Teaching Personal and Professional Principles in Pharmacy Practice Management Using the Three-Stage Model for Course Design

Jean M. B. Woodward

ABSTRACT. The Three-Stage Model was used to develop nine units to teach principles advocated in *The Seven Habits of Highly Successful People* in a required pharmacy management course. The method develops higher cognitive abilities, self-directed learning, and a realization of personal relevance from course material. Each unit comprised three different exercises addressing different levels of cognitive ability and/or individual vs. group activities. Students felt the exercises challenged them to think about, to understand, and to apply the material; however, the exercises were very time-consuming, a lot of work, and too personal. Attitudinal outcomes were evaluated using eight items comprising a composite outcome scale. Attitudinal outcome responses varied along two variables: whether students liked or disliked the Three-Stage Model, and whether they felt the material should or should not be part of a required pharmacy management course. Those who liked the teaching method or felt the material should be part of the management course had significantly higher attitudinal outcome scores than their counterparts. *[Article copies available from The Haworth Document Delivery Service: 1-800-342-9678.]*

BACKGROUND

Stephen Covey's *The Seven Basic Habits of Highly Successful People* has been advocated as a character-building program for pharmacists and

Jean M. B. Woodward, Ph.D., R.Ph., is Assistant Professor of Clinical and Administrative Pharmacy, University of Iowa College of Pharmacy, Iowa City, IA 52242-1123.

Journal of Pharmacy Teaching, Vol. 4(4) 1995

pharmacy students (1,2). In the fall of 1992, the Covey book was a recommended text for a required, team-taught pharmacy practice management course, offered in the third professional year at a midwestern college of pharmacy. Students had the option to attend weekly informal discussions about the book (led by the course instructor) which focused on the content of the book, the application of the principles to students' personal lives, and the similarity in process between personal and traditional management.

Although roughly a third of the class (35 students) started the semester with the best of intentions by attending the first few discussion sessions, only five completed the entire series of discussions. When asked for feedback and suggestions about the material, the students felt the material was important, that students should be offered credit, and that students should be required to complete the exercises included in the book for the credit received. The following fall semester (1993), the equivalent of one credit's time, within the framework of the three-credit practice management course, was allocated to a subcomponent which incorporated the principles and values advocated by Covey. Nine 50-minute lecture periods were allocated for students to complete nine distinct units. Our intention was to get students more actively involved in their own learning and to demonstrate the utility and applicability of management and Covey principles to professional and personal issues/problems as well as to traditional management problems.

We assumed the Covey material could be self- or peer-taught and that the principles advocated could be applied to professional and general management issues as well as to personal management and development. Because of these potential outcomes and because we believed the Covey principles could be applied to professional and general management issues as well as to personal management, the Three-Stage Model for Course Design was used as the framework for developing the intervention (3).

THE THREE-STAGE MODEL FOR COURSE DESIGN

The intention of the Three-Stage Model series of exercises is to have students work at various levels of learning based on Bloom's taxonomy (i.e., from knowledge to application/evaluation) as individuals and within groups. In general, the following are some of the broad goals for this teaching intervention as adapted from The Three-Stage Model (4):

1. learn a set of basic concepts and principles for personal and interpersonal effectiveness (Covey);
2. learn how these principles can be applied for professional and/or managerial effectiveness;

3. become self-directed learners;
4. develop higher cognitive abilities;
5. learn to apply knowledge to realistic professional, management, and personal issues and problems; (by applying concepts and principles to professional and managerial practice as well as to self development)
6. develop competence in working with others on professional problems;
7. learn to help one another achieve course goals; and
8. achieve professional and personal relevance from the course experiences.

The intent of the model is to have students conduct activities to develop three levels of cognitive ability (thus the "three-stage") via two mechanisms: individual and group activities. Content material is divided into distinct learning units, reflect ing particular themes. Each learning unit comprises three distinct activities to reflect different levels of learning or group vs.individual activities:

1. *S*elf *I*nstructional *G*uide (SIG): provide content knowledge and a foundation for application of the material within group activities;
2. *G*roup *I*nstructional *G*uide (GIG): provide opportunities for clarification of material by peers and for application of the knowledge to general problems or issues; and
3. *P*rocedures for *I*ndividual *P*rojects (PIP): provide opportunities for application of material to their own personal problems/issues or an evaluation/self-assessment.

Each SIG, GIG, and PIP had three major components: *(i)* an introduction to the unit or stage of activity; *(ii)* learning objectives which focus on different levels of Bloom's taxonomy; and, *(iii)* activities to achieve objectives. Students worked at these exercises in sequence, each subsequent exercise within the unit building on a foundation established in the previous.

As was originally intended by Feldhusen, the SIGs and the PIPs were individual exercises whereas the GIGs involved discussing issues with peers in a group context (groups of three to four students each). We assigned students to groups based on type and amount of pharmacy experience and maintained group composition throughout the semester.

Covey's principles for personal and interpersonal success were the

central themes used to develop the series of units. Figure 1 presents unit titles (themes). The task was to somehow demonstrate how the principles advocated by Covey could be applied to real life professional or managerial issues.

LEARNING OBJECTIVES AND OUTCOMES

Some broad, overarching goals of the teaching method were mentioned in the description of the Three-Stage Model. Some of the goals are achieved in the way the units are put together, i.e., exercises "force" students to apply the concepts and principles to professional and personal issues. Some of the goals for the intervention reflect cognitive/achievement outcomes (student learning objectives); others, attitudinal outcomes (intervention objectives regarding attitudes and self-development). Finally, we were interested in students' evaluation of the teaching intervention itself, what they liked and disliked about the method. Not all of these objectives were evaluated during the first go-around of the intervention. Other potential outcomes of the exercises which were not assessed include: values clarification and changes in professional attitudes and behaviors based upon values clarification.

Each exercise within the units contained specific learning objectives which dealt with learning principles and concepts as well as their application to professional, managerial and personal problems. (Readers may contact the author for a copy of the full set of exercises.) Students were to try to achieve the objectives by performing the activities listed in the exercise.

We also assessed specific attitudinal outcomes for the teaching intervention. In particular, we wanted to assess how the experience benefitted

FIGURE 1. Unit Titles (Themes): Adopted from Stephen R. Covey, The Seven Habits of Highly Effective People, New York: Simon and Schuster, 1989.

Unit 1: Inside-Out/Intro to the Seven Habits
Unit 2: Be proactive (Principles of Personal Vision)
Unit 3: Begin with the End in Mind
Unit 4: Put First Things First
Unit 5: Public Victory: Paradigms of Interdependence
Unit 6: Principles of Interpersonal Leadership: Think Win/Win
Unit 7: Seek First to Understand–Empathic Communication
Unit 8: Synergize–Principles of Creative Cooperation
Unit 9: Sharpen the Saw–Principle of Renewal

students, how their personal and professional lives improved as a result of the experiences, and whether they had begun to take control of their lives.

EVALUATION METHODS

Two types of evaluation were conducted. One focused on assessing student performance; the other focused on assessing attitudinal outcomes of the intervention as well as attitudes toward the intervention itself. Though evaluation of student performance is described, the focus of this section and this paper is on the intervention evaluation. The data from the two evaluations (performance and attitudinal) could not be linked since the latter was done anonymously.

Student Evaluation

Student performance was evaluated several ways: performance on examinations (SIG objectives), performance in groups (peer evaluations), performance on journals (PIP objectives and activities); and group performance on GIGs (GIG objectives and activities: group grade). The focus was mainly on the achievement of unit objectives and the completion of unit activities for this component of the course. These were developed as part of the intervention and assessed via examination questions or evaluation of group and individual reports (from GIGs and PIPs) as follows:

- SIG: multiple choice examination questions derived from SIG objectives;
- GIG: evaluation of the group product: Timeliness (by deadline); completeness; content assessed on pass-fail basis;
- PIP: Journal to be turned in at end of the semester; timeliness; completeness; content.

Intervention Evaluation

The intervention was evaluated two ways: formatively and summatively. Feedback from students used to alter the intervention early in the semester comprised the formative evaluation. An anonymous qualitative assessment of the method and content and quantitative assessment of attitudinal outcomes comprised the summative evaluation.

For the qualitative assessment, we developed a series of open-ended questions to assess students' general impressions of the good and bad

aspects of this component of the course regarding the material (i.e., Covey), and the teaching method (i.e., SIGs, GIGs, and PIPs). Examples of such questions include: "What did you *like* about the *series of exercises* (SIGs, GIGs, PIPs)?" and "What did you *dislike* about the *series of exercises*?"

For the quantitative assessment of attitudinal outcomes regarding the teaching method and its content, we asked students to respond to a series of statements using a five-point Likert-type response format with Strongly Agree and Strongly Disagree as anchors. Two types of statements were developed: (1) eight items to assess global attitudinal outcomes of the experience; and, (2) seven items to evaluate methods and administration. Of the seven items, one was used to assess the intervention's effectiveness: "The three-stage approach (SIGs, GIGs, PIPs) was effective."

The items measuring attitudinal outcomes were incorporated into an outcome scale called "global attitudinal outcomes." Cronbach's alpha reliability for the eight-item scale was 0.93. Global attitudinal outcomes reflect student reactions to the total experience, not solely an evaluation of use of the Three-Stage Model nor an evaluation of the content. However, we were able to examine differences in global attitudinal outcome scores between those who found the Three-Stage method to be an effective teaching method versus those who did not. We also were able to examine differences in scores between those who thought the material should be covered in the general management course versus those who did not.

INTERVENTION EVALUATION RESULTS

Formative Evaluation: Several key informants stopped by during the first third of the semester with the following formative feedback: *(i)* the exercises were very time-consuming, *(ii)* PIPs were too personal; *(iii)* there were feelings of discomfort at having to turn in PIP journal (too personal); and *(iv)* students were way behind at maintaining their journals; some were simply "doing it to get it done" and not putting effort into them (i.e., it was becoming a burden). As a result of this feedback, we *(i)* changed the extensiveness of the exercises (e.g., fewer activities); *(ii)* changed the nature of PIP exercises to make them less personal; and *(iii)* dropped the PIP requirement by changing it to a voluntary, extra-credit basis.

Summative Evaluation: The data presented here are summaries of some of the qualitative and quantitative attitudinal evaluations of the intervention itself rather than of student learning objectives, i.e., performance. In particular, we have focused on summarizing student comments regarding the things they liked and disliked about the series of exercises (SIGs,

GIGs, PIPs) and the quantitative global attitudinal outcome and teaching method effectiveness assessments. A total of 100 students out of the 125 enrolled completed and turned in the summative evaluation form during one of the last days of class.

To summarize students' responses to questions about what they liked and disliked about the series of exercises (SIGs, GIGs, PIPs), responses were listed, categorized and tallied. There were multiple themes to their responses and we report the more prominent themes.

When asked "What did you *like* about the *series of exercises* (SIGs, GIGs, PIPs)?" approximately 45% of student responses focused on their being able to understand, apply, evaluate, or think about the material (principles/issues). The second most common theme for responses dealt with helping them prepare for examinations (approximately 15%). The broad goal of having the students reflect upon and apply the material to professional, management, and personal issues/problems was recognized by the students and is an aspect of the exercises they tended to like most. In addition, learning objectives and activities helped them prepare for examination questions (multiple-choice items which focused on content knowledge).

When asked "What did you *dislike* about the *series of exercises*" the major type of response was "time," "the exercises were very time-consuming," or "involved a lot of work" (approximately 40%). Two additional themes included comments about the content of the exercises (too personal, idealistic and not relevant, hard to answer) and to the procedure itself (questions were redundant, busywork). Perceptions about the amount of work or time required might have affected students' perceptions about redundancy. The series of exercises within units had a similar theme; multiple applications of the materials may have appeared redundant.

Table 1 presents the list of items comprising each dimension along with the distribution of item responses. Most attitudinal outcome items were normally distributed. Again, some responses reflect outcomes of both content (Covey material) and process (Three-Stage Model). The item included to assess the teaching method ["The three-stage approach (SIGs, GIGs, PIPs) was effective."] resulted in a bimodal distribution of responses; however, 40 of the 100 students disagreed with the statement versus 35 who agreed.

In order to assess if there were differences in global attitudinal outcomes due to teaching method, respondents were categorized into three groups: those who felt the series of exercises were effective, those who were neutral, and those who thought the teaching method was not effec-

TABLE 1. Attitudinal outcomes and attitudes toward course methods and administration and item response distributions (N = 100).

Attitudinal Outcomes[a]	SD	D	N	A	SA[b]
• I am a better person because of it.	8	10	39	37	6
• It was a waste of time.[c]	6	43	23	19	9
• I have shared the "7 Habits" concepts with others.	16	20	20	38	6
• I have a better vision for my life.	8	20	23	46	3
• I have begun to take control of my life as a result.	9	27	39	24	1
• I have benefitted as a professional.	6	14	38	38	4
• It has helped me in my relationships.	7	13	23	54	3
• I would read another book by Covey.	20	20	17	30	13
Attitudes Toward Course Methods and Administration					
• The three-stage approach (SIGs, GIGs, PIPs) was effective.[d]	12	28	25	33	2
• The instructor should have lectured on the text material instead of having us do the SIGs, GIGs, PIPs.[c]	8	29	19	26	18
• The material should he covered in more depth in this general management course.	30	37	17	12	4
• This material should not be a part of this general management course.	7	37	20	20	16
• This material should be covered in an elective course.	4	22	25	28	20[e]
• The material should be covered in more depth, but in an elective course.	10	26	27	24	12[e]
• Too much weight (= I credit) was allocated to the book and exercises.	9	31	29	21	10

[a]Global attitudinal outcome items (n = 8)
[b]SD: Strongly Disagree,
D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree
[c]Reverse-coded in data analyses
[d]Teaching method effectiveness item (n = 1)
[e]One missing response

tive. Table 2 presents mean scale scores for "global attitudinal outcome" within teaching method effectiveness categories. Results of one-way ANOVA and Student Newman-Keul's (SNK) post-hoc analyses indicate significant differences among the three groups. Those who felt the teaching method to be effective had higher scores than those who were neutral who had higher scores than those who did not find the teaching method effective.

Follow-up analyses involved comparing perceptions about teaching method effectiveness and global attitudinal outcomes among students who differed in their opinions regarding whether the intervention should be part of the management course or not. Mean teaching method effectiveness scores and the results of a one-way ANOVA are presented in Table 3.

TABLE 2. Mean global attitudinal outcome scores for three levels of teaching method effectiveness.

Teaching Method Effectiveness	Mean Outcome Score (n)	Standard Deviation	F(df)
Not Effective	2.669 (40)	1.003	12.451* (2,97)
Neutral	3.120 (25)	0.438	
Effective	3.600 (35)	0.837	

*One-way ANOVA: $p < 0.0001$; SNK ($p < 0.05$): Effective > Neutral > Not Effective

TABLE 3. Mean teaching method effectiveness item score by opinions about inclusion into the management course.

Should be part of Management Course	Mean Effectiveness Score (n)	Standard Deviation	E (df)
No	2.389 (36)	1.103	7.697*(2,97)
Neutral	2.750 (20)	0.967	
Yes	3.273(44)	0.949	

*One-way ANOVA: $p < 0.001$; SNK ($p < 0.05$): Yes > No

In this analysis, those who believed the material did not belong in the management course had lower mean scores on the teaching effectiveness item than those who were of the opinion that it belonged in the management course. In addition, we compared global attitudinal outcome responses among the same three "management subgroups" and present the results in Table 4. Those who felt the material should not be part of the management course had significantly lower global attitudinal outcome scores than those who were neutral about it as well as those who felt the material should be part of the management course.

DISCUSSION

A major goal we had for the intervention was to give students the opportunity to see the applicability of self- and interpersonal management principles to general management and pharmacy practice. We wanted students to feel that spending time on developing themselves was a worthwhile activity, to feel in better control of their lives, and to develop as both individuals and professionals.

TABLE 4. Mean global attitudinal outcome score by opinions about inclusion into the management course.

Should be part of Management Course	Mean Global Score (n)	Standard Deviation	F (df)
No	2.441 (6)	1.103	24.796*(2,97)
Neutral	3.238 (20)	0.967	
Yes	3.591 (44)	0.949	

* One-way ANOVA: $p < 0.6001$; post-hoc SNK ($p < 0.05$): Yes = Neutral > No

Developing the unit exercises is a lot of work initially; however, the three-stage method provides a vehicle for achieving advanced levels of cognitive application, providing opportunity for individual and group efforts at learning. These levels are not easily achieved in a lecture format. We find it to be an excellent vehicle to discuss the application of theory to current professional issues, revealing the role and pertinence of theory to practice. We also feel that while discussing issues, students learn their peers' perspectives, learn to clarify professional values, and learn to better themselves.

An example of how the Covey principles were applied to the profession was to have the groups develop a mission statement for pharmacy using a method advocated by Covey to develop personal mission statements. Students clarified what they perceived to be pharmacists' roles and developed a single mission statement for all pharmacists. We found it very rewarding to review the products of group activities such as this one, to see how students applied the issues or principles to pharmacy and/or to management.

We used Covey as the framework for developing objectives mainly because we liked Covey's sequencing of the material. The task we have now is to broaden the perspectives on these themes or units, providing students diverse opportunities to achieving the objectives. Using the themes/goals as the framework will allow us to broaden the scope of activities (beyond Covey readings) and provide students different variations on a theme. This will add a degree of objectivity to the exercises, hopefully taking away student concerns about "Coveyisms" and lowering student reactance to the exercises.

Because both the course and the curriculum were in transition, i.e., switched from two 75-minute to three 50-minute sessions, and because of space limitations (small breakout rooms were not available), GIG activities were unsupervised. This is not consistent with the method as advocated by Feldhusen.

We assumed the material could be self- or peer-taught and decided to forego formal meetings and to allow student groups to meet when and where they wanted. This is consistent with the intention for students to take responsibility for their own learning. However, informants indicated that students did not feel the intervention to be "important" and would slack off on trying to keep up with the exercises. Some loved the exercises and the amount of work they themselves chose to put into them; others did not learn to be self-directed learners. Although class time was allocated to the intervention, we spent no formal time (other than an introductory session about the method) interacting with the students, i.e., "quality time." We have learned that group activities need to be conducted in a formal setting to introduce the unit topic/theme, to informally assess the process other than via exercises to be handed in, and to impress upon the students the importance of the exercises.

Some students were not "ready" to apply the Covey principles to pharmacy or to their own lives. Those who enjoyed the material and its application in the series of exercises tended to be non-traditional students. Broadening the scope of activities may help as was mentioned previously.

REFERENCES

1. Covey SR. The seven habits of highly effective people. New York: Simon and Schuster; 1989.

2. Rickert DR, Smith RE, Worthen DB. "Seven habits": building pharmacist leaders. Am Pharm. 1992; NS32(8):48-52.

3. Feldhusen JF. The three-stage model of course design. In: Langdon DG, series ed. The instructional design library; v. 39. Englewood Cliffs, NJ: Educational Technology Publications; 1980.

4. Ibid., p. 51.