exclaimed “I want to get the most out of all of my courses and I agree with Marcus, I’m sure there is much more involved in case study analysis”. Ok, said Sandra, “I guess I’m convinced, but where do we start?”

With Sandra now on board, the Pirate Pride team continued their work by creating a strategy to tackle the assignment. Sandra suggested, why don’t we start with the best recommendations based on some assumptions since Professor Greene assigned 30% of the grade to recommendations”. Oh no! shouted Janie and Marcus, that makes no sense we barely understand the case and there are ten pages of reading. “Ok maybe we should agree on important facts about the company and the case”, said Sandra. Marcus added, “ In class, Professor Greene mentioned we should consider a SWOT analysis, Porters Five Forces Model, issues specific to global expansion, and corporate and business strategy, where do you think all that fits in? “I’m not sure, said Janie, but we can put those items on our list to research”. The team continued to ponder over how to start the case study analysis and what resources they could use to get more information.

With a long night ahead, the team stared blankly at the assignment sheet provided by the professor. The grading rubric indicates the highest grades will be given to assignments that include a thorough analysis of the case, a visual display of any models used in the case, appropriate financial analysis, strategy analysis, and sound recommendations. The final deliverable includes a PowerPoint Presentation and a ten page paper. The professor is giving extra credit to teams who can explain how case studies are written. Can you help this team with their assignment?

Student Instruction

Read “*The Case of Pirate Pandemonium*” Consider the following open-ended questions. Research and discuss the appropriate responses to the questions. You will be allowed 2 attempts to earn 80%. If you earn 80% after completing CS1, you do not need to proceed to CS2.

1. What is a case study?
2. What skills can be learned from case study analysis?
3. What are some of the pitfalls to collaborative case study analysis?
4. Should you read a case study several times? Why or why not?
5. Why isn’t a mere summary of the case sufficient?
6. What are the steps in analyzing a case?
7. What is Porters Five Forces Model and how can it be used in case study?
8. What is a SWOT?
9. What type of financial analysis may be required in case study analysis?
10. What type of issues may surface in a case involving global expansion?

Exhibit C: Sample test questions used on the exam. Select the best answer

1. A business case study is:
 - a. An essay of someone’s desired experience
 - b. A synopsis of a business situation or issue that requires analysis
 - c. A story about a person or company looking for the attention of students
 - d. A promotional opportunity for struggling companies
2. Case study analysis provides students with all of the following skills EXCEPT:
 - a. Problem-solving
 - b. Decision-making
 - c. Storytelling
 - d. Critical thinking
3. True or False: Case analysis in courses at the 300 level and below only requires summarizing the facts of the case.
4. Other than a good grade, what else might the Pirate Pride team gain from successfully completing this case study?
 - a. Competitive analytical skills
 - b. Collaborative team building skills
 - c. Demonstrated ability to address organizational issues
 - d. All of the above
5. The following are steps to analyzing a case:
 1. Identify the organizations SWOT
 2. Recommend the best course of action
 3. Analyze corporate and business level strategy
 4. Identify the most important facts that already exist (historical profile)
 5. Evaluate SWOT
 6. Analyze structure and control systems

What is the correct order of the steps to analyzing a case?

 - a. 3,4,5,2,1,6
 - b. 4,1,5,3,2,6

- c. 3,2,1,5,4,6
 - d. 1,2,3,4,5,6
6. What do you typically NOT have to do when analyzing a case?
- a. Analyze the exhibits and tables provided
 - b. Read the case more than once
 - c. Rewrite the case
 - d. Consider financial implications
7. What does SWOT stand for?
- a. Strategy, Willingness, Organization, and Thinking
 - b. Shortcomings, Weaknesses, Opportunities and Threats
 - c. Strengths, Weaknesses, Opportunities, and Threats
 - d. Strategy, Worldwide, Opportunity, Thinking
8. True or False: There is no room for assumptions when conducting case study analysis
9. True or False: It is likely the Pirate Pride team will need to make some basic assumptions in order to complete their case study.
10. The Pirate Pride team investigated Porters Five Forces Model as the instructor suggested. What did they likely discover?
- a. The model will help them determine if the toy industry is an attractive industry
 - b. The model will help them determine if the company was profitable
 - c. The model will help them determine where to cut costs
 - d. The model is too detail oriented

REFERENCES

Anthony, R.N. (1974); the Case Method in Accounting; In J.D. Edwards (ed.), *Accounting Education: Problems and Prospects*, Sarasota, FL: American Accounting Association, 329-340.

Ballantine, J. A. & McCourt Larres, P. (2004); A Critical Analysis of Students' Perceptions of the Usefulness of the Case Study Method in an Advanced Management Accounting Module: The Impact of Relevant Work Experience. *Accounting Education*, 13 (2), 171-189.

Cochran, J. J., (2000). Introductory Business OR Cases: Successful Use of Cases Introductory Undergraduate Business College Operational Research Courses, (2000).

Credle, S.H., Maheshwari, S. & Davenport, J. (2008); An Alternative Ranking Methodology of the Best Colleges and Universities for African-American: Based on the Success of Alumni., *Global Journal of Business, Research* .Volume 2 Number 2

Credle, S.H. (2007). Presentation, to the North America Case Writers Association *The Development of the Case Based Learning and Assessment Objective: The Case of Prudential Insurance Company's optimal entry Strategy to China*; Keystone, Colorado.

Dunham, Kemba J. (2003). Career Journal: Business-School Contests Give Edge to Job- Hunting Students. New York Times, B8. April 8, 2003.

Gardiner, Debbi, 'There is no better learning', (2005)
<http://search.ft.com/ftArticle?queryText=no+better+learning&y=0&x=0&id=050306001355&ct=0>.

Gloeckler, Geoff. (2008); "The Case Against Case Studies".
http://www.businessweek.com/magazine/content/08_05/b4069066093267.htm?chan=magazine+channel_what's+next

Hassell, T., Lewis, S., & Broadbent, M. (1998). Teaching and Learning Using Case Studies: A Teaching Note; *Accounting Education*, 7(4), 325-334.

Hassell, Trevor, and Milne, Markus (Ed.); “Using case studies in accounting education”; *Accounting Education*, 13, 135-138. June 2004.

Hayes, Z. (2007); “The Case of the Pirate Pandemonium: A Student Case Analysis”; Unpublished case study.

Lee, Kathryn (Spring 2007); “Online Collaborative Case Study Learning”; *Journal of College Reading and Learning*; 37, 82-100.

McNaught, C. ., Lau, W. M., Lam, P., & Y, Hui, M. Y. (2005). The dilemma of case-based teaching and learning in science in Hong Kong: Students need it, want it, but may not value it. *International Journal of Science Education*, 27(9), 1017-1036.

Rynn, Anna E., and Klein, James D. (2001); The Influence of Discussion Groups in a Case-Based Learning Environment; *Educational Technology Research and Development*, 49, 72-85.

Shugan, S.M. (2006). Editorial: Save Research – Abandon the Case Method of Teaching. *Marketing Science*, Vol. 25, No.2, 109-115.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, Vol. 15, No. 2, 4-14.

Sykes, T.A. (2004). 50 Best Colleges for African-Americans. The Editors of Black Enterprise Magazine, October.

Wood, Alexander T., and Anderson, Carol H. (2001); The Case Study Method: Critical Thinking Enhanced by Effective Teacher Questioning Skills. Paper presented at the Annual International Conference of the World Association for Case Method Research & Application, Lund, Sweden. June 17-20.

BIOGRAPHY

Dr. Sid Howard Credle is Associate Professor and Dean of the Hampton University, School of Business. He received his Ph.D. in Accounting from the McCombs School of the University of Texas at Austin, his MBA from the Cornell University Johnson School and his B.S. degree from Hampton University in Accounting. Sid.Credle@Hamptonu.edu

Dr. Ruby Beale is a Professor and Chair of the Department of Business Administration at Hampton University. She received her Ph.D. and M.A. from the University of Michigan at Ann Arbor in Industrial Psychology and her B.A. degree from California State University San Bernadino in Psychology and Business. Ruby.Beale@Hamptonu.edu

Dr. Sharad Maheshwari is an Associate Professor at the Hampton University School of Business and received his Ph.D. from the University of South Florida. He received his Master of Engineering degree in Production and his Bachelor of Industrial Engineering degree from the University of Rookee, of India. Sharad.Maheshwari@Hamptonu.edu