The Use of Text in Theological Education in Nigeria

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Abstract

This article argues that when students create theological meaning from a text they approach this task from a culturally determined perspective. This perspective is identified and shown to replicate aspects of oral interpretation. The result is that in some instances the output of such cognitive processes are not compatible with what Western educationalists call deep or critical thinking.

Introduction

This article arises out of my experience as a theological educator in northern Nigeria1. Reports on education in the United Kingdom often lament that students embarking on a course of study have not developed the necessary reading skills that such a study requires. If this is true of tertiary education in the United Kingdom, then how much truer will it be for students in the developing world who come from a culture that is still in a state of transition from an

oral based society to a literate society. While some theological educators would call for theology to be taught in accordance with the methods of oral tradition, those involved in tertiary education know that their students have to engage with the world of education that is defined by the enlightenment concepts of education and the engagement with texts. This engagement is complicated by two further factors.

The first factor is the effect that literacy has on cognitive development (Homer, 2004). Literacy and literature enable new modes of representation and communication, not available to oral societies to develop and thereby foster cognitive development. While Scriber and Cole (1981) attributed this development to explicit training in schools and not to the inevitable effect of literature, Donald (1991,2004) and Olson (1991,1994) have made the point that writing allows for the development of specialized modes of communication and that a unique set of intellectual competencies arises in learning to develop and use these.

The second factor is the relationship between culture and cognition. A student's cognitive approach is itself a 'hybrid' of biology and culture (Donald 1991). Katherine Nelson has shown that cognitive development in children takes place in a social and cultural context. This she termed 'The mediated mind' (1996). Donald and Nelson highlight the role of culture in the development of cognition. Donald stated this clearly when he wrote:

> Symbolic systems and codes, and the basic habits of rational thought are assimilated from culture. Thus, the developing human mind follows a strategy that is radically different from that of any other species. In order to achieve its mature form, it is dependent on information that is held in something external to genome and brain: culture (2004:255).

The mediating role of cultural context in learning is well recognised and has given rise to anthropological psychology[2] and cross cultural psychology.[3] The differing reliance on memorisation by ethnic groups has been explored by Ballard and Clanchy, (1984) Samuelowicz, (1987) and Volet et al.,(1994) although not without controversy, (Biggs,1990; Watkins and Reghi, 1991). Cultural predispositions on the Individualist / Collectivist axis have been researched (Ho and Chiu, 1994; Marsella et al.,1985; Triandis et al.,1988; Weisz et al.,1984). In more recent times Michael Brown, et al (2007), has shown that when studying a group's approach to learning or its locus of control orientation culturally specific sensitivity is needed as different Asian ethnic groups vary in the way these affect their cognitive processes.

For teaching practice and the production of learning materials the above considerations mean identifying students' approaches to texts and in the light of this building a teaching method that develops within the students the necessary skills for engaging with texts in such a way as to foster deep learning. This article will seek to understand a little of the relationship between learning approach, depth of cognition and culture. Many of the researchers mentioned above used comparative statistical analysis to derive their conclusions. It was my intention to approach this research through observing and analysing an actual learning event itself. In this I was looking for patterns in the organisational processes of cognition, its relationship to the cognitive depth of outcome and possible cultural influences in learning approach.

1.The instrument used

A neglected aspect of the pioneering research done by Marton and Säljö (Marton and Säljö, 1976) provided a way forward for this research. Their work found that the qualitative levels of output a student achieves when working with a text were dependent on the processing activity deployed. The processing activity in turn was reflective of how students construed the structure of the text to be:

> In our studies of university students we have found marked interindividual differences in the types of learning process that students engage in when confronted with learning materials. In fact,we found basically two different levels of processing to be clearly distinguishable. These two different levels of processing, which we shall call *deep-level* and *surface-level*

processing, correspond to the different aspects of the learning material on which the learner focuses. In the case of **surface-level** processing the student directs his attention towards learning the text itself (the sign) i.e., he has a reproduction of learning which means that he is more or less forced to keep to rote-learning strategy. In the case of a deep-level processing, on the other hand, the student is directed towards the intentional content of the learning material (what is signified) i.e. he is directed towards comprehending what the author wants to say about, for instance, a certain scientific problem or principle (Marton and Säljö, 1976:7-8).

The student understands the structure of a text as a flat, sequential arrangement or a hierarchy of ideas. With a hierarchical approach goes a deep-level processing while a flat approach indicates a surface-level processing.

To obtain the necessary data from students, a text was constructed according to a foreground/background arrangement. This allowed students to approach the text either as a flat or hierarchical construction. By analysing their answers about this text, individual student's approach to that text could be identified and categorised. The text also needed a certain complexity to ascertain the student's level of fidelity to the authors intention.

Two texts were chosen, the first was 950 words and the second was 960 words. Both were written in simple English for a Nigerian audience. The structures of the texts were the same, a prolonged illustration in the form of a story that preceded the author's discussion and development of the idea introduced. The author's discussion was itself multi-structured, consisting of three components. The illustration introduced a problem in society. The author's discussion linked this to an aspect of church life, gave advice on how the problem could be recognised and provided ideas for overcoming the problem in the church. The structure of the text used was:
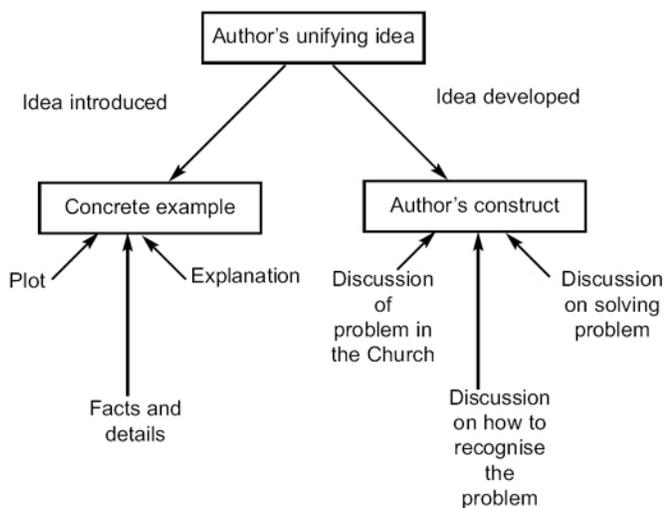
This structure enabled the researcher to present questions to the student, the answers to which can be analysed for the following data.

- The student's approach to structure of the text.
- The identification of patterns in the use of the text in constructing understanding.
- The general quality of the student's cognitive output in constructing understanding from the text.

1.1 The content of the text

Text 1: True learning at theological school is measured by how a student utilises that learning in the daily life of the

church.

The central issue is introduced through an illustration of a young man sent to an agricultural school by his father. Despite graduating with high grades, the young man's disdain for manual work means that his understanding of agriculture remains theoretical and of little practical value. Within the church, an exaggerated desire for paper qualifications as an end in themselves must be avoided. There are characteristics of learning approaches of students approaching their education in this way which can be recognised. There are also steps that theological educators can take to move students to connect their studies with their lives as pastors.

Text 2: Unity in the church requires the challenging of the cultural accepted values that lead to discrimination.

The issue central to this text is introduced with a story of a young Chinese girl, Ah Ching, who is murdered to allow her parents to have a second child, hopefully a boy. This story illustrates how cultural values (boys are more valuable than girls) lead to discrimination and injustice. Saint Paul teaches that this has no place in the church. In the church, however, this is a problem?women are not recognised, the priest becomes a special class above the laity, and tribal an d ethnic affiliation are the gateway into positions of authority in the church. Suggestions are then made as to how this can be combated:

- Through the education of laity and theological students.
- Taking deliberate practical steps to appoint excluded people to positions of authority.
- To teach in such a way that those cultural values that are dehumanising are exposed.

2.The development of the research methodology

2.1 The pilot project

A pilot project was conducted at St Francis of Assisi Theological College.4 The purpose of this study was to assess the feasibility of using the text as an instrument to identify students' approaches to the structure of the text when constructing understanding from it.

The procedure adopted was to give 19 prospective students the text as part of their selection process. They were told that this was part of their selection. They were given the text and told that the following day they would be tested on it. The following day they were given a set of questions to answer from their memory of the text.

It became apparent that the flat approach did not exclude an element of abstraction. Students did not simply recount the details of the text but created understanding but with a low fidelity to the structure of the text. The result was that minor themes in the illustration were given central position and some interpretations had idiosyncratic characteristics. Marton and Säljö's two categories needed to be expanded to incorporate this idiosyncratic aspect. This third aspect did no t manifest itself in the main research. This could be because the pilot project used students applying for studies while the full study used students who were well into their first year of study.

Students' perceptions of the text: pilot study

Table 1. Distribution of approaches to the structure of the text in the pilot study

Idiosyncratic	Flat	Hierarchical	Total
12	18	9	39

2.2 The procedure for the research project

A total of 158 students were surveyed. These were students who were available to participate in the research on an opportunist basis. A total of 28 second and third year students participated from St Francis of Assisi Theological College while 68 students drawn from first, second and third years participated from Theological College of Northern Nigeria (TCNN); 14 third year students participated from the Christian Institute Jos and 48 students from first second and third year participated from the Baptist Theological Seminary Kaduna.

The procedure followed was that the students were given the text to read. Once they had completed reading it they handed the text in and were given a questionnaire to complete. There was no limit on the amount of time that students could take to complete the questions.

Analysis took place in two phases. The first phase separated the students' written answers into two categories according to the way they reflected a flat or hierarchical understanding of the structure of the text. The second phase assessed the general level of outcome according to the Solo Taxonomy (Biggs, 1979: 381?394). Biggs identifies five le vels of response to questions about the learning and meaning that a student makes from a finite display of information. These he calls the 'Solo Taxonomy'.

1. **The pre-structural level**. The response has no logical relationship to the main thrust of the display. It shows an inability to comprehend tautology or idiosyncratic relevance. The response is often based on an irrelevance or a side issue that is not germane to the central idea of the author.

2. **The uni-structural level**. The response at this level contains one relevant item from the display. This is used to link the structure of the display but misses other items in the display that add depth to or qualify the item selected. The response, while generally true to the author's intention, is nonetheless an oversimplification of the given display.

3. **The multi-structural level**. This is a fuller response than the uni-structural response and incorporates several relevant items from the display. These are understood by the student as relevant or not, but not integrated or presented as part of a larger picture. Closure is premature and some of the items in the display are ignored.

4. **The relational level**. The student at this level is able to extract and use most or all of the relevant data. The material is unified by a relating concept within the given context of the display. The response does not go beyond the context of the material.

5. **The level of the extended abstract**. This has the same characteristics as the relational level but moves beyond it and embraces principle. The context is seen as one instance of a general case. The basic assumptions can be questioned, counter examples and new data given that are not part of the original. The only major difference is that students are given as much time as they need to read the text.

Two texts had to be used because students at the Baptist Theological Seminary Kaduna had already worked on the first text in their course on study methods.

The first example, Danjmuma, was used in two theological colleges, St Francis of Assisi and the Theological College of Northern Nigeria. Atotal of 98 students completed this first exercise. The second example was used with students from Christian Institute, Jos and the Baptist Theological Seminary, Kaduna. A total of 52 students were engaged in the second example.

The process of analysis of data followed and the final analysis was as follows:

- The students were categorised into two groups, 'Flat Perception of Text' and 'Hierarchical Perception of Text'.
- The written answers the students provided were scored for overall depth according to the Solo scale.[5]
- The initial categories were further refined and each was subdivided into three according to how the students scored on the Solo scale.

- These subdivided categories were further analysed to map the different usages made by students of the structure of the text in constructing answers.

3. Data and Analysis of Case Study

3.1 The diversity in flat construal of the structure of the text

There were several variations in the flat approach to text. These were:

Flat sequential: These students saw the text sequentially. They saw the text as 'a, and b and c'. The quote below illustrates this.

> This passage is talking about Danjuma who refused his father to teach him about the farm but later went to school and studied hard and became a diploma disease holder. On the other hand the passage also talked about the church need for well-qualified leaders, and many well-qualified leaders have several diplomas.

Flat retelling: Very often students would concentrate on some or other details of the text usually from the illustration and recount this. In so doing their account was only partial:

> This passage is about a boy named Danjuma who did not want to go to farm and as a result of that the father decided to send him to farm school, after he's completed with good results, the father thought his son would now use his experience to farm well and better but still his mind was not on farm, rather to be a teacher on high pay.

> This is about a boy, Danjuma, who refused to receive his father's teaching on a farm work and also refused to do the farm work because his father did not give him a diploma. His father later sent him. Academically he did very well but not too good in the practical.

Flat retelling globetrotter[6]: These students, while retelling parts of the text, placed an interpretation on the text that was not drawn directly from that text. In this they 'globe trotted' and derived idiosyncratic meanings of the text:

> The passage is about Danjuma who refused his father's teaching on how to farm and how he was useless to his family, when he was educated and refused to learn how to work on his father's farm. In fact the passage is all about disobedience and laziness.

The passage is about a farmer and his son who does not want to suffer.Who does not want to use what he learnt. He does not want to be obedient to his father's advice and wants to do whatever he likes to do.

Flat mentioning: The mentioner used as few words as possible and kept the answers to a short sentence. The subject of the answer could refer to an aspect of the illustration, be sequential or be more akin to globetrotting.

> Danjuma who wants a diploma in Agriculture but did not want to farm.

> It's about father and the son and also learning.

> A selfish ambition.

3.2 The relationship between the flat and hierarchical perception of a text

The existence and respective numerical strengths of the flat and hierarchical approaches is represented below.

Table 2. The distribution of flat and hierarchical approaches to text over the colleges

College	Flat approach	Hierarchical approach
SFATC	20	8
TCNN	26	42
BTSK	25	23
CI	4	10
Total	75	83

Variations were seen in the numerical relationship between flat and hierarchical approaches across the colleges. The overall picture was that there was a slight predominance in the number of students approaching a text as a hierarchical structure.

3.3 The relationship between flat and hierarchical approaches to a text and the depth of cognitive outcome

When comparing the average Solo scores of the flat and hierarchical approaches a difference can be seen between the depths of cognitive processing.

Table 3. Comparative depth of processing and approach across schools

College	Flat approach	Hierarchical approach
SFATC	13.1	19.3
TCNN	13.1	17.3
BTSK	14	18.3
CI	14.3	17.4

The general impression gained from these figures is that those students who approached the text as a hierarchy had a slightly higher cognitive output in the depth of their answers than those who used a flat approach.

A similar conclusion can be drawn from a comparison of the results of the two texts used.

Table 4. Depth of cognitive processing across the two examples

	Flat approach	Hierarchical approach
Example 1	13.1	17.7
Example 2	14.1	18

3.4 The relationship between how the text is construed and how the structure of a

text is used

The students' written answers were analysed and categorised according to where the material they used to construct their answers was found. Three categories related to the structure of the text. These were:

- The author's unifying idea.
- The author's discussion of the issue.
- The introductory illustration.

Material was also used that could not be related to the structure of the text. This was classified as being 'outside the textual display' and constituted a fourth category.

The respective roles that these four categories played in students' answers is represented in the tables below.

The flat approach to the text drew meaning from the four areas in roughly equal measure. The illustration was given slightly more weight than the other areas. The material drawn from outside the text had the same role as the author's discussion. The author's unifying idea played the least important role.

Table 5. Proportional distribution in Flat Approach.

he author's idea	Author's discussion	Illustration	Outside material
21.7%	24.9%	29.3%	24.1%

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The hierarchical approach to the text characteristically concentrated on the author's unifying idea. The second most important area for developing answers was the author's discussion. Outside material was used while the illustration was seldom used to drive answers.

Table 6. Proportional distribution in Hierarchical Approach.

The author's idea	Author's discussion	Illustration	Outside material
41.1%	30.1%	11%	17.8%

There were marked differences in the way the two categories of students used the text. Flat students were more even in their approach to the structure. Their answers were derived from material from all four categories in fairly equal proportions. Hierarchical students concentrated on the author's unifying idea and his discussion. They were twice as likely to resort to the author's intention in answering than their flat counterparts. They were slightly more dependent on the author's discussion. They also made much less use of material found in the illustration. They were more reserved in reverting to material derived from outside the text to construct answers.

The results become more interesting when students' answers are analysed according to their Solo scores. Working with three subgroups, high Solo scores (those in the top third), average Solo scores (those in the middle third) and low Solo scores (those in the bottom third), it can be demonstrated that there was a progressive variation in the way the aspects of the structure of the text were used. This is illustrated in the charts below.

Flat approach to structure ? Low Solo Score

Students with a low Solo score showed little use of the author's discussion and idea but relied substantially on the illustration and outside material to create their answers. These two aspects could be considered to represent the student's contextual or personal reference in constructing understanding. Seven out of ten answers fell into this

category.

Table 7. Proportional distribution in flat approach-low SOLO.

The author's idea	Author's discussion	Illustration	Outside material
14.1%	14.5%	36.8%	34.6%

Flat approach to structure ? Average Solo Score

Students with an average Solo score were even in their use of the structures of the text but showed an increased reliance on the author's discussion and idea. The extent to which the illustration was used was consistent in high and average groups. The student's reliance on her/his own context and personal reference in the construction of understand- ing was diminished, representing only 5 in every ten questions.

Table 8. Proportional distribution in flat approach ? average SOLO

The author's idea	Author's discussion	Illustration	Outside material
22.7%	28.2%	24.6%	24.5%

Flat approach to structure ? High Solo Score.

Students with high Solo scores concentrate on the author's unifying idea and discussion and relied much less on the illustration or material drawn from outside the text for creating understanding. The illustration was, however, important and still played a much more important role in the flat category than in the hierarchical category. The reliance on the illustration was a consistent feature of the Flat approach.

Table 9. Proportional distribution in flat approach ? high SOLO

The author's idea	Author's discussion	Illustration	Outside material
30.5%	35.7%	23.3%	10.5%

Hierarchical approach to structure ? Low Solo Score

A similar movement in the way the text is used was seen in those who had perceived the hierarchical nature of the text. This movement was for the student to decreasingly use her/his context in answering questions and interact more with the author. The illustration was given the least attention while the author's main idea received the most.

Table 10. Proportional distribution in hierarchical approach ? low SOLO

The author's idea	Author's discussion	Illustration	Outside material
39.3%	21.3%	14.3%	25%

Hierarchical approach to structure ? Average Solo

The use of the aspects of the structure of the text continued to develop the patterns already seen. Reliance on the author's unifying idea was slightly increased. There was a decrease in the use of the illustration, a decreasing use of outside material but an increasing use of the author's discussion. The significant change was in the reversal of the attention given to the text as opposed to the student's contextual situation in the construction of understanding. In this group the student used the author's text seven times in ten to derive an answer.

Table 11. Proportional distribution in Hierarchical Approach ? Average SOLO

The author's idea	Author's discussion	Illustration	Outside material
42.3%	30.5%	9.5%	17.7%

Hierarchical approach to structure ? High Solo

The number of answers that drew from the author's unifying idea showed no great variation or development. The use of the illustration remained static while the author's discussion had a more prominent place than before.

As Solo scores increased the student was increasingly utilising the author's own discussion and development of the issue. Students with low Solo scores made the least use of this aspect. The use of the illustration became decreasingly important and stabilised at about 9% of the answers. Outside material that was used to provide answers to questions constantly decreased as Solo score increased. Those students who had a low Solo score readily resorted to material not presented in the text.

Table 12. Proportional distribution in hierarchical approach ? high SOLO

The author's idea	Author's discussion	Illustration	Outside material
41.8%	37.1%	9.2%	11.9%

There were marked differences in the way the two categories of students used the text. Flat students were more even in their approach to the structure. Their answers were derived from material from all four categories in fairly equal proportions. Hierarchical students concentrated on the author's unifying idea and his discussion. They were twice as likely to resort to the author's intention in answering than their flat counterparts. They were slightly more dependent on the author's discussion. They also made much less use of material found in the illustration. They were more reserved in reverting to material derived from outside the text to construct answers.

4. Detailed description of how structure is used by students to create meaning from a text and its influence on the depth of cognitive outcome.

4.1 The flat approach to structure and cognitive depth

4.1.1 The use of the structure of the text by students in this category who have a higher than average Solo score

Students approached the illustration either factually, i.e. recounting the plot, or by abstracting or reading into the plot or detail. When description was used they tended to be fairly full. When the story was abstracted, the central issue illustrated by the story was identified and brought out. The control that the illustration exercised on the student's construction of understanding faded fairly quickly and attention was applied to the author's discussion.

In a minority of cases students developed different ideas based on different aspects of the text. The illustration was interpreted using ideas drawn from outside the display. This meaning from the illustration was not integrated with the meaning of the discussion. These independent ideas were held in parallel being united by the simple use of the conjunction 'and'.

The students' handling of the discussion was never complete. Certain aspects of the discussion were highlighted, one or two issues raised by the author received attention while any issue mentioned in passing was seldom engaged with. Students in this category were the only ones who tried to memorise aspects of the author's discussion.

A generalised appreciation of the unifying idea was often present but this was not developed and did not show any obvious sign of engagement with the author's discussion.

4.1.2 The use of the structure of the text by students in this category who had an average Solo Score

The significance of the illustration in the construction of understanding was more significant for this category of students than those with a higher learning outcome. They approached the illustration from the perspective of their own context rather from that which arose from the display itself. The unifying idea was discerned from the illustration but the illustration and abstractions from it were more likely to inform the student's discussion on the text. The result was that these student were less inclined to engage with the author's own discussion on the issue and were more ready to use a 'Global strategy' in discussing the text.

The author's discussion was generalised and reduced to a singular formula, which was then repeated with minor modification to answer different questions. Some students reverted to verbatim memorisation of the specific points made by the author. While being familiar with the author's discussion, these students did not use this knowledge to provide expanded answers to questions or to explore the author's ideas.

Most students in this category built multi-layered meanings from the text. The passage was viewed as being in two separate segments with its own meaning. The author's intention or unifying idea was not lost but it was augmented by secondary understandings that could be idiosyncratic in nature.

4.1.3 The use of the structure of the text by students in this category who had a below average Solo

Students in this category concentrated on the illustration and seldom went beyond it to the author's discussion. The illustration itself could be approached in a fragmentary way with only one aspect of the plot or detail being elevated to the level of a unifying idea. The author's unifying concept could be totally lost. The student imposed a new frame of reference on the text. This arose out of the student's own context and largely bypassed that of the text. When the student did engage with the text, the statements were often very vague and general.

4.1.4 Summary of the flat approach analysed according to cognitive depth

The three subcategories are not themselves discrete categories but rather they possess the same basic characteristics. Where they differ is in the extent to which these characteristics are combined and emphasised.

- The depth of cognitive outcome ranged widely amongst those who perceived the structure of a text to be flat. The greater the depth of output the more the student concentrated on the author's discussion and showed awareness of the unifying idea. This was always dealt with in an atomised way. As depth of output diminished so too did the student's use of the whole text. The result was increased idiosyncratic understanding and decreasing fidelity to the author's intention.

- Students approached the illustration and author's discussion in a parallel fashion. The result was that often in the more able students, two or more ideas emerged from the same reading. These were held as separate truths without any attempt to unite them in a common theme.

- Those students who were under average in their depth of outcome, approached the illustration in an undiscerning fashion and did not distinguish between its important and incidental aspects. Any aspect could be used in the creation of understanding. This resulted in a single idea emerging from the text with any contrary evidence being ignored.

- Students worked in a consecutive manner. The first part of the text was discussed, then the second. What came first in the display was generally engaged with. However, the later the ideas appeared, the less likely

they were to influence the student.

4.2 The hierarchical approach to the structure and text and cognitive depth

4.2.1 The use of the structure of the text by students in this category who had high Solo scores

Students with an above average Solo score concentrated on building understanding from two sources. There were the author's unifying idea and the author's discussion. These two aspects of structure contributed to 79% of the answers given. Students in this category, while often aware of the broader issues of concern by the author, narrowed down their use of the discussion to one particular issue. The role of the illustration was small. It was more easily remembered than the author's discussion and was occasionally used to construct answers. Ideas drawn from outside the context of the text played a discernable but minor role. These, however, were subordinated to the author's unifying idea and were used to extent this into new areas.

4.2.2 The use of the structure of the text by students in this category who had average Solo scores

The author's unifying idea played a significant role in the students' construction of answers. This group differed from those who had above average Solo scores in that they gave the illustration a more prominent role in their constructing of answers. They were likely to rely on the illustration for the author's idea for understanding while reducing their dependence on the author's discussion. Answers were left undeveloped. Their use of ideas from outside the context of the text remained at a similar level as those with a higher Solo score.

4.2.3 The use of the structure of the text by students in this category who had below average Solo scores

Students in the third group used the author's unifying idea to a similar extent as those in the other two groups. The difference lies in the extent to which they used the illustration and the author's discussion. The author's discussion received less attention by these students than by other students approaching the text as a hierarchy. They relied on a generalised restatement of the unifying idea for much of their answers. The illustration was more important to them than others in the hierarchical group. The single most important difference of this category was the significant use of imported ideas to make understanding of the text. They were the least disciplined of the hierarchical students in their use of the text.

4.2.4 Summary of the hierarchical approach analysed according to cognitive depth

- Students who construed text as hierarchical showed a consistency in dealing with the text. Their answers were consistently drawn from the author's main idea. The extent of the use of the author's idea was consistent over the three subcategories. Differences emerged in the use of the unifying idea. High Solo students extended it, while those of lower scores relied on repeating a generalised restatement of it.

- Students with a lower than average Solo score were twice as likely to use material that was outside the display than those who had a high Solo score. This is because to answer questions they were more likely to revert to padding an answer and moving at a tangent to the main idea than those with a high Solo score.

- The illustration remained significant. It is from here that students first encountered the author's unifying idea. Students with average and low Solo scores could move very rapidly to a conclusion and did not necessarily follow the text through evenly.

5.Some tentative observations

5.1 Depth of cognitive processing follows the perception a student has about the structure of the text

Nigerian theological students fall almost equally in their perception of the structure of the text into two camps: those that perceive the text as a flat construct and those who see it as a hierarchy of ideas. This represents a strong dependence on the situational context of the reader for meaning on the one hand and a more abstract orientation on the other. The contextualising orientation is a characteristic of an oral society.[7] These approaches do not produce the same quality of cognitive output. The cognitive output of students approaching the text as a hierarchy is greater that those approaching it as a flat construction. These are two different approaches, each with its distinctive features and levels of cognitive output. There are four specific observations.

- Cognitive depth in understanding a text is inversely proportional to the student's dependence on his context for constructing understanding. The output most consistent with the desire for deep learning[8] is produced by those students who perceive the text as a hierarchy of ideas. The context richness varied between the two groups. Those using a flat approach allowed it to play a bigger part in the construction of understanding than the hierarchical approach. What was significant across both groups was the way in which the level of cognitive activity related to the extent to which the context was used. The greater the cognitive depth the less the sociological context was important in mediating meaning.

- The relational nature of constructing understanding is in a bipolar relationship to the way the text is perceived and inversely affects cognitive depth. The two poles are the hierarchical construal of a text at one end and the flat construal on the other. There was continuity in the way the illustration was used across both groups. This progression was not parallel in fashion but bipolar. The progression followed the level of cognitive depth. Those using the illustration most were those students construing the text as a flat construct and who showed the lowest cognitive depth. Those using it least were the students who had high cognitive output with an understanding of the text as a hierarchy of ideas. Contextually based understanding is inverse to the depth of cognitive output.

- Perception of hierarchical ideas is proportional to the depth of cognitive activity. The greater the student's level of cognitive output, the greater the student will recognise the ideas of a text. This mirrors the way these approaches act in a bipolar way in the creation of relational understanding. However, the greater the cognitive output, the greater the use of abstract ideas for creating understanding.

- Construction from understanding from the abstract details of a text increases with the depth of cognitive action. Perception and attention to abstract details in a text runs in a parallel fashion through the two approaches to the text. The students with a flat approach to the text are less inclined to use this aspect of a text than those of the hierarchical approach. Both approaches see students increasingly giving attention to this aspect of a text as the cognitive output increases. In both groups the lower the cognitive output, the lower the attention given to this aspect of a text.

5.2 Students' approaches to the written text show similarities with the characteristics of the interpretation of oral tradition[9]

1. The influence seen in the approach of flat category students.

The flat approach sees the structure of text in a consecutive or serial fashion. There is no differentiation in the value given to different aspects of the text. The approach is, A and then B and then C. This is a noted characteristic of the construction of oral tradition. In terms of logic it allows two or more unrelated points to be derived from the different sections of the text. These can be held together without any attempt to resolve the tension between them. The

following characteristics of oral tradition were observed in the flat approach to the structure of the text.

- An atomistic approach was taken to the material presented in the text. An aspect of information could be isolated from its context in the text and interpreted independently.

- Different ideas derived from the text were dealt with as though they were parallel meanings of the text.

- The meaning of the text lay strongly with the reader rather than with the author or the text itself.

- Students did not discriminate between the differing values of the differing parts of structure of a text. They did not distinguish between its important and incidental aspects. Any aspect could be used in the creation of understanding. This resulted in the reader drawing a meaning from the text, while any contrary textual evidence for this was ignored.

- Students worked in a consecutive manner. The first part of the text was discussed then the second and so on. What came first in the display was generally engaged with. However, the later the ideas appeared, the less likely they were to influence the student.

2. The influence of the cultures of oral tradition on the hierarchical students.

- In memorisation students relied on a globalised grasp of issues and did not concentrate on detail. The central point was spun out. There was no care given to the niceties of details rather the students were satisfied with a general grasp of the point and from this they spun out answers. This flies in the face of the experience of those teaching in Africa and a common held perception amongst teachers that the students rely on rote for answers. This research did not find any great tendency amongst the students in this direction (it must be remembered that the circumstances and the expectations of the students sitting for exams are different to those of this research).

- Even with some hierarchical students, the meaning of the text was constructed through the aspects of the text that dealt with relationships. Those students who construed the text in hierarchical terms showed lower cognitive outputs. The author's unifying idea played a significant role in the students' construction of answers. They gave the illustration a more prominent role in their constructing of answers than others in their group. They were likely to rely on the illustration while reducing their dependence on the author's discussion. Answers were left undeveloped. Their use of ideas from outside the context of the text remains at a similar level as those with a higher solo score.

6 Conclusion

Much discussion in theological education has been directed at the institutional level of the theological exercise and has neglected the students' actual processes themselves. The result is much wishful thinking and grand statements about the renewal of theological education. Corresponding attention must given to the alignment of the whole educational process and the culturally mediated learning approach of students.

The identification, within the students surveyed, of the two categories of approaches to understanding text helps to understand the ordering process used by these student to make sense of a literary text. Some aspects of this correspond to characteristics of oral tradition. The student understands the structure of a text as a flat, sequential arrangement or a hierarchy of ideas. The differing organisational patterns have different results in terms of cognitive output for these students. With a hierarchical approach goes a greater fidelity to the author's unifying idea. With a flat approach fidelity decreases to the extent that an idiosyncratic understanding of the text is constructed. Where fidelity is high the concepts presented by the author can be processed to achieve a qualitative level of learning. The learner can be introduced to new ideas outside his existential frame of reference. Where fidelity is low the learning is more an existential experience dependent on the reader's already existing framework of ideas. The reader does not engage

with new ideas or concepts. The result is that communication and therefore dialogue, between the writer and the reader breaks down.

This raised important issues for me in the construction of theological education learning material for use in northern Nigeria. Where teaching materials are used they need to be of such a nature that they are sensitive to the possible way that cultural background disposes a student to construct meaning. They also need to recognise the two approaches used by students. They need to engage the student in such a way that he or she develops the skills needed to engage with the text in an ever increasing depth of cognition.

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Endnotes

- This is part of a bigger research project. The full report can be obtained in Seed, Richard Edward, The Relationship between Goals of Theological Education and Learning Practices. (Ph.D. Thesis, University of Birmingham, 2008).

- Anthropological Psychology is a discipline developed at the Danish University of Aarhus. The purpose of this discipline is to identify, describe and explain why the human psyche is especially human. It approaches the human psyche from an historical, cultural and history of life perspective. It is in the latter two perspectives that culturally generated factors play a part in explaining the human psyche. Preben Bertelsen , Anthropological Psychology 2001 Downloaded from **http://www.psy.au.dk/pb/antropsy.htm**.

- Cross-cultural psychology is a branch of psychology that looks at how cultural factors influence human behavior. The International Association of Cross-Cultural Psychology (IACCP) was established in 1972 to promote this as a discipline.

- Saint Francis of Assisi is an Anglican theological college in Wusasa, northern Nigeria. At the time of research it offered a Diploma of Theology and had 110 students.

- Biggs' categories were used to evaluate students written answers. The answers were scored according to the level they represented on the Solo taxonomy. These scores ranged from 1-5.

- Pask identified two possible problem areas in student's construction of understanding from a text. The first is 'globetrotting', seen in students who are overready to generalise from insufficient evidence to form hasty, personal judgments. The second is the 'improviser'. This is the student who fails to make use of valid and important analogies and may not build up for himself any overall map to see how the various elements of the topic interrelate and how the topic fits into the subject area in general. Pask, Gordon, Styles and Strategies of Learning (1988).

- Ong, Walter J, 1982, Orality and Literacy: The Technologizing of the Word, (London and New York: Methuen,1982). Ong identified the characteristics of oral literature.

- Biggs gives a description of deep learning. The deep-active approach reads for meaning and connects the material with past knowledge and experience. The argument of the author is understood and is evaluated according to the way the supporting evidence is used. Entwistle, Noel James. 1981, p. 77.

- Olson, David R. and Torrance, Nancy have edited two useful books on this topic. Literacy, Language and Learning, 1988 and Literacy and Orality, 1991.

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