A Best-Practice, Integrated, Semester-Long Group Project in Corporate Finance

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ABSTRACT: This paper discusses and illustrates the use of an integrated, semester-long group project utilizing corporate finance concepts to a current public company. Within the fabricated context of being their consultants, groups must think critically in applying textbook theory to a non-conforming world, making decisions with their partner (the professor) using iterative evaluation and self-critique for decision making and presentation to this public client. The project involves data research, description of strategy, financial statement analysis, weighted average cost of capital, internal rate of return project evaluation, verbal presentation, and a comprehensive written report.

INTRODUCTION

All educators desire to teach effectively the newest generation of students, described as demanding relevance of content as a price for their attention. I propose a best practice of applying content to a real-world environment throughout the course to motivate students by demonstrating that significance. I believe the more we can connect the artificial environment of the classroom to the application of the content, as their post-graduate employment will demand, the stronger the motivation of and perceived importance to our students. In addition, these assignments reinforce classroom concepts for deeper learning, especially within a group setting, requiring additional interaction with the professor outside the classroom. The application of theories to an actual business setting also offers perspective on the complex and non-compliant world. No situation may be viewed in strict isolation without compromising decision quality. Often the information required for theory application, which is so neatly provided within a textbook and sterile class environment, is difficult to obtain in such pristine form. This struggle leads students quickly to realize that decisions must be made on sources and interpretations of data in order to apply theory to the authentic business world. The calculation of formulas may be the least time-consuming portion of the decision process, and the research and development of data may be the most critical step. The result is students gain insight and wisdom.

Writing about such a best practice risks the interpretation of equating pedagogical technique with great teaching. Parker’s (2007) simple premise that “good teaching cannot be reduced to technique,” but results “from the identity and the integrity of the teacher” (p. 10) is a good reminder.

The truth is that a lot of fruitless time and energy can be spent trying to find the holy grail of pedagogy, the one way to instructional enlightenment. No philosophy, theory, or model can possibly capture or explain every single aspect of the idiosyncratic reality that is your own experience as a teacher (Brookfield, 2006, p. 265).

Often during initial presentation of course material using interactive classroom lecturing, a reminder that students will need to apply this content in their group projects promotes an active learning setting as they anticipate engaging in higher-order intellectual activities with the material, rather than merely listening and remembering (Bain, 2004). The project extends learning beyond the dominant auditory or visual/print learning styles experi-
enced in the traditional classroom to include interactive and kinesthetic/experiential learning styles (Institute for Learning Styles Research).

**COURSE DESCRIPTION, CONTENT AND FAITH INTEGRATION**

I teach at a liberal arts Christian college where the corporate finance course is required for all business majors and considered introductory for finance and accounting majors. The course prerequisites are two semesters of accounting principles, which introduce some of the basic budgeting, time value of money concepts, and investment decision criteria (e.g., net present value). Corporate finance is a foundational course required before students fulfill their internship experience. The semester-long project focuses on portions of the three major questions that comprise the course. Defining the central questions addressed in the course is a critical component for constructing knowledge for deep learning (Bain, 2004). Following are the three core questions:

- **How do we manage our day-to-day operations?** (working capital management decisions)
- **What are we going to do?** (capital budgeting/investment decisions)
- **How do we pay for it?** (capital structure decisions)

After reviewing some basic accounting, the working capital management content includes operating and cash cycles, cash forecasting and short-term borrowing, cash float and credit and collection, and inventory management basics.

Within the capital investment decision area, content includes understanding financial statements, cash flows, and ratios; time value of money and discounted cash flows; valuation of bonds and stocks and exposure to markets; investment decision criteria (e.g., net present value (NPV), internal rate of return (IRR), payback; average accounting return, profitability index, and projecting cash flows with scenario and sensitivity analysis).

Under the capital structure question the content includes the cost of equity capital and debt, the weighted average cost of capital (WACC), leverage structure issues, dividends and dividend policy, and raising capital.

The course is placed under the overriding goal of financial management — to “maximize the current market value of the existing owners’ equity” (Ross, 2008, p. 11). This is the beginning point of the faith integration course and project. Stockholder wealth maximization fits well into the traditional understanding of the Protestant work ethic and stewardship. Students quickly associate that all is God’s and that we are commanded to subordinate and have dominion over God’s creation and to work and keep God’s garden (Lemler, 2011; Genesis 1 and 2 (New American Standard); Psalm 24:1: “The earth is the Lord’s, and all it contains, the world, and all who dwell in it”). Thus, the stewardship theme may transcend maximizing productivity and move to incorporating environmental and sustainability concerns for business. Sharing negative and positive business examples are useful to illustrate the points. Negative examples might include Pacific Gas & Electric made famous by the *Erin Brockovich* movie, Love Canal, and more recently the Chinese milk tainting scandals involving adding melamine, a toxic industrial chemical, to milk in order to boost protein readings and the corresponding price (Bodeen, 2008). This tainting resulted in the sickening of 300,000 children and the deaths of at least six. On the positive side, The Redwoods Group is an example of corporate social responsibility, providing employees a week of paid leave for volunteering, creating a foundation funded with an annual tithe from corporate earnings, and offering employee benefits that resulted in three percent staff turnover in 10 years, while enjoying 1,500 percent revenue growth (Gergen, 2010).

Parallels may also be drawn between the agency problem of the corporate form of governance and Christian stewardship of God’s earth. As documented by Adams (2011), John Wesley’s sermons provide a useful framework for the discussion of maximizing wealth and stewardship responsibilities as employees/managers. When considering these topics, Wesley acknowledged limits concerning one’s health (I Corinthians. 6:19-20), legal compliance (Romans 13, especially verse 6), and the second greatest commandment of loving your neighbor as yourself (Matthew 22:39; Romans 13: 8-10). An Old Testament example of this managerial stewardship is Joseph. Potiphar (Genesis 39) and Pharaoh (Genesis 40–47) trusted Joseph with everything in their domain. Joseph managed the coming bountiful years and drought in a way that greatly increased Pharaoh’s possessions and saved the people, including his own family.

From this base, the discussion can move to the idolatry of money (mammon) rather than serving God (Luke 16:13). Luke 12:15 states, “And he said to them, ‘Beware, and be on your guard against every form of greed; for not even when one has an abundance does his life consist of his possessions.’” This follows the parable of the rich man building bigger barns, being satisfied and dying that very night. “So is the man who lays up treasure for himself, and is not rich toward God” (Luke 12:21).
Other areas of faith integration include truth telling, integrity and ethical reputation. Accurate measures (Deuteronomy 25:13-16; Proverbs 11:1, 20:23), honesty and truth telling (Exodus 18:21, 20:16; Psalm 15; Proverbs 12:22; Luke 3:13-14) are strongly supported by Scripture. In addition, doing what one says demonstrates integrity (Psalm 15; Proverbs 11:3, 28:6). Developing an ethical reputation (name or brand) is critical in most marketing (Proverbs 3:3-5; 22:1; Acts 24:16; II Corinthians 8:20-21). Application of these themes impacts marketing and advertising, financial statements and reporting, good internal controls, avoidance of bribes (Deuteronomy 16:19-20), hiring and fair payment practices, tax reporting and payment, and paying suppliers according to payments terms.

This project provides the tools to maximize stewardship as it promotes understanding of a client and its industry in order to make the best project funding decision possible, while avoiding excessive risk to the firm.

**PROJECT DESCRIPTION**

After the class has been divided into groups of four or five students, each group chooses a domestic, publicly traded corporation, excluding those from the financial industry or heavily using foreign debt instruments. Within the context of a pseudo-simulation, each group is considered their own fictitious consulting team, performing the work with the hope of being hired by their selected company for a consulting engagement on a new, significant project. After becoming familiar with the company’s main purpose, goals, objectives and strategic approach (the first interim assignment), each team will perform financial analysis and propose improvements in areas of weakness (the second interim assignment). Next, the teams will calculate the WACC of their company (the third interim assignment). Being given a newly proposed project by their company, they must decide how best to fund the project (the fourth interim assignment). They will develop a paper and presentation to be delivered to their company’s Board of Directors (BOD) in order to win the work of consulting on the new project.

**First Interim Assignment**

- No more than six pages in length, including a brief history of the company (e.g., origins, acquisitions, significant milestones), key performance indicators (KPI’s), and an overview of its current operating environment, including product offerings, manufacturing/production approach, marketing strategy, distribution approach, market position and competition, and industry identification.

Faith integration points that may be added into this assignment include company selection, review of strategies, and illegalities. Some groups could attempt to choose overtly Christian companies (e.g., Hobby Lobby, Chick-fil-A, Interstate Batteries, In-N-Out Burger), yet most of them are privately held and detailed information (typically found in a 10-K filing) is not readily available. Socially conscious investing may be introduced to students in selecting a company. Exposing them to the various funds (e.g., The Timothy Plans) and the filters that are used to eliminate companies with incompatible business practices or products may be valuable. The remaining companies are not overtly Christian, but merely do not directly conflict with the filtering criteria.

The detailed review of the 10-K’s Items 1, 1A, and 3 will describe the company’s basic strategies, risk factors and legal proceedings. Does the company have a pattern of behaving unethically or illegally? Do they value and protect a reputation of integrity? Do they provide accurate financial statements and press releases that fairly interpret their company results? Or, are they embroiled in investigations and actions by the Securities and Exchange Commission or the Attorney General of New York? The students may then evaluate whether they can identify any faith integration influences in the business or conflicts of strategy and actions with their own faith.

- The assignment’s electronic submission to include the report, the 10K, most recent press release, and a link to the last recorded conference call, if still available.

**Second Interim Assignment**

- Electronic assignment submissions to include the excel spreadsheet (containing ratios, Du Pont chart, operating and cash cycles) and the written report which defines each ratio, analyzed internal trends and comparison to the industry, and suggested improvements.

Reflections on faith integration points regarding truth telling and transparency may reinforce the premise that good stewardship would not be possible without accurate financial data being generated from ethical behavior and strong internal control. Decisions to achieve strong stewardship of resources will not be possible when using inaccurate or misleading data. The honest weights and measures and the honesty of those measuring and attesting to accuracy (e.g., auditors) is critical for maximization decisions. As we
must be brutally honest regarding our personal fallen state which leads us to accept God’s offer of salvation, a business must be equally honest with its financial data and motivations in order to make decisions that reflect God’s glory. As Grudem (2003) states, “We can imitate God’s attributes each time we buy and sell, if we practice honesty, faithfulness to our commitments, fairness, and freedom of choice” (p. 37).

**Third Interim Assignment**

- The electronic submission of the spreadsheet required for this assignment showing the calculation of the WACC, using the dividend growth model (DGM) and security market line (SML)/capital asset pricing model (CAPM) for the cost of equity.

**Fourth Interim Assignment**

- Each team given a fictitious, fixed asset project proposal with a given internal rate of return from their own company, appropriately sized by the professor, requires additional funding sources; team determines how to raise funds for the project in order to maximize the value of the firm by minimizing the WACC, taking into account the financial stress on the company by recalculating the ratios (via the spreadsheet) in each scenario.

Another point of faith integration may be emphasized by comparing the relationship of greed to spiritual self-destruction in our personal lives with the blindness of pursuing the single goal of minimizing the WACC without considering financial distress (cash flow) issues. Just as a business can bankrupt itself by a myopic focus on WACC minimizing/firm value maximization, so can a Christian lose himself in the pursuit of money from a greed motivation. In John 15:5-8 Jesus says:

> I am the vine; you are the branches. If a man remains in me and I in him, he will bear much fruit. Apart from me you can do nothing. If anyone does not remain in me, he is like a branch that is thrown away and withers; such branches are picked up, thrown into the fire and burned. If you remain in me and my words remain in you, ask whatever you wish, and it will be given you.

The professor may enhance faith considerations by adding aspects to the fictitious project that involve questionable social or environment impacts. Students could reflect on these issues and the theological foundations surrounding the green (environmental and sustainability) movement and the role of the corporation as a moral agent/citizen. John Maxwell (2003) provides insight:

> There’s no such thing as business ethics — there’s only ethics. If you desire to be ethical, you live it by one standard across the board (preface). Companies that are dedicated to doing the right thing, have a written commitment to social responsibility, and act on it consistently are more profitable than those who don’t (p. 11).

- The electronic submission of spreadsheet with the multiple tabs for the various funding scenarios and a brief written portion that describes the process, evaluation, and support for the funding recommendation

**GROUP SELECTION, COMPOSITION AND FUNCTIONING**

There are many options on how to develop groups. Usually, students want to choose their own groups. The positive aspects may involve greater motivation to work together since they may know and like one another. They may also share a common ability level, personality, racial background, interests, learning styles, etc., which may facilitate the speed and enjoyment of project work. On the other hand, students may feel left out and on a team of “leftovers” (Brookfield, 2006).

After initially allowing students to choose their own groups, I transitioned to professor-chosen groups. When the professor selects the groups, various criteria may be used. I have often asked students in this class to complete a free online personality factors tool. Obviously, there are more elaborate (and expensive) tools such as Myers-Briggs Personality Type Inventory or Kolb’s cycle of experiential learning. Research has suggested diverse groups outperform groups of similar temperament (Pettinga & Flatto, 2010). In my experience, I often found it difficult to provide enough diversity limited by small class sizes. In addition, dispersing students by functions/majors, ability levels, and ethnic/country origins comes more closely to simulating work teams in the business world (Brookfield, 2006).

Many project teams in the business world will be cross-functional, needing strengths in finance/accounting, marketing, management, economics and operations. I attempt to assign at least one finance or accounting major to each group to supply adequate quantitative skills. The diversity of strengths may be leveraged throughout the project. For
example, those with stronger quantitative skills may ensure the quality of the calculation and interpretation of financial ratios and WACC. Marketing majors often display their talents in preparing PowerPoint presentation materials and scripting (Brookfield, 2006). Others might excel at written or oral communication.

Also similar to the real world (and many business graduate programs), students need to learn how to work successfully with others in a group setting and produce a synthesized work product resulting from a combined effort. Group work promotes learning from one another and reflecting on this learning. Cunningham (2005) says in referring to the work of Couch (1993), “Using group activities and encouraging creative behavior raises the energy level in the learning context, helping to develop a community of learners who are motivated to think together” (p. 309). In addition, group work allows for a formalization of practical skills, such as learning to organize, plan, and manage meetings.

The professor, functioning in the role of the consulting partner, will meet with each group at least twice outside of class. Most often, a group will want to meet with the professor when trying to calculate the WACC for a company and when trying to decide the best funding option for the upcoming project. Sources of some component information for the WACC calculation are often obscure or not publicly required disclosures for the companies. In addition, understanding the changes to the WACC and company’s financial statements using different funding options would often drive professor/partner and student interaction.

This interaction outside of the classroom allows the professor to share expertise, facilitating learning engagement via relevance and motivation. Placing this project in the context of a consulting engagement and sharing my business-world experiences in this field assisted students who view learning activities as apparently irrelevant in overcoming their resistance to learning (Brookfield, 2006). As Brookfield (2006) states, “When teachers exhibit critical competence, they display expertise of a sufficient depth and breadth to convince students that they are sure to find their learning enhanced by being in the teacher’s presence” (p. 178). This professorial involvement also reduces the wall between instructor and students when decisions need to be made to adjust and overcome issues with data sources and interpretations. Together they can discover knowledge and creatively adjust the project. This moves the relationship toward collaboration and enhances respect and authority. According to Shor and Freire (1987), the difference between teaching from an authoritarian versus an authoritative position involves establishing credibility and authenticity in the eyes of the students, based on demonstrated skill rather than by imposition of positional authority via institutional power (Brookfield, 2006). This is similar to the contrast between expert and legitimate social power concepts from group dynamics (French & Raven, 1960).

At the end of the course, students complete a confidential evaluation of each member of their group, including themselves. This provides some accountability beyond the social dynamics and allows them to live out Proverbs 27:17, “Iron sharpens iron, so one man sharpens another.”

**INTERIM FEEDBACK**

After the first few semesters of assigning it as one huge project due near the end of the semester, I decided to structure portions of the work to be handed in throughout the semester. Over a four-month semester, students previously struggled with retention of concepts learned early in the semester, and without any interim deadlines, students would not begin seriously working on the project until the week before their presentations. This was not conducive to their learning or workload management with other courses or my own workload for outside group meetings or grading. Eventually, portions of the project were required at four interim dates throughout the semester. This allowed students to apply their learning to the project within closer time proximity to their initial learning and testing of course material. These interim assignments were to be presented in their final form and would promote easy inclusion into the final project paper, i.e., the consulting firm’s report to the client. The professor in the role of the engagement consulting partner is evaluating the drafted project portions and providing helpful feedback as characterized by Brookfield (2006) with clarity, immediacy, regularity, accessibility, individualization, affirmation, future-orientation, justification and instruction. This touches on active learning by providing the “safe environment in which students can try, come up short, receive feedback, and try again” that Bain (2004) also called the “natural critical learning environment” (p. 47). In addition, the professor can become more of a coach, a collaborator, a bit less of a judge, resulting in more intrinsic motivation from encouragement and praise in contrast to extrinsic (e.g., grades) motivation (Bain).

Initially, grading points were not associated with the pre-grading and feedback. Soon, it became obvious that many groups were not providing their best efforts for these preliminary assignments, but merely meeting a deadline. This was a poor use of my time and the groups’ time. In
addition, this kind of behavior is not tolerated well in the business world. Submitting low-quality work to a partner for review will quickly create an impression in the minds of upper management that will likely result in serious negative consequences for promotion and job retention.

The next evolution of the project included assigning part of the overall grade to the interim assignments, in order to reflect the importance of the continuously high-quality work expected. Among other things, students correlate the frequency and depth of evaluation to the importance of the assignment. One of the most significant indicators of teacher credibility is conviction, which is most commonly expressed to students via individual feedback or attention (Brookfield, 2006).

Finally, I would receive quality interim work assignments, facilitating efficient evaluation and feedback. The feedback by the professor/partner was expected to be addressed and/or incorporated into the final product. Serious grading repercussions result from not addressing or incorporating interim feedback into the final work product, simulating the real business world where ignoring expert and positional authority is not tolerated without serious ramifications.

This overall process of interim grading made evaluation a learning experience and not just a way to rate and rank their efforts. The evaluation became more of a means of communication on the learning produced rather than on a performance of recall (Bain, 2004). As stated by Brookfield (2006):

> Through having their work evaluated, students learn to deepen their understandings, improve their skills, and become aware of new learning projects. They learn to internalize criteria for judging their work and practice that alter significantly how they approach these activities (p. 174).

In the following words, Palmer (2007) reminds us that evaluation provides discernment on the validity of observations/claims/hypotheses.

> When grades are used to make distinctions of this sort, they are simply a replication of the real-world dynamics that this approach to teaching is built on . . . using grades that emphasize learning rather than judging and collaboration rather than competition, thus enhancing the contributions grades can make to the community (p. 141).

### ORAL PRESENTATION AND FINAL REPORT

Students stage their simulation to the class as if they were presenting their services to the BOD of their selected company as an opportunity to gain further consultation on the new company project. The presentations are approximately twenty minutes in length, equally utilizing each member of the team, with each student dressed in appropriate formal business attire for a BOD presentation. Within the context of this consulting simulation, the team will take approximately five minutes to present the company history, products, and strategy just as a real consulting team would, to gain credibility in the eyes of the company by proving their understanding of who the client is and what is of critical importance. The remainder of the presentation is allocated to covering the financial analysis, identifying areas for improvement, proposing the project, presenting the funding option analysis with the resulting financial impacts, and ultimately recommending whether to proceed with the project and the preferred funding method. At the end of the presentation, the BOD (the class, including the professor) may ask questions of the team. This simulates the need to think on their feet and to clarify any inconsistencies that may have been presented. Students submit their PowerPoint presentation, all Excel and Word documents making up their presentation, and the final consultant’s report. A basic rubric is used for evaluation purpose and for taking notes during the presentation.

Pedagogically, presentations require a deeper learning, similar to how teaching others creates deeper learning. The more students are required to articulate their understandings and questions, the more it bolsters their affective connection to learning, resulting in greater engagement with the material (Brookfield, 2006). Assessing this project using an adapted model of Bloom’s taxonomy of learning, this project takes the students far beyond the lower order thinking skills of remembering, understanding, and applying. The research, financial analysis, project funding analysis, and decision-making push students into the higher order thinking skills of analysis, evaluation and creation. Students analyze their clients’ financial statements compared to the industry, making recommendations. They judge the value of various solutions to the funding problem before settling on a position. Students create original communications regarding solving a problem with a recommendation that must be supported.

Another value-added activity involves having students critique their video-recorded presentations. This evaluation provides a rare opportunity to see themselves as others do, in a possibly more objective manner. They begin to realize
afresh how often they may stumble during the verbal presentation or use filler words such as “huh” or “like.” They can evaluate for themselves whether eye contact, volume, and clarity were sufficient to engage their audience. They begin to internalize and define what looks and sounds professional.

**FINAL GRADING AND FEEDBACK**

The base project grade equates to one examination, with the separate team evaluation of the individual representing one seventh of the project grade. Each student receives the same base grade for the total project, not different grades for the different parts that they may have contributed (Palmer, 2007). Any difference in individual contribution is reflected separately in the confidential team evaluation. Out of the base project grade, I use approximately 40% of the points toward their interim assignments, leaving approximately 60% to be allocated across the oral presentation and final written report. Grading would include verification of consistency between the slides, written report, and spreadsheets used for all calculations. I spend significant time ensuring accuracy of details between oral presentation and the corresponding written analysis in their report. Mistakes in accuracy and interpretation of analysis often result in losing proposals for business in real life. Verification of addressing all interim grading comments and corrections in the final report is also confirmed.

**CONCLUSION**

Although the use of an integrated project may not be applicable in all business courses, its use challenges students to apply textbook theory to a genuine business environment, resulting in deeper learning and increased perspective. Starko (1995) states the following:

Learning in pursuit of a goal makes the learning purposeful. Tying information to prior knowledge, understanding, and affect makes it meaningful. Since the ties created by each unique student must be original, and goal-oriented learning must, by definition, be appropriate (if it meets the goal), the processes of learning themselves can be viewed as creative (p. 13). As Krahenbuhl (1998) describes this process:

Research-enhanced learning activities are engaging and hands-on and involve problem-solving. This is where students participate in the creation of original ideas and the discovery of new insights. Such activities occur in laboratories, seminars, field settings, and in various other forms of collaborative effort. An ancient proverb reminds us that ‘the mind is a fire to be lighted, not a vessel to be filled,’ and it is in times of shared discovery that life-changing intellectual transformations take place. These can be the most important moments in an undergraduate’s academic life. Unfortunately, such opportunities are at risk when the quantity of teaching is emphasized over the quality of learning experiences provided (p. 21).

In contrast to surface, strategic learning, this application is more likely to encourage the deep learning, which comes from mastering something (Bain, 2004). The constant interaction throughout a semester with the data from a company of the student’s choice should enhance intrinsic motivation (Bain).

Stewardship, sustainability, environmental issues, greed, ethical and legal conduct of a corporation, financial truth telling via financial statements, and integrity are all areas of heightened concern for society as it looks at the world of business. Scripture has something to say about these issues to the Christian who is being educated to work in this arena. This project provides the opportunity to reflect on these issues in a meaningful way before graduating into this world, stimulating thinking regarding the integration of faith and business. My student responses to standard, end-of-course questions of “the instructor effectively integrates learning and biblical truth” and “this course stimulates my thinking about the integration of my faith with the academic subject matter” increased by as much as 29 percent and 36 percent, respectively, since I first taught this course and project.

Most students have not previously done a semester-long integrated project. They will feel challenged and may at times feel overwhelmed. Yet, with appropriate professional support and affirmation, they will comprehend new concepts and deeply learn them through application and reinforcement. As Brookfield (2006) states, “Of all the intractable dilemmas college teachers face, getting the balance right between being supportive of students and challenging them to go further than they think they are capable of is one of the most difficult” (p. 274).

**REFERENCES**


