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A Study on Retention: Based on "A Course in Religion For the Elementary Schools"

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A STUDY ON RETENTION, BASED ON

"A COURSE IN RELIGION FOR THE ELEMENTARY SCHOOLS"

BY

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CHAPTER I

THE PROBLEM

The purpose of the present study is to determine the effect of summer vacation upon retention of factual and assimilative material studied in religion by children in grades three to seven inclusive.

The scope of the investigation is limited to approximately one month's work scheduled for the month of April. The experiment was conducted in nine parochial schools in Chicago. The schools participating in the experiment used the adopted text of the Archdiocese of Chicago: "A Course in Religion for Elementary Schools", and each child had a work-book, which also served as the pupil's text. The tests in the experiment were based on the exercises and tests given in the work-books used by the pupils.

The tests were administered as soon as the study of the units had been completed, and in September the same tests were given to the same pupils. The writer personally administered all the tests. So that no instructions would be given on these units at the beginning of September, the teachers were asked specifically not to review these units, nor to tell the pupils that they would be retested on these units.

The results of the tests have been based on the number of questions answered correctly. The tests in September indicate the measure of retention over a period in which the children have not been under classroom influence.
An effort was made to validate the tests in so far as it was possible to do so. Copies of the tests were sent to experts for their opinion and judgment; and the teachers of the Angel Guardian School, Chicago, cooperated to the extent that the tests were administered to the pupils of that school as a preliminary experiment. The teachers of the Angel Guardian School taught the units at an earlier time than scheduled so that the tests could be given, the results studied, and the necessary revisions made before using the tests in the nine parochial schools participating in the experiment.

There is no question that the purpose of teaching religion is to bring Christian Doctrine into the lives of the children, into their hearts and hands, to make them practice virtue and live religion. But love and service of God presupposes knowledge, as the first answer in the Catechism explains: "God made me to know Him, to love Him, and to serve Him in this world and to be happy with Him forever in the next." And the factors that determine the retention or permanence of knowledge acquired are of primary importance in education.
CHAPTER II

THE PLACE OF MEMORY IN LEARNING

Memory holds an established place in education; it is closely related to the process of learning. Learning cannot take place unless the person remembers what he has learned. Learning involves not only a mastery of the subject matter, but also the retention of what has been mastered. Memory is a power of the mind; but it is not the only power of the mind; nor is it the only power that education must develop (34:205). But it is a power that education must develop so that not only old ideas can be reproduced, but that new ideas may be acquired by means of the old ideas and be incorporated into them. Memory may be defined as the faculty of retaining, reproducing, and recognizing representations of past experiences (26:179). It follows logically that a study of memory resolves itself into a study of the functions of memory: retention, recall, and recognition.

No one person is capable of retaining all that he has learned; nor is there present in his mind at one time all that he has retained (13:188). Although sooner or later all experiences drop out of the mind, some of these experiences are preserved and this preservation of ideas, ideals, and images is called retention. It is a resting state; the learned reaction remains passive in the mind until a stimulus arouses it (44:348). Since some of the experiences can again be recalled, retention means "potential recall" or the capacity that a person possesses to recall (13:188).
Some psychologists consider retention an all-bodily power, others an all-spiritual power, and some others consider it a combination of the two (34:193). Modern psychologists with materialistic tendencies make retention merely an impression on the neurone which makes up the nerve patterns (3:244). They hold that every actual recollection is due to traces left in the brain substance by past experience and to a new nerve impulse that enters the brain where the traces have been left, causing activity (12:238). They believe that retention rests primarily in the brain and is accomplished through the law of habit working on the cortex. Such psychologists fail to recognize in the mind a power intrinsically independent of matter and hence do not distinguish between sensory and intellectual memory. Sensory memory preserves and recalls perceptions acquired through the senses. It does not retain, recall, and recognize sensations, but rather the representations of past sensations (17:91). It is in the case of sensory experiences that the trace exists in the neural system and consists of neural grooves; these grooves gradually disappear unless the sensory experiences are frequently repeated in the same way (13:192).

The intellectual memory is the capacity which the intellect possesses to retain and to reproduce intellective cognitions that have already been acquired (17:91). The intellectual memory recalls abstractions and generalizations. In the case of intellectual experiences it is not so plain that the traces left by the experiences consist of grooves in the nervous system (13:192). Retention is not purely mental; the organism cooperates. The soul is an informing principle dependent on the body; it is not a detached spirit. The body cooperates in conservation and reproduction, just
as it does in the original perception (26:192).

Recall, the second element in memory, is the actual reproduction or revival of the contents of a past experience (13:192). Without the power to recall it would be useless to learn. The mind would be impoverished and each experience would have to be relearned each time. Recall may be spontaneous or voluntary. When experiences come back without any effort and in spite of oneself, they are spontaneous or involuntary. When a deliberate effort is made to bring back to mind what has been experienced, the recall is voluntary. Spontaneous recall is governed by the three laws of association: (1) The law of contiguity refers to time and space. A recalled past experience is given a proper place in the series of past experiences. (2) By the law of similarity is meant that images that resemble one another are recalled. (3) The law of contrast signifies that images representing opposite characteristics are sometimes recalled. (34:199-299). Lindworsky reduces these laws to one chief law of reproduction: "...when a part of an earlier conscious whole becomes conscious, it has the tendency to draw all the remaining parts of this conscious whole with it" (21:203).

The secondary laws of association are concerned with the process of memorizing and should be considered in committing subject matter to memory. These laws are: vividness of impression, frequency of repetition, and recency (1:72). According to the principles of vividness, the more intense the original impression, the more permanent will be the retention and the easier the reproduction. The law of frequency states that the more frequent the connection is made, the more thoroughly the association is formed.
According to the law of recency, the more recent the impression and the fewer the intervening impressions, the more easily a past experience is recalled. These laws are of practical value in training the memory and should be seriously considered by the classroom teacher.

Recognition, the third function of the memory, may be defined as the knowledge that the contents of the present experience has been experienced before. It is this knowledge which makes the contents of the past experience an act of the memory. Recognition implies three facts: (1) a knowledge of the past; (2) a knowledge of one's own past; and (3) the perception of the identity of the object of the past experience and of the object of the present experience (13:197).

The popular belief that children have better memories than adults has been changed by experimentation. Such psychologists as McCarthy (24), Brennan (4), Robinson (35), Kelly (17), and others concede to some difference between the memory of a child and an adult, but they agree that this difference is more apparent than real. The child has an advantage over the adult in "rote memory" because he lacks a background of associated ideas and is not impatient of the drill involved. The adult resents memory drill work, but if he subjects himself voluntarily, he can accomplish the work more thoroughly than the child. In logical memory the adult has an advantage. With his background of ideas he can readily form new associations by some logical connections. The logical memory advances with longest strides during the adolescent age (24:43).

There seems to be no difference between sexes in the power of memory. If there is any difference, it lies in the interest of the individuals
rather than in the inherent traits of the mind (4:248).

In learning a distinction should be made between rote memory and logical memory. Learning by force, that is, by repeating over and over again with little or no attention to the thought expressed is called memorizing by rote. Such repetition strengthens sensory associations. When the material memorized is non-sense material, the term rote memory is synonymous with sensory memory; when the subject matter has meaning, such as a poem or a selection, the thoughts expressed should be clearly understood and logical associations should be formed (13:203). The forming of associations and relationships explains also why the whole method is preferable to the part or piecemeal method of memorizing. The danger in rote memory is that children remember words and do not know the meaning. In teaching religion nothing should be assigned for memorization until it has been explained and illustrated. Then only when children have an understanding of the meaning should they be asked to commit to memory.

At the National Catechetical Congress of the Confraternity of Christian Doctrine, in October, 1936, the Most Reverend John T. McNicholas stated (33:21) that experienced theologians attach more importance to the faculty of memory in youth acquiring a knowledge of Christian Doctrine than do younger and less experienced theologians and lay teachers. Religion differs from other subjects in that the subject matter is dogmatic truths. The Church is slow and accurate in formulating her dogmas and no infallible pronouncement may ever be changed. Bishop McNicholas is of the opinion that it is good for children, just as it is for theologians, to commit to memory
the substance of our holy religion. He does not imply that memory work is all sufficient; he merely stresses that memory holds a more important place than modern education accedes to it. Nor is he alone in his pronouncement. Norsworthy and Whitley agree that modern education almost fears the word drill. "Knowledge as well as habits of all kinds, must be present in the child's mind if he is to make any progress in independent work, and this is only accomplished by memorizing, and often by drill" (31:192-193).

The logical memory implies comprehension. The subject matter must be understood, relations and associations established. All this activity calls into play the reasoning powers. Thought is more important than words. Gruender defines logical memory as "the logical arrangement of thoughts which keep them chained and which raises them to the surface again when they are recalled" (13:205).

Retention implies forgetting. The curve of forgetting as devised by Ebbinghaus in 1885, on non-sense and meaningful material, drops very rapidly at first and then the rate of forgetting is decreased. An experiment made by Ballard in 1913 differed from that of Ebbinghaus (13:208). Children were permitted to study a poem for fifteen minutes. At the end of that time they were told to write what they remembered. That amount was considered 100% for the child. On the next day they were again told to write what they remembered. Other children were tested in the same way but at intervals of two, three, and four days. It was found that children knew as much or more on subsequent days than they did on the first. He obtained the same results with non-sense verse. Gruender (13:206) points out that the curve of forgetting is not a simple problem because many factors enter, such as the
subject matter studied, the method of testing, the method of recall, the
degree of mastery in the initial learning, and others.

Overlearning and drill is necessary in every school subject as well as
in acquiring any important factor in life (17:104). Repetition is one of
the factors that conditions learning. The larger the number of repetitions
the greater is the amount retained.

"It has been shown experimentally that the first repetition
is the most important, probably because the individual pays
closer attention. For each succeeding repetition there is
an added amount of retention up to a certain number after
which the further repetitions have little effect" (16:84).

A study was made by Krueger (10) in which he tried to answer two ques-
tions: (1) Whether the degree of retention will vary proportionally as the
degree of learning is varied from 100% to 200%; and (2) Whether the rela-
tion between the degree of retention and the degree of learning will vary
with the interval between learning and recall. Twelve mono-syllabic words
were presented by a memory drum at the rate of two seconds per word. Two
degrees of overlearning were used 50% and 100%. The range of intervals was
1, 2, 4, 7, 14, and 28 days. The anticipatory verbal and the saving method
were used. Krueger found that as the degree of learning was increased from
100% to 150% the corresponding increase of retention in the interval of one
day was approximately the same and increased rapidly as the length of the
interval between learning and recall was extended. As the degree of learn-
ing was increased from 150% to 200% the corresponding increase in retention
was usually less, all of which indicates that a certain degree of overlearn-
ing at least 50% is highly economical from the standpoint of retention for
intervals of two to twenty-eight days, and the larger the interval the
greater the economy. Further overlearning proved to be uneconomical for most intervals.

For the measuring of retention there are three major methods: relearning, recall, and recognition (7:203). The relearning method as devised by Ebbinghaus (9) consists in learning the material to the point of an errorless reproduction and after a definite period of time to relearn the material to the same degree it was originally learned. The difference in time between the effort required for the original learning and that required for relearning to its original errorless reproduction constitutes the saving of time. Hence this method is called the saving method. The recall method measures the amount of material that can be recalled immediately or at a specified subsequent time. The technique of prompting may be used or omitted. The prompting when used may be anticipatory or it may be given only when needed. The accuracy of retention is measured by the total amount of material correctly reproduced. This technique may be used with any type of material provided the measuring can be carried out on an objective basis.

In the recognition method, the subject is provided with objects or symbols and he is expected to identify these as having been seen or heard of before. The usual method is to have the individual select from a group of concepts or facts those which he has experienced before. The direct question followed by three or four suggested alternate answers, and the incomplete statement are the most common forms used. The reconstruction technique consists in presenting a series of objects or symbols in a given order. Later the individual is required to rearrange these objects in their original order. This technique is especially applicable with concrete and tangible
material. In the present study on retention the recall and recognition methods are used by means of various types of objective tests.

From the study of memory certain rules emerge which aid in the training of the memory. Teachers should distinguish between rote and logical memory. Even in the primary grades an effort should be made to have the child understand and see the connection and association of ideas, according to the laws already discussed. The forming of useful associations and the reinforcement of those associations is fundamental to mental growth. It is important to organize the subject matter so that the more important points will stand out and the less important will be grouped under them. The meaning of material and the proper relationship of ideas affects retention (8:231). The distribution of work over a long period with a rest between, offers the necessary repetitions to deepen the first impression. Spaced repetition, that is, repetition at certain intervals, is more effective than unspaced repetition. Such repetition prevents retroactive inhibition (4:252). Recitation to oneself furnishes the recall necessary; it also enables one to see the important aspects of the subject and helps to fill in gaps which the recitation evidences (43:406). Experimental studies indicate that the whole method is more effective than the part method of memorizing. It provides for understanding, association of ideas and proper relationships. Brennan (4:250) however, states that the subject of whole versus part method is still debatable because such factors as age, training, and subject matter make it irreducible to any general rule.

Interest is an element which no teacher may overlook. Interest in any subject attracts closer attention and concentration. Consistent practice
is necessary for memory, "but in the last analysis the success of any system of memory development depends on the way it builds up a body of interests and aids in acquiring concentration of attention (24:44)."

Sharp (38:197) warns of improper handling of the memory in religion classes. He is in agreement with other religious educators who hold that there must be an inner growth and development, not a mere accumulation of facts. There must be an understanding of the subject matter, hence an adaptation of the material to the capacity of the child. The understanding must be accompanied or followed by an appreciation of the truths learned, and finally an application of practice of the knowledge acquired.
CHAPTER III
PREVIOUS STUDIES ON RETENTION

For a better understanding of the nature of the problem, previous investigations on the effect of summer vacation will be reviewed. Such studies on doctrinal matter in religion are limited, but a review of some of the studies in other subjects may prove beneficial from the standpoint of comparison. It is generally held that subject matter which enters into one's daily life and which the individual has opportunity to utilize is better retained and more readily recalled than material which is not applied.

A study of the effect of summer vacation on the achievement of pupils in the fourth, fifth, and sixth grades was made by Elizabeth Bruene (5) at the University Training School of the University of California in Los Angeles. The Stanford Achievement Test, Form A was administered in May and the following September Form B was given. Reading showed a gain; but there was a detrimental effect on arithmetic computation, a loss of about six months. In reasoning the loss was negligible. Spelling, language use, history and literature showed a loss; nature study and science revealed a slight gain.

In a few of the larger and smaller cities of North Dakota, O.W. Kolberg (18) conducted an experiment of summer-time forgetting. His purpose was to answer the question, "How much does a pupil forget during the summer months?" The Terman Group Test of Mental Ability was administered to
obtain the mental ability. The Van Wagenen American History Scales, Information Scale S 2, was used to measure retention. The scale was given to pupils at the close of their 7th grade history course in May, 1933, and again at the beginning of the 8th grade work in September. The difference of scores was used as an indication of retention.

His study revealed that (1) In case of easy material improvement in knowledge of subject matter rather than forgetting takes place; (2) when an entire range of intelligence is considered there is no relation between I.Q. and retention; (3) the group with an I.Q. above 120 shows superiority in retention of difficult subject matter when compared with I.Q. group below 90; (4) difficult subject matter is forgotten by all I.Q. groups to a greater degree than easy subject matter.

L. D. Morgan (28) studied the effectiveness of specific learning in preventing loss due to summer vacation. The study was conducted in south-eastern Kansas with two classes of sixth grade pupils designated Group X--40 pupils, and Group Y -- 38 pupils. The following tests were administered on May 11, May 25, and September 4: Compass Survey Test in Arithmetic, Form A; Thorndike McCall Reading Scale, Form A; and Otis Reasoning Test in Arithmetic, Form A. Group Y received specific training for two weeks. The same teacher taught both groups. Group Y was given diagnostic tests followed by remedial teaching. After two weeks, just before the closing of school the same test was administered. On September 4, the same tests were given again. The results indicated that Group Y increased over Group X in fundamentals of arithmetic, in reading, and in problem solving.
Morgan concluded that two weeks of specific training is productive of greater efficiency in the three subjects considered. The loss of Group Y exceeded the loss of group X in problem solving. He attributed it to the shortness of the training period. In the fundamentals of arithmetic where greater skill is required, Group Y did not lose to the same degree as Group X. In reading both groups increased in efficiency over vacation. An analysis of errors made before and after vacation showed that 77% of the errors were the same.

Harry E. Elder (10) studied the effect of summer vacation on silent reading ability in the intermediate grades. The Monroe Standardized Silent Reading Test was given to 182 pupils, grades three to six. He separated the pupils in two groups, those above and those below the norm in the May test. In September he found an increase in some of the best and a decrease in some of the poorest. When considered without reference to grade, 59% improved during vacation; 27% lost; 15% remained the same; and 17% passed from below to above standard. The average gain per pupil was four and one half months approximately.

Elder concluded that (1) the ability in silent reading changes whether pupils attend or not; (2) while some pupils read enough during vacation to gain, others in the intermediate grades do not read enough to prevent a loss; (3) time and study were necessary to restore reading habits in September; (4) the increase and decrease in vacation makes the group less homogeneous in September.

In a study conducted by Sister M. Immaculata O.S.B. (4) during the academic year 1929-30, she investigated the relation of method of drill in
addition and subtraction to the permanence of retention. Two methods of
drill were used: (1) the visual, by means of which the examples were pre-
sented to the children in print and the final responses were made in writ-
ing; and (2) the auditory, in which the examples were presented orally and
the pupils' responses were written. These methods were used to determine
their influence on the permanence of skills developed through their use.
The effectiveness of the method was determined by the amount of improvement
retained after intervals of six and ten weeks of non-specific practice.

The results of her study point to the written method as a source of
greater and also more permanent gains. In the process of addition all com-
parable grade groups, except the fourth, gave results which showed the supe-
riority of visual presentation of practice material over auditory, not only
for greater gains but also for greater permanence.

In the process of subtraction the visual presentation again manifested
superiority over the auditory in six out of eight cases. She also found
that there is a direct relation between the amount learned and the amount
retained. The results of the study indicate that the permanence of gains
in arithmetic skills is directly related to the age of the children. Older
children retain more than younger children. Sister M. Immaculata concludes
from her study that there is probably little need for much intensive drill
at the beginning of the fall semester to re-establish a firm basis for fur-
ther work because children lose but little of their degree of efficiency in
such skills. The loss they sustain is insignificant compared to the gains
they have made. The loss in the lower grades is greater than in the higher
grades, and the amount of loss in subtraction is greater than in addition.

Mildred V. W. Patterson (32) studied the effect of summer vacation on children's ability in reading and arithmetic in the New York city schools of 149 children distributed in grades four to eight. The children were divided into three groups according to their intelligence quotient. Children with an I.Q. of 110 and upward were classified as supernormal, those with an I.Q. of 90 to 110 as normal, and those below as subnormal. The Haggerty Intelligence Test was used. In grades 4 to 6, Woody-McCall Mixed Fundamentals Test was given; in grades 7 and 8, Woody Scales, Multiplication Scale B. All pupils were given the Thorndike McCall Silent Reading Test. The same tests were given in the middle of June and in the middle of September.

Patterson found that all classes made better records in intelligence after the summer vacation. The normal group of children gained most, the super-normal less, and the subnormal least. Vacation seemed to have little effect on reading ability; the subnormal group seemed to have retained most, while the supernormal lost slightly as did also the normal group of children. In agreement with other studies it was found that vacation was detrimental to arithmetic. All groups lost except the supernormal group of grades 7 and 8. However, when tabulated according to grades only, all grades lost.

M. J. Nelson (30) studied the amount of time required under ordinary conditions in the fall for pupils to reach again the spring level of achievement. The study was conducted in spelling and in the fundamentals of
arithmetic. Pupils of grades 7B, 5A, and 3A were included. The Courtis
Standard Research Arithmetic Test and the Morrison McCall Spelling Test
were used. The first form of the test was administered in May, 1926; the
second form was given in September. Successive forms were given at inter­
vals of two weeks until six weeks had elapsed. Finally the tests were
repeated just before Christmas, after school had been in session for fif­
ten weeks.

The results showed that Grade Seven had regained the spring level of
achievement in speed in solving arithmetic problems, involving only funda­
mental processes at the end of four weeks after the opening of school. In
the number of problems solved correctly, they reached the spring level after
six weeks and in spelling within two weeks. Grade Five had regained the
spring level of achievement shortly after the end of the six weeks period
and some time prior to the Christmas test, also in spelling. It required
the pupils of Grade Three six weeks to again reach the spring level of
achievement. Contrary to the deductions of Sister M. Immaculata, Nelson
concluded that it was beneficial to review the fundamentals at the beginning
of the school year and that where deterioration is slight such reviews ap­
pear to increase the achievement far above the level obtained in the pre­
vious school year.

In her study on the effects of summer vacation upon the retention of
elementary school subjects, Sister M. Irmina agrees with Sister Immaculata
in that the deterioration caused by the vacation months is not a serious
handicap. The purpose of her study was twofold: (1) whether the summer
vacation has a significant effect upon the retention of elementary school subjects for children in grades one to seven, and (2) whether the loss sustained during summer vacation is persistent or whether the June efficiency is quickly regained. Three schools from three distinct parts of the country with a total of 1184 pupils were included in the study. The achievement of the pupils in the school subjects was measured in June and again in September by means of standardized tests, both general and specific. The tests were repeated at the end of September for comparison with the two previous tests.

In reading, the loss in grade one was found to be so slight that it might be disregarded; all other grades indicated no change with a possible tendency to gain in the power of comprehension. In the rate of comprehension there was a slight decline. The type of reading affected most, varied in the grades and in the individuals. Ability to read directions showed the greatest loss and reading for detail the greatest gain. Rapid progress was made in all grades and in all types of reading immediately after the opening of school. From this Sister Irmina concluded that progress is not hindered by vacation; on the other hand, that vacation promotes zeal and interest.

For arithmetic computation in rate and power a loss in ability was evident and usually the loss was significant. The intermediate grades did not regain their June efficiency at the end of September. The loss in the power tests was greatest in the primary grades, and in all grades the loss of power was greater than that of rate. The process of subtraction was
least affected, that of multiplication most. In spelling the loss was found to be consistent in all grades. All grades showed equal ability in improvement, but only the seventh grade completely regained the June efficiency. The content subjects showed a gain.

Sister Irmina concludes from her study that changes in the elementary school subjects over summer vacation occur independently of one another and independently of changes in mental ability. She also draws the logical conclusion that the emotional disturbances due to restraint at the beginning of September demand adjustment of the child. As soon as he becomes adjusted to the entire atmosphere of the new classroom he regains quickly.

"The Sower" of 1933 (39) reports an experiment conducted in England with sixteen subjects varying in age from fourteen to forty years. The purpose of the experiment was to test how much of the catechism learned in school was remembered in later life. Eleven questions on the fundamental truths of religion were asked. The requirements were: first an answer in Catechism terms; if that could not be given then in any wording at choice; if that too failed then the testee was asked whether he had any idea whatever of what the questions meant. Although most of the persons claimed to have known the catechism very well at one time, they doubted whether some of the questions asked were really in the catechism. The youngest candidate, only fourteen years old, had a record of being an excellent student, but in his answers he gave only three correct, three were partially correct, and five answers were entirely wrong.
The results of the experiment may be summarized as follows:

Total number of questions asked 176
Total number of correct catechism answers 23
Total number incomplete but fairly satisfactory attempts 50
Total number of unsatisfactory attempts 31
Total number with no idea of answer 51
Total number quite wrong in substance 21

In 1935 "The Sower" (40) again reported data on an experiment made by the same person who had carried on the experiment reported in the "Sower" of 1933 (39). His purpose in this experiment was to test the validity of the claim put forward by many that "for the future the memory will provide", that is, to test the results that follow from studying the catechism, getting it "word perfect" and letting this knowledge provide for the future of the pupils. The school in which the experiment was carried on has the name of being a good school and the Diocesan Inspector gave a most satisfactory report for the preceding year. For four months after the report, from September to December, the time in the "top class" was spent in studying the gospels and following up the feasts and devotions of that particular time of the year. Then twenty-three children who had been examined by the Inspector were tested each orally and separately on twelve questions which had been chosen either because of their doctrinal importance or because they were the actual ones asked by the Inspector at the last examination.

The total number of questions asked was 288; out of these 68 were answered correctly and 23 partially correct. The author states that after viewing the results he ceases to wonder why so little is remembered by those who have left school for several years. The author intimates that the religion period should not be a time for storing the memory of the child but a
happy time in which the child steadily imbibes impressions that will impel to practice. But he adds that the pupils lost four months of Catechism work and at their next examination they received just one word "fair".

In both experiments the number of testees included is too small to draw any general conclusions.

In a survey reported in the "Orate Fratres" under "Timely Tracts", Reverend Virgil Michel (27) reports another disappointment in testing the religious knowledge of public high school students who had attended a Catholic parochial school. The following five questions comprised the test:

1. What is meant by the Blessed Trinity?
2. What is meant by the fall of man?
3. How many persons are there in Christ?
4. What is the Church?
5. Mention the ten commandments.

The results proved disconcerting. The freshmen students averaged a total of 45% in their answers, the sophomores made 30%; the juniors 29%, and the seniors 36.5 per cent. Reverend Michel stated that the conditions at home, in school, and in general were favorable for successful religious teaching. The priests who conducted the experiment are convinced that the fault lies in the whole attitude and in the approach to the problem of teaching religion, not merely in the method of teaching.

A study of the scores of "The Religion Placement Test for College Freshmen" (23) reveals some interesting data. The test has as its sole purpose to serve as a criterion for placing college freshmen in religion. The test consists of the various types of objective tests; the highest possible score in the revised edition is 152; and the time required for giving the test is fifty minutes. The scores reveal a wide difference of knowledge
among Catholic students entering college, a wide difference between the graduates of Catholic high schools and public high schools. The test was administered to 7000 students in 73 Catholic colleges. Of these, thirty-six colleges submitted a report on 2948 students. The scores of these thirty-six colleges were analyzed. The median score of the students with twelve years of Catholic school training was 95; the median for those with eight years of Catholic school training was 76; and the median for students with twelve years of public school training was 53. These scores indicate that the high school student grasps and retains doctrinal matter better than the elementary school pupil.

Of the thirty-six colleges fourteen were men's institutions, nineteen were women's, and three were coeducational. The median of the scores of the women excelled those of the men. With one exception, the median of ten women's institutions equalled or excelled the highest median in the men's group.

The data shows evidence that the Catholic high school is accomplishing something in religion, and Sister M. Loyole intimates there may be contributing causes besides the method and thoroughness of instruction. She aptly suggests that the rate of forgetting doctrinal matter in religion be compared with the rate of forgetting other subject matter. It is only through experimental study that this can be accomplished and the field of religion provides fertile soil.
CHAPTER IV
THE EXPERIMENT

A more satisfactory way, perhaps, of studying the retention of religious doctrine would be to determine the retention of pupils after they have left the influence of the classroom for a period of several years to ascertain what they are actually practicing in everyday life. But since both time and circumstances do not permit such an extensive study, it was decided to study the problem of retaining factual knowledge with a larger number of pupils over one summer vacation. The experiment was conducted during the school year 1936-37.

Two thousand and seven pupils from nine parochial schools in Chicago participated in the study. The schools were selected at random from different parts of the city. The nine schools are under the care of eight different religious communities. The writer was not personally acquainted with the sisters in charge of the schools, except those of one school conducted by the community of which the writer is a member. With very few exceptions the children are American born and speak English in the homes.

The investigation comprises the work of grades three to seven inclusive. Only the work of those pupils who were present at the administration of both tests could be considered. The absence of pupils at either time necessitated the elimination of a considerable number. Grade eight was not included in the study since the graduates would not be available in September. Grades one and two were omitted for two reasons: (1) A different type
of technique would be called for; and (2) primary pupils do not take the
diocesan tests.

The experiment is restricted to the study of religious doctrine. It
is further limited by testing approximately four weeks' work usually stu-
died in April. The first test was administered in May and the same test
was given to the same pupils a few days after school opened in September.
All the schools included in the study use the diocesan adopted textbook
"A Course in Religion for Elementary Schools," by Rev. Alexander P.
Schorsch, C. M., and Sister M. Dolores Schorsch, O.S.B. The method of
teaching is the unit plan based on the Morrisonian technique with its five
step procedure: exploration, presentation, assimilation, organization, and
recitation. The entire course is built around the person of Christ. Each
grade has its own general objective with specific objectives for each unit.

For each grade there are two books, the Teacher's Guidebook and the Work-
book (29). The Teacher's Guidebook explains the technique. Suggested ques-
tions for exploration are given, also a complete presentation for each unit,
assimilation questions, character guidance, word lists, facts concerning the
liturgical year, correlated pictures, poems, and hymns. The work-book is
placed in the hands of the pupil and serves the twofold purpose of work-book
and text. It is illustrated and contains exercises of various types: scrip-
tural quotations, poems, problems, puzzles, directions for project work, and
from the fifth grade on, Bible hunts.

Each unit usually has four activities, which means that the entire unit
is re-presented from four different angles an in as many different ways. The
activities are in the form of the various types of objective tests, questions, and exercises. The tests used in the experiment were based on the exercises in the work-books. Although the wording of the test questions was generally followed, the exact wording was not always found advisable since the questions in the work-book are sometimes connected with the question preceding or are linked with the one following. In selecting the test items those points which were considered more important were given preference, and then only were the less important included. Furthermore, that type or form of test item was chosen which was judged the best form of expressing the thought. It was intended to have the various types of objective test forms, such as completion, multiple choice, true-false, matching or association well-balanced, but the material of the units accounts for the reason why one or the other type of question predominates in some of the tests.

An effort was made to validate the tests, but a true validation under the circumstances was impossible. The test questions were sent to teachers, supervisors, priests, and other experts in the teaching of religion for their opinion and suggestions. The cooperation of those consulted induced the writer to make several changes especially in the wording of some of the test items. Two of the persons consulted suggested the elimination of true-false items, but this suggestion was not followed because (1) the work-books contain this type of test; and (2) the semester diocesan tests have been including true-false tests. The authors of the unit plan as taught in the Chicago diocesan schools defend this form of testing:
"This activity, (true-false test) besides serving as a means for bringing about the repetition of vivid conception and understanding of the content of the unit, serves also to develop in the child the habit of discrimination. In the motor field it may be true that false movements slow down the acquisition of habits, although it is also true that the effort to eliminate all false movements results often in the loss of time and the elimination is practically impossible. But in the field of knowledge it is not true that the thinking of erroneous ideas is injurious to knowledge, rather is the thinking of them profitable and necessary. The human mind conceives ideas clearly by comparing them with their opposites and contradictories. The true becomes clear with its contrast with the false. If we desire to make the idea of one God clear, we contrast it with the idea of many gods; if we desire to make the idea of a free will clear, we compare it with the idea of a deterministic will. To have in mind ideas only in their existing relationship would not make these ideas clear. Because of this fact philosophy contrasts its position with the position of its opponents. Of course, if we were to think only false ideas, but also were to think them to be true this would be injurious to the habit formation of knowledge. In the true-false activity the child is not asked to accept the false statements but to discriminate between the false and the true. Even though it were possible to acquire the truth without contrasting it with the false, the child that acquired knowledge in this way alone would not be prepared for the society in which he must live. The present world is filled with contradictory statements in the spoken and written word. Even the child in the primary grades lives amid true and false statements. To get along in such a world the habit of discriminating between truth and error is necessary. The true-false activity in its various forms tends to develop this habit of discrimination. Because of this tendency the true-false activity also tends to increase curiosity and attention and, because its being easy, confidence (37:439-90).

Another effort at validating the tests was made by administering the first draft of the tests to the pupils of the Angel Guardian School as a preliminary experiment. The teachers of this school taught the units included in the experiment at a date earlier than scheduled. As soon as the units had been taught, the tests were administered, the results studied,
TABLE I -- Listing the Units for Each Grade and the Total Test Items for Each Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total Test Items</th>
<th>Units</th>
<th>Title of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>35</td>
<td>17</td>
<td>Extreme Unction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td>What To Do When the Priest Gives the Sacraments to the Sick</td>
</tr>
<tr>
<td></td>
<td></td>
<td>19</td>
<td>The Sacrament of Baptism</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
<td>23</td>
<td>Christ Sends the Holy Ghost</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24</td>
<td>The Nature of Confirmation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25</td>
<td>Reception of Confirmation</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
<td>22</td>
<td>Humility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23</td>
<td>Temperance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24</td>
<td>Meekness</td>
</tr>
<tr>
<td>6</td>
<td>50</td>
<td>23</td>
<td>Good Works</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24</td>
<td>Through the Church We Gain Merits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25</td>
<td>The Church Aids Us by Indulgences</td>
</tr>
<tr>
<td>7</td>
<td>55</td>
<td>20</td>
<td>The Church is a Valid Witness to Christ and to Herself</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21</td>
<td>The New Testament is a Witness to Christ and His Church</td>
</tr>
</tbody>
</table>
and necessary changes were made before using the tests in the schools included in the experiment.

Table I presents a list of the units on which the tests have been based. As soon as the school participating in the experiment had completed a study of the units, the writer called personally to administer the tests. To eliminate reading difficulties, the instructions and the test items were read aloud to all the children in the third grade. In grades four, five, six, and seven a uniform method of procedure was followed. The children were informed that the results of the tests would not be checked on their report cards, but that they were important for other reasons. The children responded whole-heartedly when asked to answer as many questions correctly as they could. The ready response of the pupils was, no doubt, due to a great extent to the willing cooperation of the teachers.

The first tests were administered at the beginning of May. Since, however, the pupils take the diocesan semester examinations during the first week in June, the units were undoubtedly reviewed as a preparation for the examination. But during the summer vacation and to the time of the retest very shortly after the opening of school in September the units were not reviewed or studied. No copy of the tests was left in the hands of the teachers, who were informed of the purpose of the study and were consequently asked not to review the units in September nor to tell the children that a retest would be given. All the tests were administered by the writer, and the retest, a few days after the opening of school, came as a surprise to the children.
On account of an infantile paralysis epidemic in Chicago the opening of schools was delayed till September 27, which extended the usual summer vacation approximately three weeks.

The results of the tests have been based on the number of questions answered correctly. All tests were scored twice by competent persons. The May tests were scored and tabulated during the summer months. The scores of each individual child were tabulated under the respective school and grade. The tabulation sheet of each grade presented a picture showing the loss or gain of the individual pupil. Red pencil was used to check the errors of the first test and blue to indicate those of the second test.

Since, however, the purpose of the study is merely retention and the schools were taken as a sampling, the report will not be made of the separate schools, but all the third grades of the nine schools will be grouped under the third grade. The other grades will be treated in the same way.

The first step in measuring the retention was to draw up a distribution table to find the mean and the standard deviation for each test in May and for each retest in September. For uniformity a class interval of two was used in the tests for all the grades. Table II to VI inclusive, present a complete frequency distribution for each of the grades tested, and a comparison between the first test and the retest in September.

The next step was to find the difference between the mean of the first test and retest of each grade. Since the study is concerned with changes in scores, it was necessary to find the reliability of such differences as exist.
TABLE II -- A Frequency Distribution for Grade Three, Showing a Comparison between the Test Administered in May and the Retest in September.

<table>
<thead>
<tr>
<th>Class Interval</th>
<th>Frequency for the Test in May</th>
<th>Frequency for Retest in September</th>
</tr>
</thead>
<tbody>
<tr>
<td>34-35</td>
<td>110</td>
<td>68</td>
</tr>
<tr>
<td>32-33</td>
<td>124</td>
<td>117</td>
</tr>
<tr>
<td>30-31</td>
<td>75</td>
<td>77</td>
</tr>
<tr>
<td>28-29</td>
<td>44</td>
<td>69</td>
</tr>
<tr>
<td>26-27</td>
<td>34</td>
<td>31</td>
</tr>
<tr>
<td>24-25</td>
<td>14</td>
<td>24</td>
</tr>
<tr>
<td>22-23</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>20-21</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>18-19</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>16-17</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14-15</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>12-13</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Number of Pupils ......................... 417

Mean for the Test in May ....................... 31.02
Standard Deviation for the Test in May ...... 3.52

Mean for the Retest in September .......... 30.04
Standard Deviation for the Retest in September 3.78
TABLE III -- A Frequency Distribution for Grade Four, Showing a Comparison between the Test Administered in May and the Retest in September.

<table>
<thead>
<tr>
<th>Class Interval</th>
<th>Frequency for the Test in May</th>
<th>Frequency for Retest in September</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-42</td>
<td>60</td>
<td>21</td>
</tr>
<tr>
<td>38-39</td>
<td>146</td>
<td>90</td>
</tr>
<tr>
<td>36-37</td>
<td>91</td>
<td>128</td>
</tr>
<tr>
<td>34-35</td>
<td>40</td>
<td>69</td>
</tr>
<tr>
<td>32-33</td>
<td>33</td>
<td>45</td>
</tr>
<tr>
<td>30-31</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>28-29</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>26-27</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>24-25</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>22-23</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>20-21</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>18-19</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Number of Pupils ......................... 401

Mean for the Test in May ..................... 36.68
Standard Deviation for the Test in May ...... 3.30

Mean for Retest in September ............... 35.28
Standard Deviation for Retest in September.. 3.76
TABLE IV -- A Frequency Distribution for Grade Five, Showing a Comparison between the Test Administered in May and the Retest in September.

<table>
<thead>
<tr>
<th>Class Interval</th>
<th>Frequency for the Test in May</th>
<th>Frequency for Retest in September</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-52</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>48-49</td>
<td>65</td>
<td>42</td>
</tr>
<tr>
<td>46-47</td>
<td>67</td>
<td>56</td>
</tr>
<tr>
<td>44-45</td>
<td>65</td>
<td>63</td>
</tr>
<tr>
<td>42-43</td>
<td>51</td>
<td>62</td>
</tr>
<tr>
<td>40-41</td>
<td>24</td>
<td>38</td>
</tr>
<tr>
<td>38-39</td>
<td>25</td>
<td>33</td>
</tr>
<tr>
<td>36-37</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>34-35</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>32-33</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>30-31</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>28-29</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>26-27</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>24-25</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Number of Pupils ......................... 359

Mean for the Test in May ....................... 44.10
Standard Deviation for the Test in May ....... 5.22

Mean for Retest in September .................. 42.68
Standard Deviation for Retest in September ... 4.82
TABLE V -- A Frequency Distribution for Grade Six, Showing a Comparison between the Test Administered in May and the Retest in September.

<table>
<thead>
<tr>
<th>Class Interval</th>
<th>Frequency for the Test in May</th>
<th>Frequency for Retest in September</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-52</td>
<td>67</td>
<td>32</td>
</tr>
<tr>
<td>48-49</td>
<td>150</td>
<td>90</td>
</tr>
<tr>
<td>46-47</td>
<td>94</td>
<td>103</td>
</tr>
<tr>
<td>44-45</td>
<td>48</td>
<td>72</td>
</tr>
<tr>
<td>42-43</td>
<td>25</td>
<td>43</td>
</tr>
<tr>
<td>40-41</td>
<td>24</td>
<td>26</td>
</tr>
<tr>
<td>38-39</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>36-37</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>34-35</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>32-33</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>30-31</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>28-29</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>26-27</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>24-25</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Number of Pupils .................................. 434

Mean for the May Test .................................. 46.38
Standard Deviation for the May Test ................. 3.84

Mean for the Retest in September .................. 44.36
Standard Deviation for the Retest in September.. 4.88
TABLE VI-- A Frequency Distribution for Grade Seven, Showing a Comparison between the Test Administered in May and the Retest in September.

<table>
<thead>
<tr>
<th>Class Interval</th>
<th>Frequency for Test in May</th>
<th>Frequency for Retest in September</th>
</tr>
</thead>
<tbody>
<tr>
<td>54-55</td>
<td>57</td>
<td>29</td>
</tr>
<tr>
<td>52-53</td>
<td>82</td>
<td>70</td>
</tr>
<tr>
<td>50-51</td>
<td>75</td>
<td>65</td>
</tr>
<tr>
<td>48-49</td>
<td>55</td>
<td>70</td>
</tr>
<tr>
<td>46-47</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>44-45</td>
<td>26</td>
<td>36</td>
</tr>
<tr>
<td>42-43</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>40-41</td>
<td>16</td>
<td>28</td>
</tr>
<tr>
<td>38-39</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>36-37</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>34-35</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>32-33</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>30-31</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>28-29</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>26-27</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Total number of Pupils: 396

Mean for the Test in May: 48.92
Standard Deviation for the Test in May: 4.68

Mean for the Test in September: 47.72
Standard Deviation for the Retest in September: 4.82
The tests under consideration represent correlated measures; hence a correlation table was drawn up for each grade and from this was obtained further necessary calculations: the standard error of each test, and the standard error of the difference between the means. The standard error rather than the probable error was used because the former is considered more reliable. Each of these steps will be explained.

In finding the correlation between the test and retest of each grade the Pearson Product Moment formula as given on the correlation sheets published by G. M. Ruch and G. D. Stoddard was used. The study is not directly concerned with correlation between the two tests, but the correlation coefficient was necessary to find the reliability of the difference between the means of the test and the retest.

In finding the standard error of the mean the following formula given in Garrett's "Statistics in Psychology and Education" (11:201) was used:

\[ \sigma_{\bar{X}} = \frac{\sigma}{\sqrt{N}} \]

It is read as follows: The standard error of the mean of the test is equal to the standard deviation, or sigma, of the distribution divided by the square root of the number of cases in the distribution. "The standard error of the mean measures the extent to which the mean is affected by errors of measurement as well as by fluctuations which arise from measuring. The reliability of an obtained mean increases as the standard error of the mean decreases" (11:202).

The standard error can be explained more clearly by an example. In Grade Three the standard error of the mean is equal to 3.52 (the standard
deviation) divided by the square root of 417 (the number of cases in the
distribution). We find the result to be .17, which may be interpreted in
the following way. The chances are 68 in 100 that the true mean lies with-
in the limits 31.02 (the obtained mean) -.17 and 31.02 + .17, or between
30.85 and 31.19. One may be practically certain that the true mean lies
between 31.02 ± 3 x .17 or between 30.51 and 31.53.

The next step was to find the standard error of the difference of the
means. The following formula from Garrett's, Statistics in Psychology and
Education (11:218) was used:

\[
S. \text{D. diff} = \sqrt{\frac{\sigma_x^2}{n_x} + \frac{\sigma_y^2}{n_y} - 2r \frac{\sigma_x}{\sqrt{n_x}} \frac{\sigma_y}{\sqrt{n_y}}}
\]

In this formula \(x\) stands for the May test and \(y\) for the retest in September.
In Grade Three we find that the obtained difference of the means is -.98
and the standard error, found according to the formula, is .13. The ob-
tained difference of the means may be interpreted in the same way as a mean
is interpreted in terms of its standard error. Hence we say that the chan-
ces are 68 in 100 that the obtained difference -.98 does not differ from
the true difference by more than ±.13, and that the chances are practically
certain that the obtained difference does not differ from the true differ-
ence by more than ±3 x .13, or .39.

The final step was to find whether this difference was reliable and
significant. This was done by dividing the difference by standard error of
the difference, \(D/\sigma_{\text{diff}}\). The quotient indicates the reliability of the ob-
tained difference. It is an accepted fact in statistics that if the
TABLE VII -- Results of May Test. Showing Complete Data for Each Grade.

<table>
<thead>
<tr>
<th>Grade</th>
<th>No. of Pupils</th>
<th>Total Test Items</th>
<th>Range</th>
<th>Mean</th>
<th>S. D.</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>417</td>
<td>35</td>
<td>12-35</td>
<td>31.02</td>
<td>3.52</td>
<td>.17</td>
</tr>
<tr>
<td>4</td>
<td>401</td>
<td>40</td>
<td>18-40</td>
<td>36.68</td>
<td>3.30</td>
<td>.16</td>
</tr>
<tr>
<td>5</td>
<td>359</td>
<td>50</td>
<td>26-50</td>
<td>44.10</td>
<td>5.22</td>
<td>.27</td>
</tr>
<tr>
<td>6</td>
<td>434</td>
<td>50</td>
<td>26-50</td>
<td>46.38</td>
<td>3.84</td>
<td>.18</td>
</tr>
<tr>
<td>7</td>
<td>396</td>
<td>55</td>
<td>30-55</td>
<td>48.92</td>
<td>4.68</td>
<td>.24</td>
</tr>
</tbody>
</table>
### TABLE VIII -- Results of September Test. Showing Complete Data for Each Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>No. of Pupils</th>
<th>Total Test Items</th>
<th>Range</th>
<th>Mean</th>
<th>S. D.</th>
<th>( \sigma \text{Mean} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>417</td>
<td>35</td>
<td>14-35</td>
<td>30.04</td>
<td>3.78</td>
<td>.19</td>
</tr>
<tr>
<td>4</td>
<td>401</td>
<td>40</td>
<td>18-40</td>
<td>35.28</td>
<td>3.76</td>
<td>.14</td>
</tr>
<tr>
<td>5</td>
<td>359</td>
<td>50</td>
<td>24-50</td>
<td>42.68</td>
<td>4.82</td>
<td>.25</td>
</tr>
<tr>
<td>6</td>
<td>434</td>
<td>50</td>
<td>24-50</td>
<td>44.36</td>
<td>4.88</td>
<td>.23</td>
</tr>
<tr>
<td>7</td>
<td>396</td>
<td>55</td>
<td>26-55</td>
<td>47.72</td>
<td>4.82</td>
<td>.24</td>
</tr>
</tbody>
</table>
difference in loss or gain is at least three times as great as the standard error, it may be concluded that the difference is reliable and significant; or in other words, that the true difference between the mean scores of the two tests is greater than zero. A ratio greater than 3.0 may be accepted as so much additional security. Since all the ratios obtained range from 6.66 to 13.47, the reliability in every grade is significant.

Table VII presents complete data for the tests administered in May; Table VIII for the retests in September. Table IX shows a comparison of the results of both tests with additional data.

The column titled "Mean Diff." in Table IX indicates the difference between the mean scores of the first test and the retest. All grades show a slight loss which is indicated by the minus sign preceding the score. The column headed "diff." shows the sigma or standard error of the difference between the two mean scores. The last column "D/σ_diff." denotes the ratios between the difference and the standard error of the difference of the means, or the reliability and significance of the standard error of the means.

The tests are a measure of factual knowledge, and not of appreciation or actual practice. There is no doubt that "living" one's religion is the most essential element and the final goal of teaching religious doctrine. This study does not wish to minimize its importance, but no effort was made to measure appreciation or character development since such measurements are somewhat intangible and require a different method of procedure and technique.

Table IX reads that 417 pupils in Grade Three took the May test and the retest in September. The test consisted of 35 total test items. For the
TABLE IX -- Showing a Comparison of Changes in Mean Scores, Standard Deviations, and the Reliability of the Mean Scores

<table>
<thead>
<tr>
<th>Grade</th>
<th>No. of Pupils</th>
<th>Total Test Items</th>
<th>Mean May Test</th>
<th>Mean Sept. Test</th>
<th>S.D. May Test</th>
<th>S.D. Sept. Test</th>
<th>Mean Diff.</th>
<th>$\sigma$ diff.</th>
<th>$D$ $\sigma$ diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>417</td>
<td>35</td>
<td>31.02</td>
<td>30.04</td>
<td>3.52</td>
<td>3.78</td>
<td>-.98</td>
<td>.13</td>
<td>-7.54</td>
</tr>
<tr>
<td>4</td>
<td>401</td>
<td>40</td>
<td>36.68</td>
<td>35.28</td>
<td>3.30</td>
<td>3.76</td>
<td>-1.40</td>
<td>.17</td>
<td>-8.23</td>
</tr>
<tr>
<td>5</td>
<td>359</td>
<td>50</td>
<td>44.10</td>
<td>42.68</td>
<td>5.22</td>
<td>4.82</td>
<td>-1.42</td>
<td>.21</td>
<td>-6.76</td>
</tr>
<tr>
<td>6</td>
<td>434</td>
<td>50</td>
<td>46.38</td>
<td>44.36</td>
<td>3.84</td>
<td>4.88</td>
<td>-2.02</td>
<td>.15</td>
<td>-13.47</td>
</tr>
<tr>
<td>7</td>
<td>396</td>
<td>55</td>
<td>48.92</td>
<td>47.72</td>
<td>4.68</td>
<td>4.82</td>
<td>-1.20</td>
<td>.18</td>
<td>-6.66</td>
</tr>
</tbody>
</table>
In the fourth grade the total test items number was 40. The test was administered to 401 pupils. The mean of the May test is 36.68 and the standard error of the mean is .16 (Table VII), with the chances 68 in 100 that the true mean lies between the limits of 36.52 and 36.84; and a practical certainty that the true mean lies between 36.20 and 37.16. For September the mean is 35.28 and the standard error is two points less than in the first test, namely, .14 (Table VIII), with the chances 68 in 100 that the true mean lies between 35.14 and 35.42, and practical certainty that it lies between the limits of 34.86 and 35.70. The difference of the means, as given on Table IX is -1.40, and the standard error of the difference is .17. The ratio of reliability of the difference is -8.23. Again its magnitude decides that the reliability of the loss sustained is significant.
The fifth grade test consisting of fifty items was taken by 359 pupils. The mean for the first test is 44.10, as given on Table VII, and a standard error of .27. The standard error may be interpreted that the chances are 68 in 100 that the true mean lies between 43.83 and 44.37; and the chances are practically certain that it lies between the limits of 43.29 and 44.91. For the retest the mean is 42.68 and the standard error .25 (Table VIII), slightly less than in the first test. The reliability of the obtained mean is that the chances are 68 in 100 of the true mean lying between 42.43 and 42.93 and practical certainty of its being between 41.93 and 43.43. The difference of the means as shown in Table IX, is -1.42, almost identical with that of the fourth grade. The standard error of the difference is .21 and the ratio between the difference and the standard error of the difference is -6.76, again significant and reliable.

The sixth grade test also included fifty items and the group tested numbered 434. The mean for May is 46.38 and the standard error .18 (Table VII). The chances are 68 in 100 that the true mean does not diverge from the obtained mean more than ± .18, that is, it lies between the limits of 46.20 and 46.56; and the chances are 99 in 100 that it lies between 45.84 and 46.92. For September the mean was 44.36 and the standard error .23; the chances are 68 in 100 that the true mean lies between 44.13 and 44.59 and practical certainty that it is within the limits of 43.67 and 45.05. The difference between the means is -2.02 (Table IX), the greatest loss sustained in any of the grades. The standard error of the difference is .15 and the reliability ratio -13.47, both significant and real.
In the seventh grade 396 pupils took the test which contained fifty-five items. In May the standard error of the mean is .24 (Table VII) and the mean 48.92. The reliability of this obtained mean is that the chances are 68 in 100 of the true mean lying between 48.68 and 49.16, and 99 in 100 of its being between the limits of 48.20 and 49.64. For September the standard error of the means is also .24 (Table VIII) and the mean 47.72. The limits within which the true mean lies 68 times in 100 are 47.48 and 47.96, and the limits of practical certainty of the true mean are 42.00 and 48.44. The difference of the means is -1.20 (Table IX) and the standard error .18. The ratio of reliability is -6.66, denoting significance.

The total test items of the pupils vary, some show a gain, others a loss, and still others scored the same on both tests, even to making the same errors. It is not surprising that some of the pupils had a higher score on the second test. It has already been explained that the units were undoubtedly reviewed before the closing of school for the diocesan semester examinations and wrong impressions were probably corrected in some cases. The greatest number of errors was made on the completion tests; some of these test items called for the completion of definitions and quotations; for example, in the sixth grade a large number of pupils failed in both tests on the definition for mortification.

All grades sustained a loss, the greatest seemed to occur in the sixth grade and the least in the third. In the latter grade the instructions and test items were read to the children, thereby eliminating reading difficulties. The losses sustained are not great, but in each case they are real and significant.
CHAPTER V

SUMMARY AND CONCLUSIONS

In answer to the question, "What is the effect of summer vacation on the retention of religious doctrine?" the results of the present study indicate a loss in all grades. In terms of scores the amount lost is not great in any grade, but in each grade it is reliable and significant.

This study did not set out to indicate a comparison of loss or errors on the various types of test forms, but a glance at the tabulation sheets shows a considerable loss in completion tests, especially in those requiring the completion of a quotation or a definition. Previous studies on religious doctrine, as referred to in Chapter III, reveal little retention or much forgetting. The testing in those studies was made by requiring either the definition verbatim or the definition in the subject's own words. It is readily recognized that such a type of memory work differs from the objective test items in which recall and chiefly recognition are demanded.

The fact that a number of pupils made the same errors in the second test indicates that the wrong impression made when the material was first presented had not been corrected, even in the review for the diocesan examination. A tabulation of the errors of each pupil on a sheet would give the teacher a picture of the standing of the individual pupil. Such information serves as a guide in diagnostic and remedial teaching. In religion even more than in other school subjects the correct impression is of
the utmost importance because religious instructions deals with dogmatic truths.

The material studied in the grades varied. Some of the doctrinal matter entered more closely into the lives of the children. This fact may account for the reason that some of the grades showed less loss than others. It is an accepted fact that the things one does and says every day are better retained than those that do not enter into one's everyday life.

Will pupils regain the loss sustained during the summer months? Tests on the same material after pupils have been under classroom influence for about two or three months would reveal whether the loss has been regained. In religious doctrine there is a constant review of material and a study of the new in relation to what has already been learned. Such reviews as are given on the sacraments and the virtues should repair any loss sustained.

The study of retention in the subject of religion offers a fertile field. A study of retention over a longer period of time of pupils leaving the eighth grade, the test comprising only items that every boy and girl should know; or, a study of retention over the summer vacation, including all the important facts learned during the year, would provide interesting data on the rate of retaining and forgetting religious doctrine.


32. Patterson, Mildred V. W. "The Effect of the Summer Vacation on Children's Ability and on their Retention of Arithmetic and Reading." Education 46:222-8, 1925-26.


I. -- COMPLETE THE FOLLOWING BY WRITING IN THE MISSING WORD.

1. Jesus died on the _____________ to save us from our sins.

2. Jesus sent His Apostles to _______________ all nations.

3. To save our _______________ is the most important thing in our life.

4. "I baptize thee in the _______________ of the Father, and of the Son, and of the Holy Ghost."

5. In Extreme Unction the priest makes the sign of the cross with holy _______________ on the eyes, ears, mouth, hands, and feet of the sick person.

6. "Jesus, Mary, and Joseph! I give you my _______________ and my soul.

7. Extreme Unction helps a sick man to die a _______________ death.

II. -- DRAW A LINE UNDER THE WORD OR PHRASE THAT COMPLETES EACH SENTENCE CORRECTLY.

1. Baptism makes us (children, priests) of God.

2. The Sacrament of (Baptism, Penance) is received first.

3. Baptism of (desire, blood, water) is a sacrament.
4. When we baptize, the words must be said (before, while, after) we pour the water.

5. All who want to be saved must be (baptized, blessed).

6. A perfect love of (God, ourselves, others) gives us sanctifying grace.

7. Extreme Unction can be received by a very (well, sick) person.

8. The Sacrament of (Extreme Unction, Baptism) takes away original sin.

9. Extreme Unction helps the sick man to (give in to, fight) temptations.

10. Extreme Unction takes away mortal sin if the sick man cannot go to (church, confession).

11. Extreme Unction sometimes makes a sick person well through a (miracle, natural way).

III.--READ WORD OR GROUP OF WORDS CAREFULLY. MATCH IT WITH THE CORRECT GROUP OF WORDS ON THE RIGHT. WRITE ITS NUMBER IN THE BLANK.

1. Original sin _______ The debt which a person owes to God.

2. Baptism of water _______ A small sin that does not make us enemies of God.

3. Temporal punishment _______ The sin we have from Adam.

4. Apostolic blessing _______ A sacrament for those who are very sick.

5. Venial sin _______ A sacrament which makes us children of God.

6. Extreme Unction _______ The blessing of the Pope which priests give to the dying.
IV. --READ EACH SENTENCE CAREFULLY. IF IT IS TRUE, WRITE YES BEFORE IT; IF IT IS NOT TRUE, WRITE NO BEFORE IT.

1. We must be baptized to get to heaven.
2. Baptism takes away original sin.
3. Only a priest can baptize.
4. Baptism can be received more than once.
5. Only Baptism of water really brings us into the Church.
6. Baptism gives us the right to receive the other Sacraments.
7. Baptism puts on the soul a mark which never goes away.
8. Anyone who dies rather than offend God receives the baptism of blood.
9. Extreme Unction can be received more than once.
10. The family remains in the room while the sick person goes to confession.
I. -- COMPLETE THE FOLLOWING BY WRITING THE MISSING WORD.

1. The Holy Ghost came upon the Apostles on the Feast of ____________.

2. The Holy Ghost keeps the ____________ in truth.

3. The Sacrament of __________________ makes us strong soldiers of Christ.

4. To receive Confirmation worthily we must be in the state of _____________.

5. In confirming the bishop uses blessed _____________.

6. The Holy Ghost came for two purposes: To stay with the _________ forever, guiding and sanctifying her; and to ________________ each of the disciples.

7. If we have committed a mortal sin we must go to ________________ before we are confirmed.

8. ________________ is the invisible head of the Church.

9. The holy oils are blessed by the ________________ on Holy Thursday.
II. -- UNDERLINE THE WORD OR PHRASE THAT COMPLETES EACH SENTENCE CORRECTLY.

1. God the (Father, Son, Holy Ghost) came upon the Apostles in the form of tongues of fire.

2. (Before, after) the Holy Ghost came upon the Apostles, they began to talk in different languages.

3. The Holy Ghost will remain with the Church (forever, a little while).

4. Every (bishop, priest) can confirm.

5. At Confirmation the bishop makes the sign of the cross on the (forehead, cheek) with chrism.

6. After Confirmation the confirmed say aloud the (Act of Faith, Apostles Creed) the Our Father, and the Hail Mary.

7. Confirmation is a sacrament because the Holy Ghost is given through an (outward, invisible) sign.

8. The Sacrament of Confirmation can be received (only once, several times).

9. Confirmation makes us (children, soldiers, priests) of God.

III. - READ EACH QUESTION CAREFULLY. IF THE ANSWER IS TRUE, PLACE A CIRCLE AROUND THE WORD YES; IF IT IS FALSE, PLACE A CIRCLE AROUND THE WORD NO.

1. Can we receive Confirmation before we are baptized? Yes No

2. Are we made children of God in the Sacrament of Baptism? Yes No

3. Were the Apostles weak and afraid after the coming of the Holy Ghost? Yes No

4. Is Confirmation a Sacrament of the dead? Yes No

5. Does Confirmation put a mark upon our souls that remains in us forever? Yes No

6. Can we have more than one godparent for Confirmation? Yes No
7. Does Confirmation bring us the fullness of the Holy Ghost? Yes No

8. Did the Apostles and those in the upper room receive the Sacrament of Confirmation? Yes No

IV. -- READ EACH WORD OR PHRASE. MATCH IT WITH THE PROPER GROUP OF WORDS ON THE RIGHT. WRITE THE NUMBER IN THE BLANK.

1. Confirmation ______ Mixture of olive oil and balm used in Confirmation.
2. Chrism ______ The feast on which the Holy Ghost came down upon the Apostles.
3. Baptism ______ The Third Person of the Blessed Trinity.
4. Pentecost ______ The Sacrament which makes us soldiers of Christ.
5. Holy Ghost ______ An outward sign instituted by Christ to give grace.
6. A Sacrament ______ The sacrament in which we are made children of God.

V. READ EACH QUESTION CAREFULLY AND THEN CHECK (√) THE BEST ANSWER TO IT.

1. Who miraculously received the Holy Ghost to sanctify them?
   ______ a. The early Christians.
   ______ b. Mary, the Apostles, and disciples in the upper room.
   ______ c. All of Christ's followers.

2. How do we receive the Holy Ghost to sanctify us?
   ______ a. By way of a miracle.
   ______ b. In the Sacrament of Confirmation.
   ______ c. In the same way as the Blessed Virgin Mary did.

3. Why is Confirmation a sacrament?
   ______ a. Because it gives the Holy Ghost by an outward sign.
   ______ b. Because the Apostles instituted it.
   ______ c. Because the disciples in the upper room received it.
4. What effect has Confirmation upon our supernatural life?
   ____ a. It brings us into supernatural life.
   ____ b. It makes us grown up in the supernatural life.
   ____ c. It is the food of our supernatural life.

5. Who is the usual minister of Confirmation?
   ____ a. A bishop
   ____ b. A priest appointed by the bishop.
   ____ c. A priest who receives the power from the Pope to confirm.

6. Why is Confirmation a sacrament of the living?
   ____ a. Because it may be worthily received in mortal sin.
   ____ b. Because it must be received in sanctifying grace.
   ____ c. Because Baptism must be received before it.

7. What words does the Bishop say when he confirms?
   ____ a. "Peace be with you."
   ____ b. "I sign thee with the sign of the cross, and I confirm thee with the chrism of salvation, in the name of the Father, and of the Son, and of the Holy Ghost."
   ____ c. "And there appeared to them parted tongues as it were of fire."
I. -- UNDERLINE THE WORD OR PHRASE THAT COMPLETES EACH SENTENCE CORRECTLY.

1. Christ fled when the people wished to (crucify Him, make Him king).

2. Christ usually received (glory, dishonor) from men.

3. In the parable of the two men who went to the temple to pray, God forgave the (proud Pharisee, humble Publican).

4. We should value ourselves at what we are worth before (others, God).

5. When we do a good work it is due to our efforts and (nothing else, God's grace).

6. To glory in anything as though God had not given it to us is (a sin of pride, an act of humility).

7. Meekness and humility bring us (peace, unhappiness).

8. A humble person (denies, acknowledges) the talents and gifts he has.

9. We should (pray for, complain about) anyone who does us wrong.

10. God resists the (proud, humble), but to the (proud, humble) He gives grace.

11. Anger is against meekness when there is (loss of temper, a good end).

12. We live temperately by enjoying (forbidden, lawful) pleasures moderately.

13. Temperance is a supernatural moral virtue which enables us to (give up, moderate) lawful pleasures and to avoid (permitted, forbidden) pleasures.
II. -- Complete THE FOLLOWING BY WRITING IN THE MISSING WORD.

1. Christ said, "Learn of Me because I am ___________ and ___________ of heart.

2. After washing the feet of His Apostles, Jesus said, "I have given you an _________________ that as I have done to you, so you do also."

3. Humility is a supernatural moral virtue which makes us able and _________________ to value ourselves at our true worth before God, and not be bothered about _________________ before _________________.

4. Jesus said, "Everyone that _________________ himself shall be humbled, and he that _________________ himself shall be exalted.

5. All that we are or have, we have received from _________________.

6. _________________ is the giving up of lawful pleasures to please God.

7. "You are the temple of the living _________________."

8. Meekness is a supernatural moral virtue which makes us able and willing to _________________ our anger and to be _________________.

III. -- READ EACH QUESTION CAREFULLY. IF THE ANSWER IS TRUE, DRAW A CIRCLE AROUND YES; IF THE ANSWER IS FALSE, DRAW A CIRCLE AROUND NO.

1. Does a humble person deny his talents and gifts? Yes No

2. Was Jesus temperate in pleasures? Yes No

3. Did Jesus seek honors and praise? Yes No

4. Will a humble person compare himself to others to find out how much better he is? Yes No

5. Was Christ meek and kind toward sinners? Yes No

6. Should a humble person speak ill of himself? Yes No

7. Is it meekness to let your neighbor run you and your business? Yes No
8. Should we get excited and angry when we have temptations? Yes No
9. Is it a sin to lose one's temper and fly into a passion? Yes No
10. Does meekness mean to take things easy? Yes No
11. Should we bear with the faults of our neighbor? Yes No
12. Should a humble person be sad about his successes? Yes No
13. Does mortification mean to give up lawful pleasures to be more like Christ? Yes No

IV. -- READ EACH SENTENCE BEGINNING CAREFULLY. THEN CHECK (✓) ONE GROUP OF WORDS THAT COMPLETES IT CORRECTLY

1. A truly humble person
   ______ a. boasts about himself.
   ______ b. gives God the glory of his successes.
   ______ c. pretends to have many talents.

2. We should be humble because
   ______ a. we are all sinners.
   ______ b. God gives graces to the proud.
   ______ c. we can be virtuous without God.

3. The supernatural moral virtue of temperance
   ______ a. helps us to conquer temptation.
   ______ b. breaks down our health.
   ______ c. makes us dislike virtue.

4. It is against temperance
   ______ a. to eat and drink moderately.
   ______ b. to take strong drinks in excess.

5. When impure thoughts and feelings come, we
   ______ a. should hate them.
   ______ b. should get excited.
   ______ c. should fear them.
6. When God sends us trials, we
   a. should complain.
   b. should feel resigned.
   c. have reason to be angry.

7. When we have committed sin, we
   a. should repent.
   b. should become angry.

8. Jesus
   a. forgave sinners who repented.
   b. blamed His persecutors.
   c. lost His temper.

9. We are meek with our neighbor when we
   a. fight with him.
   b. complain about him.
   c. bear with his faults.
I. -- UNDERLINE THE WORD OR PHRASE THAT COMPLETES EACH SENTENCE CORRECTLY.

1. Through good works we (merit heaven, grow in worldliness).

2. To the poor souls in purgatory we can give our (growth in holiness, satisfactory merits).

3. (Before, After) we have the use of reason, God's grace is enough to gain heaven.

4. All supernatural acts are (ours alone, God's and ours).

5. (Overcoming, Yielding to) sinful temptations is a good work.

6. (Seeking, Avoiding) occasions of sin is a good work.

7. Our good works increase our (temporal, eternal) reward.

8. The remission of the (temporal, eternal) punishment which our good works gain is called satisfactory merit.

9. The (pleasure, difficulty) in doing a good work increases our merit.

10. Doing everything out of (love of God, fear of hell) increases our merits most.

11. We can help people on earth and the souls in purgatory by (prayers and good works, committing sin).

12. Fallen away Catholics are helped by (all good works, those offered for them).
II. COMPLETE THE FOLLOWING BY WRITING IN THE MISSING WORD.

1. The end of our existence is to gain ____________.

2. Everything except ____________ can be a good work meritorious of heaven.

3. Christ gave to ____________ the keys of the kingdom of heaven.

4. ____________ is the invisible head of the Church.

5. In the next life we pay our temporal punishment by suffering in ____________.

6. To live supernaturally we must perform ____________ works.

7. The Church wants us to fast during ____________ and abstain from meat on ____________.

8. In the early Church the person who committed a public sin was obliged to do ____________ penance.

9. To gain an indulgence we must fulfill whatever conditions the ____________ requires.

10. Christ is the Head of the Church and we are the ____________.

11. The Pope aids us in paying the temporal debt due to sins by granting us ____________.

12. When we repent of our mortal sins God forgives the ____________ punishment, some of the ____________ punishment may remain.
III. -- READ EACH WORD OR PHRASE. MATCH IT WITH THE PROPER GROUP OF WORDS ON THE RIGHT AND WRITE ITS NUMBER IN THE BLANK.

1. The Church
   Acts performed for a supernatural motive with the aid of grace.
2. Sanctifying grace
   The remission of part of the temporal punishment.
3. Good works
   Crucifixes, rosaries, scapulars, and medals.
4. Temporal punishment
   The remission of all the temporal debt.
5. Jubilee indulgence
   The debt we owe to God through our pleasure in sinning.
6. Plenary indulgence
   A special indulgence that the Pope proclaims every twenty-five years and on special occasions.
7. Devotional objects
   The Mystical Body of Christ.
8. Partial indulgence
   The supernatural life of the soul which makes us sons of God, temples of the Holy Ghost, brothers of Christ, and heirs of heaven.

IV. -- READ EACH SENTENCE CAREFULLY. IF THE SENTENCE IS TRUE, DRAW A CIRCLE AROUND YES; IF IT IS FALSE, DRAW A CIRCLE AROUND NO.

1. A partial indulgence remits all the temporal punishment. Yes No
2. It is impossible to give away our increase in sanctifying grace. Yes No
3. Almost every prayer and ejaculation is indulgenced. Yes No
4. We should daily renew our intentions of gaining all the indulgences possible. Yes No
5. We gain the indulgences even when we say the prayer without moving the lips. Yes No
6. The use of blessed crucifixes, rosaries, and medals is indulgenced Yes No
7. Peter and his successors received power to aid Catholics to gain heaven.

8. We can possess the Beatific Vision without paying our temporal debt.

9. We gain much more when doing the good works which the Church commands than doing those of our own choosing.

10. A fifty-day indulgence remits as much temporal debt as a fifty-day public penance in the early Church.

11. When we take part in the work of the Church, we take part in the work of Christ.

12. The Rosary is more highly indulgenced than the Way of the Cross.

13. The members of the Catholic Church share in one another's merits.

14. Everyone who goes to heaven will be perfectly happy.

15. Good works done in mortal sin merit actual grace to repent.

16. An indulgence may be plenary or partial.
UNITED STATES DEPARTMENT OF THE NAVY

UNITED STATES NAVAL ACADEMY

NAME _______________________________ AGE LAST BIRTHDAY _________ YEARS

BOY or GIRL _______________ NATIONALITY __________________________ GRADE 7

SCHOOL ___________________________ CITY Chicago DATE _____________

The Church is a Valid Witness to Christ and to Herself

The New Testament is a Witness to Christ and His Church

I. -- UNDERLINE THE WORD OR PHRASE THAT COMPLETES EACH SENTENCE CORRECTLY.

1. (Men, God) inspired the Apostles and their disciples to write the New Testament.

2. The New Testament teaches that Christ founded (a visible, an invisible) Church.

3. The Bible is the only source of teaching in the (Protestant, Catholic) Church.

4. The New Testament is a good historical witness, for its content comes from (eyewitnesses, books).

5. From 800 to 1517, the world became (pagan, Christian) in faith, morals, and the fine arts.

6. As teachers the Apostles taught the (Jews only, world) to enter Christ's Church.

7. All the writers of the New Testament except John wrote within (sixty, thirty-five) years after Christ's death.

8. The Church is a reliable historical witness to Christ and herself because she is founded by (men, Christ); and because she has existed (continuously, brokenly) from Christ's time; and because she has (changed, not changed) in doctrine and authority.

9. In her entire existence the Catholic Church has remained (one, divided) holy, (catholic, national) apostolic, and infallible.

10. The New Testament books are (independent, dependent) documents, because they were written at (the same time, different times) and at different places.
11. The (Catholic, Orthodox, Protestant) Church is the best witness that Christ redeemed all men by His death, resurrection, and ascension.

12. Protestant churches are (one, national) and have no supreme authority.

II. -- COMPLETE THE FOLLOWING BY WRITING IN THE MISSING WORD.

1. The Catholic Church was founded by ____________.

2. The Evangelists tell Christ's life in the four ____________.

3. Christ established His Church to bring the knowledge and fruits of ____________ to mankind.

4. St. ____________ was called the Apostle of the Gentiles after the Ascension of our Lord.

5. St. ____________ is the author of the Apocalypse.

6. The four Evangelists are: ____________, ____________, ____________, and ____________.

7. In 1054 the Eastern rite rejected the ____________ of the Pope.
III. -- READ EACH WORD OR PHRASE. MATCH IT WITH THE PROPER GROUP OF WORDS ON THE RIGHT AND WRITE ITS NUMBER IN THE BLANK

1. The Greek Schism
   The book of revelations about the Church and the Last Judgment.

2. Mohammedanism
   The years 1517 to 1648 when fallen-away Catholics formed the Protestant churches.

3. Epistles
   A collection of seventy-two books written under the inspiration of the Holy Ghost and acknowledged by the Church as the Word of God.

4. The Crusades
   A mixture of Christian and Jewish religion.

5. The Apocalypse
   Letters written by the Apostles to the Christians.

6. The Bible
   The rejection of the authority of the Pope by the Eastern Church.

7. The Protestant Revolution
   The attempt of the Christians to take the Holy Land from the Turks.

IV. -- READ EACH SENTENCE CAREFULLY. IF THE SENTENCE IS TRUE, DRAW A CIRCLE AROUND YES; IF IT IS FALSE, DRAW A CIRCLE AROUND NO.

1. The edict of Milan in 313, gave civil liberty to the Church. Yes No

2. The New Testament books cannot contain errors because they are inspired by God. Yes No

3. At the present time there is a close union between the Catholic Church and governments. Yes No

4. The Catholic Church continues to exist because she is Christ's Church. Yes No

5. The Catholic Church and true science are opposed to each other. Yes No

6. The books of the New Testament do not pass over, but tell about the weaknesses of the Apostles. Yes No