A Validation Study of an Instructional Design Which Attempts to Teach the Concept of Faith to Seventeen Mentally Retarded (I.Q.'S 50-75) Seminary Students of the South Salt Lake Seminary District During the Spring of 1970

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A VALIDATION STUDY OF AN INSTRUCTIONAL DESIGN WHICH
ATTEMPTS TO TEACH THE CONCEPT OF FAITH TO
SEVENTEEN MENTALLY RETARDED (I.Q.'s 50-75)
SEMINARY STUDENTS OF THE SOUTH SALT
LAKE SEMINARY DISTRICT DURING
THE SPRING OF 1970

A Thesis
Presented to the
College of Education
Brigham Young University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Roger A. Hendrix
May 1971
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Introduction

The Latter-day Saints Church Education Program of Seminaries has become increasingly interested in mentally retarded children. Reflecting the concern for helping such children, William E. Berrett, administrator for the seminaries and institutes of the Church, in 1970 formed the new department of Special Education and placed Dr. Grant Bitter at its head.

A major task of this newly formed department is the creation of religious instructional material geared to the intellectual level of the mentally retarded high school student. Because material of this nature deals in the main with such abstractions as concepts, principles, and problem solving, great care and diligence must be taken to get the best product possible. Therefore, this paper deals with a way in which concepts, in particular the concept of faith, might best be taught to mentally retarded seminary students of the Latter-day Saints Church.

An entirely new approach to the teaching of concepts has been presented by Markle and Tieman (1969); the present study develops methods for adapting these into a basic instructional model. The major components of a teaching model (i.e. instructional objectives, entering behavior, instructional procedures, and performance assessment) are discussed and related to the new studies
by Markle and Tieman. Because a basic understanding of
the mentally retarded aided in making the final instruc-
tional instrument more precise and successful, a brief
overview of the problems and situations unique to the
mentally retarded child are presented in the related
research to follow.

Need for Research

To date, no study has reported the creation of any
religious instruction in the Latter-day Saints Church
geared specifically to the mentally retarded seminary
student. Also, as the studies by Markle and Tieman have
presented a new approach to the teaching of concepts, and
as their work is so recent, few if any researchers have
had the opportunity to employ and test the validity of
these principles. To the knowledge of this writer Woolley
and Tennyson (1970) alone have attempted to implement
these ideas into a workable instructional model.

Statement of Purpose

The purpose of this study is a validation study of
a theoretical instructional design which attempts to
bring about a significant (.01 level) gain in post-test
results in the concept of faith in seventeen mentally
retarded (I.Q.'s 50-75) seminary students of the South
Salt Lake Seminary District.
Hypothesis

There will occur no significant gain in the learning of the concept of faith by mentally retarded seminary students receiving a special instructional treatment when compared to mentally retarded seminary students receiving no treatment.

Delimitations of the Study

The conclusions of this study are delimited by the following considerations:

1. It was limited to thirty-four students of the south Salt Lake Valley Seminary District whose I.Q.'s ranged from 50-75.
2. It involved only those students taking seminary spring semester of 1970.
3. It included only students from grades 9-12.
4. It involved only the following seminaries: Magna, Kearns, and Sandy.
5. The length of the study--pre-test, instructional treatment, post-test--was limited to two days.
6. In the definition of faith, only the attribute of truthfulness is emphasized.

Definition of Terms

Concept. Any group or class of objects, situations, examples, etc. that has common characteristics and that is called by the same name.
Relevant or critical attributes. Those characteristics shared by all members of a concept class.

Irrelevant attributes. Characteristics other than the relevant attributes that members of a concept class may possess, but have no bearing on whether or not an object, etc. becomes a member of a concept class.

Member. An object, thing, example, situation, etc. that is part of a concept class.

Non-member. An object, thing, example, situation, etc. that is not part of a concept class.

Example or exemplar. An object, thing, example, situation, etc. that is a member of a concept class.

Faith. An operationally defined concept that has the following critical attributes: (a) telling the truth about people; (b) telling the truth even when faced with the possibility of being punished; and (c) telling the truth even when one might be ridiculed.

Classification behavior. Concept learning or understanding.

Instructional objective. A behavior which the student will be able to manifest upon finishing an instructional sequence.

Review of Related Research
The areas of study to be considered are (a) General characteristics of the mentally retarded as they relate to
the teaching of concepts; (b) Instructional objectives and the importance they play in the teaching of concepts; (c) Entering behavior and its contribution to successfully teaching concepts; (d) Instructional procedures of teaching concepts; and (e) Proper performance assessment in determining whether the concept has been learned.

General Characteristics of the Mentally Retarded as They Relate to the Teaching of Concepts

Cruickshank's (1945, 1952) studies indicated that selected mentally retarded children had greater difficulty working with conceptual material than did normals of the same age group. Dunn's (1955) study also showed that the mentally retarded had problems with conceptual material, but suggested that this might be overcome if learning material were geared to the level of the mentally retarded. Zeaman and House (1963) apparently took this suggestion and worked with the rate of attention in discrimination learning. The results indicated that mentally retarded children can work with conceptual material when given enough exposure and time.

In connection with this Pinegar (1967) developed a programmed instructional system that successfully taught conceptual material to the mentally retarded. Pinegar (1967) stated that in preparing such instructional sequences, give learning problems of the mentally retarded must be considered: (a) a need for the teacher to "oversimplify" concepts; (b)
the inability to make generalization; (c) a short memory span; (d) a short attention span; and (e) a limited "acquisition of learning incidentals." Pinegar also states that the mentally retarded student has problems understanding written instructions.

**Instructional System Needed to Teach Concepts**

DeCecco (1968) adapted Glaser's model as the basic teaching model to be used in the teaching of the different types of learned behaviors, which include the learning of concepts. The system is composed of the following components: instructional objectives, entering behavior, instructional procedures, and performance assessment.

This paper defines the make-up of each separate component and demonstrates how it leads to the improvement of the teaching of conceptual material.

**Instructional Objectives**

DeCecco (1968) stated that instructional objectives are goals or objectives that a student should complete upon finishing a given section of instruction. More specifically, instructional objectives are statements of specific performances that a student should be able to show upon completion of a particular instructional segment (Mager, 1962). Mager (1962) explained that the instructional objective is made up of the following elements: (a) The identification of the terminal performance which the instruction attempts to
produce; (b) The description of the important conditions under which the behavior is expected to occur; and (c) The description of how good a student's performance must be to be acceptable.

Being that an understanding of the components of the instructional objective, especially the first two, is essential to the correct and successful teaching of concepts, each is explained separately.

**Terminal performance.** Bloom (1956) and Gagne (1965) have developed demonstrable classifications of terminal performances. However, in the opinion of this writer Gagne's is more comprehensive and understandable and is therefore, used in this study. Gagne (1968, 1965) stated that there are eight terminal performances which a student can learn and demonstrate and that these eight behaviors form a hierarchy of dependency. Each of the eight behaviors fits into a sequence scale ranging from one (least difficult) to eight (most difficult), and each lower behavior in the hierarchy has to be mastered before a higher one can be attempted (Gagne, 1965, 1968, and Merrill, 1970). Gagne's (1965) behavioral hierarchy is as follows (listed in ascending order of difficulty): signal learning, stimulus response learning, multiple discrimination, concept learning, principle learning, multiple discrimination, concept learning, principle learning, and problem solving. Signal learning is classical conditioning, characterized as "involuntary" response.
Stimulus response learning—not to be confused with the S-R theories—is precise voluntary muscular response to specific stimuli. In other words, there is a definite response for a definite stimulus. Chaining is the process of connecting through contiguity individual stimulus responses. Necessary to chaining is the bringing of the individual stimulus response into proper order. Verbal association is giving names to objects or memorization and is also a form of chaining which is characterized by verbalization. Tennyson and Merrill (1970, p.5) summed it up well by saying that "verbal association is the chaining...of stimulus responses." Multiple discrimination is the ability to discriminate between stimuli and then arrive at the proper response. Multiple discrimination is still at the memorization level because the student "commits to memory" a definite stimulus and its corresponding response (Tennyson, and Merrill, 1970). Concept learning is responding to stimuli whose properties are not concrete but abstract, such as "color," "shape," "position," and "number" (Gagne, 1965, p.47). Gagne (1965) stated that the chief characteristic of concept learning is the presentation of new situations. Principle learning is defined as the chaining of two or more concepts. The last behavior in Gagne's hierarchy is problem solving and is characterized as the implementation of previously
learned principles to achieve a goal or solve a problem.

It should here be noted that Merrill (1970) has done much to expand the work of Gagne in the realm of behavioral categories. He has extended the behavioral categories from eight to ten, thus making less ambiguous some of the overlapping of behaviors in Gagne's model.

In this study, only one behavioral classification or terminal performance is considered extensively: concept or classification learning. Merrill (1970) stated that concept learning occurs when the student is able to correctly respond by identifying the class membership of a "stimulus object," "event," or "situation" which he has not previously encountered. Merrill continued to assert that if the situations to identify are familiar to the student because of previous experience, the behavior is not that of classification but memorization. This is perhaps the greatest mistake of most studies and projects attempting to teach concepts--memorization behavior is repeatedly mistaken for classification behavior. Another characteristic of classification behavior illustrated by Merrill (1970) is the principle of psychological transfer. If the student responds correctly to one unencountered situation, it is inferred that he will make a similar response when other unencountered
situations of the same class are presented. This is called a "many-to-one relationship."

It is felt that much greater success is afforded to teaching concepts if a behavioral category system is used to define the particular terminal performance desired (DeCecco, 1968, and Merrill, 1970).

Conditions under which the behavior is expected to occur. Merrill (1970) felt that the component of the instructional objective which is most misunderstood is the condition or conditions under which the performance will be observed. Merrill (1970) and Gagne (1965) indicated that if a behavior is to be properly executed and observed, specific conditions must be stated, and if these conditions are not present, the behavior being observed has changed. Merrill defined two classes of conditions found in Kager's (1962) instructional objective model. They are conditions related to the particular subject matter under consideration and unique to the testing situations, and the psychological conditions which help to define the behavior being observed. This study dealt with the second class of conditions stated under only one behavioral category—classification behavior.

Merrill (1970) reported that the important psychological condition in classification behavior is the
presentation of "unencountered instances" and/or "non-instances." These unencountered instances and/or non-instances are presented in such a way that the student makes some sort of class identification; this can be done, as Merrill (1970, p. 9) suggested, by "distinguishing a class member from a non-member, checking 'yes' or 'no' for a list of instances, or sorting instances into piles, etc." The concept of psychological conditions in classification learning can be better understood if one comprehends "parameter" and "values." Clark and Merrill (1970, p. 18) defined parameter as a "characteristic" or "constant factor" that helps define a psychological condition. But the factor, which remains constant because it is always there, may and does change its value. Value in this instance refers to "quantities," "amounts," or "categories" (Clark, and Merrill, 1970, p. 18). In other words, in classification behavior, the constant factor of the psychological condition would be the unencountered instances and non-instances, and the presentation of the instances and non-instances would be determined by the manner in which the teacher organized and divided them into categories, amounts, and quantities (Clark, and Merrill, 1970). Hopefully, the observer would then be able to determine which parameter was best suited for each student. Clark and Merrill (1970) have established five parameters for the observation of
classification behavior. Parameter number one is the ratio of instances to non-instances. Parameter number two refers to the number of simultaneous classes of concepts with which the student has to work. Students, as Clark suggested, differ in their ability to work with one or more concept classes simultaneously. Parameter number three deals with the manner in which the referent is represented. This means that the student could work with the actual referent, a mere picture of it, or just a verbal description of the object or event in question. Once again, students differ in their ability to work with different types of representations. Parameter number four is the type of question asked. Several different types of questions can be employed in working with identification. One student might work better with a different set of questions. And parameter number five refers to the discrimination required. One concept might be very easy to identify because of clear cut attributes, but another concept would be much harder to identify because its attributes closely resemble members of another class concept. Here the ability of the student to make fine discriminations plays an important role, and each student differs in his ability to do so.

Conditions in the instructional objective are set to properly execute and observe a behavior. In classification learning, the conditions of importance are the unen-
countered instances and/or non-instances. And conditions can be best defined if the above parameters are employed.

Criteria for acceptable performance. For any objective to be complete, a minimum score or value has to be set for acceptable performance. That which is important here, as Merrill (1970) pointed out, is to identify the type of objective employed. For example, acceptable performance on an objective which measures overall terminal performance will be different from acceptable performance on an objective which only measures a specific behavior which helps to establish a desired terminal behavior. In other words the function of the objective has to be specified before criteria of acceptable performance can be established.

Entering Behavior

In sophisticated society, effective men of means very seldom attempt a task or a goal without evaluating their talents and weaknesses in relation to that task or goal. In so doing, they plot the best possible course, which allows for their differences and thereby makes success more feasible. The process of instruction in education attempts to do the same by utilizing a principle called "entering behavior" (DeCecco, 1968, p. 12). DeCecco described entering behavior as the level of the student's behavior before instruction takes place. Levels
in this consideration include intellectual, motivational, cultural, etc. standing. In addition, entering behavior describes the behaviors the student must master before he can acquire new behaviors. Two basic characteristics must be "present and checked" before instruction can begin—readiness and maturation (DeCecco, 1968, p. 61). Readiness in this context refers to the student's present capacity relative to an instructional objective. Maturity is concerned both with biological growth, which is influenced by heredity, and with structural changes that must occur before a particular behavior can appear. Glaser (1963) suggested that this type of diagnostic assessment must assume a more precise function in the educational setting. DeCecco (1968) responded to this challenge by suggesting that a way to diagnostically pre-test is to use Gagne's behavioral levels which determines what pre-requisites the student has and has not attained. It appears that Merrill's behavioral category (1970) system will be better applied than Gagne's, owing to its greater precision in defining behavioral levels.

After the diagnostic assessment has been made, instructional material can then be developed, organized, and presented to meet the needs of the behavioral level of the student. If done properly, the likelihood of success in teaching a student will be greatly enhanced.
In working with mentally retarded children and classification learning, assessment of entering behavior is essential to the determination of which students have the readiness, or potential readiness, and maturation to work with conceptual material.

Entering behavior therefore describes the extent of the student's behavioral level before instruction takes place; it also describes the behaviors he must master before he can acquire any new behaviors.

**Instructional Procedures**

Once the objectives and entering behavior have been determined, instructional procedures can be developed. In this study, instructional procedures concern development of material for classification behavior.

DeCecco (1968) stated that instructional material should be commensurate with the stated objectives and results of the diagnostic pre-testing for entering behavior and that instructional procedures serve the purpose of describing the complete teaching process.

Henceforth, an analysis of concept or classification behavior is made, but only as it relates to the methods necessary to properly teach concepts. The format of the section is as follows: (a) a working definition of the term concept; (b) a misconception of what a concept might be; (c) concepts as they relate to behavioral
levels; (d) the teaching of a concept; (e) possible mistakes made by those learning the concepts.

**Definition of concept.** Markle and Tieman (1969) defined a concept by the use of a circle:

![Conceptual Circle](image)

**Figure 1.** Conceptual Circle. All members of a concept are inside. All non-members of a concept are outside.

In support of this idea, Merrill (1970) claimed that a concept is a class of objects, events, situations, etc. which share pertinent properties or characteristics and name. Heretofore, concepts have been represented only by nouns such as cat, dog, man, house, car, etc., but recent studies state very clearly that a concept can also be "adjectival," "adverbial," and "non-verbal" (Markle, Tieman, 1970, p. 2). Markle and Tieman illustrate this fact with such conceptual examples as "behind," "throughness," and "mystical."
Misconception of the nature of a concept. Markle and Tieman (1969) indicated that a common mistake in concept identification is regarding as a concept "an identity" or "identical twins." "Identity" possesses a sole example such as "the North Pole;" "identical twins" are collections of identical examples, such as the copies of the "Mona Lisa." Markle and Tieman (1969) concluded that a concept is a class whose members vary among themselves except in their critical properties; therefore, identities and identical twins, which do not vary at all, are not examples of concepts. The terms "identity" and "identical twins" are "non-examples of a concept" (Markle, Tieman, 1969, p. 6).

Concepts as they relate to behavioral levels. It should here be recognized that it would be "impossible to teach high level concepts until appropriate lower level" behavior and learning have been accomplished (Markle, Tieman, 1970, p. 8). Markle and Tieman stated that complex generalizations cannot take place when the learner is still at a stage at which he is learning "response $R$ when stimulus $X$ or stimulus $Y$ or stimulus $Z$" (Markle, Tieman, 1970, p. 8). This seems to be an added incentive to become familiar with the principles of behavioral objectives and entering behavior before instruction, especially instruction of concepts, takes place.
The teaching of a concept. The student who has "grasped" a concept can generalize to new examples, and he can discriminate examples from non-examples (Markle, Tieman, 1970). Mechner stated that classification behavior is the "ability to generalize within a class, and discriminate between classes (Woolley, and Tennyson, 1970, p. 1)."

Markle and Tieman (1968) indicated that when a student generalizes, he is dealing with never encountered instances that differ in their irrelevant attributes. Thus, generalization is taught by presenting examples of a concept with which a student is unfamiliar, and having the examples agreeing on their critical properties, while being different in attributes which have no bearing on the concept make-up (Woolley, and Tennyson, 1970). Therefore, examples for purposes of generalization are made up of two types of attributes: the critical attributes which all members of a class share in common, and the irrelevant attributes that are different in each example, but are not a function of the concept's being a member of a particular class. As might be noted from the above statements, the largest problem in forming conceptual examples is that of finding instances which "differ significantly" in irrelevant attributes (Woolley, and Tennyson, 1970, p. 3).
Discrimination, on the other hand, involves recognizing never encountered members from never encountered non-members of a concept class. Markle and Tieman (1969, 1970) indicated that the non-examples, or discrimination situations, should be closely related to class members, and for the purposes of teaching discrimination, the non-examples should have similar characteristics to the irrelevant attributes of the examples in a concept class.

Because of its frequent misuse, the non-instance or non-example here warrants closer attention and more finite explanation. Markle and Tieman (1969, 1970) stated that the major role of the non-instance is to reinforce and make clear the referent of the attributes of critical properties under question. Therefore, the best type of non-instance is that which shares all but one critical property with the concept class to be discriminated (Markle, Tieman, 1970).

A possible conceptual teaching model developed by Woolley and Tennyson (1970) which attempts to properly organize and measure conceptual learning, as defined by Markle and Tieman (1969), is now discussed. A cross section of a three dimensional model is used to illustrate the model; the cross section of a three dimensional model is used to illustrate the model; the cross section is the familiar bell shaped curve. From this, the operational definition of a concept class becomes a normal
frequency distribution in which the concept examples are spotted along the distribution. If the example is easily recognized as a member of a concept class, it will be closer to the mean and will thus be a high probability instance. On the other hand, a low probability instance will be further away from the mean, as it is filled with a greater amount of irrelevant material, making it harder to recognize. Because there is no limit to the number of irrelevant attributes that can be employed in a concept class, the distribution is infinite (Woolley, and Tennyson, 1970, p. 6). Woolley and Tennyson therefore employed Standard Deviation to form the distribution. Thus, most examples will be grouped around the mean, and concept generalization (and ultimately discrimination) is enhanced as the examples deviate more from the mean (Woolley, and Tennyson, 1970, p. 7). To this point, only a one-tailed distribution has been formed; therefore, to create the other half of the distribution, equal probability examples are paired to the first examples. Woolley and Tennyson indicated that the only difference in the examples is that they differ in irrelevant attributes. Once the two-tailed distribution has been formed, discrimination is promoted by matching non-examples to examples across the distribution (Woolley, and Tennyson, 1970, p. 7). The non-examples match the examples in all irrelevant material but lack
the necessary critical attributes to make them class members. Figure 2 illustrates Woolley and Tennyson's conceptual model.

Although this conceptual procedure needs data for validation, it was used in partial connection with the ideas presented by Markle and Tieman to establish the conceptual design for this thesis.

![Conceptual Model Diagram]

Figure 2. Conceptual Model.

Possible mistakes made by those learning the concept. Markle and Tieman (1969) postulated that three problems can occur in concept instruction due to the use of incorrectly chosen examples and non-examples; they are overgeneralization, undergeneralization, and misconception.
The authors used circles to illustrate how overgeneralization take place.

![Diagram](image)

Figure 3. Conceptual Overgeneralization. The student includes some non-examples as members of a concept class.

Overgeneralization is a case of selecting non-examples as examples of a class (Woolley, and Tennyson, 1970). In so doing, the student has no problem identifying examples, but places non-examples in the same category with examples. Markle and Tieman (1970) stated that the cause of overgeneralization is the failure of the student to identify or "attend to" one or more of the critical attributes of a concept example; as a result, the student does not note its absence when given a non-example. Markle and Tieman (1969) claimed that the best cure for overgeneralization would usually be more and/or better discrimination examples. If, however, the normal frequency distribution principle were being used, Woolley and Tennyson (1970)
hypothesized that overgeneralization would occur when the number of low probability examples were not matched to the examples to "promote discrimination." The solution would be to insure that the probability distribution is properly formed and that non-examples are matched appropriately to examples (Woolley, and Tennyson, 1970, p. 8).

Studies indicate undergeneralization occurs when there is a failure to select examples of a class (Markle, and Tieman, 1969, 1970). Markle and Tieman (1969) illustrated undergeneralization as such:

![Conceptual Undergeneralization Diagram]

Figure 4. Conceptual Undergeneralization. Student fails to recognize some true examples as members of a concept class.

The authors (1968) indicated that this mistake is usually made when the student includes more properties in a concept that are critical. This can occur when a strong irrelevant attribute is repeated in all examples
and there is too narrow an exposure to the full range of presentation of more "far-out" examples, which will dislodge the inappropriate properties from the concept class (Markle, and Tieman, 1969). Again, if the normal frequency distribution principle were being used, Woolley and Tennyson (1970) stated that overgeneralization would occur if only high probability examples, matched examples, and paired non-examples were used. The cure for overgeneralization is this case would again be the establishment of a true distribution (Woolley, and Tennyson, 1970, p. 6).

The last mistake in concept instruction is misconception, which is a combination of both overgeneralization and undergeneralization. Markle and Tieman's illustration follows:

Figure 5: Misconception of a Concept. Student overgeneralized and undergeneralizes.
Woolley and Tennyson (1970) stated that this problem occurs when it is difficult to discriminate examples from non-examples, even when the irrelevant attributes are somewhat small. The cure for misconception is a combination of treatments mentioned in the two previous problems of concept instruction. If the normal distribution idea was used, Tennyson and Woolley (1970) indicated misconception would be caused if examples were not matched with non-examples, and were not paired along the diameter. The cure would be to insure that matching of non-examples and pairing of examples were adequate (Woolley, and Tennyson, 1970, p. 8).

A concept, therefore, is a class of objects, events, situations, etc., which share pertinent properties or characteristics. Before instruction can occur, the learner must be capable of handling conceptual material. One way to determine his capacity is to identify the student's position in a behavioral hierarchy. Concept learning is characterized by the ability of the student to generalize to new examples and discriminate never encounter examples from never encounter non-examples. The best method for teaching generalization and discrimination is to establish examples that differ in irrelevant material but lack the critical attributes and to establish non-examples that have much of the same irrelevant material but lack the critical attributes. A potential
method of organizing these examples and non-examples for most effective teaching is a normal frequency distribution. The most common mistakes made in concept learning, resulting from faulty instruction are overgeneralization, undergeneralization, and misconception.

Performance Assessment

The last component of the basic instructional system is performance assessment. Traditionally, the field of testing has dealt with norm referenced measures, in which one student's performance has been compared to other student's along a statistical distribution. However, this approach is changing with the advent of instructional technology. Gronland (1965) reported that performance assessment is concerned with tests and observations that determine how well the student has achieved the instructional objectives. Glaser's (1963) criterion referenced measurement illustrated this point very well. Achievement measurement is based upon a continuum of "knowledge acquisition" ranging from "no proficiency at all to perfect performance (Glaser, 1963, p. 519)."

In other words, criteria of minimum levels of performance are established along the instructional treatment to determine whether or not the student's behavior will meet the stated instructional objectives. The emphasis here is not on how many responses the student misses or answers
correctly but what minimum behavioral levels he lacks in order to have end of course competency. This criterion reference approach of student achievement provides information about the subject matter attainment of the individual student and is free from comparison to performance of other students. Glaser (1963, p. 519) stated that "The standard against which a student's performance is compared...is the behavior which defines each point along the achievement continuum." Therefore, the final test, so to speak, would simply be whether or not the student can achieve and perform the stated instructional objectives (Glaser, 1963, and Gronland, 1965). And if the principle of achievement through criterion referenced measure has been employed, the end of course competency should be present.

This criterion performance concept can be applied to concept learning in the following ways; (a) establish minimum standards of generalization and discrimination throughout the instructional treatment, (b) remain at a certain generalization and discrimination level until criterion performance has been established (c) give a final test to see whether or not end of course competency coincides with minimum performance of terminal behavior of an instructional objective, and (d) if criterion referenced measurement is to properly measure generalization and discrimination, insure that never encountered
examples are used (Markle, and Tieman, 1969).

Performance assessment is concerned with tests and observations that determine how well the student has achieved the instructional objectives. Criterion referenced measurements attempt to properly implement this principle. Criterion levels of performance are established at designated points in instruction; The points give information about the adequacy of a student's performance, and indicate what he must be capable of doing before he can achieve the desired knowledge or behavioral level.

**Overall Conclusions**

Instructors that attempt to teach concepts to mentally retarded children must consider their limitations: (a) their need to have concepts oversimplified; (b) their inability to make generalizations; (c) their short memory span; (d) their short attention span; and (e) the difficulty they have understanding written instructions. However, it has been shown that mentally retarded children can learn concepts through properly organized programmed instruction that includes material geared to their everyday life experiences.

An instructional system that properly attempts to teach concepts is made up of four components: instructional objectives, entering behavior, appropriate instructional procedure, and performance assessment.
Instructional objectives are composed of three elements. The first is the task or terminal performance to be accomplished. Basically, there are eight behaviors that can be manifested, concept learning being number six on the scale. Each behavior in the hierarchy must be mastered before the next higher one can be attempted. The second component in the instructional objective includes the conditions under which the behavior or task will be performed. The psychological conditions of importance for classification behavior are unencountered situations. The last component of the instructional objective is the criterion of acceptable performance. (Here it is important to consider the type of objective to be used, i.e., terminal, enabling, etc.)

The second component of the instructional model is entering behavior. The diagnostic pre-test which uses learning hierarchies to test for readiness and maturation is an effective instrument to test entering behavior. Classification behavior should not be attempted until appropriate entering behavior is established.

The third model ingredient is the proper instructional procedure for classification behavior. Concept learning is characterized by the student's being able to generalize to new examples and non-examples of a concept. A possible method for effective implementation of these instructional principles is the normal frequency distri-
bution diameter. To test for understanding, never encountered examples must be used.

The last component of the basic teaching model is the performance assessment. The traditional norm reference measure is giving way to the criterion performance achievement measure. Here, the student's performance is gauged and tested in such a way that his terminal performance will be commensurate with stated instructional objectives.

Research Design

Included below are descriptions of the following aspects of the study: (a) the sample; (b) the instrument; (c) the procedure and organization of data; and (d) statistical procedures.

The Sample

The sample of subjects included thirty-four mentally retarded seminary students, whose I.Q.'s ranged from 50-75, and whose grade level ranged from nine to twelve. The sample area was the South Salt Lake Seminary District. The seminaries included in the study were Magna, adjacent to Cyprus High School; Kearns, adjacent to Kearns High School, and; Sandy, adjacent to Jordan High School. Students were randomly assigned at their own seminaries to experimental and control groups. There were six control
and six experimental groups in all. Each group had either two or three members. The breakdown of groups at each seminary are as follows: Magna, three experimental, three control; Kearns, two experimental, one control; Sandy, one experimental, two control. Selection to experimental and control groups was random. The number of groups at each Seminary was determined by the number of subjects at each seminary available to take part in the study.

The Instrument

The ideas presented by Markle, Tieman (1969), Woolley and Tennyson (1970) served as the basis for the development of the instrument. The instrument itself is made up of three parts: the pre-test, the instructional treatment, and the post-test. The pre-test and post-test sections were composed of sixteen short stories. While developing the stories, the mentally retarded's short attention span, and need to have learning geared to their everyday life experiences were taken into consideration. The stories dealt with situations in which the mentally retarded might find himself. Each short story was either an exemplar of faith or a non-exemplar of faith. After hearing the short story the student was asked, "Did John show faith?" The student could then mark one of the following four possible answers: "Yes," "no," "don't
know," or "has nothing to do with faith." The student had 10 seconds in which to mark his answer before the next story began. The same stories were used for both the pre and post-tests. Six of the short stories were concerned with people showing faith, six dealt with individuals not showing faith, and the last six situations had nothing to do with faith.

The instructional treatment consisted of twenty-seven short stories ranging from very simple exemplars and non-exemplars of faith to very difficult ones. This procedure was formed to meet the mentally retarded's need for concept oversimplification. The instructional material was broken into three sections, each dealing with a critical attribute of faith. This was done to counteract the difficulty the mentally retarded has in generalizing and discriminating. By dwelling upon one attribute at a time, it was hoped that generalization to new examples, and discrimination of non-examples, would be possible. There were nine short stories per section, four dealing with people showing faith, four telling of people not showing faith, and one having nothing to do with faith. Except for two stories per series, all others in each section were organized and handled in exactly the same manner as was the pre-test. The two exceptions required telling why a short story was or was not an exemplar of faith. The instructional
treatment employed the principles of being able to generalize within a concept class and to discriminate between classes. To accomplish this, unencountered exemplars and non-exemplars of faith were formulated.

Procedure and Organization of Data

Group assignments. Thirty-four mentally retarded seminary students from the South Salt Lake Valley Seminary District were used in the study. Students were randomly assigned at each of the three seminaries to six control and six experimental groups. All groups were made up of three members, except two groups, which had only two members.

Each control group was given only the pre-test, post-test sections of the research design. The experimental groups were given the pre-test, post-test sections, plus the instructional treatment. Therefore, the independent variable to be measured in the experimental groups was the instructional treatment, whereas, in the control groups it was the lack of instruction.

Controlled variables. One person administered the complete research design to the twelve groups, thereby controlling any extraneous variables that might enter because of different attributes of people giving the material. The administer read all sections of the design, thus controlling the reading variable of each student.
By reading the entire instructional material the problem of the mentally retarded to understand written instructions was somewhat alleviated. Strict instructions were given that no one was to enter the room, and were followed in all cases, thereby eliminating any outside interference which might have effected results. Last, all students sat at desks and were given pencils to write with, which controlled any variable of body positioning, differences in writing instruments, etc.

Variables that were not controlled. There was no certain time during the day that the students were administered the design, therefore, the time variable might have influenced the scores. Also, the speed and intonations of the administer's voice were not calculated so as to be equal in all presentations, thereby, making a manner of presentation variable possible.

Pre-test. Each member of a group was given a manual, containing instructions, and the sixteen story pre-test. Before the presentation of the pre-test, the following instructions, written on the outside of the manual, were read:

1. I will read you some very short stories.
2. If the person in the story is showing faith, mark the space entitled Yes.
3. If the person in the story is not showing faith, mark the space entitled NO.
4. If the story has nothing to do with faith, mark the space HAS NOTHING TO DO WITH FAITH.
5. If you do not know, mark the space DO NOT KNOW.
6. You will have 10 seconds to answer each question.
7. Now, turn the page and I will read the stories to you.

The groups were then read the stories, and they marked the answers according to the directions that had been given them. The entire pre-test took from fifteen to twenty minutes. No stories were repeated in their reading, nor were questions of clarification permitted.

Amount of time between sections. Instructional treatment and post-test batteries were administered one day after the pre-test. The experimental groups took the post-test directly after having been administered the instructional material.

Instructional treatment, post-test series with experimental group. Members of the experimental groups were all given instructional manuals, which included the following items: (a) two statements per section (there were 3 sections) explaining a critical attribute of faith; (b) instructions exactly the same as those on the pre-test; (c) nine examples and non-examples of faith per section, and (d) a post-test, which was a
copy of the pre-test with the stories in different order. From this point the instructional treatment took place in the following manner:

1. Students were told that they were going to have a lesson of faith.

2. The groups were then read two statements concerning a critical attribute of faith.

3. They were then shown overhead pictures that pictorially represented each statement.

4. Instructions, which were exactly like those of the pre-test, were then read.

5. Each story was read, and an answer was marked.

6. The correct answer was then read to the group.

7. After the nine stories of section one were finished, sections two and three followed in the same manner.

8. After all three sections were administered, the post-test was taken in the same way as was the pre-test.

As was the case in the pre-test, no story in the treatment or post-test was repeated or clarified in any way. The groups spent from 45-50 minutes in completing the series.

Post-test with control groups. The post-test with the control groups was handled in exactly the same manner as was the pre-test.
Organization for Processing of Data

Each of the six experimental groups was numbered, as were control groups. Individual scores were then calculated on the pre-tests and post-tests for each of the thirty-four students. This data was then transferred to EDP processing cards, and tabulations were made on the computer at the Brigham Young University Computer Research Center.

Statistical Procedures

Covariance analysis was used to determine significant difference, if any, in scores. Adjusted means were calculated for within group and between group means, the F value of each group was computed to determine if the variances were significant at the .05 and .01 levels.

Findings, Discussion, Recommendations

Findings

Table 1 shows the results of the Analysis of Covariance for all adjusted means.

Table 2 shows that the difference between the adjusted means scores for the experimental group and control group was significant beyond the .01 level.

Table 3 indicates that the within group differences for the experimental and control groups was non-significant.
Table 1
Adjusted Mean Scores

<table>
<thead>
<tr>
<th>Experimental Groups</th>
<th>Control Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
</tr>
<tr>
<td>Group 1.</td>
<td>8.333</td>
</tr>
<tr>
<td>2.</td>
<td>8.999</td>
</tr>
<tr>
<td>3.</td>
<td>9.333</td>
</tr>
<tr>
<td>4.</td>
<td>8.999</td>
</tr>
<tr>
<td>5.</td>
<td>9.666</td>
</tr>
<tr>
<td>6.</td>
<td>8.666</td>
</tr>
</tbody>
</table>

| Total mean          | 8.999    | 13.612**  | Total mean | 8.705    | 10.092*   |

*There was no significant difference in pre-test and post-test control groups. This was determined by an analysis of variance, pre-post difference comparison.

**Difference shows significance at .01 level.
Table 2
Among Means Variance
(experimental vs. control)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss adjusted</th>
<th>m.s.</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among Means</td>
<td>21</td>
<td>97.4514</td>
<td>4.6405</td>
<td></td>
</tr>
<tr>
<td>Source (SN) + Error</td>
<td>22</td>
<td>202.2476</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>1</td>
<td>104.7961</td>
<td>104.7961</td>
<td>22.58*</td>
</tr>
</tbody>
</table>

*F significant beyond .01 level
<table>
<thead>
<tr>
<th>Source</th>
<th>d.f.</th>
<th>ss adjusted</th>
<th>m.s.</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within Groups</td>
<td>21</td>
<td>97.4514</td>
<td>4.6405</td>
<td></td>
</tr>
<tr>
<td>Source (SN) + Error</td>
<td>31</td>
<td>168.0835</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>10</td>
<td>70.6320</td>
<td>7.0732</td>
<td>1.52*</td>
</tr>
</tbody>
</table>

*F non-significant
Therefore, it may be concluded that: (a) the experimental group's post-test score was significantly higher than its pre-test score; (b) that the experimental group's post-test score was significantly higher than the control group's post-test score; (c) that the significant difference in scores on (a) and (b) was not caused because of within group variance; and (d) all control groups scored higher on their post-tests than they did on their pre-tests. The Null hypothesis, then, was not confirmed in that a significant gain in learning did occur with the experimental group, who had instruction, when compared with the control group, who had no treatment.

Discussion

One of the limitations of this study was the small sample of mentally retarded seminary students that were worked with, and also the homogeneous area grouping from which they came. Only thirty-four students were worked with, and all came from the Salt Lake Valley of Utah. For better validation a greater number of students should be included, and other areas where the Church has established seminaries should be used. However, even with these two problems, the statistical conclusions serve as an indicator that such an approach should be attempted on a broader scale, because it does show that mentally
retarded children, at least the ones worked with in this study, can indeed work successfully with conceptual material.

Another limitation of the study was the amount of time involved. Two hours at the most was all the time needed to take the pre-test, receive the instructional treatment, and then take the post-test. The real value of the teaching design will be its ability to hold up as well under longer time periods of instruction. Added to this was the short number of stories employed to test learning gains. Perhaps this would be the sharpest criticism of the entire instrument, plus the fact that the mean score on the pre-tests were high (over 50 percent). This is an indication that perhaps the examples that truly measured differences were at a minimum, thus making somewhat suspect the validity of the testing instrument. This problem would have been alleviated had the tests followed the normal frequency distribution principle set down by Woolley and Tennyson (1970), as did the instructional treatment. Nevertheless, the significance of difference of the experimental post-test results were surprisingly high compared to the same results of the control group.

The greatest weakness of the instructional treatment was that it included irrelevant characteristics as relevant attributes. The fact of the matter is that faith
in this instance only had one critical attribute, i.e. faith through being truthful. Everything also, although important, was irrelevant to whether or not an example was an instance of faith. Also, it should not be concluded that because the student scored high on the post-test he can now go out and apply his learning in a real life situation. That would be dealt with in at a higher learning level, namely principle learning or problem solving. This study however, has served as a foundation for positive transfer to these higher learning categories. On the other hand the greatest asset of the instructional treatment was the fact that it incorporated Woolley and Tennyson's idea of the normal frequency distribution principle.

The greatest weaknesses of the instructional design as a whole were in the areas of diagnostic assessment, and criterion performance measurement. Except for the fact that all subjects had I.Q.'s ranging from 50-75, there was no diagnostic assessment of needed pre-requisites employed. This could account for one of the reasons why some subjects, even after having received the instructional treatment, did poorly on the post-test. (To rectify this situation, this writer is trying to create a diagnostic assessment using the principle of learning hierarchies as a foundation.) Likewise, the concept of criterion performance measurement was absent from the project. The
observer had no idea how well each individual was performing at the various levels of concept difficulty. This could be another reason why some experimental students did not do as well on the post-test, because the instrument was not able to indicate or adjust to their individual problems. If instruction is ever to become individualized, criterion performance measurement with its logical antecedents must be worked with.

This study, with its good and bad points, has served as a starting point for future studies that will attempt to properly teach religious concepts to mentally retarded seminary students.

Recommendations

Based on the findings and discussion of this investigation, a number of recommendations seem appropriate to those who may conduct further research in this area.

1. Future instruction should include a greater number of subjects from different areas.

2. Instructional designs should now attempt to be commensurate with real classroom schedules.

3. Pre-test, post-test series should try to employ the principle of frequency distribution for best results in measuring learning outcomes.

4. Care should be taken to not mistake irrelevant characteristics for relevant attributes, so faulty
instruction of what a concept is does not take place.

5. Thought should be given to forming some instrument that would place the student in a problem solving situation where he would have to apply his knowledge about the concept he has learned.

6. Diagnostic assessments should be created in order to determine whether or not the student has the desired pre-requisites to operate successfully at a conceptual level.

7. Measurements of criterion performance along the instructional continuum should be formed in order to determine whether or not the student will gain end of course competency.

8. Along with Analysis of Covariance, an analysis of variance (where post-pre differences are compared) should also be used, because it lends itself to more meaningful interpretation.
References


Pinegar, Rex D. A comparison of a conventional teaching technique with a programmed instruction technique as applied to teaching basic arithmetic addition and subtraction combinations to normal and educable mentally retarded boys. Doctoral dissertation, University of Southern California, 1967.


Woolley, R. Ross, & Tennyson, Robert D. Conceptual model of classification behavior. To be published by Educational Technology.
References


Pinegar, Rex D. A comparison of a conventional teaching technique with a programmed instruction technique as applied to teaching basic arithmetic addition and
APPENDICES
APPENDIX A
PRE-TEST INSTRUCTIONS

1. I WILL READ YOU SOME VERY SHORT STORIES.

2. IF THE PERSON IN THE STORY IS SHOWING FAITH, MARK THE SPACE ENTITLED YES.

3. IF THE PERSON IN THE STORY IS NOT SHOWING FAITH, MARK THE SPACE ENTITLED NO.

4. IF THE STORY HAS NOTHING TO DO WITH FAITH, MARK THE SPACE ENTITLED HAS NOTHING TO DO WITH FAITH.

5. IF YOU DO NOT KNOW, MARK THE SPACE DO NOT KNOW.

6. YOU WILL HAVE 10 SECONDS TO ANSWER EACH QUESTION.

7. NOW, TURN THE PAGE AND I WILL READ THE STORIES TO YOU.
1. Jeannie's parents are divorced and her father has not been living at home for two years. Jeannie feels bad about this.

Did Jeannie show faith?

---

2. A group of boys at a high school wanted to make up a story that John Smith smoked. They wanted to do this because John Smith thought he was much better than everyone else, because his dad was a church leader. Dick Harrison, a member of the group, decided that he would not go along with the boys who wanted to make up the story.

Did Dick show faith?
3. Fred called Mike's mother an old witch. Mike told Fred to stop calling his mother an old witch, but Fred would not stop. Mike got mad at Fred. Mike then broke a window and told the owner that Fred did it.

Did Mike show faith?

4. Sharla got up in the cupboard, and got her mother's good dishes down. As she was getting the plates down, she broke one of the dishes. Sharla was extremely upset to think what her mother would do to her when she found out. Sharla thought of blaming what happened on someone else. When her mother angrily asked her who broke the dishes, Sharla said she had done it.

Did Sharla show faith?
5. Trent and Roger were in gym Wednesday afternoon. They were talking about next year's football team. As they were talking the gym teacher walked in.

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<tr>
<th>YES</th>
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Did Trent show faith?

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6. Jerry's teacher found a red ball point pen on the floor. She asked the class if it belonged to anyone. Jerry thought that would be a nice pen to have, so he raised his hand as if he were the owner. The teacher then gave him the pen.

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<th>YES</th>
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Did Jerry show faith?
7. Richard was at home. His parents had already gone to bed, and it was 11:15 p.m. Richard was watching a very good movie. When his father woke up, he told Richard that if it was past 11:00 p.m., Richard should go to bed. Richard wanted to see the rest of the movie, so he told his father not to worry, that it was only 10:30 p.m.

Did Richard show faith?

8. Dick's father was listening to the weather report as he was driving home in his car. When he got home, he told Dick to put the car in the garage, because he heard that it was going to rain.

Did Dick show faith?
9. John remembered that his dad had told him if he caught John using the power saw without his permission John would have to stay in the house for two weeks. John thought about the stiff penalty as he turned the power saw off. He then went into the house, and his dad said that he thought he heard the power saw going. John told him that it must have been his imagination, that the power saw had not been on.

Did John show faith?

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<th>YES</th>
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10. Jay has like Laurie for two years now, but has never said anything about it. Last week he finally asked her to go to the Junior Prom. When they were at the dance, Jay told Laurie that he had like her for two years. Laurie said, "That's funny, I have liked you for two years also." Did Jay show faith?

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<tr>
<th>YES</th>
<th>NO</th>
<th>DON'T KNOW</th>
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11. Mary and her girlfriend went to the show last Thursday. When they got to the show, Mary bought some popcorn, but her girlfriend ate it all. That upset Mary very much. As a matter of fact, Mary was upset for one week. Mary finally talked the whole thing over with the girl because Mary was afraid she was going to start making up stories about the girl if she didn't.

Did Mary show faith?

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<th>YES</th>
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12. Ken told the principal that he saw the boy who stole the coat from the locker. Ken was very frightened when he told the principal, because the boy who stole the coat told Ken that if Ken told anyone he would knock his head in.

Did Ken show faith?

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<th>YES</th>
<th>NO</th>
<th>DON'T KNOW</th>
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<tbody>
<tr>
<td>HAS NOTHING TO DO WITH FAITH</td>
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</table>
13. Albert wanted to go horseback riding very much last Saturday. He went and asked his parents if it was alright that he go. They said no. Albert felt bad. Some of his friends suggested that he tell his parents that he was going to the library to study, but instead go horseback riding. He decided against that, and stayed home, although he thought his parents were wrong.

**Did Albert show faith?**

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<th>YES</th>
<th>NO</th>
<th>DON'T KNOW</th>
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14. Terry and Jack have not been friends for a long time. Last week Terry was elected student body president of the high school. Jack told people that Terry cheated in the election. This made everyone mad at Terry. No one knows if Terry did cheat in the election, not even Jack.

**Did Jack show faith?**

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<tr>
<th>YES</th>
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<th>DON'T KNOW</th>
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</table>
15. Mary wanted to see the movie, "Midnight Cowboy." She went to the movie house, and the girl at the window told her that no one under 18 years of age was admitted inside. The girl then asked Mary what her age was. Mary paused for a moment. She thought how much she wanted to see the movie, and all she would have to do was say she was 18. She then looked at the girl and said her real age, "I'm 17."

Did Mary show faith?

16. Tim quietly went home and did not tell anyone that he had stepped on and ruined Mrs. Johnson's new plants. When Mrs. Johnson asked him if he knew who had done it, he said he did not know.

Did Tim show faith?
APPENDIX B
INSTRUCTIONAL MATERIAL

A person shows his faith when he is truthful and tells the truth.

A person who is not truthful, and tells lies is not faithful.
Section I

When a person does not make up stories, or does not tell lies about another person, even when he is mad at that person, or does not like that person, he is showing that he has faith.

When a person tells a lie about another person or makes up a story about that person, because he is mad or does not like that person, he is showing that he does not have faith.
INSTRUCTIONS

1. I WILL READ YOU SOME VERY SHORT STORIES.

2. IF THE PERSON IN THE STORY IS SHOWING FAITH, MARK THE SPACE ENTITLED YES.

3. IF THE PERSON IN THE STORY IS NOT SHOWING FAITH, MARK THE SPACE ENTITLED NO.

4. IF THE STORY HAS NOTHING TO DO WITH FAITH, MARK THE SPACE ENTITLED HAS NOTHING TO DO WITH FAITH.

5. IF YOU DO NOT KNOW, MARK THE SPACE DO NOT KNOW.

6. YOU WILL HAVE 10 SECONDS TO ANSWER EACH QUESTION.

7. NOW, TURN THE PAGE AND I WILL READ THE STORIES TO YOU.
1. John tells lies and makes up stories about people he does not like or is mad at.

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<th>YES</th>
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<td>Is John showing faith?</td>
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2. Mary does not lie or make up stories about people she is mad at or does not care for.

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<td>Is Mary showing faith?</td>
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3. Even though Jack is mad at Harry, Jack said that he would not make up stories about Harry in order to make Harry feel bad.

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4. Tim told a lie about Jane to kids at school, because he is mad at her and does not like her anymore.

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<td>Is Tim showing faith?</td>
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</table>
5. Vickie was on her way to the market when she saw two of her friends talking, so she stopped to chat with them for a minute.

Did Vickie show faith?

6. Mike and Bob had a fight. Mike got mad at Bob, and would not speak to him. Mike wanted to get back at Bob, so he broke a window and blamed it onto Bob.

Did Mike show faith?

7. John and Bill are not speaking to one another. They had a fight when they were playing basketball. John was going to say a bunch of bad things about Mike to the other kids, which were not true. Instead he went over and cleared the whole thing up with Mike.

Did John show faith?
8. John and Bill are not speaking to one another. They had a fight when they were playing basketball. John was going to say a bunch of bad things about Mike to the other kids, which were not true. Instead he went over and cleared the whole thing up with Mike.

Why is this an example of John showing his faith?

____ a. Because John did not tell a lie even when faced with being punished, or made fun of.

____ b. Because John did not tell a lie to win the basketball game.

____ c. Because John did not tell a lie about Bill.

9. Mike and Bob had a fight. Mike got mad at Bob, and would not speak to him. Mike wanted to get back at Bob, so he broke a window, and blamed it onto Bob.

Why is this not an example of Mike showing faith?

____ a. Because Mike lied about Bob.

____ b. Because Mike lied in order to get out of being in trouble.

____ c. Because Mike lied to get something he wanted.
Section II

A person who will tell a lie to get something he wants, or to get out of doing something is not showing his faith.

A person who will not lie, or will continue to tell the truth even when he will not get something he wants is showing that he has faith.
INSTRUCTIONS

1. I WILL READ YOU SOME VERY SHORT STORIES.

2. IF THE PERSON IN THE STORY IS SHOWING FAITH, MARK THE SPACE ENTITLED YES.

3. IF THE PERSON IN THE STORY IS NOT SHOWING FAITH, MARK THE SPACE ENTITLED NO.

4. IF THE STORY HAS NOTHING TO DO WITH FAITH, MARK THE SPACE HAS NOTHING TO DO WITH FAITH.

5. IF YOU DO NOT KNOW, MARK THE SPACE DO NOT KNOW.

6. YOU WILL HAVE 10 SECONDS TO ANSWER EACH QUESTION.

7. NO., TURN THE PAGE AND I WILL READ THE STORIES TO YOU.
1. Laurie will not lie to get something she wants.

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**Is Laurie showing faith?**

HAS NOTHING TO DO WITH FAITH

2. If Randy can get what he wants by telling a lie, he will tell a lie.

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**Is Randy showing faith?**

HAS NOTHING TO DO WITH FAITH

3. Larry wanted a good mark on the test he was taking. So he told his teacher he had to go to the bathroom. Instead he went out of the room and looked up the answers to the test questions in his book.

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**Is Larry showing faith?**

HAS NOTHING TO DO WITH FAITH

4. Hector and Dick are the quarterbacks on the football team. Dick is better than Hector, so he plays more than Hector.

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**Is Hector showing faith?**

HAS NOTHING TO DO WITH FAITH
5. Fred wanted a good grade on the test. He thought that all he would have to do is tell the teacher he had to go to the bathroom, and instead, go to his locker and look up the answers in his book. He decided not to do it.

Is Fred showing faith?

6. Karen has a test in math today. She is not prepared to take it because she got in late last night and could not study. To get out of taking the test, she thought of going to the office and faking sickness. She decided against that and went to her teacher, and told the truth. Then she asked the teacher if she could take the test tomorrow.

Is Karen showing faith?
7. Albert wants to be popular, so he told some kids that he went out with this very cute girl. Even though he did not really go out with her, he thinks the kids will like him for saying it.

Is Albert showing faith?

8. Karen has a test in math today. She is not prepared to take it because she got in late last night and could not study. To get out of taking the test, she thought of going to the office and faking sickness. She decided against that, and went to her teacher and told her the truth. Then she asked the teacher if she could take the test tomorrow.

Why is this an example of Karen showing her faith?

_____ a. Because Karen did not tell a lie about her teacher.

_____ b. Because Karen did not tell a lie even in the face of being punished.

_____ c. Because Karen did not tell a lie to get out of taking the test.
9. Albert wants to be popular, so he told some kids that he went out with this very cute girl. Even though he did not really go out with her, he thinks the kids will like him for saying it.

Why is this not an example of Albert showing faith?

_____ a. Because Albert told a lie about the kids.
_____ b. Because Albert told a lie so the kids would like him.
_____ c. Because Albert told a lie to get out of being punished.
Section III

A person who will tell the truth even though he might be punished, or be made fun of is showing that he has faith.

A person who will lie because he is afraid he will get in trouble, or be made fun of, is not showing that he has faith.
INSTRUCTIONS

1. I WILL READ YOU SOME VERY SHORT STORIES.

2. IF THE PERSON IN THE STORY IS SHOWING FAITH, MARK THE SPACE ENTITLED YES.

3. IF THE PERSON IN THE STORY IS NOT SHOWING FAITH, MARK THE SPACE ENTITLED NO.

4. IF THE STORY HAS NOTHING TO DO WITH FAITH, MARK THE SPACE HAS NOTHING TO DO WITH FAITH.

5. IF YOU DO NOT KNOW, MARK THE SPACE, DO NOT KNOW.

6. YOU WILL HAVE 10 SECONDS TO ANSWER EACH QUESTION.

7. NOW, TURN THE PAGE AND I WILL READ THE STORIES TO YOU.
1. If Jake did something wrong, he would lie and tell everyone he did not do it, because he would be afraid that they would be angry at him.

**Is Jake showing faith?**

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2. If Rick did something wrong, he would not tell a lie, so no one would know. He would do this even if it meant someone getting mad at him.

**Is Rick showing faith?**

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3. At the malt shop the other day, two boys were making fun of some girls because they were in the dance club at school. After a while they asked Jane, also a member of the dance club, if she belonged to the organization. She was afraid that they would make fun of her also, but she stood up and told them that she belonged to the dance club.

**Did Jane show faith?**

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4. Some kids at school were criticizing and making fun of people who were members of the church. They asked Tommy if he was a member of the church, and even though he was, he told them that he was not. He said that, because he was afraid they would make fun of him.

Is Tommy showing faith?

5. John was afraid that his dad would whip him for getting in so late. So he made up the story that he had a flat tire on the way home.

Did John show faith?

6. Brenda knew her parents would be mad at her for spending all of her money at the show. She thought of telling them that she lost the money. But she finally decided to tell them the correct story.

Did Brenda show faith?
7. Last Wednesday, Randy had to go to Salt Lake City. As he was walking down Main Street, he looked over on the other side of the street and saw some rough looking kids.

Is Randy showing faith?

---

8. Brenda knew her parents would be mad at her for spending all her money at the show. She thought of telling them that she lost the money. But she finally decided to tell them the correct story.

Why is this an example of Brenda showing her faith?

_____ a. Because Brenda did not lie even when she was afraid of what would happen to her if she told the truth.

_____ b. Because Brenda did not tell a lie about her parents.

_____ c. Because Brenda did not lie in order to get more money.
9. John was afraid that his dad would whip him for getting in so late. So he made up the story that he had a flat tire on the way home.

Why is this not an example of John showing faith?

_____ a. Because John told a lie to get his tire fixed.

_____ b. Because John told a lie when faced with the possibility that he would get in trouble for getting in so late.

_____ c. Because John told a lie about his parents.
POST-TEST INSTRUCTIONS

1. I WILL READ YOU SOME VERY SHORT STORIES.

2. IF THE PERSON IN THE STORY IS SHOWING FAITH, MARK THE SPACE ENTITLED YES.

3. IF THE PERSON IN THE STORY IS NOT SHOWING FAITH, MARK THE SPACE ENTITLED NO.

4. IF THE STORY HAS NOTHING TO DO WITH FAITH, MARK THE SPACE HAS NOTHING TO DO WITH FAITH.

5. IF YOU DO NOT KNOW, MARK THE SPACE DO NOT KNOW.

6. YOU WILL HAVE 10 SECONDS TO ANSWER EACH QUESTION.

7. NOW, TURN THE PAGE AND I WILL READ THE STORIES TO YOU.
1. Tim quietly went home and did not tell anyone that he had stepped on and ruined Mrs. Johnson's new plants. When Mrs. Johnson asked him if he knew who had done it, he said he did not know.

Did Tim show faith?

2. A group of boys at a high school wanted to make up a story that John Smith smoked. They wanted to do this because John Smith thought he was so much better than everyone else, because his dad was a church leader. Dick Harrison, a member of the group, decided that he would not go along with the boys who wanted to make up the story.

Did Dick show faith?
3. Trent and Roger were in gym Wednesday afternoon. They were talking about next year's football team. As they were talking the gym teacher walked in.

**Did Trent show faith?**

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**HAS NOTHING TO DO WITH FAITH**

4. Ken told the principal that he saw the boy who stole the coat from the locker. Ken was very frightened when he told the principal, because the boy who stole the coat told Ken that if Ken told anyone he would knock his head in.

**Did Ken show faith?**

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**HAS NOTHING TO DO WITH FAITH**

5. Jeannie's parents are divorced and her father has not been living at home for two years. Jeannie feels bad about this.

**Did Jeannie show faith?**

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<th>YES</th>
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**HAS NOTHING TO DO WITH FAITH**
6. Richard was at home. His parents had already gone to bed, and it was 11:15 p.m. Richard was watching a very good movie. When his father woke up, he told Richard that if it was past 11:00 p.m., Richard should go to bed. Richard wanted to see the rest of the movie, so he told his father not to worry, that it was only 10:30 p.m.

Did Richard show faith?

7. Jay has liked Laurie for two years now, but has never said anything about it. Last week he finally asked her to go to the Junior Prom. When they were at the dance, Jay told Laurie that he had liked her for two years. Laurie said, "That's funny, I have like you for two years also."

Did Jay show faith?
8. Fred called Mike's mother an old witch. Mike told Fred to stop calling his mother an old witch, but Fred would not stop. Mike got mad at Fred. Mike then broke a window and told the owner that Fred did it.

**Did Mike show faith?**

---

9. John remembered that his dad had told him if he caught John using the power saw without his permission, John would have to stay in the house for two weeks. John thought about the stiff penalty as he turned the power saw off. He then went into the house, and his dad said that he thought he heard the power saw going. John told him that it must have been his imagination, that the power saw had not been on.

**Did John show faith?**
10. Mary and her girlfriend went to the show last Thursday. When they got to the show, Mary bought some popcorn, but her girlfriend ate it all. That upset Mary very much. As a matter of fact, Mary was upset for one week. Mary finally talked the whole thing over with the girl, because Mary was afraid she was going to start making up stories about the girl if she didn't.

Did Mary show faith?

11. Jerry's teacher found a red ball point pen on the floor. She asked the class if it belonged to anyone. Jerry thought that would be a nice pen to have, so he raised his hand as if he were the owner. The teacher then gave him the pen.

Did Jerry show faith?
12. Sharla got up in the cupboard, and got her mother's good dishes down. As she was getting the plates down, she broke one of the dishes. Sharla was extremely upset to think what her mother would do to her when she found out. Sharla thought of blaming what happened on someone else. When her mother angrily asked her who broke the dishes, Sharla said she had done it.

Did Sharla show faith?

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13. Terry and Jack have not been friends for a long time. Last week Terry was elected student body president of the high school. Jack told people that Terry cheated in the election. This made everyone mad at Terry. No one knows if Terry did cheat in the election, not even Jack.

Did Jack show faith?

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14. Mary wanted to see the movie, "Midnight Cowboy." She went to the movie house, and the girl at the window told her that no one under 18 years of age was admitted inside. The girl then asked Mary what her age was. Mary paused for a moment. She thought how much she wanted to see the movie, and all she would have to do was say she was 18. She then looked at the girl and said her real age, "I'm 17."

**Did Mary show faith?**

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15. Dick's father was listening to the weather report as he was driving home in his car. When he got home, he told Dick to put the car in the garage, because he heard that it was going to rain.

**Did Dick show faith?**

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16. Albert wanted to go horseback riding very much last Saturday. He went and asked his parents if it was alright that he go. They said no. Albert felt bad. Some of his friends suggested that he tell his parents that he was going to the library to study, but instead go horseback riding. He decided against that, and stayed home, although he thought his parents were wrong.

**Did Albert show faith?**
APPENDIX D
Correct Answers

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*Has nothing to do with faith*
Individual Scores

No. of Correct Answers

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