1978

A Math Curriculum for Retail Buying (ECIDE 306) Old Dominion University

Betty Bradshaw
Old Dominion University

A MATH CURRICULUM FOR RETAIL BUYING (ECIDE 306)

OLD DOMINION UNIVERSITY

A Research Study

Presented to

the Faculty of the Graduate School

Old Dominion University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science in Secondary Education

---

by

Betty Bradshaw

May 1978

ACKNOWLEDGEMENTS

Many people have contributed to the development of this study and the writer would like to acknowledge their contributions.

Appreciation is extended to the buyers and merchandise managers who assisted in the collection of data for the original task list contained in this document.

Appreciation is also extended to Dr. John Turner for willingly giving his time and support to this document.

Special gratitude is extended to the writer's children, Brad and Ann, for their sacrifices, patience and understanding.

Finally, special gratitude is extended to the writer's parents, Rosalee and Jim Delaney, for their encouragement, love and continued support throughout the masters study.

TABLE OF CONTENTS

Chapter 1

INTRODUCTION

In order to be effective and competent in their jobs, buyers must be knowledgeable and proficient in the mathematics necessary to perform the buying function. The buyer, therefore, must be able to compute accurately the math essential to the success of his job.

It has been indicated through interviews with graduates of the Old Dominion University Distributive Education program who are presently employed as buyers and through a task analysis survey of buyers and merchandise managers that the Retail Buying class at Old Dominion University needs to go into more depth with mathematics of buying.

Through a review of related literature of curriculum development texts, it was determined that a competency based curriculum would best meet the needs of the students. Competency based curriculum enables the instructor to base curriculum content on competencies needed to perform job skills. A task list devised by Lucy Crawford in A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education was used as the basis for the development of the task list included in this document. The tasks were further refined and validated through a task analysis detailing sheet completed by local buyers and merchandise managers.

Prerequisite math skills were determined by defining computation skills the student should possess in order to compute mathematics problems to be taught in the Retail Buying course.

PROBLEM

The problem was to determine what math skills should be taught in the Retail Buying class (ECIDE 306) at Old Dominion University. Given the determination of math required, a second phase was to develop a competency based curriculum guide to be used.

DEFINITION OF TERMS

Distributive Education. A vocational instructional program designed to meet the needs of persons who have entered or are preparing to enter a distributive occupation or an occupation requiring competency in one or more of the marketing functions (Crawford, 1971).

Vocational Education. Training or retraining which is given in schools or classes under public supervision and control or under contract with a state board or local education agency and is conducted as part of a program designed to prepare individuals for gainful employment as semiskilled or skilled workers or technicians or sub-professionals in recognized occupations and in new and emerging occupations or to prepare individuals for employment in occupations which the Commissioner determines, and specified by regulation, to be generally considered professional or which requires a baccalaureate or higher degree (Roberts, 1971).

Curriculum Theory. A theory setting forth the sources, screens, and procedures for the development of a curriculum.

Behavioral Objectives. A description of the student behavior which represents an intended measurable outcome of the educational process including the condition, the behavior, and the criteria.

Lesson Plan. A curriculum guide which includes over-all and specific educational objectives; and arrangement of subject matter; learning experiences to give direction in meeting the stated objectives; and texts and references. An illustration of evaluative techniques may be included (Crawford, 1971).

Task. A logically related set of actions required for the completion of a job objective or stated another way, a task is a complete job element (Mager & Beach, 1967).

Competency. A knowledge, skill, or attitude required for the efficient performance of a task.

Competency Based Curriculum. Curriculum designed to teach students the knowledge, skill, and attitude needed to complete tasks for a specific job.

Chapter 2

REVIEW OF LITERATURE

The literature related to this problem is presented in two sections. The first section deals with methodology of curriculum development. The second section deals with mathematics directly related to the buying function.

METHODOLOGY OF CURRICULUM DEVELOPMENT

According to Tyler, curriculum development revolves around four divisions of curriculum inquiry. These are:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained (Crawford, 1971)?

Tyler is one of the most renouned in the field of curriculum development rationale. He believed that objectives should be stated in generalizations. Tyler also believed that the subject area involved should be analyzed before trying to formulate student behavior outcomes. Tyler's curriculum rationale, although subject referenced, provided a good base for the investigator in developing a competency based curriculum rationale.

Tyler's rationale is a theory for the development of the ends to be met. The distinction that curriculum concerns ends while instruction involves means must be considered by those participating in the planning of the curriculum.

The first step is to consider the sources necessary in order to match the ends to the needs. There are three sources involved: the student, society, and the subject matter.

Student needs and interests must be determined. One must study the current status of the students and compare the status to an acceptable norm in order to determine the difference which are the needs.

Subject matter must be considered to identify goals that all learners should achieve.

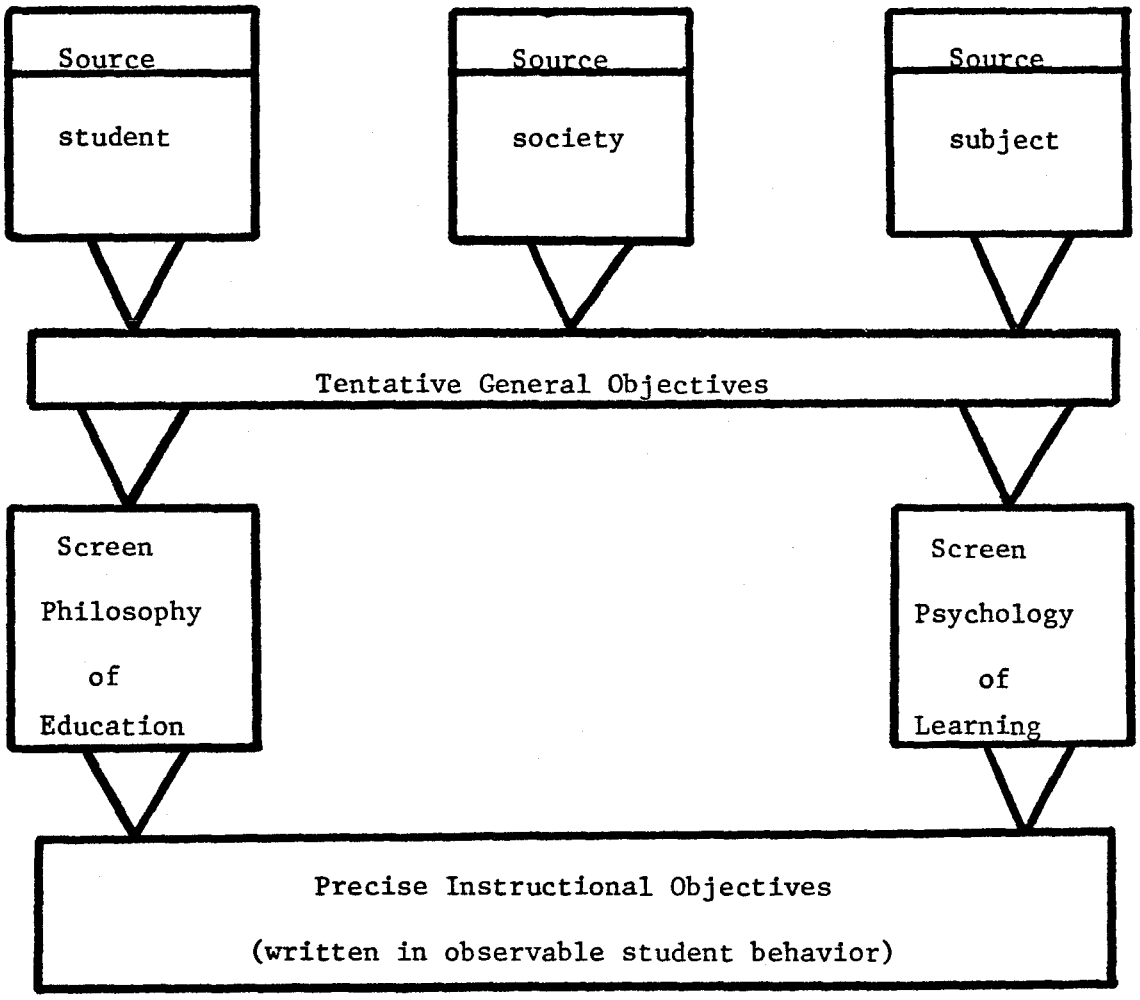
From these three sources tentative, general objectives can be drawn and ranked.

The next step is to take these general objectives and subject them to a screening process based on two screens.

Goals can be appraised through one's philosophy of education. This is really an individuals value system. After this screen is applied goals should again be ranked.

Next the psychology of learning screen can be applied to determine which goals are feasible and which might be impossible to accomplish in a given time period.

The two screening processes should result in the development of precise instructional objectives stated in terms of observable student behavior.



Tyler's Curriculum Rationale
(Popham & Baker, 1970)

Although the Tyler rationale offers a sound basis for the development of subject referenced curriculum materials, it stops short of utilizing task analysis necessary for the development of a competency based curriculum. The investigator chose to use a competency based curriculum because emphasizing specific competencies would give the curriculum a definite direction. Since the emphasis would be placed on competencies actually required for successful job performance, competency based curriculum would be more relevant than a traditional subject referenced approach.

One competency based curriculum theory is stated in the seven following steps:

1. Identify jobs (description of jobs).
2. Task analysis (cluster tasks).
3. List competencies.
4. Write behavioral objectives.
5. Write curriculum content.
6. Identify teaching methods.
7. Evaluation (student tests).

Tyler's screens of philosophy of education and psychology of learning can be applied to this competency based rationale, particularly in the first three steps.

The steps of task analysis can be accomplished through the use of the Dictionary of Occupational Titles. With the location of a specific job title, you will find a general task list for the job.

Task analysis is one method of identifying competencies necessary for job performance. This method may be used in conjunction with the interview approach.

The investigator developed the task list included in this document based on a task list devised by Lucy Crawford in A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education. The investigator considered this an appropriate basis since her original list was developed from a review of related literature and structured interviews with knowledgeable full-time employees in distributive occupations. Validation of tasks by those who perform the job is necessary in relevant curriculum planning.

After a task list is developed for a particular job, tasks can be broken down into sub-tasks and corresponding competencies can then be written for each task.

The critical element in competency based instruction is the competency. Specifically, competencies for vocational and technical education are "those tasks, skills, attitudes, values and appreciations that are deemed critical to successful employment" (Finch, 1975, as reported by Lynch, 1977). Other researchers have added judgments and/or behaviors to this listing. The competency statements represents explicit worker roles and responsibilities at a particular level (Lynch, 1977).

Behavioral objectives are developed from competency statements. Behavioral objectives must specify the condition under which learning must take place, identify the observable behavior, and establish criteria through quantity or quality standards. It is preferable to divide the task list or competency statements into major topic areas before writing behavioral objectives.

After behavioral objectives are established, curriculum content and teaching methods can be developed.

MATHEMATICS OF BUYING

In A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education (1967), Lucy Crawford provided a base upon which to develop a task list for the mathematics function of buying. Critical tasks for the entire buying function were included in the Crawford study. The tasks involving math skills were isolated from this list by this investigator.

COMPARISON OF A "TYPICAL" TRADITIONAL AND A "TYPICAL" CBE PROGRAM*

Characteristics	Traditional Program	CBE Program
1. Competencies to be demonstrated by the student are:	. derived from committee consensus . stated in general terms . seldom made public	. derived from explicit concepts of worker roles . stated so that competence may be assessed . made public in advance
2. Criteria to be employed in assessing competencies are:	. based upon general program objectives . general in stating mastery levels . seldom made public	. based upon specified competencies . explicit in stating levels of mastery under specified conditions . made public in advance
3. Assessment of the student's competency:	. uses course grades as evidence of competence . may include performance . may focus on objectivity	. uses performance as evidence of competence . takes student knowledge as it relates to performance into account . strives for objectivity
4. Student rate of progress through program is determined by:	. time of course completion	. demonstrated competency

COMPARISON OF A "TYPICAL" TRADITIONAL AND A "TYPICAL" CBE PROGRAM*
(Continued)

Characteristics	Traditional Program	CBE Program
5. Instructional program is intended to:	. facilitate student achievement of certain general program objectives	. facilitate development and evaluation of student achievement of specified competencies

*Elam, 1971, as reported by Lynch, 1977.

The study of the task list and buying textbooks revealed six possible major topic areas to be included in the curriculum.

I. Pricing

II. Stockkeeping and inventory

III. Six-month merchandise plan

IV. Model stock plan

V. Open-to-buy

VI. Vendor's terms and discount policies

Maryanne Bohlinger in Merchandise Buying Principles and Applications (Bohlinger, 1977), includes several of the major topic areas in the planning functions of a buyer's job. Planning requires accurate record keeping of cash, credit, expenses, sales, purchases, stocks and inventories, and profit and loss statements. The other major area of planning in the buying fuction involves the merchandise budget. This is a control measure that enables the buyer to follow a definite course of action as well as to evaluate current activities. Certain elements should be present for the merchandise plan to accomplish its objectives. The following seven important factors should be considered when planning the merchandise budget:

I. Sales - Sales planning is the key element. Sales are planned first because it is easier to adjust stocks, markups, and expenses to sales potentials.

II. Stock - The buyer must maintain a balanced stock in relation to anticipated sales. Stock planning involves an understanding of the various methods used to plan stocks, stock turn, and average inventory.

III. Reductions - Reductions consist of three major factors: (1) merchandise shortages, (2) employee and other discounts, and (3) markdowns.

IV. Markups - Markup includes planning initial markup and maintained markup.

V. Gross margin and operating profit - Once operating expenses have been planned, net profit may be computed by deducting expenses from gross margin.

VI. Expenses - There are two types of operating expenses: (1) direct expenses, and (2) indirect expenses. Expense planning is a method of control that helps safeguard the store's profit objective.

VII. Purchases - The buyer purchases from sales, reductions, and stock figures. To control purchases effectively, the buyer uses a device called open-to-buy (OTB) (Bohlinger, 1977).

In Arithmetic for Distribution (1970), Pauline Burbrink establishes computational skills that would need to be taught as a prerequisite to the buying course. These would include addition, multiplication, subtraction, and division of whole numbers, fractions, and decimals. The student would also need an understanding of percentage and its application of distribution.

Chapter 3

PROCEDURE

Using a combination of the Tyler curriculum development rationale and a competency based curriculum theory, a curriculum was developed for the Retail Buying class (ECIDE 306) (Appendix E). This procedure shows the steps used in the development of the curriculum.

Using the Crawford task list and related literature, the investigator developed a task collection interview guide (Appendix B). This guide was used as a basis for interviews with buyers and merchandise managers located in the Tidewater area. Each respondent was asked to rate the tasks listed in the guide in two catagories: (1) frequency of performance, and (2) importance of the task performance. They were also asked to list any additional tasks concerning mathematics of buying that had been omitted from the original list. These guides, along with personal interviews of the buyers and merchandise managers, provided the final task list used to develop the curriculum for the Retail Buying class (ECIDE 306) (Appendix D).

After all of the interview guides were collected, the tasks were listed on the task listing sheets (Appendix C). A task listing sheet was completed for each task collection interview guide sheet to determine total scores and determine which tasks to include and which to delete. After completing each individual task listing sheet, the investigator compiled the ratings on one master task listing sheet in separate columns for supervisors and employees. The investigator used the master

task listing sheet to develop a revised task list. Some of the original tasks were deleted as a result of low frequency or importance ratings and others were added as a result of the interview guides and task listing sheets.

After the revised task list was completed the next steps in the development of the curriculum was to write competency statements for each task. Competency statements were written to include three categories of performance. These were knowledge, skill, and attitude needed to perform a given task (Appendix D).

Upon completion of the list of competency statements, behavioral objectives were written for each competency statement. The key question asked in writing these objectives was: what kind of things should the student be able to do at the end of the course that will most facilitate his becoming a skilled craftsman in the least amount of time (Mager & Beach, 1969)? Each objective must contain three areas. First, an objective must specify the condition under which learning will take place. Second, an observable behavior or product must be identified. Third, a quontative or qualitative criteria must be stated for each objective.

Although the form is important, the instructional intent is more important.

When the behavioral objectives were completed for each competency statement, the objectives were clustered into major topical areas before planning the lesson content. Each major topic area contains several behavioral objectives.

The final step in the development of the curriculum was the actual writing of individual lesson plans including the outline, teaching tips, and references (Appendix E).

Chapter 4

SUMMARY

Background of the Problem

The need for more emphasis being placed on the mathematics functions of buying in the Retail Buying class (ECIDE 306) at Old Dominion University had been identified through interviews with graduates of the Old Dominion University Distributive Education program who are currently employed as buyers and through a task analysis survey of buyers and merchandise managers throughout the Tidewater area.

Statement of the Problem

The problem was to determine what math skills should be taught in the Retail Buying class (ECIDE 306) at Old Dominion University. Given the determination of math required, a second phase was to develop a competency based curriculum to be used.

Reactor Panel

The reactor panel of this study consisted of buyers and merchandise managers employed throughout the Tidewater area. Emphasis was placed on interviewing buyers and merchandise managers who deal directly with the purchase of fashion merchandise or merchandise with a definite life cycle as opposed to staple merchandise. The investigator felt that the opinions of these buyers would be particularly valuable and significant in the areas of fashion forecasting, model stock development, and procedures for unit control and re-ordering.

Review of Literature

The review of related literature revealed two basic methods for curriculum development. The Tyler curriculum development rationale provided an approach to the development of subject referenced curriculum. The investigator gained insight into the development of competency based curriculum from the procedure outlined in Developing Vocational Instruction by Robert F. Mager and Kenneth M. Beach, Jr. The basis for a task list, as suggested in Developing Vocational Instruction, was provided by Lucy Crawford in A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education.

A review of math and buying texts provided a further basis for development of math content for the curriculum and determination of needed computational skills.

Procedures Utilized in Collection and Analysis of Data

The investigator used a task collection interview guide (Appendix B) as the basis for interviews with the reactor panel. Each respondent rated each task as to frequency and importance in its relation to the buying function.

Task listing sheets (Appendix C) enabled the investigator to rate each task according to frequency and importance on a master task listing sheet. From these ratings, the investigator developed a final list of tasks that should be utilized in the development of competency statements (Appendix D). The competency statements were then written to the knowledge, skill, and attitude needed to perform each of the tasks on the final task list (Appendix D). After the list of competency statements was completed, the investigator developed a behavioral

objective for each competency statement. Each behavioral objective specified the condition under which learning will take place, the observable behavior, and a quantative or qualitative criteria.

The behavioral objectives were then clustered into major topic areas and lesson content was then developed for each objective (Appendix E).

Each behavioral objective, competency statement and task statement were number coded as cross reference between objectives and task statements would be possible.

SELECTED REFERENCES

SELECTED REFERENCES

Bohlinger, M. S. Merchandise Buying Principles and Applications. Dubuque W. C. Brown Company, 1977, 283.

Burbrink, P. W. Arithmetic For Distribution. Austin University of Texas, 1970.

Crawford, L. C. A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education. Virginia Polytechnic Institute, 1967, 350-355.

Crawford, L. C. A Distributive Teacher Education Curriculum Theory Design. Virginia Polytechnic Institute, 1971, 4-5.

Diamond, J. & Pintel, G. Retail Buying. Englewood Cliffs, N.J.: Printice-Hall, 1976.

Luter, R. R. Basic Math of Distribution. Austin University of Texas, 1970.

Lynch, Richard L. et al. A Theoretical Framework for Institutional Programs in Distributive Education, USUE Grant OE 300-76-0308, VPI 6SU, Blacksburg, VA., June, 1977, 20.

Mager, R. F. Preparing Instructional Objectives. Palo Alto Fearon Publishers, Inc., 1962.

Mager, R. F. & Beach, Jr., K. M. Developing Vocational Instruction. Belmont, California: Fearon Publishers, Inc., 1967, 10-29.

Popham, W. J. & Baker, E. L. Establishing Instructional Goals. University of California: Prentice-Hall, Inc., 1970.

Richert, G. H. & Meyer, W. G. & Haines, P. G. & Harris, E. E. Retailing Principles and Practices. New York, N.Y.: McGraw-Hill, 1974.

Roberts, R. W. Vocational and Practical Arts Education. New York, N.Y.: Harper and Row, 1971, 51.

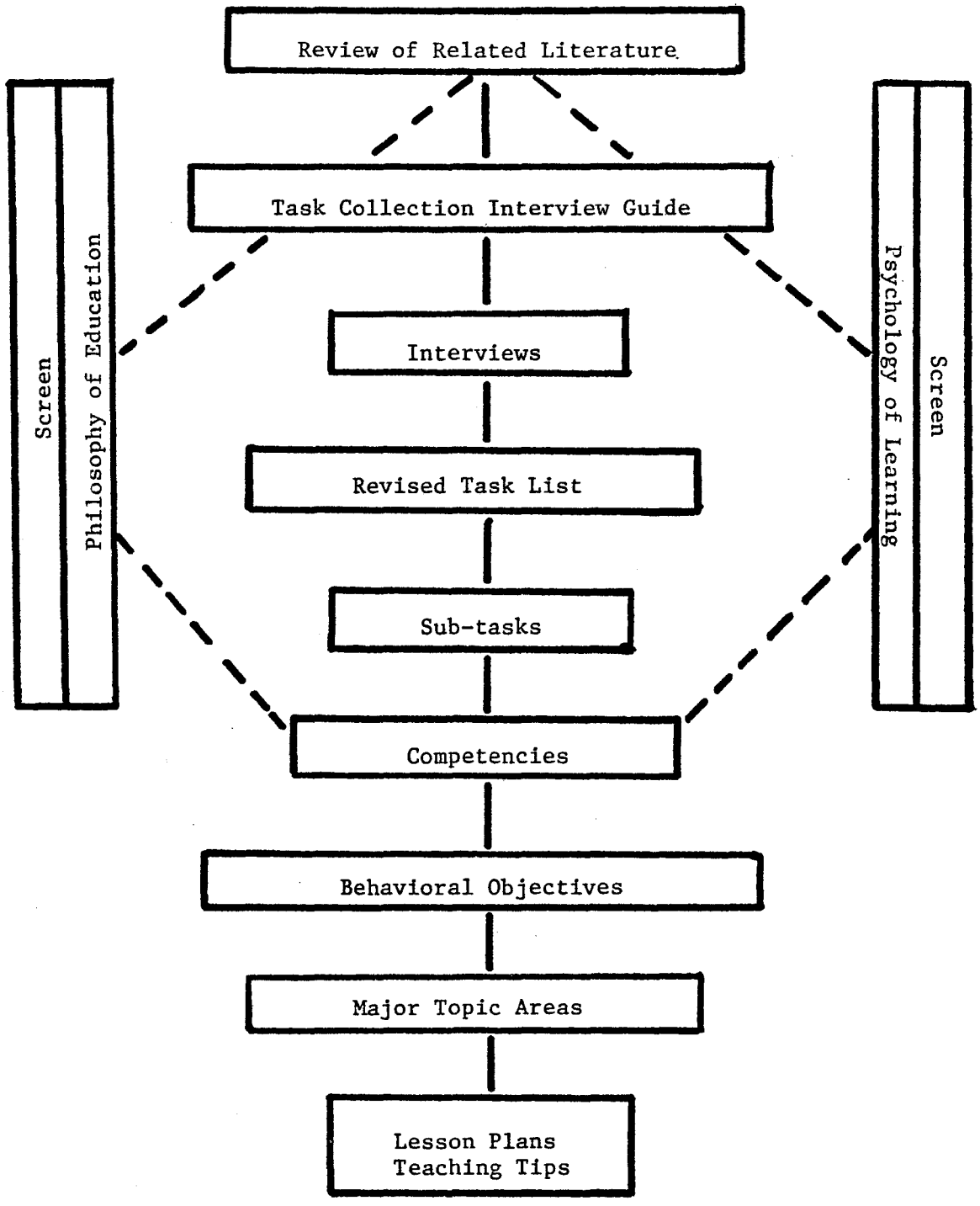
Wingate, J. W. & Friedlander, J. S. The Management of Retail Buying. Englewood Cliffs, N.J.: Prentice-Hall, 1963.

Wingate, J. W. & Samson, H. E. Retail Merchandising. Cincinnati: Southwestern, 1975.

APPENDIXES

APPENDIX A

CURRICULUM PROCEDURES USED TO
DEVELOP RETAIL BUYING CURRICULUM



APPENDIX B

TASK COLLECTION INTERVIEW GUIDE

Name of Business _____

Date and Day of Observation _____

Experience on Job _____yrs. _____mos.

Completed by _____

1. Please place the appropriate number in the space provided in the left column to indicate the frequency of task performance: (1) regularly, (2) occasionally, (3) never, or (4) not able to respond.*

   In the column on the right, place the appropriate number to indicate the importance of the task performance: (1) great, (2) some, (3) little, or (4) no.

Job Title: _____

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

*(1) Regularly denotes task is performed five or more times during a normal day.
(2) Occasionally denotes task is performed less than five times during a normal day.

APPENDIX C

TASK LISTING SHEET

Job Title: _____

Business: _____

No.	Task	Frequency of Performance		Importance	
		E	S	E	S

E indicates the employee
S indicates the supervisor

APPENDIX D

TASK LIST AND COMPETENCY STATEMENTS

1. Interpret the retail method of inventory
   - A. Knowledge of the retail method of inventory
   - B. Skill in the interpretation of figures
   - C. Awareness of the importance of the retail method of inventory
2. Interpret vendor's terms and discount policies
   - A. Knowledge of terms and policies
   - B. Skill in interpreting terms and policies
3. Interpret various factors in the uses of a model stock plan
   - A. Knowledge of factors in a model stock plan
   - B. Skill in interpreting factors of a model stock plan
   - C. Awareness of importance of a model stock plan
4. Identify the factors which influence open-to-buy
   - A. Knowledge of open-to-buy factors
   - B. Skill in identifying open-to-buy factors
5. Maintain an accurate record of the supply of merchandise on hand or amount to re-order
   - A. Knowledge of inventory recording methods
   - B. Knowledge of method of re-ordering accurately
   - C. Skill in keeping accurate records
   - D. Skill in re-ordering accurately
   - E. Awareness of importance of accuracy in re-ordering merchandise supplies and re-ordering merchandise
6. Analyze an open-to-buy to learn of overbought conditions or money available for buying

APPENDIX D (Con't)

A. Knowledge in analyzing an open-to-buy report

B. Skill in interpreting open-to-buy figures

7. Interpret orders and invoices and other basic forms used in inventory control

A. Knowledge of the format of the basic forms to be used

B. Skill in interpreting orders, invoices, and other basic forms

8. Initiate stock counts

A. Knowledge of when stock counts are needed

B. Skill in communicating with people to do stock counts

C. Awareness of importance of keeping accurate stock records

9. Re-order from stock counts

A. Knowledge of when and how to re-order from stock counts

B. Skill in re-ordering accurately

C. Awareness of the importance of re-ordering merchandise accurately and at the proper time

10. Correct stock control books from stock counts

A. Knowledge of changing and correcting stock counts

B. Skill in correcting and changing accurately

C. Knowledge of the significance of correct stock counts

11. Re-order basic stocks

A. Knowledge of how and when to re-order

B. Skill in re-ordering accurately

C. Knowledge of importance of maintaining basic stock levels

12. Markup and record stock

A. Knowledge of markup in dollars

B. Skill in correctly marking merchandise

APPENDIX D (Con't)

C. Skill in re-ordering accurately

13. Mark down and record stock

A. Knowledge of mark down in dollars

B. Skill in accurately marking

C. Skill in re-ordering accurately

14. Studies reports of periodic inventories

A. Knowledge of information contained in periodic inventory reports

B. Knowledge in interpreting information

C. Skill in use of information

15. Decides on selling price of merchandise

A. Knowledge of desired markup percent

B. Skill in determining amount of markup item could carry

C. Awareness of importance of correct markup

16. Supervises stock control

A. Knowledge of stock control methods

B. Skill in communicating importance of accuracy and methods

17. Identify necessary figures to compute open-to-buy

A. Knowledge of figures in open-to-buy

B. Skill in computation

18. Identify formula for figuring retail price

A. Knowledge of formula

19. Find retail price

A. Skill in computation

20. Identify formula for computing markup percent

A. Knowledge of formula

21. Identify markup percent

APPENDIX D (Con't)

A. Skill in computation

22. Identify formula for computing stock to sales ratio

A. Knowledge of formula

23. Compute stock to sales ratio

A. Skill in computation

24. Identify formula for computing average stock

A. Knowledge of formula

25. Identify formula for computing turnover

A. Knowledge of formula

26. Find turnover

A. Skill in computation

27. Identify figures necessary to prepare buying plan

A. Knowledge of figures in six-month buying plan

28. Identify formulas used to compute figures in six-month buying plan

A. Knowledge of formulas

29. Interpret significance of figures in six-month buying plan

A. Knowledge of figures and their relationships

B. Skill in interpreting figures

C. Awareness of importance of figures

30. Forecasts fashions

A. Knowledge of factors affecting current fashion

B. Skill in evaluating factors in forecasting

C. Awareness of importance of forecasting

31. Studies economic conditions

A. Knowledge of economic condition indicators

B. Skill in interpreting conditions

APPENDIX D (Con't)

C. Awareness of importance of economic conditions and their influence on fashion forecasting

32. Interprets and compares past sales figures

A. Knowledge of past sales figures and their effect on planning

B. Skill in interpretation of past sales figures

C. Awareness of importance of past sales figures on projections

33. Identifies staple and fashion merchandise

A. Knowledge of staple and fashion merchandise characteristics

B. Skill in categorizing merchandise

34. Identifies classifications of merchandise and allots percentages of open-to-buy

A. Knowledge of classifications of merchandise by departments

B. Skill in identifying classifications

C. Awareness of importance of merchandise classifications in model stock planning

APPENDIX E

RETAIL BUYING MATH CURRICULUM

VENDOR'S TERMS AND DISCOUNT POLICIES

VENDOR'S TERMS AND DISCOUNT POLICIES

OBJECTIVES

1. Given 10 problems involving the use of vendor's terms and discount policies, the student will be able to solve these problems with 90% accuracy (2A).
2. Given 10 sets of vendor's terms, the student will be able to choose which terms are most advantageous to the buyer with 100% accuracy (2B).

VENDOR'S TERMS AND DISCOUNT POLICIES

CONTENT	TEACHING TIPS
I. TYPES OF DISCOUNTS:	Students should read p. 195-199 in Retail Buying.
A. Cash discount:	
1. A discount allowed by a vendor for prompt payment of an invoice.	Discuss the importance of obtaining discounts and their relationship to profit.
2. Terms given on invoice specify amount of discount and time period. Net amount must be paid if not taken.	Pass out sample invoices showing terms used. Have a buyer as guest speaker to explain how he bargains for the most advantageous terms, the importance of discounts, and how he computes what terms are best.
3. Types of cash discounts and terms used.	
a. Net 30--total bill due in 30 days.	
b. 2/10--2% discount if paid in 10 days.	Explain: Merchandise purchased June 12th with terms 2/10 must be paid by June 22 to obtain 2% discount.
c. R.O.G. (receipt of goods).	
1. Merchandise arrives before payment is due.	

VENDOR'S TERMS AND DISCOUNT POLICIES

CONTENT	TEACHING TIPS
2. 5/10 R.O.G.-- merchandise purchased in Paris on January 15th, arrives on March 13, must be paid for by March 23rd to deduct discount.	Explain: the day the merchandise arrives is considered the date of the invoice--arrival date available from shipping records.
d. E.O.M. (end of the month).	Explain: enables retailers to pay all of their bills at one time.
1. 8/10 E.O.M.-- 8% discount if paid within 10 days after end of month.	An invoice dated August 15th with terms 8/10 E.O.M., is paid by September 10th to obtain discount.
e. Extradating.	
1. Allows extra time in which cash discount may be taken.	Explain: extra time is an advantage because the retailer has use of the money for an extended period of time.

VENDOR'S TERMS AND DISCOUNT POLICIES

CONTENT	TEACHING TIPS
2. 2/10, 60x allows 70 days for the retailer to deduct the 2% discount. f. Postdating. 1. Invoices may have postdating stated in the following manner--an invoice dated March 1 with terms 8/10 E.O.M. as of June 1, will allow 3 extra months before payment. (bill due on July 10) B. Quantify discount: 1. A discount keyed to the number of units ordered. Example:	

dozens ordered	price per dozen
1 - 10	$15.00

VENDOR'S TERMS AND DISCOUNT POLICIES

CONTENT	TEACHING TIPS
11 - 30 $14.50 31 & over $14.00	
C. Trade discounts:	
1. Manufacture's catalogue gives the "list" price.	Explain: "list" price is suggested retail price.
2. Amount of discount--varies with the classification of the buyer.	
3. Listed in a series: Example: a. Dealer: 20%, 10%, 5% b. Wholesaler: 20%, 10% c. Jobber: 10%, 5% d. Retailer, 5%	
4. Each percentage of discount is deducted from the amount remaining after the previous discount has been deducted.	Explain: Manufactures list price on a new motorcycle is $2384.00. The wholesale price is 20% off list: $2384 - 20% = $1907.20. The dealer's price is 20%, 10%: $2384 - 20% = $1907.20 - 10% = $1715.60.

VENDOR'S TERMS AND DISCOUNT POLICIES

WRITTEN DRILL

1. A buyer orders 10 dozen toasters with a total list price of $2,295 with a trade discount of 20%. How much should he remit for his order? ($1,800)
2. A buyer is given a trade discount of 10%, 5% on a purchase of $1,800. How much will he have to pay for his order? ($1,530)
3. A buyer orders a shipment of coats on May 9th. The merchandise is shipped a month later with an invoice dated June 6, with terms of 8/10 net 30. When must the bill be paid in order to deduct this discount? (June 16)
4. If an invoice is dated February 6, with terms of 3/10 net 30, when is the final day that the entire bill may be paid? (March 8)
5. A buyer receives a shipment of gloves with terms of 8/10 E.O.M. The invoice is dated October 15. When is latest that the cash discount may be deducted? (November 10)
6. Merchandise is received May 15, with an invoice dated May 20, and terms 3/10 R.O.G. What is the last day a cash discount may be taken? (May 25)
7. An invoice dated March 11, had terms of 3/10, 30x. What is the last day for a cash discount? (April 20)
8. An invoice dated June 10 had terms of 6/10 as of July 1. When must payment be made to receive a cash discount? (July 11)

PRICING

PRICING

OBJECTIVES

1. After classroom instruction, the student will be able to use pricing policies in a mock department according to set guidelines provided by the coordinator (15A).
2. Given 5 markup problems, the student will be able to solve 4 our of 5 (20A and 21A).
3. Given 5 retail price problems, the student will be able to solve 4 out of 5 (18A and 19A).

PRICING

CONTENT	TEACHING TIPS
I. Factors which affect pricing merchandise:	
A. Customer buying habits.	
B. Competition.	
C. Current price lines carried in the store.	Explain: price line is a specific price at which a stock assortment is carried.
D. Manufacturer's suggested retail price.	
E. Turnover.	Explain: turnover is a ratio that tells the number of times that stock has sold and been replaced. $\frac{\text{Average stock--}25{,}000}{\text{Net sales} \quad 100{,}000} = 4$
F. Leaders.	
G. Expense of handling item.	Explain: expense of carrying bulky items such as furniture costs in storage and handling.
H. Store image.	Have students interview a buyer to determine how they interpret and use pricing policies.

PRICING

CONTENT	TEACHING TIPS
II. Factors which determine retail price:	
A. Internal factors:	
1. Pricing objectives.	Explain: pricing objectives are determined by top management in order to maximize profits.
2. Cost of goods sold.	
3. Business expenses.	Explain: retail price must cover fixed and variable expenses and allow for a profit.
B. External factors:	
1. Consumer demand.	
2. Federal and state laws.	
	Have students write a paper explaining how they would determine the retail price of an item.

PRICING

CONTENT	TEACHING TIPS
	Students should read p. 221-222 in
I. Retail Formula:	Retail Buying.
A. $\frac{\text{Cost \$}}{\text{Cost \%}} = \text{retail price}$	Explain: retail always represents 100%.
1. Given: Cost - $325	
Markup % - 35%	retail % - markup % = cost %
Find: retail price	
100% - 35% = 65%	
$\frac{325.00}{.65} = \$500.00$	
2. Given: Cost - $300	
Retail - $500	
Find: markup %	
$M\% = \frac{\text{retail price - cost price}}{\text{retail price}}$	
$\frac{500-300}{500} = \frac{\$200}{500} = 40\%$	

PRICING

CONTENT	TEACHING TIPS
I. Markup Formula:	
A. Cost + markup = retail $4.00 + $1.00 = $5.00	Explain: markup is the difference between the cost and selling price of an item.
B. Retail - cost = markup $15.00 - $10.00 = $5.00	
C. Retail - markup = cost $12.00 - $4.00 = $8.00	
II. Markup %:	Explain: markup is usually expressed as a percent.
A. $\frac{\$ \text{ Markup}}{\$ \text{ Retail}}$ = markup % (based on retail)	Explain: markup is based on retail because operating expenses and profit and loss are determined as a percentage of net sales.

PRICING

WRITTEN DRILL

1. An article costing $134 to be marked up 40% will sell for ($223.33).
2. What is the retail price of a blouse that cost the buyer $8.00 and will be marked up 45%? ($14.55)
3. A table retails for $239.00 and cost the $150.00. What is the markup %? (37%)
4. A shirt selling for $25.00 which cost $9.00 has a markup % of (64%).
5. A buyer pays $39.95 for a radio and wants a 39% markup. What should the retail price be? ($65.49)
6. An article costing $45.00 was sold for $54.00. What was the markup percent? (16.67%)
7. Cost = $12.00, Markup = $4.00, What is the retail price? ($16.00)
8. Calculate the markup % for the figures in number 2. (25%)
9. A dress purchased for $37.50 and retailed for $75.00 has a markup % of (50%).
10. Retail price = $195.00, Cost = $89.50, What is the markup? ($105.50)

SIX MONTH MERCHANDISE PLAN

SIX MONTH MERCHANDISE PLAN

OBJECTIVES

1. Given a completed six month merchandising plan, the student will be able to orally explain the significance of the figures and their relationship to future buying decisions (29 A, B, C).
2. Given a six month merchandise plan, the student will be able to identify past sales figures and discuss their relationship to projected sales figures with 100% accuracy (32A and 32C).
3. Given past sales figures for a deparment, the student will be able to write a paragraph which explains the significance of past sales figures to the satisfaction of the instructor (32A).
4. Given 5 problems involving each formula used in completing a six month merchandising plan, the student will be able to solve 4 out of 5 with 100% accuracy.
5. After classroom instruction, the student will be able to orally identify the factors which influence and determine open-to-buy (4B).
6. Given 5 open-to-buy problems, the student will be able to solve 4 of the 5 correctly (4A, 17 A and B, 6A).
7. Given a completed six month merchandising plan, the student will be able to orally explain the significance of the figures and their relationship to future buying decisions (29 A, B, C).
8. Given a six month merchandise plan, the student will be able to identify past sales figures and discuss their relationship to projected sales figures with 100% accuracy (32 A and C).
9. Given past sales figures for a department, the student will be able to write a paragraph which explains the significance of past sales figures to the satisfaction of the instructor (32A).

OBJECTIVES (Con't)

10. After classroom instruction, the student will be able to orally identify the factors which influence and determine open-to-buy (4B).
11. Given 5 open-to-buy problems, the student will be able to solve 4 of the 5 correctly (4A, 17 A and B, 6A).
12. Given 5 problems involving each formula used in completing a six month merchandising plan, the student will be able to solve 4 out of 5 with 100% accuracy.

SIX MONTH MERCHANDISE PLAN

CONTENT	TEACHING TIPS
I. Three step method for planning purchases:	
A. Six month merchandise plan:	Explain: The six month merchandise plan represents a combined effort of the buyer and the merchandise manager. It represents the retail dollar value of merchandise.
B. Model stock plan:	Explain: The model stock plan is the buyer's transformation of the retail dollar value into units of merchandise. The model stock plan involves the total amount of merchandise including merchandise on hand and planned purchases.
C. Buying plan:	Explain: The buying plan differs from the model stock plan in that it is only concerned with planned purchases needed to duplicate the model stock plan.

SIX MONTH MERCHANDISE PLAN

CONTENT	TEACHING TIPS
II. Six month merchandise plan: A. Definition: a plan that forecasts specific merchandising activities for a department or store for a specified period of time. B. Figures included: 1. Planned sales. 2. Planned stocks (B.O.M. and E.O.M.). 3. Planned reductions. 4. Planned expenses. 5. Planned purchases.	Explain: The budget provides a plan of action for the buyer and enables management to evaluate current activities. The merchandise plan should be simple, flexible, and a judgment of both buyers and management.

SIX MONTH MERCHANDISE PLAN

CONTENT	TEACHING TIPS
III. Planned sales:	Use example of six month merchandising plan in Merchandise Buying Principles by Maryanne Bohlinger.
A. Inside factors to consider: 1. Change of fashion image. 2. Opening or closing of units. 3. New merchandising philosophy.	Explain: Sales are the key element in planning as other figures can be adjusted to sales potentials.
B. Outside factors to consider: 1. Economic trends. 2. Rate of employment and unemployment. 3. Competition.	The most important consideration in planning sales is past sales performance. Planned sales increases will vary according to individual departments.
IV. Planned stock:	
A. Factors to consider: 1. Basic stock method-the difference between average stock and average amount sold monthly. 2. Stock turn-the rate at which stock is sold and replaced.	Explain: Bom Equation Bom = planned sales for the month + (average stock at retail - average monthly sales). This plan increases or decreases stock at the beginning of each month in accordance with sales increases or decreases. Stock turn equation: $\frac{\text{net sales}}{\text{average stock at retail}}$

SIX MONTH MERCHANDISE PLAN

CONTENT	TEACHING TIPS
a. Inventory must be turned back into money to make a profit. b. Reducing inventory and increasing stock turn can increase profit.	
V. Planned reduction:	Explain: Amount of reductions is determined by combining total employee discounts, total merchandise shortages, and total markdowns.
A. Definition - the difference between the original retail value of merchandise and the actual final sales value of the merchandise.	
B. Types of reductions:	
1. Employee discounts.	Explain: An employee discount is a price reduction granted to store employees.
2. Merchandise shortages.	Merchandise shortage equation: book inventory - physical inventory
3. Markdowns.	Explain: A markdown is a reduction in price from the original retail price.

SIX MONTH MERCHANDISE PLAN

CONTENT	TEACHING TIPS
	Markdown equation: original retail price $8.00 - markdown price 6.00 dollar markdown $2.00
VI. Planned expenses:	The major objective of expense planning is forecasting the costs involved in merchandising and thus safeguarding the store's profit objective. By forecasting costs, management is assured that the target markup percentage is adequate to produce the desired profit.
A. Steps in expense planning: 1. Plan the store's overall expense. 2. Plan expenses for individual branches. 3. Plan expenses for each department.	
B. Department expenses: 1. Payroll. 2. Promotional costs. 3. Record keeping. 4. Buyer's personal expenses. 5. Supplies.	Explain: Direct expenses-for the benefit of the department indirect expenses-these expenses serve the store as a whole (examples-rent, taxes, and lights).

SIX MONTH MERCHANDISE PLAN

CONTENT	TEACHING TIPS
VII. Planned purchases: Planned purchases are determined by the total amount of merchandise needed for a given period- the merchandise on hand.	Explain: O.T.B. equation planned sales + planned reductions + planned E.O.M. stock = total merchandise needed - B.O.M. stock = planned purchases - committments = O.T.B.
VIII. Factors that determine open-to-buy: A. Sales volume of department. B. Economic conditions. C. Projected sales.	
XI. Open-to-buy formula: A. E.O.M. inventory + planned sales + markdowns = total merchandise needed. B. B.O.M. inventory + committments = total merchandise on hand. C. Total merchandise needed - merchandise on hand = O.T.B.	

SIX MONTH MERCHANDISE PLAN

WRITTEN DRILL

1. Find the B.O.M. stock: planned sales = 37,500
   average monthly sales = 33,000
   average stock at retail = 76,300 ($80,800)

2. Find stock turn: net sales = $600,000
   average inventory = $60,000 (10)

3. Determine the O.T.B. from the following figures:
   planned sales - $17,500
   planned E.O.M. stock - $30,000
   B.O.M. inventory - $25,000
   committments - $12,000
   markdowns - $ 2,000 ($12,500)

4. The average retail stock for a children's wear department was $25,320 and the net sales were $68,411. Find the stock turn. (2.70)

5. If the planned sales in the junior sportswear department are $83,450, average stock at retail is $103,570 and average monthly sales are $79,300, what is the B.O.M. projection figure? ($107,720)

6. Determine O.T.B.: planned sales - $14,600
   E.O.M. inventory - $61,460
   opening inventory - $67,300
   goods ordered - $ 8,760
   markdowns - $ 2,000 ($7,840)

SIX MONTH MERCHANDISE PLAN

WRITTEN DRILL

7. Determine the average stock at retail (average stock at retail used in determining stock turn):

stock on hand at retail:	Jan.	1	$21,000	
	Feb.	1	$23,000	
	Mar.	1	$26,000	
	Apr.	1	$27,000	
	May	1	$25,000	
	June	1	$20,500	
	July	1	$18,000	
	Aug.	1	$21,000	
	Sept.	1	$25,000	
	Oct.	1	$26,000	
	Nov.	1	$28,500	
	Dec.	1	$25,500	
	Dec.	31	$19,000	($23,500)

MODEL STOCK PLAN

MODEL STOCK PLAN

OBJECTIVES

1. After classroom instruction, the student will be able to explain the importance of a model stock plan in relation to purchasing merchandise according to standards set by the instructor (3C).
2. After classroom instruction, the student will be able to write five economic condition indicators with 100% accuracy (31A).
3. Following classroom instruction, the student will be able to orally discuss the importance of economic conditions when making buying projections according to guidelines established by the instructor (31C and 31B).
4. After classroom instruction, the student will be able to write five examples of staple and five examples of fashion merchandise with 100% accuracy (33A).
5. Given a list of ten items, the student will be able to classify them as staple or fashion items with 100% accuracy (33B).
6. Following classroom instruction, the student will be able to write a paper discussing the factors involved in forecasting fashions and their importance in making buying decisions according to guidelines established by the instructor (30 A, B, and C).
7. Given a mock department, the student will be able to set up classifications of merchandise for the department according to guidelines set by the instructor (34 A and B).
8. After classroom discussion, the student will be able to write a paper explaining the importance of classifying merchandise for the purpose of planning a model stock to the satisfaction of the instructor (34C).

OBJECTIVES (Con't)

9. Given a department of merchandise, the student will be able to formulate a model stock plan according to standards set by the coordinator (3A).
10. Given past sales figures, planned purchases figures, and a completed model stock plan, the student will be able to orally explain the relationship of the figures according to guidelines established by the instructor (3B).

MODEL STOCK PLAN

CONTENT	TEACHING TIPS
I. Model stock plan: Definition - an inventory containing a proper assortment of the time the consumer is ready to purchase.	Explain: A well balanced assortment will contain merchandise of the right type, right price, right quality and right quantity. A well planned assortment should lead to increased sales and profit.
II. Factors to consider on planning a model stock:	
A. Store image.	Explain: Store image will greatly determine the type of merchandise carried in price ranges, quality, and variety. A merchandise assortment should represent the buyer's interpretation of the store's image. Have the students write a description of the type of store that they might like to open and tell what type of merchandise would interpret this image to the customer.
B. Past sales records.	Past sales records such as unit control records must contain detailed information as to sizes, colors and styles sold.

MODEL STOCK PLAN

CONTENT	TEACHING TIPS
	Obtain computer print out sheets from a store. Discuss what information is recorded and how this information would relate to future purchasing decisions.
C. Consumer wants.	Explain: Consumer wants can be determined through analyzing past sales, offering new items, and a want slip system.
D. External considerations.	External considerations are competition and the general economics condition. Economic indicators: rate of employment, rate of unemployment, GNP, national income, and disposable income. Have students write a paper discussing what economic factors a buyer must consider and how they relate to buying decisions.
III. Types of merchandise included in every assortment:	
A. Fashion-new merchandise with a short life cycle.	Discuss specific items of merchandise that would fit into each catagory.
B. Staple-merchandise that is	

MODEL STOCK PLAN

CONTENT	TEACHING TIPS
always kept in stock.	
C. Seasonal-merchandise that is in demand only at certain times of the year.	
IV. Fashion forecasting sources:	
A. Resident buying office.	Show and discuss a fashion forecast from a resident buying office.
B. Trade publications.	Bring copies of trade publications such as Women's Wear Daily and Retail News Bureau to class. Discuss information that they contain that might aid the buyer in fashion forecasting.
C. Past sales.	
D. Study of fashion trends.	Explain: Fashion is a continuous process. The designer, manufacturer, retailer and consumer all react and affect the actions of the others in the creation of fashions.
V. Steps in planning a model stock:	
A. Determine O.T.B.	Explain: Open-to-buy figure is determined from six month merchandise plan.
B. Determine classifications.	

MODEL STOCK PLAN

CONTENT	TEACHING TIPS
C. Breakdown classification according to: 1. Style. 2. Price. 3. Size. 4. Color. 5. Material.	Classification refers to a particular kind of goods carried in a department. Refer to Retail Buying by Diamond and Pintel (pp. 144-148) for model stock plan charts.
D. Set a percentage of O.T.B. for each classification.	Note: The buying plan is formulated after the model stock plan is completed. This adjusts purchases according to merchandise on hand and committements.

STOCKKEEPING AND INVENTORY CONTROL

STOCKKEEPING AND INVENTORY CONTROL

OBJECTIVES

1. After classroom instruction, the student will be able to explain orally the importance of stock control in order to maximize profits according to guidelines set by the instructor (1C).
2. Following classroom instruction, the student will be able to orally explain the importance of accuracy in maintaining inventory records in relation to profit according to guidelines set by the instructor (5C; 9 A, B, and C; 10 B and C; 11 A, B, and C).
3. After classroom instruction, the student will be able to explain orally the importance of accuracy in stock counts in relation to profit (8C).
4. Given classroom instruction, the student will be able to orally explain the need and proper timing of stock counts (8A).
5. Through the use of simulations and role playing, the student will be able to demonstrate the ability to communicate orally with others to the satisfaction of the instructor (8B).
6. Given invoices and inventory control forms, the student will be able to orally explain the relationship of the figures to maintaining proper inventory levels according to guidelines established by the instructor (7 A and B).
7. After classroom instruction, the student will be able to write a description of dollar control and unit control systems according to guidelines established by the instructor (16A).
8. After classroom instruction, the student will be able to orally explain stock control methods and their importance to making buying decisions and re-order decisions to the satisfaction of the instructor (16B).

OBJECTIVES (Con't)

9. Given 5 problems to compute average stock, the student will be able to solve 4 out of 5 with 100% accuracy (24A).
10. Given 5 stock to sales ratio problems, the student will be able to compute 4 out of 5 with 100% accuracy (22 A and B, 23A).
11. Given 5 problems to compute turnover, the student will be able to complete 4 out of 5 with 100% accuracy (25A and 26A).
12. Given 5 retail method of inventory problems, the student will solve four out of five accurately (1A).
13. Given a completed retail method of inventory problem, the student will be able to explain orally the significance of the figures in the problem to the satisfaction of the instructor (1B).
14. Given a sample stock control book page and stock count figures, the student will be able to make corrections with 100% accuracy (10A.)
15. Given 10 figures, the student will be able to record them with 100% accuracy (12C and 13 A, B, and C).
16. Given a periodic inventory report, the student will be able to orally explain the information in the report according to guidelines set by the instructor (14 A and B).
17. Given a periodic inventory report, the student will be able to determine original markup, maintained markup, derived sales and net sales with 100% accuracy (14C).
18. Given figures and an inventory record form, the student will be able to complete the form with 100% accuracy (5A).
19. Given inventory level figures for re-ordering staple merchandise, the student will be able to complete a re-order form with 100% accuracy (5 B and D).

OBJECTIVE (Con't)

20. Given 5 markup problems, the student will be able to accurately solve 4 out of 5 (12A).

21. Given 5 prices, the student will be able to write the prices with 100% accuracy (12B).

STOCKKEEPING AND INVENTORY CONTROL

CONTENT	TEACHING TIPS
I. Merchandise control:	
Maintence of a stock adjusted to consumer needs	
II. Purposes of a control system:	Explain: An effective control system will indicate fast moving and slow selling items helping to create a well balanced stock.
A. Aids in planning purchases.	
B. Insures prompt re-ordering of merchandise.	
C. Prevents purchasing of unacceptable merchandise.	A good control system will aid management in measuring performance.
III. Types of control systems:	
A. Dollar control-the amount of dollars at retail invested in inventory.	Answers the question: How much?
B. Unit control-an established method of re-ordering individual units of merchandise.	Answers the question: What? Unit control is the dollars at retail invested in inventory interpreted in individual inventory units. It is a supplement to dollar control.
IV. Types of inventory systems:	
A. Perpetual inventory system.	Figures reported at regular intervals such as daily or weekly. This system

CONTENT	TEACHING TIPS
B. Periodic inventory system.	is suitable for merchandise with a short selling season. This system is managed best through the use of data processing equipment. Figures reported periodically such as monthly. This system is commonly used for staple merchandise. Have students complete inventory sheet from figures supplied by instructor (p. 239 Merchandise Buying). Example instructions-p. 244 Merchandise Buying.
V. Related math procedures to stock-keeping and inventory control:	
A. *Average inventory:	Example: Inventory at Retail
1. The average inventory on hand for a given period of time.	October 31 $35,000 November 30 $32,500 December 31 $23,700 $91,200
2. Formula: $\frac{\text{total inventory}}{\text{number of inventories}}$	$91,200 ÷ 3 = $30,400
B. Stock to sales ratio:	
Formula: $\frac{\text{beginning stock}}{\text{sales}}$	Example: B.O.M. stock - $60,000 month's sales - $15,000 $60,000 ÷ $15,000 = 4

CONTENT	TEACHING TIPS
	Explain: This can be used as a method to plan stock. Planned sales can be multiplied times planned stock - sales ratio to determine the B.O.M. stock figure.
C. *Stock turn:	
1. The number of times during a given period that the average inventory on hand has been sold and replaced.	As stock to sales ratio decreases, stock turn increases.
2. Formula: $\frac{\text{net sales}}{\text{average inventory at retail}}$	Example: $\frac{\text{net sales } \$45{,}000}{\text{average inventory } 11{,}250} = 4$ stock-turnes
	*Problems on average inventory and stock turn can be found in the written drill for the six month merchandise plan.
D. Retail method of inventory- a method of determining the value of the inventory on hand or E.O.M. inventory.	Example: B.O.M. inventory $100,000 purchases 195,000 total mdse. handled $295,000

CONTENT	TEACHING TIPS

Deduct

sales	$180,000	
*total reductions	2,700	
		$182,700
E.O.M. inventory		$112,300

*Total reductions include:

1. markdowns.
2. employee discounts.
3. merchandise shortage.

STOCKKEEPING AND INVENTORY CONTROL

WRITTEN DRILL

1. The inventory at retail on August 1 was $50,000; net sales for the month were $40,000; purchases at retail were $30,000; markdowns were $1,500; discounts to employees were $350. What was the closing book inventory at retail for the month? ($38,150)
2. The inventory at the beginning of the period was $75,000 at retail; net purchases were $54,400; net sales were $65,000; markdowns were $800; shortages were $200. What was the E.O.M. inventory at retail? ($63,400)
3. Find the stock to sales ratio: B.O.M. stock - $48,000
   month's sales - $12,000 (4)
4. Find the stock to sales ratio: B.O.M. stock - $120,000
   month's stock - $ 20,000 (6)