

## A STUDY ON THE ROLE OF REMOTE LEARNING AS A BARRIER TO A COMMUNICATIVE CURRICULUM APPROACH

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### ABSTRACT

*This research examines the deterrents that are faced by rote learners, such as difficulties that are not voiced either by students or by the teacher and are ignored because of the awe-inspiring results from the students that all parties are entirely content with, i.e., teachers, parents, and, of course, students. It is basically divided into two phases. The first phase includes the theoretical part, i.e., introduction, statement of the problem, objective of the study, hypothesis, rationale of the study, and literature review, while the second phase includes the practical part, i.e., research methodology, sampling techniques, measurement instruments, data collection, and data analysis. For this qualitative research, the researcher decided to conduct an activity where a single class of elementary school students, specifically in the 5th grade, participated in a week-long study. The study commenced with the introduction of a new concept, followed by an immediate test to measure the students' initial grasp of the material. After a week's time, the students returned for a follow-up test to assess the impact of rote memorization on their understanding. By comparing and analysing the results of both tests, the study aimed to uncover any notable differences, providing insight into how various learning methods affect academic achievement. Throughout the testing process, careful attention was given to the students' behaviour to mitigate any potential factors that could influence the study's findings. Finally, the outcome of the study claims that if the pedagogy had focused on delivering knowledge through abstract methods to the students, the outcomes would have been significantly improved. This reinforces the hypothesis that rote learning is ineffective and constraining, hampering learning and constraining imaginative thinking. Instead, endorsing conceptual learning is advocated for superior and long-lasting outcomes.*

**KEYWORDS:** Deterrents, Rote Learning, Pedagogy, Curriculum, Communicative Approach

### INTRODUCTION

The research report focuses on whether rote learning promotes greater academic achievements or not and whether it is an obstacle to the implementation of communicative curriculum in the classroom. The main concern is that students can rote learn everything, but they don't have a proper understanding of the concepts in any subject. Conceptual formation is the basis of everything, but unfortunately it is not practiced. Even if it is practiced in classrooms, students are least bothered or interested in hearing what the teacher is trying to tell they (as they know that they can rote learn it later). Here comes the lack of communication between the teacher and the student, which gives rise to many other problems, all related to learning. Students don't take teachers as their facilitators now a days and are not able to relate whatever they have learned in the classrooms to their real-life situations, which causes long-term problems for them that they don't realize at the stage of rote learning (Blumenfeld, 2000). Learning is a subjective act; it

reflects the style or the way in which a person learns, and if that style is not correct, then learning is not optimal. There are many theories on learning, and much of the debate has been carried out on this topic, which indicates that we don't really focus or concentrate on our ways of learning until and unless we encounter some problem or hindrance towards learning, which makes us concerned about the ways through which we learn, and then we act upon it. Most of the time, this is taken for granted, which results in stoppages towards learning. That is why new learning methods should be introduced in order to eliminate all the factors that lead to any kind of stoppage in learning. These methods should be easy and comprehensible for both the teacher and the student so that both of them can get the maximum outcome from them.

Students are frequently exposed to a concept, but they are still unable to understand it, so they rote-learn. Weakness lies in the abilities of students which are not polished with time and as a result that weakness persists and turns into a permanent problem. So, the point to brood over is that teachers should focus on the ways of teaching to make the students grasp that concept without difficulty (Westwood, 2004). The plug of syllabus design matters a lot over here, i.e., in learning, as it provides the tools and techniques to proceed with a certain course content and to reach the specified goal by the organization. Proper development of the syllabus provides a secure base for the course and the methodologies to be implemented in that course. A teacher or syllabus designer should be aware of the difference between a syllabus and a curriculum and should know all the aspects that have to be considered in developing a syllabus by keeping the curriculum in mind to form a good syllabus. We do have solid education plans for every foundation, but the matter of fact is that there is no proper implementation of that plan or the curriculum that is provided to a certain institute, which results in a lack of performance by the students, and as a result, rote learning remains the only method of learning (Fuller, 2005).

Everyone is aware of the fact that conceptual learning that incorporates literacy strategies affects students' achievements in a class, but still, we have no room for actually practicing or polishing the conceptual part of children's brains (Learn, 2000). The methods or ways of teaching do not provide children much space to roam or let their imaginations wander in order to learn in an interactive way. There is a contrast between syllabus design and methodology, which is the root of the issue that children have no room for a 'thinking outside the box' approach to learning. Either learners should know or be able to do the task on the basis of instructions provided to them; now the issue here is that the instructions are not clear enough to provide a full outcome.

The focus here is on learning and being able to transfer that learning because only then will a child be able to develop certain competencies, which will eventually develop the brain. To stand in this society, a person has to learn for their own betterment and success, and the transfer of that learning is equally important because it will enhance their brains. Teachers hope that students will transfer learning from one problem to another, but they are actually unable to do so. The reason for this inability is that they are not broadly educated; rather, they are just trained (Broudy, 1977). There has to be some link between the learning and the situation so that the learning can be transferred. In order for it to happen, the learning should be as close to real-life situations as it can be. The "Drill and Practice" method for such learning is no longer fruitful, but "practice" still holds the position of being fruitful for students. Practice is the result of an understanding of a concept, while drill is just memorizing that concept without any practice.

Today, there are various kinds of practices that are important and make use of learners' characteristics for optimal results.

A teacher has to understand that children learn in a far different way than adults and that each child has a unique way of learning and grasping concepts. Only then will the teacher be able to provide full support to that child in order for them to learn in their own way. Well-established learning patterns and expertise should be there to facilitate students in every way a teacher can. "Zone of proximal development" should be in the mind of a teacher while teaching so that the teacher can fully facilitate that child in order to develop and master their learning. That is why it is suggested that the class size should not be more than twenty-five, as a teacher is only able to provide complete attention to a child when the class size is considerate. Young age is very delicate in every form, especially while learning, so it has to be catered accordingly. Children learn more at a young age, and so the development of their competencies is quick. If provided proper guidance and directed in the right direction, they can excel (Rose, 1997).

### **Statement of the Problem**

According to the curriculum that is followed in public schools, they seek to provide productive education among students and claims that students are obtaining maximum advantage, however, the reality is opposing this fact and gives us a view that students are just cramming all the stuff in order to achieve good grades but are not actually learning properly instead they are just blindly overcoming the capability of what they can achieve. In response to this issue, the research tries to highlight all these familiar factors in order to make the authorities aware of this fact and eliminate the main factor that 'rote learning is a hindrance towards communicative curriculum approach'.

### **Objective of the Study**

The main objective of this research is to know:

1. The effects of rote learning on students' academic achievements.
2. The best way to increase comprehension among students.
3. Importance of conceptual learning among students.

### **Rationale of the Study**

The selected topic has been under consideration for centuries and is still increasing with various findings, just because rote learning methods are not leaving the education system. This research focuses on numerous concepts that mainly involve teachers and parents, as they have a key role in a student's life and education. What others learn from it is that even though this topic is discussed in tons of ways and with innumerable concepts every time, people still don't implement the recommendations provided, i.e., the old teachers who have been teaching for years and are well experienced. They are not in favour of moving ahead from these traditional methods. The new perspective that this research provides is to give a chance to new methods of learning, as the world is evolving and we have to keep up. Stress should be on proper guidance

and conceptual methods of learning in order to widen the scope of studies and broaden students' minds with the incorporation of advanced learning methods.

### **Hypothesis**

Rote learning is not a fruitful approach to implement among students as it hinders their learning and compresses their minds, leaving no room for imagination. Rather, conceptual learning should be promoted for better and longer-term results.

### **Literature Review**

Today, it is commonly said that learning should take place by doing things practically, not impersonating stuff. It should be fun and innovative, with loads of creativity and freedom of thought. The 'think outside the box' approach should be adopted by the teacher as well as the student. It is a deep-rooted, long-lasting, and essential statement that concepts are the essential units of human thought. They make a firm foundation for a person, which is then very helpful for future learning. Once a conceptual base is formed, that base always remains in the human mind and can be applied appropriately where ever it is required to, which turns out to be very helpful for every type of learner as learning should be productive.

Researchers came to realize that the functional use of language is very important, and it is becoming more important over the years. So, the use of rote learning methods has been in criticism for the past few years because the information learned by rote learning methods is not understood properly and their functional use is almost never practiced. According to Rosenshine (1995), when students learn some text by drill-type repetition, which is without any understanding, conceptual formation, or linking it to their previous knowledge, this chunk remains isolated in the students' long-term memory. This type of storing information in the brain is not easily retrieved whenever required and is easily forgotten unless it is rehearsed in equal intervals of time. People often confuse rote learning with memorization, not realizing that they are two different things. Although there is a slight difference between them, they are not the same. In memory, there is deepening understanding, while in rote learning, there is no such thing (Rosenshine, 1995).

With the help of surveys and extensive research, people found out that most schools are making abundant use of rote learning methods. In a conversation with Howard Gardner, he answers the question that most schools are giving students exercises and drills to obtain correct answers on a test basis that looks like an understanding of the text. It's what Howard Gardner calls the "correct answer compromise," in which students read a text assigned to them, they give a test of it, and everybody agrees that if they repeat or use that chunk learned by them, it'll be counted as an understanding (Brandt, 1993). But the aftermaths of the cognitive research over the past years are really persuasive, i.e., students do not understand anything in such a way; they learn it for the sake of obtaining good grades only, and then that idea is forgotten and never put into practice. This means that they lack the ability to use that knowledge acquired in one place and then apply it appropriately in a different place. Multiple studies have found that mostly students (the best ones) in the best schools cannot do it, but they still have to because that is the only method of learning for them that is within their knowledge (Ausubel, 1968).

Now, the outcome of this method is not fruitful in the long run, as it was mentioned earlier that the learned material is not linked with prior knowledge, and it is boring and basically mindless as it does not involve a person's intelligence at all. Bartoli said that when a student spends so much time learning by applying the repetitive strategy of gripping it all in, the actual and productive learning is not taking place inside the head; it is just learning it for some time to get grades and then forgetting about the rest. Unfortunately, in Pakistan, this method requires a mammoth amount of training among every single student, especially those who are not sharp or good at conceptual ways of learning material. Certain subjects may require rote learning, but for productive and functional learning, the learned material must be linked with the previous knowledge of the learner, or it should be in daily practice so that it remains in the long-term memory for future applications as well. Learning can take place with the help of many things and strategies, but keeping it in the long-term memory is the crucial part of it.

Research has shown that if the rote learning methods are applied correctly then it makes the teaching effective but that research was conducted for the students who were facing learning issues or had some learning disabilities among them (Bartoli, 1989). The students who are not facing such issues/problems, rote learning is not the best method for them to apply. The human mind is something that can be grown with some help and motivation. Students who do not have any sort of learning problem/disability should not at all follow this method; they should try to develop to be ahead of everyone and for their betterment. Here the role of the teacher comes to how well and appropriately a student is catered.

The chief side effect of rote learning is that it is not optimal learning as it only transfers the education and skips the core purpose of learning. It is a difficult method to begin with as the student is not accustomed to such a method of learning which outcomes the stagnant growth of the students, in simple words an uneducated nation of people. It might be important for children of younger age but once they get hold of some method then they won't be able to leave that in forthcoming years of their lives. No doubt it is a great learning method for the early years of life but when it is the only system in the education field then its benefits will be insignificant as it is the only "one-legged" method whose role is to transfer information. Saying that it is a great learning method for early years is also not a solid statement to make by anyone because the early years are the most important ones in students' educational lives.

The severe effects of this method are mostly found in Asia as majority of the Asian countries are trapped in this method of learning. In primary and secondary school systems this method of learning has an enormous implementation. Their view is academic success i.e. how glowing grades students achieve however, what they fail to perceive and achieve is that these 'glowing grades' achievers are unable to implement all that knowledge in real-world situations, they seem completely blank and vague about how to deal with a situation or how to act in a certain situation. The point that grasps our thoughtfulness is that the students who gain 'glowing grades' are not able to implement that same knowledge in the real world, then how come they achieve those grades in exams? The answer is by 'rote learning'. They learn concepts so accurately, that when they place them on paper, the result is outstanding but the practical application is nowhere to be found because the information learnt is still in their short-term memory and has no purpose of going to the long-term memory. The next thing to which our

attention is turned now is how the students become so good at rote learning any material. The answer is that the 'rote learning' method is introduced to the students from the start i.e. in the early years of their education and they are not familiarized with any other method of learning then automatically the outcome is a skilful rote learner in every way and reproducing it by the book because of which they achieve highest grades in the class. This achievement is fruitful just in the academic domain but when they step outside this domain and they have to compete in the practical world then this achievement is of no prominence.

The reason that students are not leaving this method of learning is primarily because of the teaching patterns that are being administered. If the teaching patterns are not evolved then how will the students gain from the education provided to them? The teaching patterns in Pakistan are strictly traditional. Teachers do not let go of the old methods and ways of teaching but are still hoping for good responses from students. They do not understand the needs, wants and lacks of the modern era. Pakistani classrooms mostly implement the teacher-centred learning approach without any student interaction in the classroom. They just teach and go and expect an outstanding result which is not the case. Teachers should understand the needs of today's world; most schools have those teachers who deny using the new teaching methods as they are not comfortable with them or they don't find them appropriate or helpful for the students but they fail to realize and accept the fact that when there is no interaction in the classroom then students learning is hampered because of it as every student has a different learning ability and a teacher should try to cater each one of them (Sarwar, 2001). This approach should be changed or it should be modified among all the teachers. Classroom sessions should be interactive so that every student gets a way to say what he/she wants to say/express. In this way, there will be maximum learning among students and the teacher will also be able to know every student in a better way.

Freire in 1993 coined a new and exciting term for this kind of education system: banking education (Govender, 2020). He says that education is becoming an act of depositing in which the students are the depositories and the teacher is the depositor. Instead of communicating the teacher issues communiques and makes deposits which the students patiently receive, memorize and repeat. This style of education outcomes passive learner's only not active learners. Properly planned and organized ways of teaching should be there to have educated citizens who can meet their potential. For this, the teacher should be well aware of the new teaching methods and should implement those in the lectures.

Leaving rote learning methods or shifting students from one method to the other involves a huge amount of effort. The development of critical thinking among students is another factor which should be considered among teachers as it helps the students a lot in their future education (Fisher & Scriven, 1997). It broadens the ways of their thinking which is very beneficial for the students. But mostly old Pakistani teachers do not want their students to be so active and productive towards society. It is not that it's completely the teacher's fault but as the teachers play an enormous role in student's educational life and educational upbringing so they should feel this responsibility and then improvise themselves along with the teaching methodologies. Today's world does not demand passive learners; it requires active learners with

inordinate critical minds to achieve what they want, and for this, a teacher has to make some effort.

The teacher's role in learning is very crucial and holds a great amount of significance in a student's life. A teacher is everything in their lives i.e. a guide, friend, knowledge bank, helper etc. Students essentially become what their parents and teachers make them, mostly teachers because they spend most of their time in school so it enhances the role of the teacher even more as school is the leading place where the student's behaviour and educational success are moulded (Mike, David, & Jon, 1997). The teacher's role has the most significance because it is the key which releases either positive or negative behaviour towards students. The focus on the first years of school is so important because that forms the base of the students on which their whole educational life hangs and shapes. A teacher should be passionate, enthusiastic, and energetic and should be fixated on making the lives of other children because all their future is on the teacher's shoulders so the most important element for a teacher is to be responsible enough to understand this fact that how much imperativeness it holds in a student's future career life.

Effects of teachers hold on to their students. A student who is inspired by a certain teacher will follow the same steps and will always look up to that teacher. That is how important a teacher's role is in a student's life. So, a teacher should also worry about how the students are going to be looking at them and following them. As a teacher, every child should be catered to and given an equal amount of importance for optimal learning in a classroom but to imply it, the strength of the classroom should also be appropriate for the teacher to accommodate everyone. Students should also be open enough to the teacher so that an appropriate amount of attention can be given. For this, there should be a good teacher-student relationship (Ausubel, 1977).

Rote learning is emphasized by the teachers of Pakistan because first, our education system does not allow any other method to be applied, more likely, success is high when only rote learning is followed by students and second, all of our standardized tests are based on this method of learning. So, teachers have to prepare the students accordingly. Now the role of the education system is also very important here. Everyone knows the requirements of the new and upcoming world and to make Pakistan firm enough to stand in that world, change has to start from today and change must be made in the education system because our nation is based on such a system which is not productive in the long run. A system should be brought up which has long-term advantages for everyone. The education system is at fault and in its effect, everything is going the wrong way.

Besides teachers, parents also have a keen role in students' educational lives as students follow whatever their parents say or advise them. Good parenting should be there to have good students and children for the nation and themselves as well. They should know the difference between learning and education as both are completely different in their sense. Education is simply academic learning that the students gain from school and everyone knows that good education is an important factor in today's world if anyone wants to stand on their own feet. Education is becoming important day by day in the new and advancing world.

Now the education that is being given to the students is ‘rote learning’ which is a boring task for them as they start to lack interest in it with time. As a result, students run away from this type of education which turns out illiterate people in our world.

A student enters an institution to learn a lot from it but when they fail to achieve that aim then they lose interest in it. Talking about learning, learning is productive and can be used whenever it is required by a person. Learning is healthy for the mind but education is not. If education is provided equivalent to learning status, then it is beneficial for the teachers as well as the learners and the outcome is as healthy as we can imagine it to be. It turns out that when students lack interest in anything then the outcome is worse, so parents and teachers should focus on this aspect more as possible. Learning is associated with feelings, for a person having positive feelings, learning will be increased and negative feelings will decrease learning, mainly, that is why learning is not administered in the schools of Pakistan because people here are full of emotions and feelings. Children are quite moody which affects learning but this is not the reason to kick start rote learning. There is always a way to make things work and so teachers and parents should be clear about the difference between education and learning and should support and pump learning into student’s minds.

Students who have sharp minds and learn everything fast at their early stages of life are at a downfall when they enter a system which follows ‘rote learning’. School is a place where student’s skills are polished in a way that they become strong in future but when a student who already has polished/sharp skills enters this type of institution then their skills become suppressed with time. For example, a student has sharp mathematical skills (strong mental math) and once this child enters a school and sees that the teacher is not explaining all the rules properly and merely focusing on the right result via some basic rote learned steps then this particular student will not progress in this situation. A student has to be comfortable in the school environment and when they are not then there is no optimal learning even if education is not good in this case(Griffiths, 2004). In other words, it can be said that intellectual learning is hampered where rote learning is taking place.

Developing students also requires developing teachers. The most experienced teachers that an institution has are old and are not comfortable with the new ways of learning so to ease that discomfort among those teachers who are prize possession for an institution the article on Language Learning Strategies provides the basic terminologies, definitions and classification of language learning strategies that should be read and understood thoroughly by the teachers to implement them in the classroom of mixed ability groups to achieve their point of satisfaction without the rote learn method. It clarifies all the ambiguities and unclear ideas about Language Learning Strategies so that they can be practiced well enough. The pioneer work on Language Learning Strategies was done in the mid-seventies by the researchers (Rubin, 1975). Language Learning Strategies are focused in quite detail in this article. The main aim of this article is to provide a clear view to the teachers as they are not so sure about which methods or strategies should be applied in a mixed-ability classroom. Even if this article is shared in the classroom by making it short and comprehensible, it will also help students to know about language learning strategies. This article is basically for teachers so they can put an end to the rote learning approach.



## Research Methodology

There are two ways of carrying out research i.e. qualitative or quantitative research methods. This particular research is conducted using a quantitative method of data collection, as it is more reliable and valid. One class is selected to participate in this study. The research time for this study is one week. Participants are elementary school students i.e. 5 grades, to whom a concept is given in class and a test is taken there and then of that same concept to see their level of conceptual grasp regarding that concept. After compiling the test results, students are then asked to come prepared for a re-test after a week to examine the level and effect of their rote learning. Then these two tests are compared and contrasted to see how these results have a mark difference among them which will indicate how it is affecting their studies and their ways of learning. Students were observed keenly during tests, their behaviour was monitored very closely to avoid any varying results which would affect the hypothesis.

## Sampling Techniques

Population is taken from a public institution in which the focus is on 5th-grade students (a mixed-ability classroom). There are many different types of sampling such as simple random sampling, systematic sampling, stratified sampling, quota sampling, and cluster sampling. The way of sampling that this research follows is simple random sampling in which each member of the population has an equal chance of being included in the samples. It is applicable when the population is small, homogenous and readily available.

## Measurement Instruments

The sampling instrument that is applied in this research is a class test (as mentioned above in the research methodology). The format, structure, marks and pattern of the test are the same as of the school policy to avoid any variables that will affect the result of the research and to keep the students comfortable and relaxed during the conduction. Tests are constructed in coordination with the class teacher so that there is no room for error in the result due to the alienation of the pattern to the child. The reason for the selection of this measurement instrument is that it is more valid and reliable to the topic i.e. the result of this instrument will work in coherence with the topic and will validate it accordingly. Both tests have 15 marks each in total with 6 questions in each test and the marks distribution of all the questions is the same as well, only the questions are varied i.e. some questions are conceptual, some are taken as it is from the exercise while some are taken as it is from the exercise but they are rephrased.

## Data Collection

The research was carried out in a proper and step-by-step method to avoid any varying results at the end. The first step was to get consent from the required parties i.e. head of the department and advisor so that no issue arises in the school premises. Because of this reason, a proper consent letter signed by the advisor and head of the department was taken along with the researcher for approval from the principal of the school for conducting the research. After the approval, the second step was testing construction: the test was constructed according to

the school's policy and the format along with the coordination of the subject teacher so that the students are comfortable in solving it. The third step was the actual data collection. The period of the research was of one week so on day 1 only class observation was taken i.e. the teacher's way of teaching, student's responses and their behaviour, to get accustomed to the environment for the ease of students. Students got a little nervous and conscious at first but then after the detailed discussion and answering all their queries, they became comfortable and enthusiastic. The next day (16th April) tests were brought by the researcher, after all the printing and photocopying, for the conduction. The concept was given by the researcher in the class while the teacher sat at the end of the class, observing whatever was going on. It was observed by the researcher that students were blank at first because they were unable to grasp any conceptual thought that was provided to them, after getting this type of response from the class, the researcher had to switch the teaching methodology (from interactive class to just one-way teaching) to make them understand so that they can solve the test. After teaching the chapter, a general discussion was done with the students just to warm them up for the test as they were not at all prepared for it. Giving at least thirty minutes to provide them with all the basic concepts of the chapter, the test was taken in the next half of the class. Students were very confident at viewing the test but when they started solving it, they were a little dubious about it. Some of the questions were not at all understandable. They kept on asking what to write in it and what does this mean. The class took at most thirty minutes to solve the test and got very anxious about the result. After collecting the first data, the date and time for the second test was confirmed by the teacher. On the third day, the second test was constructed and was with the researcher for printing and photocopying as the test was preordained to be conducted after a couple of days (24th April). After a gap of three to four days, a second test was conducted as the students were now completely prepared for it and even more enthusiastic. The confidence level of the class was at its height but the analysis of both tests is going to show the real story. The fourth step is the analysis of the data collected which is done in the next chapter.

## Data Analysis

Data analysis and results are based on the type of data collected (via pie charts and tables). It is done right after data collection to avoid chances of variation. Results are derived mathematically i.e. how many students have gained maximum marks in a question and what is the reason behind it, how do they get maximum or lowest marks in a question? Students' grades are verified to see whether rote learning should be practiced or not. The research also helps to determine whether students should change their method of learning and provides a clear view to the teachers whether they should encourage this method or not. Data analysis of each test's question is done separately for better and improved analysis.

## DATA ANALYSIS OF TEST # 1

Six short questions, total marks 15, of sample size 30 are shown in the frequency table below along with the marks of each question. No sample is missing.

## FREQUENCIES

[DataSet1]

### Statistics

	What does the topic "So you think you can divide!" mean? (3 Marks)	A man had three sons. Name them. (3 Marks)	Why was Hameed given the largest share? (2 Marks)	Why were the younger boys disappointed? (2 Marks)	What was the point of quarrel among the brothers? (3 Marks)	How did the brothers try to solve the problem? (2 Marks)
Valid	30	30	30	30	30	30
Missing	0	0	0	0	0	0

### FREQUENCY TABLE

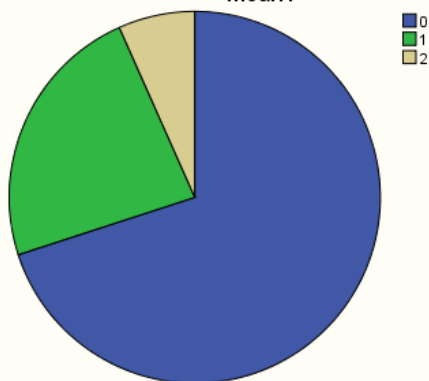
#### ITEM NO 1:

#### What does the topic "So you think you can divide!" mean?

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
0	21	70.0	70.0	70.0
1	7	23.3	23.3	93.3
2	2	6.7	6.7	100.0
Total	30	100.0	100.0	

### PIE CHART

What does the topic "So you think you can divide!" mean?



This question carries 3 marks, according to the frequency table and the pie chart, it is seen that most of the students have obtained "0" in it because this was a conceptual question rather their own creativity was required in answering it which the students lacked. Only "2" students have obtained "2" marks. This shows that students are unable to come up with their own answers, they can only provide whatever is taught to them and asked for learning.

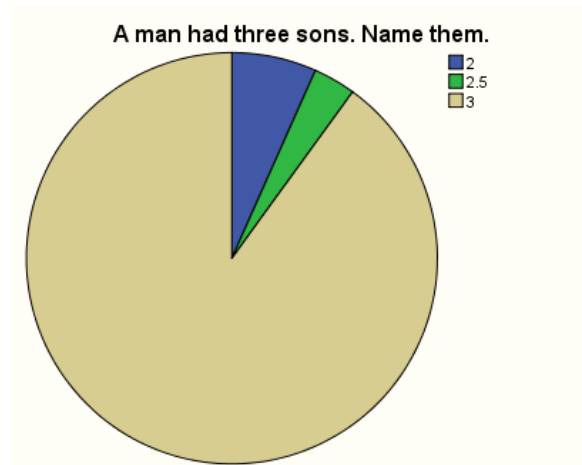
## FREQUENCY TABLE

### ITEM NO 2:

**A man had three sons. Name them.**

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
2	2	6.7	6.7	96.7
2.5	1	3.3	3.3	100.0
3	27	90.0	90.0	90.0
Total	30	100.0	100.0	

## PIE CHART



This question carries 3 marks, according to the frequency table and the pie chart, it is observed that the majority of the students have obtained full marks as this question was very easy and no thinking or creativity was required. It had to be answered directly and to the point. During teaching, they were underlining the names for later as they are familiar that the names mentioned in the chapter are important to learn as a question can come in the test or exams.

## FREQUENCY TABLE

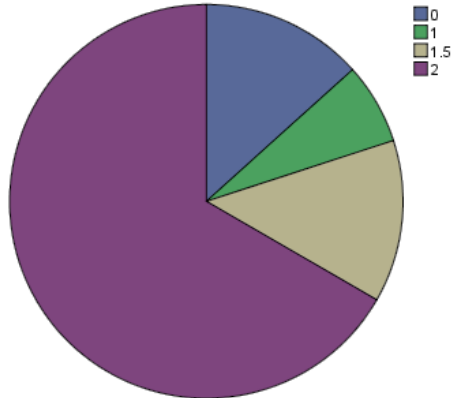
### ITEM NO 3:

**Why was Hameed given the largest share?**

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
0	4	13.3	13.3	80.0
1	2	6.7	6.7	100.0
1.5	4	13.3	13.3	93.3
2	20	66.7	66.7	66.7
Total	30	100.0	100.0	

## PIE CHART

Why was Hameed given the largest share?



This question carries 2 marks, according to the frequency table and the pie chart, it is seen that the majority answered it correctly because this question was mentioned in the exercise of the chapter and it was also discussed during the general discussion after providing all the concepts to them. So students had a clear idea about it and as a result, a maximum of them got full marks.

## FREQUENCY TABLE

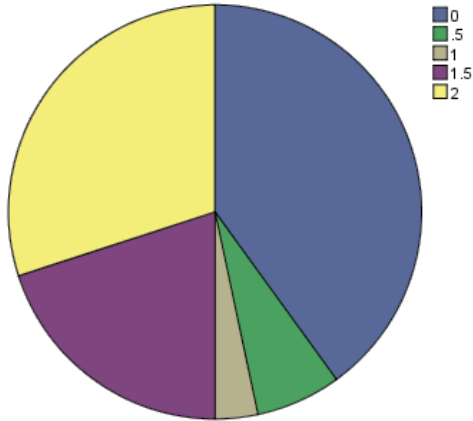
ITEM NO 4:

Why were the younger boys disappointed?

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
0	12	40.0	40.0	40.0
.5	2	6.7	6.7	96.7
1	1	3.3	3.3	100.0
1.5	6	20.0	20.0	90.0
2	9	30.0	30.0	70.0
Total	30	100.0	100.0	

## PIE CHART

Why were the younger boys disappointed?



This question carries 2 marks, according to the frequency table and the pie chart, it is seen that most of the students have obtained “0”, although this question was mentioned in the exercise they had to refer to the text to answer it and they failed to do so. This shows that they are unable to go back and think for a moment before answering the question.

#### FREQUENCY TABLE

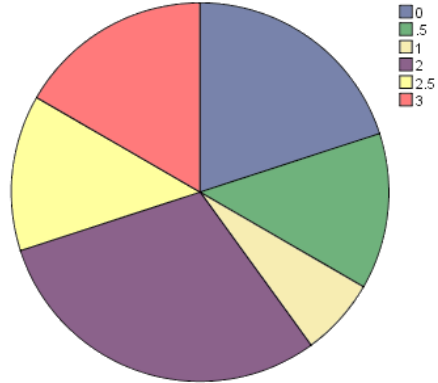
ITEM NO 5:

What was the point of quarrel among the brothers?

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
0	6	20.0	20.0	50.0
.5	4	13.3	13.3	80.0
1	2	6.7	6.7	100.0
2	9	30.0	30.0	30.0
2.5	4	13.3	13.3	93.3
3	5	16.7	16.7	66.7
Total	30	100.0	100.0	

#### PIE CHART

What was the point of quarrel among the brothers?



This question carries 3 marks, according to the frequency table and the pie chart, it is seen that there are varying marks for it. This question is taken from the exercise of the chapter but it has been a little rephrased and the students were confused as most of them were asking “What does point mean?” which resulted in varying degrees of marks.

## FREQUENCY TABLE

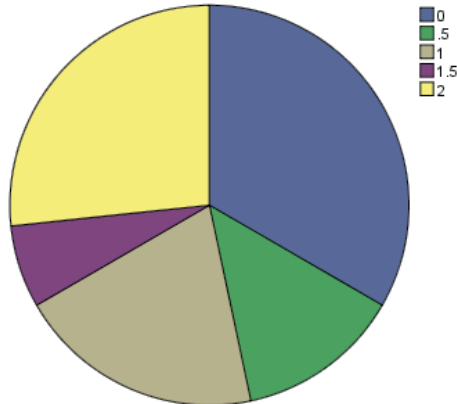
ITEM NO 6:

How did the brothers try to solve the problem?

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
0	10	33.3	33.3	33.3
.5	4	13.3	13.3	93.3
1	6	20.0	20.0	80.0
1.5	2	6.7	6.7	100.0
2	8	26.7	26.7	60.0
Total	30	100.0	100.0	

## PIE CHART

How did the brothers try to solve the problem?



This question carries 2 marks, according to the frequency table and the pie chart, it is seen that 10 students have obtained “0” although this question is taken from the exercise still they did not grasp the concept behind it and were unable to rote learn there and then because of the less time given for revision.

## DATA ANALYSIS OF TEST # 2

Six short questions, total marks 15, of sample size 30 are shown in the frequency table below along with the marks of each question. No sample is missing.

## FREQUENCIES

[DataSet2]

### Statistics

	How did the father ask his sons to divide the camels? (3 Marks)	What lesson do we learn from this chapter? (3 Marks)	"The younger brothers were a little disappointed but they did not complain" why? (2 Marks)	Why did the brothers refuse to take the holy man's camel? (2 Marks)	What was the final comment given by the holy man to the brothers? (3 Marks)	"How about selling one camel and then dividing the money?" Why did the speaker think it was a good idea to sell one camel? (2 Marks)
Valid	30	30	30	30	30	30
Missing	0	0	0	0	0	0



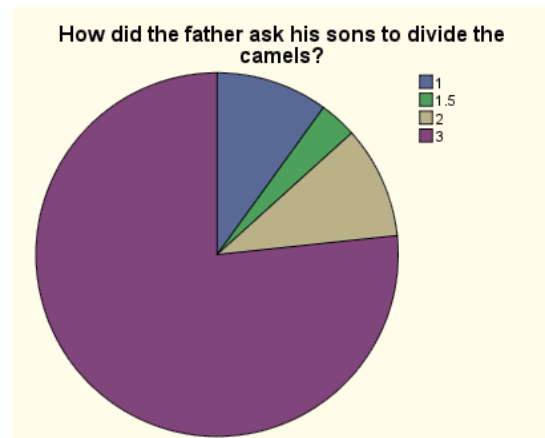
## FREQUENCY TABLE

### ITEM NO 1:

**How did the father ask his sons to divide the camels?**

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
1	3	10.0	10.0	86.7
1.5	1	3.3	3.3	100.0
2	3	10.0	10.0	96.7
3	23	76.7	76.7	76.7
Total	30	100.0	100.0	

## PIE CHART



This question carries 3 marks, according to the frequency table and the pie chart; it is observed that most of the students have obtained full marks. The reason is that it is mentioned in the exercise.

## FREQUENCY TABLE

### ITEM NO 2:

**What lesson do we learn from this chapter?**

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
0	6	20.0	20.0	86.7
1	4	13.3	13.3	100.0
2	8	26.7	26.7	66.7
3	12	40.0	40.0	40.0
Total	30	100.0	100.0	

## PIE CHART



This question carries 3 marks, according to the frequency table and the pie chart, it is seen that almost half of the class has obtained full marks while the rest have varying results because this question is not mentioned anywhere and they have to come up with their answer as it is a conceptual rather critical question, which most of the students have done.

## FREQUENCY TABLE

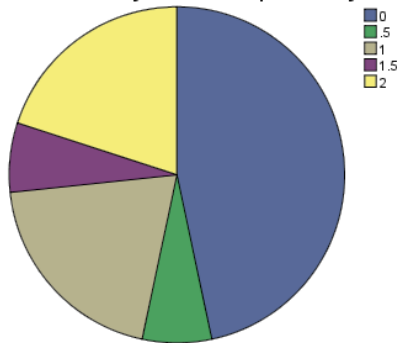
### ITEM NO 3:

**"The younger brothers were a little disappointed but they did not complain" why?**

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
0	14	46.7	46.7	46.7
.5	2	6.7	6.7	93.3
1	6	20.0	20.0	66.7
1.5	2	6.7	6.7	100.0
2	6	20.0	20.0	86.7
Total	30	100.0	100.0	

## PIE CHART

"The younger brothers were a little disappointed but they did not complain" why?



This question carries 2 marks, according to the frequency table and the pie chart, it is seen that students have obtained varying marks because this question is from the exercise but it is rephrased a little which confused the students while attempting it, which shows that they had no idea that a simple statement can also be rephrased.

### FREQUENCY TABLE

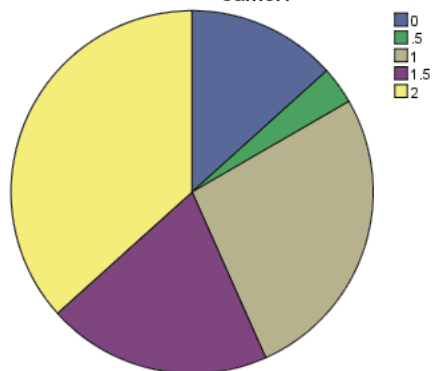
#### ITEM NO 4:

**Why did the brothers refuse to take the holy man's camel?**

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
0	4	13.3	13.3	96.7
.5	1	3.3	3.3	100.0
1	8	26.7	26.7	63.3
1.5	6	20.0	20.0	83.3
2	11	36.7	36.7	36.7
Total	30	100.0	100.0	

### PIE CHART

Why did the brothers refuse to take the holy man's camel?



This question carries 2 marks, according to the frequency table and the pie chart, it is observed that most of the students have obtained full marks besides the fact that the question was from within the chapter and not taken from exercise, which shows that they were fully prepared for any possible question that could be constructed.

### FREQUENCY TABLE

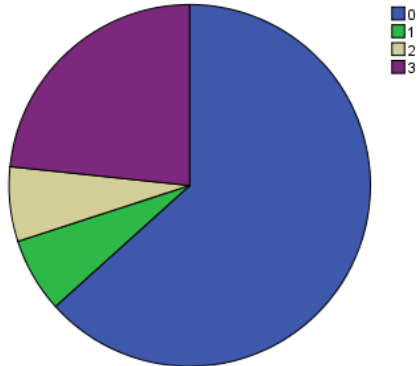
#### ITEM NO 5:

**What was the final comment given by the holy man to the brothers?**

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
0	19	63.3	63.3	63.3
1	2	6.7	6.7	93.3
2	2	6.7	6.7	100.0
3	7	23.3	23.3	86.7
Total	30	100.0	100.0	

### PIE CHART

What was the final comment given by the holy man to the brothers?



This question carries 3 marks, according to the frequency table and the pie chart, it is observed that most of the class got "0" because they got confused as there were two comments given by the holy man in the chapter and they were not able to point and write the correct one.

### FREQUENCY TABLE

#### ITEM NO 6:

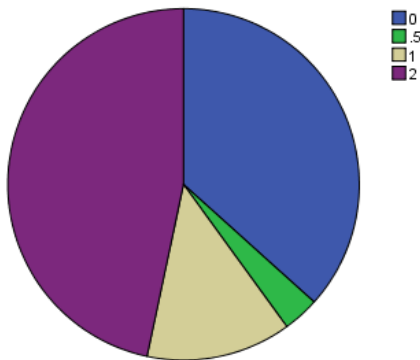
**"How about selling one camel and then dividing the money?"**  
**Why did the speaker think it was a good idea to sell one camel?**

Marks	Frequency	Percent	Valid Percent	Cumulative Percent
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0	11	36.7	36.7	83.3
.5	1	3.3	3.3	100.0
1	4	13.3	13.3	96.7
2	14	46.7	46.7	46.7
Total	30	100.0	100.0	

## PIE CHART

"How about selling one camel and then dividing the money?" Why did the speaker think it was a good idea to sell one camel?



This question carries 2 marks, according to the frequency table and the pie chart, it is observed that almost half of the class has "0" and the other half has "2", the reason is that this was a conceptual question. The answer was in the chapter but students were not able to grasp it, yet most of them managed to give the correct answer.

## Discussion and Conclusion

The overall comparison of both these tests shows a mark difference among them. The second test is better than the first one. Although both tests had the same pattern the level of rote learning was higher in the second test. Even in the first test, the obvious questions were answered almost correctly by all the students but in the second test, the conceptual questions and the rephrased questions were also attempted correctly by most of the students because they were then aware that any type of question can come. The second test shows that even conceptual questions are answered in a rote learned manner which means that creativity is not focused among the students i.e. students are encouraged to think out of the box. They are forced to cram all the stuff as tests are based on whatever they learn and the students are also aware of the fact that nothing can come that they have not learned (overconfidence of students has also resulted in varying marks in the second test). The first test was a surprise test and the results were good as well because students have mastered rote learning that during teaching every important detail was underlined by them. They implement the rote learn method but are not aware of how are they learning as the teacher does not make them aware of the ways of learning from which they can choose whatever method to learn which enhances their abilities. The second test results are

better than the first one, which shows that have rote learned all the stuff but even rote learning can end in not answering the question correctly as the second last question of the test (What was the final comment given by the holy man to the brothers?) created lots of confusion among the students because of the two comments mentioned in the chapter but the question was very obvious that they had to write the “last” comment still they got confused and most of them wrote the wrong answer. When students’ rote learns, they do not stop for a minute to think before writing the answer, they get very confident while attempting not realizing that they need to ask from the teacher which shows that there is no proper student-teacher interaction in class. The teacher is not friendly with them and as a result, students are holding back and lacking proper education. Students achieve good grades and they are contented with it, and, those who do not get good grades are not bothered to question, understand and improve. Some of the tests have shown that a child has got good marks in test one but the result of the second test was very low, because of the lack of understanding and putting in effort from teacher and parent’s part. Such students sit silently in the class as they lack the confidence to even participate or ask for the help of the teacher. Most of the students have improved in test two, confirming that they have rote learned.

The research has clearly shown the effects of rote learning via test#2, if the teaching methodology had focused on conceptual ways of conveying the knowledge to the students, then the results would have been far better, as a result, it validates the hypothesis made that: Rote learning is not a fruitful approach to implement among students as it hinders their learning and compresses their mind, with leaving no room for any imagination. Rather conceptual learning should be promoted for better and long-term results.

## Recommendations

It is recommended that teachers should pay proper attention towards concept building so that there is no room for rote learning among students. The syllabus should be designed in a better way to enhance study skills. The innate ability of learners should be brought into light which helps them to construct their understanding of a certain topic. The natural tendency of learners should be polished instead of applying traditional methods to learning. Proper guidance should be provided to each student so that they know what to do and what not. A teacher-student relationship should be friendly so the students do not hold back from asking any question from the teacher.

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