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*Journal of the Academy of Marketing Science* 1991; 19; 141

DOI: 10.1177/009207039101900208

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# Mnemonics in Marketing: a Pedagogical Tool

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*The popular mnemonic techniques are defined, classified, and described. Empirical evidence is cited supporting the effectiveness of mnemonic techniques in a variety of learning contexts. It is explained why mnemonics are effective. Then, a particular mnemonic technique, the first letter mnemonic, is selected to illustrate how the topic of questionnaire design can be taught using mnemonics. The use of mnemonics in classroom teaching is discussed with specific reference to teaching marketing research and other marketing courses.*

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ety of contexts. A theoretical explanation of why mnemonics are effective is provided. Then, a particular mnemonic technique, the first letter mnemonic, is selected to illustrate how the topic of questionnaire design can be taught using mnemonics. The use of mnemonics in classroom learning is discussed with specific reference to teaching marketing research and other marketing courses (Malhotra 1988; Malhotra, Taschian, and Jain 1989).

## DEFINITION AND CLASSIFICATION

## INTRODUCTION

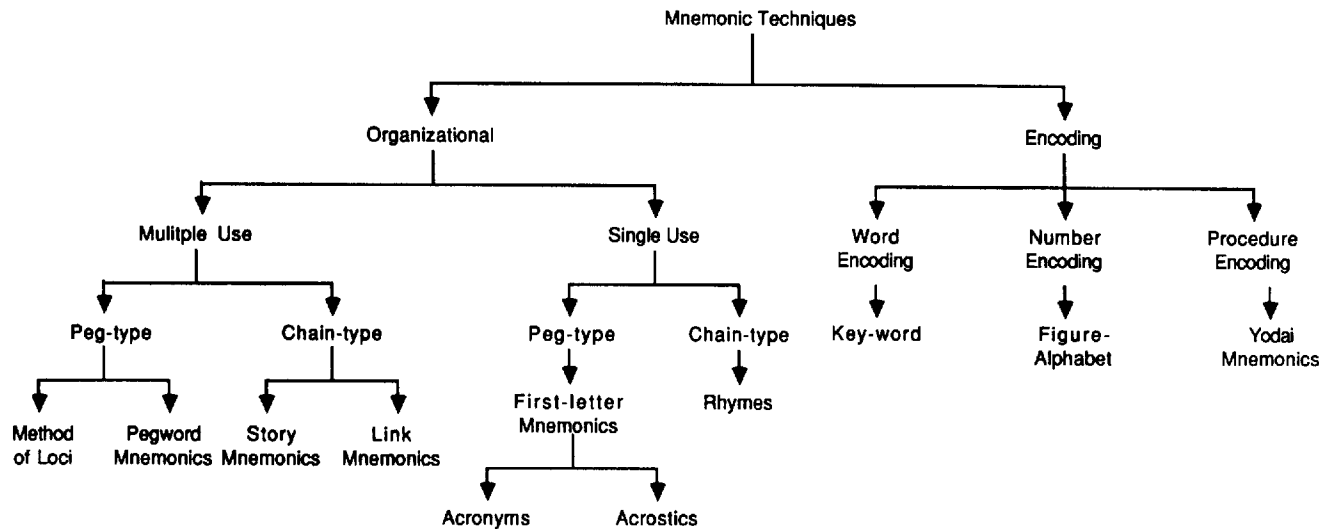
The use of mnemonic techniques dates back more than 2000 years (Higbee 1979). Yates (1966) describes the history of mnemonics from about 500 B.C. through the 17th century. Later studies offered other historical perspectives on mnemonics (e.g., Hoffman and Senter 1978; Marshall and Fryer 1978). However, it is only recently that attention has been devoted to experimental research on mnemonics. Only in the mid-sixties was it realized that mnemonic techniques made an important contribution to learning. Since then, mnemonic processes such as rehearsal, the recoding of stimuli, subjective organization, natural language mediation, and visual imagery mediation have been researched in a programmatic way (Bellezza 1981).

The purpose of this paper is to describe popular mnemonic techniques and illustrate their use in teaching marketing research and other marketing topics. Toward this goal, we present a definition, classification and description of the more popular mnemonic techniques. Evidence is cited supporting the effectiveness of mnemonic techniques in a vari-

Mnemonic techniques may be defined as learning strategies which can enhance the learning and improve later recall of information (Bellezza 1981). The mnemonic techniques that will be described in this paper are those that use cognitive cuing structures during both learning and recall. A framework for classifying mnemonic techniques is presented in Figure 1. This framework builds upon and represents a modification of the one proposed by Bellezza (1981). Following Bellezza (1981), mnemonic techniques may be broadly classified as those that primarily involve organizing operations and those that primarily involve encoding operations. An organizing operation associates or relates in memory seemingly unrelated units of information. An encoding operation involves a transformation of a unit of information so that it can then be more easily organized into some kind of a structure.

As shown in Figure 1, organizational mnemonics can be either multiple use or single use. Multiple use techniques make use of the same cuing structure to remember several different sets of information. In contrast, single use techniques employ a separate or distinct organizational mnemonic for each set of information that must be learned. Both multiple and single use techniques can be further classified as peg type or chain type. The peg type mnemonics use extrinsic cuing, such as a series of loci or a series of peg words. These extrinsic cues are not part of the information to be remembered. Before the mnemonic system can function, it is usually necessary to first memorize

**FIGURE 1**  
**A Classification of Mnemonic Techniques**



this cuing structure. The popular multiple use, peg type techniques include the method of loci and the peg word mnemonic. The single use peg type techniques consist of first letter mnemonics comprising acronyms and acrostics. On the other hand, intrinsic cuing is used in chain type mnemonics. The cues which facilitate recall are part of the information items to be remembered. The intrinsic cuing structure, which may be visual or verbal, is associated with a sequence of items and acts like the interlocking links in a chain. The multiple use chain type mnemonics consist of story and link mnemonics. The single use chain type mnemonics are best described by rhymes.

Encoding mnemonic techniques involve the transformation of the information to be learned so that the information can be more easily remembered. Techniques have been developed for encoding words, numbers, and procedures. These techniques are, respectively, the key word, figure alphabet, and Yodai mnemonics. A brief description of each of these techniques follows.

**MNEMONIC TECHNIQUES**

**Method of Loci**

The first step in the method of loci is to memorize a familiar series of locations that follow a regular order. For example, one might imagine the distinct locations seen when entering the house after grocery shopping—the hallway, den, dining room, kitchen, the pantry, etc. These locations serve the purpose of pigeon holes for the items to be learned. Suppose a shopping list of bread, jam, cereal, butter, and milk is to be remembered. First, each item is converted into a visual image. Then the image of each item is placed in a specific location that has been visualized. Thus one might imagine: (1) a loaf of bread dropped in the hallway while carrying the groceries, (2) some jam on a shelf in

the den, (3) a cereal box on the table in the dining room, (4) the butter kept in the refrigerator in the kitchen, and finally (5) a gallon of milk in the pantry. Each item in each location is visualized for about five or ten seconds. In order to recall the list, one simply takes a mental walk through the various locations to determine what has been placed in each one. Recent empirical studies pointing to the effectiveness of the method of loci include Anschutz et al. (1985), De Beni and Cornoldi (1985), and Kemp and van der Krogt (1985).

**Peg Word Method**

As indicated by its name, the peg word method involves the learning of a list of peg words that correspond to specific numbers. A list that has been commonly used for the first ten numbers is:

- |                 |                 |
|-----------------|-----------------|
| One is a bun    | Six are sticks  |
| Two is a shoe   | Seven is heaven |
| Three is a tree | Eight is a gate |
| Four is a door  | Nine is a line  |
| Five is a hive  | Ten is a hen    |

The learner is required to “hang” the items to be remembered on the pegs, with each item on one unique peg. The peg and the item are then visualized interacting with each other. Suppose the shopping list given earlier—bread, jam, cereal, butter, and milk—was to be remembered. The learner might create an image of a boy wanting to eat bread rather than a bun, a jam bottle breaking and spilling jam over a shoe, cereal being used as fertilizer for a tree, butter being used to grease the hinges of a door, and finally milk sweetened with honey from a hive. As a result of this visual interaction, the pairs become associated in the mind. When the list is to be recalled, the learner traces the peg words to determine what object had been visually hung on each peg. As in the case of locations in the method of loci, the pegs

give the cues necessary to recover the list. Research on the peg word method has been reviewed and evidence on the effectiveness of this method is provided by Elliott and Gentile (1986), Pressley and Ahmad (1986), Tolfa Veit, Scruggs and Mastropieri (1986).

### Story Mnemonic

Constructing a story is another technique for remembering a list. The items to be remembered are chained together by weaving them into a story. The list previously considered can be remembered by creating a story centered around an argument between a husband and wife at the breakfast table. The husband wants some bread, jam, and butter for breakfast. His wife says that since he has an upset stomach, he should have cereal and milk instead. They get into a heated argument and the husband gets up and walks out of the kitchen without eating anything. The wife starts crying. This technique is also called the narrative chaining method. It is not only effective for learning a single list, but it is also powerful for learning several lists. In one empirical study, people who used this method remembered over six times as much information as people who learned by ordinary rote memorization (Loftus 1980). More recent studies reporting the effectiveness of story mnemonics include Bellezza (1986) and Glidden et al. (1983).

### Link Mnemonic

In the link mnemonic technique, the first and second items of the list are associated by a visual image. The second and the third items are then connected by a completely different image. Then the third and fourth items are linked, and so on. These overlapping series of images, associating the sequence of pairs of items in the list, serve the purpose of interlocking links in a chain. Thus they provide the cognitive cuing structure. For example, one might form images of eating bread and jam for breakfast, cashing coupons for jam and cereal, cooking hot cereal with butter, and butter and milk being delivered by the local dairy. Use of the link mnemonic technique has been empirically shown to improve recall performance in serial learning tasks (e.g., Bellezza 1981).

### First Letter Mnemonics

First letter mnemonics are perhaps the most popular form of mnemonics (Gruneberg and Morris 1979, p. 47). As can be seen from Figure 1, there are two types of first letter mnemonics: the acronym and the acrostic. In the acronym, the first letters of the words to be remembered spell out a meaningful word. For example, HOMES is a popular acronym for recalling the names of the Great Lakes (Huron, Ontario, Michigan, Erie, and Superior). The names of the Great Lakes can be quickly recalled by remembering the chunk HOMES. Likewise, a list of 11 items to be purchased in the supermarket could be rearranged to spell the word SUPERMARKET (Sugar, Utensils, Pepper, Eggs, Raisins, Mustard, Apples, Rice, Ketchup, English Muffins, and Tea).

In the acrostic method, the learner takes the first letters of the words to be remembered and uses them as the first

letters of other words which form a meaningful sentence. For example, one could use the first letters of the first four hydrocarbons (methane, ethane, propane, and butane) to form an easy to remember sentence "Mary eats peanut butter." The letter that starts the appropriate chemical compound matches the first letter of each word in the sentence. The peanut butter sentence links the limited knowledge of carbon rings to the better knowledge of English grammar and spelling. From this cuing structure, associations can be made listing the hydrocarbons in proper order (Bolles 1988). By remembering the sentence, the list can be easily reconstructed.

First letter cuing can be used as a combined encoding and retrieval system that may be superior to either encoding or retrieval alone (Jaffe and Katz 1975; Wilson and Moffat 1984). Empirical studies demonstrating the effectiveness of first letter mnemonics include McKenzie and Sawyer (1986), Nelson and Archer (1972), and Perewiznyk and Blick (1978). Additional evidence attesting to the utility of first letters as retrieval cues can be derived from (1) studies showing that first letters represent reliable cues for regenerating list words, (2) studies indicating that relative to other letters, first letters play a differentially significant role in word processing, and, (3) studies which show that effective attempts at abbreviation incorporate first letters.

### Rhymes

Rhyme composition is probably not a commonly used mnemonic technique (Gruneberg and Morris 1979). However, rhymes are employed when they are available to the learner. An example is the rhyme for remembering the number of days in each month. "Thirty days hath September, April, June, and November ..." Poetry is generally easier to learn than prose because forcing the information into meter and rhyme makes it easier to remember. However, the alternatives that will fit poetry when the material is reconstructed at the time of recall are limited in number. McFarland, Warren, and Crockard (1985) provide empirical evidence supporting the effectiveness of rhymes.

### Key Word Method

This mnemonic technique is a two-stage process that has been popularly used for encoding words. In the first stage, the unfamiliar word or item of information is transformed into a familiar and imageable item. In the second stage, the transformed item and the information associated with the original item are associated via an image which shows the two items interacting with each other. The key word method was originally proposed by Atkinson in the context of helping college students learn foreign vocabulary (Atkinson 1975; Atkinson and Raugh 1975). In this context, the first stage is to find a key word. The key word is an English word which is similar in some way to the foreign word to be learned. The second stage consists of forming an image connecting the key word and the English translation. Thus the foreign word is linked to the English word via the key word in a two-stage process. For example, the Spanish word *pato*, which means duck, is pronounced "pot-oh." Given the similarity in pronunciation, pot can be used as the key

word (Atkinson 1975). In the second stage, the key word "pot" may be connected to the English meaning duck by an image such as a duck eating out of the pot. The meaning of *pato*, i.e., duck, would be retrieved by first retrieving the key word "pot." Then using the stored image, the pot would be linked to the duck. Students learning via the key word method have shown substantial memory improvements (Condus, Marshall and Miller 1986; Laufenberg and Scruggs 1986; Scruggs et al. 1987; Tolfa Veit, Scruggs, and Mastropieri 1986).

**Figure Alphabet**

As shown in Figure 1, Figure Alphabet involves the encoding of numbers. The reason for encoding numbers is that while they may be imageable, they have little "meaning." Also, it is difficult to associate numbers with one another or with the cuing components of an organizational mnemonic. Numbers are encoded into words commonly by translating each digit into a predetermined consonant sound. The conversion of the words back into digits is accomplished by again using the coding scheme. A popular coding scheme employed in figure alphabet is as follows (Gordon, Valentine and Wilding 1984).

1	2	3	4	5	6	7	8	9	0
T	N	M	R	L	J	K	F	P	Z
D	Ng			G-soft	G-hard	V	B	S	
Th				Ch	Q			C-soft	
				Sh	C-hard				

This is a phonetic scheme in which each digit is represented by a consonant sound or sounds. Some letters, A E I O U and W H Y, have no numerical value. However, they are used to build up words. For example, 21 can be coded as NuT, NoT, aNT, etc. As the digits are represented by sounds, rather than by the letters themselves, silent letters do no count (e.g., lamb = 53, not 539). Another feature is that double letters usually count as single letters (e.g., mill = 35, not 355).

It should be noted that the scheme considered here is an arbitrary one that has evolved historically. As compared to other mnemonic techniques, the Figure Alphabet is difficult to understand and implement. Yet, empirical evidence supporting its effectiveness is provided by Gordon, Valentine and Wilding (1984) and Morris and Greer (1984).

**Yodai Mnemonics**

Yodai (meaning the essence of structure) mnemonics were created in Japan by Nakane. The purpose of Yodai mnemonics is to help in remembering principles, procedures, and rules, rather than specific facts. The underlying premise is that all subject matter is governed by rules and procedures. Thus any subject can be learned effectively by learning the applicable rules and procedures. For example, in learning the correct spelling of English words, the learner can achieve much more by studying spelling rules than by simply memorizing the spelling of each word. The same is true for learning formulas in chemistry, mathemat-

ics, language, and a variety of other subjects (Nakane 1968).

Yodai mnemonics are particularly suited for problem solving. The symbols and words associated with the problem are used as cues for solving it, thus helping in recognition of the solution process. For example, multiplying binomials of the form  $(a + b)(c + d)$  can be conceptualized in terms of wrestling. Each term in parentheses represents a wrestler of either the east team or the west team. Each wrestler on the west team wrestles each wrestler on the east team, so that  $(a + b)(c + d) = ac + ad + bc + bd$  (Higbee and Kunihira 1985).

Empirical evidence regarding the value of Yodai mnemonics using Japanese subjects is provided by Kunihira and Machida (1981), and Takizawa et al. (1980). Effective applications of this technique in the U.S. have also been reported (Higbee and Kunihira 1985; Kunihira et al. 1981).

**ADDITIONAL EMPIRICAL EVIDENCE SUPPORTING MNEMONICS**

The effectiveness of mnemonic techniques has been demonstrated with different kinds of subjects, in a variety of learning situations, using immediate as well as delayed tests. Recent studies showing the effectiveness of mnemonic techniques using children as subjects include Best and Ornstein (1986), Condus, Marshall and Miller (1986), and McKenzie and Sawyer (1986). Eighth graders, junior and high school students have been employed by Elliott and Gentile (1986) and others. A vast number of studies have shown the effectiveness of these techniques in inducing learning and recall using *college/university students* (e.g., Atkinson and Raugh 1975; Bellezza 1986; De Beni and Cornoldi 1985; Hall and Fuson 1986; Kemp and van der Krogt 1985; McFarland, Warren and Crockard 1985; and Pressley and Ahmad 1986). A few studies have employed the elderly as subjects (e.g., Anschutz et al. 1985).

It is encouraging to note that many studies have documented the effectiveness of mnemonic techniques in improving the learning of the learning disabled, mentally retarded, and handicapped learners (e.g., Laufenberg and Scruggs 1986; Scruggs et al. 1987; Tolfa Veit, Scruggs and Mastropieri 1986) as well as gifted learners possessing special abilities (e.g., Carrier et al. 1983; Scruggs et al. 1985). The findings with respect to gifted students are particularly important. Gifted students inherently use more learning strategies as compared to their counterparts. Also, their learning strategies tend to be more effective. These factors help us to explain to a large extent the superior performance of gifted students. Yet, the performance of gifted students can be enhanced by providing them with learning strategies such as mnemonic techniques which are externally generated (Scruggs et al. 1985).

In addition to the learning of verbal items, number matrices, and digit span (e.g., Bellezza 1986; Gordon, Valentine and Wilding 1984; Laufenberg and Scruggs 1986), mnemonic devices have been used in a variety of other situations. These include vocabulary development (e.g., Atkinson 1975; Condus, Marshall, and Miller 1986) and the



study of geography, history and other related areas (e.g., Bellezza 1983; McKenzie and Sawyer 1986; Tolfa Veit, Scruggs and Mastropieri 1986). These techniques have been employed also in the learning of scientific and technical facts. Mathematical computations including monomials, polynomials, equations, inequalities and problem solving have been learned using these techniques. The most frequently employed dependent variable has been the immediate and delayed recall of the material to be learned. Delayed recall has been measured after one week (e.g., Bellezza 1986; Scruggs et al. 1987), four weeks (e.g., Anschutz et al. 1985), two months (e.g., Glidden et al. 1983), ten weeks (e.g., Conduis, Marshall and Miller 1986), and five months (Elliott and Gentile 1986).

Furthermore, transfer situations have been examined where the subjects applied the mnemonic strategy in a task situation that was different from the original task in which the technique was learned (e.g., Pressley and Ahmad 1986). Transfer between techniques has also been demonstrated. In one study, *college students* who had learned the peg word mnemonic used the key word technique in a vocabulary learning task. A related finding is that mnemonic strategies can be employed in combination (Tolfa Veit, Scruggs and Mastropieri 1986). For example, a combination of key word, peg word, and loci methods has been effectively employed in learning the chronological order of U.S. presidents (e.g., Levin et al. 1983). These results suggest that mnemonic skills are not limited to specific tasks or techniques but tend to be generalizable.

**THEORETICAL EXPLANATION**

As indicated by Figure 1, mnemonic techniques are strategies for organizing and/or encoding information. These strategies work by generating and using cognitive cuing structures. As the functions of organizational and encoding mnemonics are somewhat different, each may generate cuing structures that are somewhat distinct. An organizational mnemonic associates or relates in memory information that appears to be lacking an inherent structure. Thus a collection of separate items is stored in memory as an integrated whole (Bellezza 1981). While similar to chunking, this process is different in one major aspect. In chunking, the chunk is stored in short-term memory (STM) while the specific items activate their representation in long-term memory (LTM). On the other hand, a mnemonic and the items associated with it are all stored in LTM. The mnemonic is already stored in LTM and imposes a schema by which the specific items are also stored there. The important point is that all storage takes place in LTM. Therefore, mnemonics result in a more enduring recall as compared to chunking (Cermak 1972).

In organizational mnemonics a system of self-cuing is used to facilitate recall. Often these cues may be extrinsic or external to the material to be learned, as in the peg-type mnemonics. Alternatively, the self-cuing may utilize cues intrinsic or inherent in the material itself. The latter case is observed in the chain-type mnemonics where each item serves as a cue to the next. In either case, the fundamental process in recalling information is self-cuing (Bellezza

1981). To illustrate, acronyms aid recall by using the first letters of the words to be memorized as cues in retrieving information. They unitize or integrate the information so that the cue to the item is contained in the mnemonic.

In encoding mnemonics, the learner recodes new information so that it becomes more associable. After encoding takes place, the encoded items can be associated with one another or become part of a more extensive cuing structure. The code created for an item serves an effective cue for that item. It enables the later recall of the original item. Recall is facilitated by retrieving the cognitive cue first. This cue in turn retrieves the original item. In the key word method illustration given earlier, an unfamiliar Spanish word (*pato*) is recoded into a phonetically similar and familiar key word (*pot*). The key word (*pot*) is then associated by an interactive image with the English meaning (*duck*). This provides a systematic means of retrieving the meaning of the foreign vocabulary word: *pato* to *pot* to *duck* (Mastropieri, Scruggs, and Levine 1985).

In the following sections we illustrate how first letter mnemonics in the form of acronyms can be used in teaching questionnaire design, a popular topic in marketing research. The first letter technique was selected as it is the most popular mnemonic procedure employed by college students (Blick, Buonassissi, and Boltwood 1972; Gruneberg and Morris 1979). These earlier studies were supported by Bellezza (1982, p. 79) who states: "Researchers have found that the first letter mnemonic is the most popular mnemonic used spontaneously by college students."

**QUESTIONNAIRE DESIGN USING ACRONYMS**

The questionnaire design process, encompassing the objectives and steps involved in developing a questionnaire, will be presented as a series of steps shown in Figure 2. While for the sake of exposition we present a step-by-step approach, in practice the steps are highly interrelated. Typically, the development of a questionnaire will involve some iteration and looping between steps. For example, the researcher may discover that the possible wordings of a question are misunderstood by the respondents. This may require a loop back to the earlier step of deciding on the question structure or still earlier steps (Labau 1981; Schuman and Presser 1981; Sudman and Bradburn 1983).

These steps may be summarized by the following acronyms.

**Acronyms**

The objectives and steps involved in developing a questionnaire may be defined by the acronym **QUESTIONNAIRE**.

- Objectives Q uestions that respondents can answer
- U plift, encourage and motivate the respondent
- E rror reduction
- Steps S pecify the information needed
- T ype of interviewing method
- I ndividual question content

- O vercome inability and unwillingness to answer
- N ame the question structure
- N arrate the question wording
- A rrange the questions in proper order
- I dentify form and layout
- R eproduce the questionnaire
- E liminate bugs by pretesting

The guidelines for question wording may be summarized by the acronym WORDING.

- W ho, where, what, when, why, and how
- O rdinary words
- R egularly, normally, usually etc. should be avoided
- D ual statements (positive and negative)
- I mplicit alternatives and assumptions should be avoided
- N on leading and nonbiasing questions
- G eneralizations and estimates should be avoided

The guidelines for deciding on the order of questions may be summarized by the acronym ORDER.

- O pening questions
- R udimentary or basic information first
- D ifficult questions
- E ffect on subsequent questions
- R eview the sequence to ensure a logical order

The guidelines for reproducing a questionnaire may be summarized by the acronym REPRODUCE.

- R esponse category format
- E ntire question on a page
- P rofessional appearance
- R educe costs
- O vercrowding should be avoided
- D irections or instructions
- U se of booklets
- C olor coding
- E asy to read

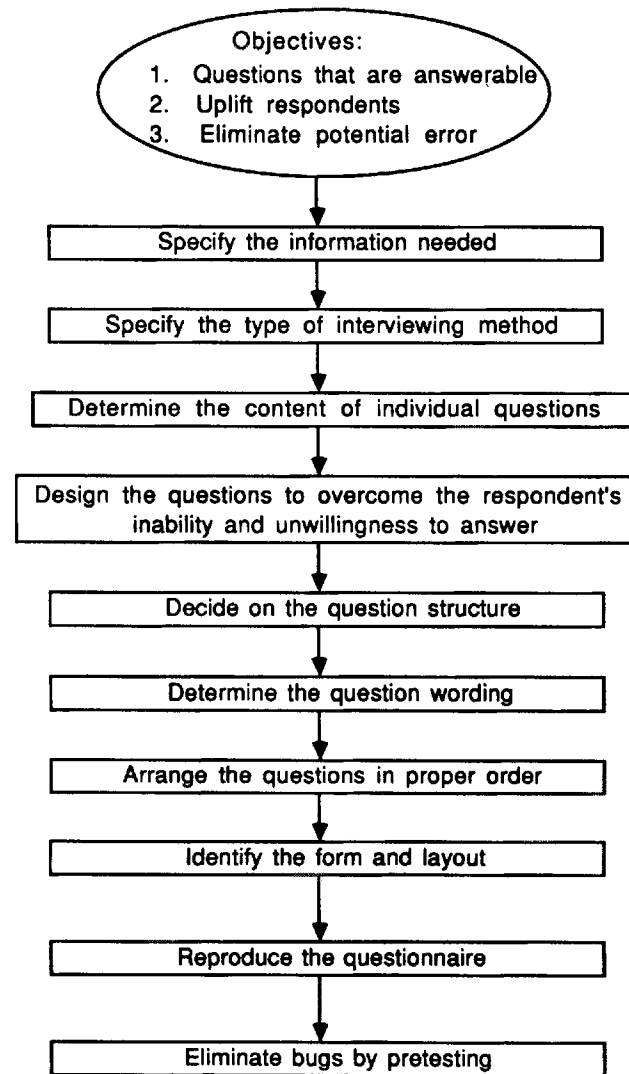
The guidelines for pretesting a questionnaire may be summarized by the acronym PRETEST.

- P rotocol analysis and debriefing
- R espondents
- E xtensive
- T ype of interviewing method
- E diting and analysis
- S ample size
- T ype of interviewers

**DISCUSSION**

It is well documented that college students often use mnemonic devices for memorizing and learning subject

**FIGURE 2**  
**Questionnaire Design Process**



matter related to their course work (Bellezza 1981; Gruneberg 1973, 1978). A positive correlation between grade point average and the spontaneous use of mnemonics by college students has been reported by Carlson, Kincaid, Lance, and Hodgson (1976). Gruneberg (1978) presents more convincing evidence that the use of mnemonics, specifically the first letter mnemonic or acronyms, may aid college students in their learning. Empirical research in learning has consistently shown that good learners use mnemonic techniques where it is beneficial to employ them (e.g., Pressley et al. 1982; Pressley et al. 1983). In reviewing the literature, Pressley (1982) concludes that the use of mnemonic techniques is one of the causal factors contributing to proficiency in learning. This may explain why mature learners, not previously using mnemonic strategies, develop a preference for mnemonic techniques once they are exposed to them (e.g., O'Sullivan and Pressley 1984; Pressley, Levin, and Ghatala 1984).

Many of the criticisms levied against mnemonic techniques are not justified (Bellezza 1983). Some of the arguments against their use are that mnemonics are not practical, do not help comprehension, hinder reasoning, are memory crutches, and are tricks (Higbee 1978). In particular, critics often argue against the use of mnemonics in education stating that mnemonics merely help in memorizing meaningless and unrelated facts. They feel that mnemonics do not foster understanding, reasoning, and creative thinking. As we have shown, this argument is not true. In fact, mnemonics can help students broaden their knowledge base because much college work does involve memorization. Higbee (1979, p. 623) states: "Although teachers typically describe educational goals in such lofty terms as teaching their students to be critical, insightful, curious, and deeply appreciative of the subject matter, these are usually only extra requirements beyond the learning of basic facts that is demanded as a minimum." Systematic application of the knowledge about learning should help students in improving skills so that less time is spent memorizing facts. By using mnemonics strategically, the students would be freed for those tasks considered more important than memorization. This point is made forcefully by Rohwer and Dempster (1977, p. 407).

Indeed, some give the impression that they regard memory proficiency as antithetical to academic excellence, feeling that memorization interferes with the operation of more laudable, higher mental processes. Such misconceptions about psychological perspectives on memory must be dispelled if work on memory development is to constitute a positive contribution to educational practice.

Should marketing research and other marketing courses be taught using mnemonic techniques? We certainly think so. However, mnemonic strategies should not be relied on exclusively. Rather they should be carefully considered in the light of the instructional objectives and course content and used in conjunction with other methods of teaching. We have successfully employed mnemonics in conjunction with semantic learning strategies in the classroom. Semantic strategies involve relating unfamiliar terms to familiar concepts and experiences. For example, new marketing research concepts are related to known concepts and familiar experiences and illustrated with several real-life examples. Students are told that they will be examined not in terms of how well they can reproduce the concepts but rather how well they can apply the concepts in real life marketing research settings. Mnemonics will help them remember the concepts but comprehension and creativity will be necessary for applying them. We have also used first letter mnemonics as an outline for structuring the material to be discussed or for summarizing the material once it has been presented using the book format. Although only questionnaire design was considered for the purpose of illustration in this paper, we have mnemonically coded the entire marketing research course using acronyms (Malhotra 1992). The material has been class tested with very positive feedback. We also recommend that mnemonic techniques be used in

teaching other marketing concepts. Currently efforts are under way to mnemonically code the marketing principles course. Mnemonics can also be used as pedagogical tools in courses such as marketing strategy, promotion management, product planning and policy, channels management, pricing, and international marketing.

## CONCLUSIONS

Marketing educators are encouraged to consider the use of mnemonics in their curricula as an additional pedagogical tool to supplement the ones they already employ. One well respected researcher in the field has gone to the extent of saying that "to exclude mnemonic strategies from the classroom because of their perceived 'limitations' is, I believe, as indefensible as teaching them exclusively" (Levin 1985, p. 81). Mnemonic techniques are very well suited for remembering facts. For those who despise the memorization of facts for the sake of more lofty objectives such as thinking, reasoning, and problem solving, it should be pointed out that relevant factual information must first be remembered before it can be used for thinking, reasoning or problem solving. "Remembering is exactly what mnemonic strategies enable one to do, better than any other learning strategy yet investigated" (Scruggs, Mastropieri, and Levin 1987, p. 240).

## ACKNOWLEDGEMENTS

The author acknowledges the Walk Thru The Bible Ministry for illustrating the use of mnemonics in their Applied Principles of Learning Seminar. This seminar motivated the research reported in this paper. Appreciation is extended to professors Francis S. Bellezza, Joel R. Levin, Merrie Brucks, and Robert A. Peterson for helpful comments.

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