

# **Lessons Learned From Creating Significant Learning Experiences: Re-Designing an Accounting Course with Broader Educational Implications**

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*Creating significant learning experiences requires a completely new focus on course design and student learning. This paper highlighted the insight gained from Fink's twelve steps to integrated course design. The result was a cost accounting course that was more active, relevant, and meaningful to students. The course objectives were drastically altered to reflect increasingly varied goals. A new teaching strategy was adopted along with a new set of learning activities to make the course a team-oriented learning process. Course evaluation systems became participative, continuous, and relevant.*

## **INTRODUCTION**

Any attempt to read the book *Creating Significant Learning Experiences* written by L. Dee Fink in one session proves to be futile. There is so much to learn from the book that it needs to be absorbed gradually and methodically, and needs substantial rereading. As one begins the book, he/she may be skeptical that it is only one of many books on how to become a better teacher. After further reading the overall objective of the book becomes clearer—its focus is not really about making better teachers, rather it is about creating better learning environments for students. Teaching is the delivery mechanism; learning is the desired end product. The former does not guarantee the latter; more is required.

Fink, an educational innovator, quickly points out that *significant learning* occurs only when students are engaged and the class has high energy. The result is a significant and lasting change in student learning as well as creating long-term implications for their lives. Significant learning creates change in the learner. Learners do not only just know more information, but also know more about what it means, how to use the information, and how it affects themselves and others. It is a holistic view of learning that involves six separate, but interrelated aspects: foundational knowledge, application, integration, human dimension, caring and learning how to learn (Fink, 2003, 2007; Robinson, 2009). A traditional content-centered approach of teaching focuses on the breadth of mastering foundational knowledge and perhaps limited application of it. A learning-centered view expands the learning process to include the deeper types of learning including integration, human aspects, and understanding more about making one a more effective and efficient life-long learner.

Much of the discussion among faculty in higher education revolves around, creating the ideal classroom. This is where students are engaged in the learning process, passionate about the subject matter,

and are eager to learn more. In reality, this would not happen to most instructors during their careers because that “dream course” is unattainable. Fink (2003) proposed that, by incorporating these deeper forms of learning into the classrooms, instructors will come closer than ever to teaching their dream course. This paper is an attempt to describe experiences in trying to apply Fink’s design to a cost accounting course. Learning new pedagogical techniques often helps in improving course structure and assessment.

### **Integrated Course Design**

One of the major contributors to unfulfilled course dreams is the way that many educators design their classes. For many of those in higher education, the traditional course design is one that is easy to apply and replicate semester after semester. It is generally some variation of listing the topics or chapters to be covered. Planning the lectures and scheduling the homework, quiz and exam dates. Extra projects or papers may be added for cosmetic reasons and variety, but with little thought as to how the projects or papers truly influence the learning process. More often than not, the extras are added only to break up the routine for the teacher; not to make the learning more meaningful for the students. This approach is primarily targeted at the lower level learning goals, summative assessment processes, and passive class activities.

Fink’s integrated course design assures that all six significant learning objectives are included throughout the course. The design process is organized around three key phases with twelve individual steps: *Phase One: Building Strong Component Parts* - identify important situational factors, formulate significant learning goals, formulate feedback and assessment procedures, generate teaching and learning activities, evaluate integration of the component parts; *Phase Two: Assemble Components Into A Coherent Whole* - creating a course structure, selecting an effective teaching strategy, creating the overall scheme of learning activities; *Phase Three: Addressing Important Details* - assemble the grading system, identify what might go wrong, write the syllabus, plan the course and teaching evaluation system (Fink, 2003).

#### *Identify Important Situational Factors*

The first step in the integrated design system asks educators to identify the key situational factors affecting the environment. This includes the course content (e.g., divergent vs. convergent material), context (e.g., regular vs. online course; day or night class), expectations of external groups (e.g., AICPA, IMA), specific and unusual characteristics of both the students and the teacher (e.g., demographics, experiences, learning styles), and any pedagogical challenge of the subject matter (e.g., cost accounting is the transitional course). A good analysis here will help the instructor anticipate and avoid later problems or inconsistencies. For the cost accounting learning environment at the authors’ college, the key factors include: first, an upper level accounting course for majors other than financial accounting; second, the IMA exam performance expectations by the profession and the school; third, on-the-job expectations by recruiters and/or employers. As the rest of the course is developed, these factors will serve as background in designing learning activities and teaching strategies.

#### *Formulate Significant Learning Goals*

Some professors may think that their course objectives are already “significant” and do not need much improvement. After all, they have spent many semesters perfecting and rewriting them so the objectives must certainly be good by now. When teaching a course for the first time faculty members often use the syllabus and objectives of an experienced instructor and add a few personal touches as the semesters unfold. Many professors know about writing course objectives. They make sure that the goals are measurable; they have some connection to the topics in the textbook and are related to broader institutional goals (Fink makes no distinction between goals and objectives in his discussions, so no distinction is attempted here). Actually, writing significant learning objectives is difficult, Fink (2003) suggested that an instructor write no more than seven or eight significant learning goals and try to have at least one in each of six dimensions of significant learning. Moreover, one should approach the goals by

asking questions about what positive student outcomes are desirable a year or more after the course has been taken. This is not limited by just what one wants them to know, but also wants them to understand, appreciate, and value.

*Foundational Knowledge*

Since students are not likely to remember all, or even fifty percent of the details of a specific course, one must decide which of the content areas are the most vital, overall concepts and details that students need to learn long-term. What overreaching knowledge should the students remember, understand and explain and/or identify after the course is over? It was with some difficulty that these two foundational knowledge goals were condensed into the cost accounting course (see Table 1). After taking the cost accounting course, students will be expected to understand the key terms related to cost objects, direct costs, product costs, period costs, discretionary costs, committed costs, relevant costs, and cost-benefit analysis. In addition, the students will be expected to understand how cost accounting provides key data to managers for planning and controlling, as well as costing products, services, and customers.

**TABLE 1  
COST ACCOUNTING (RE-DESIGN) SIGNIFICANT LEARNING  
GOALS AND ASSESSMENT TECHNIQUES**

Course Objectives	Assessment
<i>Foundational Knowledge</i>	Chapter quizzes
1. Understand the meaning of key terms related to costs and their purposes	
2. Understand the accountant's role in the organization	Class Presentation
<i>Application and Integration</i>	Homework problems
3. Use the cost information for making managerial decisions. a. Product-Pricing decisions b. Capital Budgeting decisions c. Make-Buy decisions d. Acceptance of special order decisions	
4. Compare and Contrast the difference between relevant costs and irrelevant costs	Case Studies
5. Demonstrate competence in written and oral communications Demonstrate Competence in the use of electronic spread sheets	Writing assignments, Class presentations Homework problems using Excel
<i>Human Dimension</i>	Questionnaire
6. Attain confidence in mastering difficult material	
<i>Caring Dimension</i>	
7. Better understand career opportunities in Management Accounting	Class discussion, Student papers, and presentations
<i>Lifelong Learning</i>	
8. Identify sources of information for future accounting research	Writing assignments, class presentations

### *Application*

In moving up to the next higher level of learning, instructors should ask themselves what students need to be able to do successfully in later courses and their careers. What items should they be able to use, manage, solve, assess, calculate, analyze, and/or make decisions about? These were the most challenging goals to write since it had been common to think in terms of individual calculations rather than overall concepts and relationships. After much thought, the application goals were condensed for the cost accounting course into, ideally, what students should be able to achieve.

### *Integration*

At the next higher level of learning, one must decide what will be the most important connections that students need to be able to make from the course. The connections can be between this course and other major or business core courses or issues with their personal lives. Fink casts his integration net very widely and incorporates some areas that most instructors may have not considered before. Instructors have different goals and visions as to what they want to accomplish with their students. This is the time to incorporate those aspirations into their course.

It was concluded that the cost accounting course will be considered a success if students are able to isolate between relevant costs and non-relevant costs in making managerial/cost-accounting decisions. This is a broad concept, but it reaches the heart of decision-making. Although this concept had been seen as important for a long time, this was the first time using it as a specific course goal for cost accounting. Applying Fink's design method allowed for explicitly incorporating this key concept into the course—one that had been only implicitly addressed in the past.

### *Human Dimension*

This was a difficult dimension to incorporate into the course, since it seemed unnatural viewing cost accounting from this perspective. Fink (2003) challenged teachers to think about how their courses might change, how students view themselves and others, how students interact with others, and how course theories and content affect their lives. After much analysis, it was discovered that one of the situational factors affecting cost accounting creates a perfect opportunity for students to grow in this regard. Thus, the following goal was added: students will be more confident about mastering difficult material after taking this course.

### *Caring*

Implicitly at least, most instructors want their students to have a better appreciation after taking an upper level course. However, many instructors like this one, have never thought to include it as a specific course objective. Based on the adage that "you get what you measure", including this in the stated course goals assures that it will be explicitly evaluated. What do you want your students to get excited about, value or be more interested in after having taken your course? The following goal was included: students will better understand career opportunities in the accounting profession.

### *Learning How to Learn*

The term *metacognition* describes the concept of thinking about how to think. Part of an education should involve students becoming more effective and more efficient learners as they progress through a program of study. Lifelong learning will occur only if students understand the need for and the way to accomplish it. This means instructors should help learners become better students by helping them learn how to learn and become more self-directed. An instructor may implicitly do these things, but never include it as a separate learning goal. At a practical level, a key goal for the cost accounting students was to be able to identify sources of information for future research in cost/managerial accounting.

### *Formulate Feedback and Assessment Procedures*

Over the years, the authors have learned the culture of what Fink calls "backward-looking" assessment. This involves testing whether students have learned the material covered during the last few

class sessions. Homework, quizzes and exams are very good ways of looking back for the foundational knowledge goals, backward looking assessment is appropriate. Without the requisite understanding of basic terms and concepts, student experiences in the application and integration levels of learning will likely have little benefit. However, this is not a good way to evaluate the higher-order learning goals. For higher-order goals, the focus should be forward rather than backward. Forward looking assessment is realistic, requires judgment and innovation, and stimulates real-life context. In short, try to place the student in a professional situation that they might face in their future careers. In cost accounting this might include a buy or lease recommendation on a company's equipment, sell or process further decision, in-source or outsource decisions. Some ideas on assessment techniques that incorporate these features include: (1) Students help develop the evaluation criteria for an assignment, (2) Students do peer evaluations of assignments such as papers or homework problems, (3) Students assign themselves a preliminary grade that is later verified by the instructor, (4) Members of student teams compare answers and resolve any differences, (5) Giving quizzes with both individual and group grade components.

As the lead author reviewed his cost accounting course, he realized that assessment was the weakest part of the class. Fink's assessment discussion is primarily based on Wiggins *educative assessment model* (Wiggins, 1998). Assessment is not educative unless it provides useful information about what the student did. It is not advice or evaluation (e.g., grades) but descriptive feedback on a complicated task in relation to preset standards. It is a value-neutral guidance on what happened and why and what students should modify as a result. Fink adds that high-quality feedback is frequent, immediate, discriminating, and delivered supportively. For many classes, a realistic assessment technique would be experimental learning where students operate in the professional realm. Some business classes have students act as consultants and make suggestions for small businesses; co-ops and internships can accomplish the same objective. For the examined cost accounting class, the logistics of experimental learning for a class of 15 students precluded that option. Instead, an attempt was made to design projects that required teamwork, multiple skills, knowledge sets, and some professional research.

### *Course Structure*

In laying out the sequence of topics for the course, there should be an ordered, thematic approach. First, identify the main themes of the course (four to seven) and then arrange them in their most logical order (Fern, 2008). Many course schedules are dictated by the order of topics in the textbook. For example, in the covered cost accounting course the chapters that are arranged as follows: the accountant's role in the organization, cost-volume, profit analysis, product costing methods, tools for planning and control, flexible budgets, variances, and management control, cost information for decisions, decision making and relevant information, pricing decisions and cost-management. Putting these topics into broader themes and ignoring the chapter sequence, one might identify these topics: cost accounting fundamentals, tools for planning and control, decision making and relevant information, and pricing decisions and cost management (Horngren, Datar, Foster, Rajan, & Ittner, 2009).

The following sequence represents one way to structure this course thematically:

Week 1	The Accountants Role in the Organization: An Introduction to Cost Terms and Purposes.
Week 2	Cost-Volume- Profit Analysis
Weeks 3 - 6	Job Costing System Process Costing Systems Activity-Based Costing and Activity- Based Management
Weeks 7 - 9	Master Budget and Responsibility Accounting Flexible Budgets, Variances, and Management Control I Flexible Budgets, Variances, and Management Control II
Weeks 10 - 14	Determining How Costs Behave Decision Making and Relevant Information Pricing Decisions and Cost Management

### *Teaching Strategy*

At this point in the backward design process, Fink recommended that instructors formulate a teaching strategy. A common strategy was to cover the material, assign and grade homework, conduct somewhat interesting class sessions, and give exams. What other strategy could there be? Fink defined a teaching strategy as a particular combination of learning activities in a particular sequence. In other words, combine and sequence the learning activities in a synergistic way to promote increased learning. Fink suggested three teaching strategies: team-based learning, problem-based learning, and accelerated learning (Fink, 2003). After exploring the team-based learning concept, a decision was made to adopt this teaching strategy for the cost accounting course.

Team learning is an important educational concept that surpasses routine group activities. For each learning unit in the course, the team initially takes individual and team quizzes on the basic material. To allow more time for learning how to use the course material, the initial quizzes encourage students to spend more out of class time learning the basic concepts. The quizzes are scored in class (immediate feedback), grade appeals are heard and resolved, and instruction is then focused on the weakest areas (as revealed by the quizzes). The remaining class time is spent on learning activities focused on using the material. These activities should ideally be of increasing complexity. At the end of the learning unit, individual and or team exams are given within the overall strategy of team-based learning (or any other type of teaching strategy) the instructor can use a variety of teaching and learning techniques as deemed appropriate (Michaelsen, Knight, & Fink, 2004).

### *Overall Set of Learning Activities*

Finally, the instructor is ready to schedule the daily activities for the course. In scheduling the learning activities for each block of material, it is important to remember three concepts: (1) Use of a variety of learning activities, (2) Make the activities increasingly more complex as students move through each topic and as they move through the course, and (3) integrate the topics throughout the course for each learning unit. By adopting the team-based learning strategy, the overall structure of the course had already been determined (quizzes, in-class team activities, out-of-class activities). Specific class activities now needed to be identified.

## **SUMMARY**

Once the course re-design was established the result was a cost accounting course that was more active, relevant, and meaningful to students. The course objectives were drastically altered to reflect increasingly varied goals. A new teaching strategy was adopted along with a new set of learning activities to make the course a team-oriented learning process. Course evaluation systems became participative, continuous, and relevant. Students were challenged more than ever to work outside the classroom, be better prepared, and contribute to their team's success. Finally, assessment turned out to be more forward-looking and less backward-looking.

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