

Analysis of Grade 10 Opportunity-to-Learn Dynamics of Market from Two Economics Textbooks

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Abstract

This theoretical paper analyses the Opportunity-to-Learn (OTL) Dynamics of Market offered in two Grade 10 economics textbooks. The study asked whether opportunities provided in economics textbooks improve learners' performance in Dynamics of Market. Following a Content Analysis approach, three OTL variables; Content organization, Content coverage and Tasks were used as the theoretical framework to couch this study. One of the findings was that Less High-Order tasks were found in both textbooks hence do not develop learners' Higher order Cognitive skills. The overall study showed that the analysed economics textbooks do not offer enough OTL Dynamics of Market. This study is significant because it helps both educators and policy makers to explore more on 'must-have features' of economics textbook before it could be prescribed for use. It makes contribution to international literature on textbook analysis in the field of economics education, this is rare in economics education studies. It is recommended that Higher order tasks should be included in future editions of the Grade 10 economics textbooks thus, suggesting the need to analyse economics textbooks in high schools for effective learning. Although the study analysed specific textbooks, its findings shed light on how learning opportunities relate to performance more generally.

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INTRODUCTION

The poor learners' performance in 'Dynamics of Market' (DM) is a concern in South African High schools and so it is globally. Dynamics of Market remains one of the school topics in economics education that exposes students to the analysis of the market structures. These concepts require critical thinking skills, analytical skills, the use of calculations, equations, interpretation of graphs, use of tables, and mathematical skills to make economic analysis and decisions (Suparno & Ghina, 2019). Understanding these DM concepts however prove challenging for learners in using them to make sense of the economy and the world economy at large. Thus, it becomes necessary to understand how the 'Dynamics of Market' are presented from economics textbooks and the extent to which enhances learners' understanding.

Malyshkin (2016) describes Dynamics of Market as "The disbalance of supply and demand that is typically considered as the driving force of the markets". Hence what readily comes to mind in the DM are concepts such as the Demand and Supply, equilibrium prices and all the fluctuations in the market structure. Ayer (2015) suggests that "teachers needed to expose students' multiple times to the supply and demand content ...because their students often considered the content dry and overly mathematical." This implies that the understanding of DM requires among others, the analysis of demand and supply graphs, the interpretation, the drawing, and analysis of the different economic graphs that stimulates critical thinking skills and analytical skills.

In the South African context, the Senior Certificate Diagnostic Reports presented by Department of Basic Education (DBE) in the 2020 Diagnostic report admitted, "...there is a noted improvement in the writing of essays, but that the Higher-Order questions in Dynamics of Market still presented a challenge to learners" (DBE, 2020, p. 81). Similarly, the 2021 Diagnostic Report commented that candidates found it difficult to relate the impact

of one variable on the graphical aspect of DM to another. Coupled with the foregoing, the report acknowledged the lack of application and interpretation of DM questions to economic issues (DBE, 2021 Pg 96).

From the forgoing, it is evident that the understanding of DM present learners both in South Africa and globally with challenges that stimulates their critical thinking skills and analytical skills in making economic analysis and decisions. However, researchers have dived into understanding reasons most learners struggle to understand the DM in different ways. For example, Burdina & Sauerb (2015) revealed that students tend to have misconceptions on DM concepts that they tend to illustrate a decrease in supply by shifting it to the right because it then looks "lower" on the graph. Khoo & Fitzgerald (2017) found that most learners struggle with the DM concepts because they lack graphical skills and mathematical concepts and that learners have phobia for figures and graphs. Ogbonnaya (2022) used technology integration to mitigate learners' challenges in understanding Dynamics of Market and found that learners are not proficient to use technology to make sense of graphs in DM. Consequently, Manzi, Mosisia & Moreeng (2021) found that little or no Opportunities-to-Learn was avail for Grade 12 learners in the classroom to learn the concept of imperfect market as a concept in the Dynamics of market. Others still argue that students' challenges in understanding the Dynamics of Market is as a result of lack analytical skills (Kurniawati, 2020), while others for example Zhang (2017) argue that it is lack of content knowledge and ineffective use of available instructional resources by the teachers.

It is now clear that researchers in economics education have not come to a common consensus on the reasons for learners' challenges in understanding DM. It is safe to say that the challenges face by learners in understanding the DM is not a uniquely South African problem but a global one. This study therefore takes a different perspective to investigate learners' challenges in understanding the DM

through the textbooks. The study argues that there is a gap in the literature that fails to account for the Opportunity-to-learn DM provided for learners from economics textbooks thus it is unclear how learners learn Dynamics of Market through the textbooks.

Fan, Zhu & Miao (2013) argue that to advance the field of textbook research, researchers need to move from descriptive to analytical studies showing how textbooks function in education. This argument is supported by scholars such as Otieno & Povey (2022) who opined that textbooks create an opportunity-to-learn for both teachers and learners and remain the key resource for teaching and learning. Otieno & Povey argue that textbooks play a pedagogical role in providing understanding to specific topics. Textbooks are used to mediate the intended curriculum and the implemented curriculum. They often reflect the intended curriculum (what students are expected to learn) (Hadar & Ruby, 2019). In other words, the degree of students' opportunity to learn are largely determined by the textbooks used. For this reason, the researcher settled to analyse the content of the two economics textbooks (Content Analysis method) using Opportunity-to-Learn as the conceptual framework to the couch study.

The following research questions were addressed to realize the objectives of this study: (i) How are the topic contents organized in the textbooks? (ii) What contents of Dynamics of Market are covered in the Grade 10 textbooks? (iii) To what extent does the OTL from tasks presented in economics textbooks help in developing learners' cognitive skills in understanding Market Dynamics?

This study is located in the concept of Opportunity-to-learn (OTL) which emerged among the International Association for the Evaluation of Education (IEA). Within the IEA, the OTL concept was developed by Carroll (1963) to ensure the validity of mathematics achievement (though it can be applied in other fields such as economics) conducted by the International Association for the Evaluation of Educational Achievement (IEA). OTL

is based on the premise that students should not be assessed on knowledge that they had not been given an opportunity-to-learn. OTL was also propelled by the relationship that exist between students' curricular exposure and their achievement. It advocates for a balanced curriculum. Gillies & Quijada (2008) contend that not only the low intensity of curriculum coverage that affect OTL but some other factors such as teacher qualification, curriculum and materials, time-on-tasks, type of tasks, cognitive demand on tasks, teachers' professional development, school financing, instructional practices, etc. should be taken into consideration in OTL.

There are different approaches in which OTL could be measured, using questionnaires, classroom observation and textbooks analysis. However, researchers have agreed that the measure of OTL from textbook could not be completed without the inclusion of certain concepts such as resources, content organization, school conditions, curriculum coverage, content coverage, type of tasks, time-on-tasks, cognitive demand of tasks, coherence, and instruction to which students have access pertinent to the success of the teaching and learning.

Therefore, within the concept of OTL, I have chosen to focus on these three concepts: content organization, content coverage and tasks to investigate the OTL Dynamics of Market from economics textbooks and they will be referred to later in this study. OTL is chosen to couch this study because OTL allows the researcher to analyse the economics curriculum and make sense of what opportunity-to-learn is presented by economics textbooks for the teaching and learning of DM. OTL is relevant for this study since it argues that a student should not be tested on a particular topic or a source in which it has not been avail the opportunity to learn from. The above explanations on OTL show that what drives OTL is that learning outcomes may be explained by the content coverage, content organization and the cognitive level of tasks in the textbooks.

Content organization is the sequence in which the textbooks present the subject concepts to foster content progression from previous grades to the current grade (Ogbonnaya 2021). Charalambous, Delaney, Hsu, & Mesa (2010) stated that the sequencing of contents captures the learning opportunities the textbooks offer to the students. Charalambous et al. (2010) argues that "the selection and sequencing of topics not only frame what is to be learned but also could facilitate or impede this learning". In their study, Grouws et al. (2013) investigated the effects of content organization on students' learning in high school mathematics course and found that content organization affects students learning and that teachers are the ultimate arbiters of students' opportunity to learn. In another study, Tarr et al. (2013) explored the effects of Content Organization and Curriculum Implementation on Students' learning and suggest that content organization is an important dimension of the curriculum. Lopus, & Paringer (2015) compares several features of the Mankiw and McConnell texts and noted that Mankiw and McConnell textbooks have similar organizational formats.

In the context of South Africa, the Curriculum and Assessment Policy Statement's (CAPS) economics grade 10 document was used as a yardstick in examining the content coverage of the Dynamics of Market. Content coverage is described as the measure of the extent to which subject topics and sub-topics prescribed in the curriculum are covered in the textbooks (Ogbonnaya, 2021). Textbooks are instructional resources and learning materials for teaching and learning. Chabongora's (2011) were of the opinion that schools' instructional resources continue to be an important OTL indicator because the school ability to provide a high-quality instructional depends on the quality of instructional resources used in teaching and learning.

Early studies in the body of knowledge conducted by Aguirre-Munoz & Boscardin (2008) found a positive relationship between higher levels of content coverage and learners'

academic performance. This suggests the need for teachers to cover the content of the prescribed textbook to improve learners' performance of the subject. Chabongora & Jita (2013) contend that content coverage is not only concerned with the extent to which learners are exposed to topics that are essential to attaining standards but that it plays a significant role in determining the opportunities presented to the learners to learn from the textbooks. This is because learners are examined based on the curriculum and it is expected that the curriculum is covered before learners exit any grade level.

Lopus, & Paringer (2015) analyzed an economics textbook and found that while some students perceived that the depth of coverage make theory easier to understand, others perceive it as being more difficult because it entails more in-depth analysis of theory. In the same study, Lopus, & Paringer (2015) noted that although economics textbooks look similar to each other following similar structures, there are content differences among them. Cueto et al. (2014) was of the opinion that the way in which a topic or content was treated either as a major or minor topic will determine the depth of coverage.

Iwuchukwu (2001) evaluated the topical content of some textbooks and found one of the textbooks to have adequate topical coverage than the others. Iwuchukwu contends that content coverage could be based on the extent of topical coverage, provision of relevant study tasks, learning activities, chapter summary etc. Opara & Enang (2023) evaluated the content coverage for three approved Mathematics textbooks and found that differences exist in the content coverage of the textbooks. However, their study emphasized that content coverage should not be separated with curriculum coverage.

Taylor & Fintel (2016) identified curriculum coverage as the biggest problem in South Africa and opined that it must be addressed to improve the learners' academic performance. Bertram, Mthiyane & Naidoo (2021) noted that the increasing state monito-

ring of curriculum coverage in South Africa was a response to classroom research which shows that teachers do not always cover the official curriculum in the specified year which has resulted to learners' poor achievement in international tests. Schmidt (2012) noted that textbook serves as a window on the implemented curriculum and the content that students are likely exposed to in their classroom instruction. Hoadley & Galant (2016) argue that the curriculum coverage "determines the amount of curriculum content covered and the cognitive demand level." The South African Department of Basic Education monitors the degree of curriculum coverage against the Annual Teaching Plans (ATP), which are given to all teachers at the beginning of each year (Department of Basic Education (DBE), 2017).

Textbooks remain the major source of tasks for both classroom activities and homework (Gracin, 2018). A textbook typically contains numerous tasks which are closely linked to what opportunity it presents the students learn the school content or topic and how the students learn while studying that subject. Krause, Béneker, & Tartwijk, (2021) assert, that as a part of a textbook, tasks play an indispensable role in facilitating students' learning process and fostering thinking skills.

Many scholars have investigated the use of textbook tasks in different categories. Gracin, (2018) investigated the cognitive level of tasks in different textbooks and found few cognitively challenging tasks in the textbook even though such tasks are promoted in the curriculum and educational research. Consequently, Andersson-Bakken et al., (2020) found most tasks in the textbooks closed tasks, asking students to repeat facts or to apply certain rules or procedures. The findings of Andersson-Bakken et al., (2020) aligns with the findings of Gracin (2018) who asserts that most tasks found in the textbooks were not cognitively challenging. Similarly, Qian (2022) analyzed different tasks from the textbooks according to their cognitive levels and found that more attentions are given to some sub-task types than others in different versions of the textbooks.

Another study by Abid & Moalla, (2019) found that the textbook tasks give the students few opportunities to practice authentic communication.

While Celik (2017) is concerned with the learning activities form of tasks and found that they do not promote students' creativity to the extent that the curriculum demands, Desimore (2016) emphasized on the importance of time spent on tasks and found a correlation between academic achievement and the time taken in covering the content. Similarly, Stol (2013) found a high correlation between the experts' prediction about the opportunity to learn in the different schools and learners' actual performance that shows content coverage, the cognitive level, and the coherence of activities play a major role in understanding learner performance. Bakken & Andersson-Bakken (2021) concluded that a common finding from a wide different school subjects is that textbook tasks fail to meet the demands set in the curriculum and the recommendations of educational research.

The original Bloom taxonomy developed in 1956 have been used to addresses the cognitive domain of tasks in textbooks. Bloom stated that the purpose of education was developed to classify "mental actions or thoughts resulting from educational experiences". Teachers, textbook writers, and curriculum developers have therefore consider using the Bloom taxonomy as a tool to ensure appropriate coverage of educational experiences using a variety of types of cognitive levels starting from the common lower tasks to higher level of cognition (Surjosuseno & Watts, 1999). Arek-Bawa & Dhunpath (2017) defined cognitive level as the quantity of thinking and the level of the thinking processes involved in successfully resolving a task to gain a rich understanding of the phenomenon. The six levels within the Bloom cognitive domain are divided into two levels of thinking skills: (1) Lower-Order Cognitive Skills (LOCS) Knowledge, Comprehension and Application; (2) Higher-Order Cognitive Skills (HOCS): Analysis, Synthesis and Evaluation.

The knowledge level of the Bloom's taxonomy is about memorizing, recalling, and recognizing. This level asks questions such as define, list, state, distinguish, name. At the comprehension level, learners are expected to understand the information and be able to explain a concept in their own words. Some action verbs such as compare, explain, interpret are mostly used to test the cognitive level at this stage. The application level requires learners to really use the information that they have learnt to apply to a situation to make reasonable judgment. For example, using the law of demand in a new situation. Some verbs such as implement, are mostly used. In the higher order thinking skill, analysis is about breaking down concepts and examine their relationships. It is the level where the character is separated to arrive at a resolution dependent on the analysis. Some verbs such as differentiate, how does x influence y are used in this level. With Synthesis, one must pull from different subjects and incorporate the information before coming to an end result. Action words such as create, designs are use in this level. Evaluation is the top element in the Bloom's taxonomy. Here, one is expected to evaluate data and land at an end. Action words such as evaluate, justify are used at this level.

In his study, Igbaria (2013) examined different cognitive tasks presented by the WH-questions in the textbook according to the Bloom's taxonomy and found that the textbooks analyzed placed greatest emphasis on the lower thinking processes of knowledge, comprehension, and application. Razmjoo & Kazempourfardm (2012) also found that the Lower Order Thinking Skills (LOTS) of Bloom taxonomy were the most prevalent learning levels in the textbooks.

One study by Wijaya, Heuvel-Panhuizen & Doorman (2015) on the comprehension level skill found that learners tend to comprehend tasks based on the context however, there were limited number of tasks in the analyzed textbooks. On the Application level tasks, Anderson et al. (2001) found that tasks that fall under application entails the use of rules,

formulae, and steps to find the solutions to the problems. On the Higher-Order Cognitive level skills, Pratama & Retnawati (2018) found that Higher Order level tasks are less frequently represented in most textbooks and argued that the more Higher Order level tasks in a textbook, the greater the opportunity for students to think critically. Also, Arifin & Retnawati (2017) found that students' Higher-Order Cognitive skill could only develop well if the textbooks avail the students the opportunity with more tasks on Higher-Order Cognitive skills. These findings contradict Sidek (2010) findings who reported that tasks based on synthesis which is of Higher-Order-Level were the most represented tasks in the Higher-Order level. However, Lopus, & Paringer (2015) argue that for textbooks to appeal to different audiences, it might be logical to assume that some textbooks would be written at higher or lower, however this may not be straightforward as the level of difficulty depends on ones' perception. This study uses the Bloom taxonomy to analyze the different tasks presented in the two textbooks used in this study.

METHODS

Following a qualitative case study approach, this study analyzed the Dynamics of Market in the two Grade 10 economics textbooks in South Africa. The qualitative approach was chosen to produce a rich description data concerning Dynamics of Market coverage in the textbooks (Yin, 2018). The two textbooks chosen were Oxford Successful Economics Grade 10 learners' Textbook by E. Basson, V. Beautement and L. Smith (2011) and Enjoy economics learners' Textbook 10 by Levin & Bantjes (2011). For easy reference, we name the first economics textbook (Oxford Success) as BOOK 1 while the second economics textbook (Focus) is named BOOK 2. It is important to note here that these textbooks are in the public domain and therefore do not require any ethical clearance to analyze them. These textbooks were chosen because they were among the approved economics

textbooks for the 10th grades and most popularly and widely used in secondary schools across the country. In South Africa, the 10th grade is the base year in the Further Education and Training (FET) Band before writing the exit- matric exam in the 12th grade. The topic 'Dynamics of Market' is chosen because it is central to economics education internationally thus the topic could be compared in all textbooks or textbook series and again learners struggle to understand the concepts in the topic.

The study used a deductive content analysis (Krippendorff, 2018) for the data analysis. The two economics textbooks were analyzed based on content organization, content coverage and cognitive level of tasks.

The Curriculum and Assessment Policy Statement's (CAPS) grade 10 economics was used as a yardstick to analyze the content organization of Dynamics of Market in the two textbooks. The organization of content in the CAPS document is presented; thus, (1) The market as a phenomenon: (demand and the supply). Use graphs to illustrate the establishment of prices and quantities; (2) Description of Market; (3) Value, price and utility.; (4) Composition; (5) Types of markets: Perfect markets, imperfect markets, world markets (the effects of electronics); (6) Prices: demand, supply, price formation; (7) Functions of markets: bringing supply and demand together, allocating resources, self-regulatory.

On the content coverage, the researcher used a list of the curriculum content as the checklist to indicate the topics covered and the extent of coverage. While tasks in both textbooks consist of activities and exercises, the cognitive levels of tasks in both textbooks were analysed using the Bloom taxonomy. We adopted the Bloom's taxonomy because it is accepted among the educational community and has been proven as valid in various previous studies (Igbaia, 2013; Razmjoo & Kazempourfard, 2012). In this study, the Bloom taxonomy is divided into two categories; Lower-Order Cognitive Levels which were assigned codes as follows: (1) Knowled-

ge; (2) Comprehension; and (3) Application and the Higher-Order Cognitive Level were also coded; (4) Analysis; (5) Synthesis; and (6) Evaluation. Each task in both textbooks was assigned a code according to the levels of the Bloom taxonomy. The Knowledge level tasks were identified with verbs such as define, list, state, distinguish, name. The Comprehension level tasks were identified with verbs such as compare, explain, interpret. The Application tasks were recognised with the verbs such as implement, apply, interpret, illustrate. Analysis tasks were identified with verbs such as analyse, distinguish, compare, contrast. The Synthesis tasks were detected with verbs such as create, designs, arrange while Evaluation tasks were identified with verbs such as evaluate, justify, interpret, estimate, and assess. The total tasks in I the six levels were summed up to give us the total tasks in each of the textbook. To get the percentage occurrence of each level of cognitive task, the total for each level was divided by the grand total of the tasks and expressed in percentage.

RESULTS AND DISCUSSION

In this section, we discuss the findings based on the three research questions posed in this study. Following the findings is discussion of the findings.

Content Organization

To address the research question 1, it was found that the organization of contents in both textbooks aligned with the CAPS economics curriculum from 'Description of Markets' to the 'Functions of Market' although Book 1 started with Activity 1 instead of the Description of Market. We found that the organization and sequencing of the content in economics textbooks have variety of supplements underlying economics and pedagogical features for both students and instructors. Some of these pedagogical features are Case Studies, Boxes, FYI Boxes, Key Concepts and Chapter Summaries.

The content of Book 1 Dynamics of Market was presented in Chapter 5 under Module 2 -Microeconomics and all sub-topics are organized under one Unit 1. The sub-topics are 1-The Market; 2 -Value, price and Utility; 3 - Composition of markets; 4 - Kinds of Markets; 5- Formation of prices and 6- Functions of markets. In book 2, Dynamics of Market was presented under Module 2- Microeconomics and it is organized under six units as follows. Unit 1- Description; Unit 2 -Value, price and Utility; Unit 3 - Composition of markets; Unit 4 - Kinds of Markets; Unit 5- Formation of prices and Unit 6- Functions of markets.

The key finding from the content organization was that the organization of contents in both textbooks aligned with the CAPS economics curriculum.

Content Coverage

To address Q2 of the research question, it was found that the content coverage in both textbooks do not align with the CAPS curriculum. For example, the content in functions of markets were not explicitly covered in Book 1 and Book 2 respectively. The CAPS document requires that While the sub-topic on description of market in Book 2 did not provide learners with any activity, Book 1 provided two activities on this sub-topic. It was also found that while both textbooks provided learners with one activity on the sub-topic utility, value and price, only book 2 provided learners with one worked example. In both textbooks, the DM of concepts were not explained in detail, for example, book 2 used just a graph to illustrate the concepts of total and marginal utility which was not represented at all in Book 1. On the sub-topic, composition of markets, it was found that book 1 gave a detailed analysis of what constitute the market with detailed diagrams to illustrate different sectors, book 2 did not give a detailed description of the market structure and did not use any diagram to illustrate this. While book 2 provided learners with an activity on this sub-topic, book 1 did not provide any activity. Both textbooks treated the sub-topic on kinds of market with

few activities. While book 3 had two activities with a case study and a research project, book 1 had 1 activity.

The concept of the supply curve was presented under the sub-topic- 'Prices' in both textbooks. While both textbooks presented the movement along and shift of the supply curve, Book 1 gave a graphical representation of these concepts while book 2 did not. It was found that Book 1 explicitly differentiated the concepts of changes in quantity demanded and changes in demand using graphical representations while this was not done in book 2. In both textbooks however, the concepts of 'shifts of and movements along the demand curve were not presented with solved examples, but activities were given in both textbooks. For the concept of supply, it was found that Book 1 explicitly differentiated the change in supply with the changes in quantity supplied while this was not done in Book 2. Also, to an extent, Book 1 explained and differentiated the movement along the supply curve with the shift of the supply curve and graphically illustrated them. Both textbooks did not present any worked examples, but activities were given on the concepts.

Lastly on the concepts of price formation and functions of market, both textbooks presented the concepts extensively with diagrams and activities, however, no worked examples were provided. These findings could be summarized to imply that similarities and differences were found in both textbooks with respect to the depth of content coverage. Some students perceive that the depth of coverage make theory easier for them to understand while others see it as being more difficult as it involves more in-depth analysis of theory. We conclude from our findings that although both textbooks covered the contents as prescribed by the CAPS curriculum, there are content differences among them.

Cognitive Levels of Tasks

To address question 3 of the research, we analyze the different tasks in the two textbooks using the Bloom taxonomy.

Table 1. Bloom's Taxonomy Cognitive Levels

Lower-Order Cognitive Level	Tasks in Book 1	Book 2
(1) Knowledge (Remember)	31	46
(2) Comprehension	8	22
(3) Application	2	1
Higher-Order Cognitive Level		
(4) Analysis	1	2
(5) Synthesis	4	4
(6) Evaluation	9	4
Total Tasks	55 Tasks	77 Tasks

Source: Processed Data, 2023

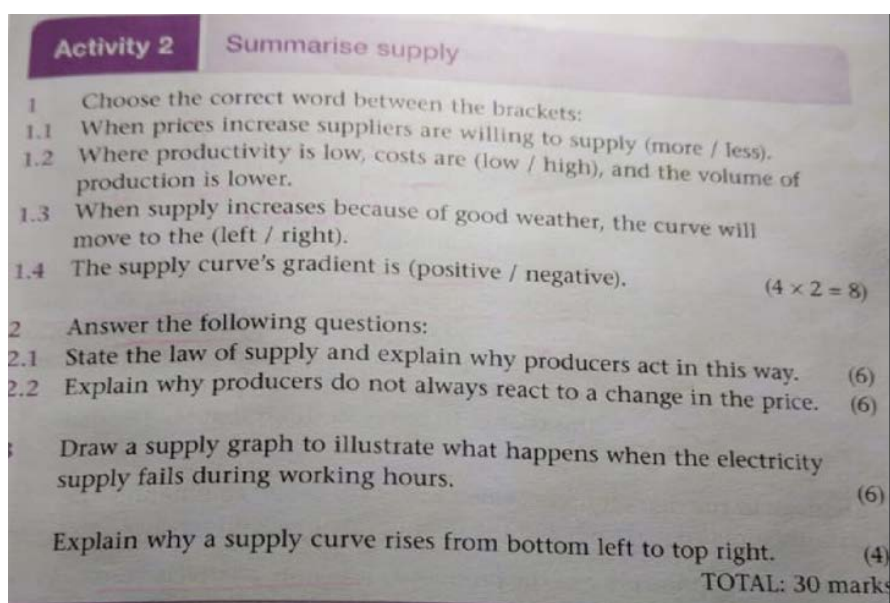
**Figure 1.** Examples of Tasks in Higher-Order Cognitive Level

Table 1 shows the number of tasks found in both Book 1 and Book 2 classified according to Bloom's Taxonomy level of cognitive demand. In Book 1, It was found that 41 tasks (75%) fall under the Lower-Order Cognitive Level while 14 tasks (25%) fall under the Higher-Order Cognitive level. In Book 1, the knowledge skill appears most frequently and accounted for (31) 55% of the task in the entire Book 1. Evaluation skill comes second with 9 questions (16%) while Comprehension comes third with (8) 15%. There are 4 questions (7.3%) of synthesis, and 2 questions (4%) of application.

In Book 2, 69 tasks (90%) out of the 77 tasks fall under the Lower-Order Cognitive Level while 10 tasks (13%) fall under Higher-Order Cognitive Level. In the Lower-Order Cognitive Level, it was found that knowledge skill accounted for 46 (60%) of the tasks in Book 2. This was followed by comprehension 22 (29%), while application accounted for 1(1%) of the tasks. In the Higher-order Cognitive Level, Analysis consisted of 2(3%), Synthesis 4 (6%) and Evaluation 4(4%). This implies that less tasks fall under the Higher-Order Cognitive level.

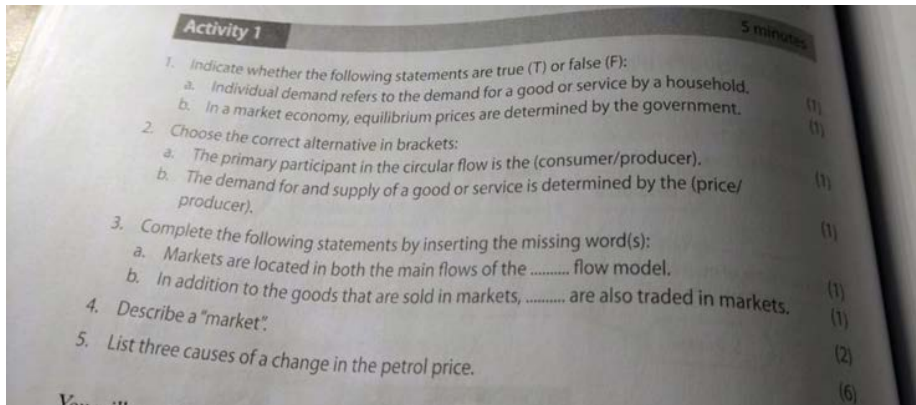


Figure 2. Example of Task on Remembering Skills

Although book 1 adapted more task on Higher-Order Cognitive level especially on Evaluation than book 2, there is only one task on the Analysis skills in Book 1. We can draw from our findings that the authors of both Book 1 and book 2 placed the greatest emphasis on the Lower-order-Cognitive Level of Knowledge, Comprehension, and Application.

While only one worked example was found in Book 2 (Pg 79), there was no worked example in Book 1. It was found that in both textbooks, most of the tasks in the Remember skill are mostly True (T) and False (F) questions, the 'choose' questions and 'inserting the missing word' questions.

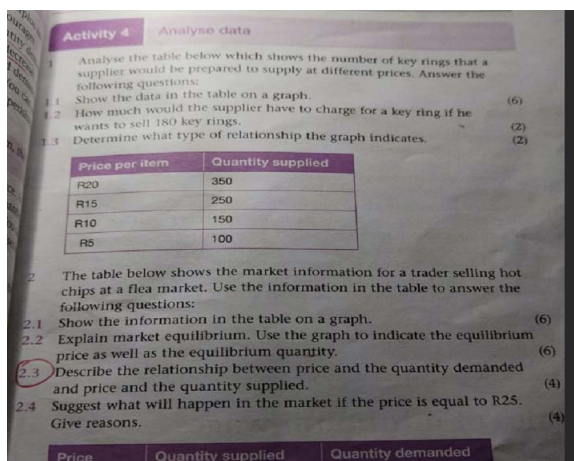


Figure 3. Example of Task on Analysis Skills

The key findings are that most of the questions in both textbooks fall under the Lower-Order Cognitive Skills (LOCS), however, it expected that more Application questions

should be provided at this level to equip the learners for the final exit exams in Grade 12.

This study explored the opportunity to learn Dynamics of Market in two grade 10 South African textbooks. The focus of the study was on the content organization, content coverage, and the cognitive level of tasks in the textbooks. The content organization of both textbooks corresponds to the order of the content in the CAPS economics curriculum in sequential and logical order. While the organization enhances the making of connections between the concepts, the sequencing shows coherence as the previous contents build on the knowledge from the preceding contents which affect students learning. This finding echoes the findings of Grouws et al. (2013) who found that content organization affects students learning and that teachers are the ultimate arbiters of students' opportunity to learn.

Although in Book 1, activity 1 came first before the sub-topic 'Description of Market', activities as stipulated in the curriculum come after every sub-topic. The authors ought to have placed the activity at the end of the sub-topic to allow students to reflect on what was learned from the textbook. It might also be that the authors wanted to place the activities first before the sub-topic to as a baseline or diagnostic assessment to assess knowledge of the previous topic in the previous grade. However, a close look at the activity showed that the author was not assessing previous knowledge as no activity was also given at the

end of the first sub-topic 'Description of Market'. Starting the content with the revision of some previous content in previous grade levels would have been necessary to lay a foundation and transition to the grade 10 work. The sequencing of the content in economics textbooks must have variety of supplements underlying economics and pedagogical features for both students and instructors that the author believes will help interpret the content and render it teachable and comprehensible by the student. This finding is in line with Lopus, & Paringer (2015) findings from economics textbook analysis who found that Mankiw and McConnell economics textbooks have similar organizational formats arranged in sequential and logical order.

Of particular interest are findings related to content coverage. We found that although the contents presented on the topic MD in both textbooks are in line with the CAPS curriculum however both textbooks presented discrepancies in content coverage. Our finding revealed that while some contents were covered to an extent in both textbooks, their coverages were not extensive. This finding concurs with Lopus, & Paringer (2015) findings that although there is much consensus when it comes to content coverage however differences among textbooks do exist. This finding is consistent with Opara & Enang (2023) and Iwuchukwu (2001), who found discrepancies to exist in three evaluated approved textbooks but contrary to that Chabongora & Jita (2013) and Cueto et al. (2014) who contend that content coverage and depth of coverage presents learners with the opportunity to learn from the textbooks.

The results show that although both textbooks included Higher-Order-Level (HOL) and Lower-Order-Level (LOL) tasks, tasks on the LOL consisted of the highest percentage of tasks than the tasks in HOL in both textbooks. One would have expected that the HOL tasks in both textbooks be greater than the LOL tasks as reported in the diagnostic report (DBE, 2020, p. 81). Also, while there were Analysis tasks in both textbooks, it was

only 1 task for Book 1 and 2 tasks for Book 2. These are relatively few when compared with the comprehension tasks which were 8 tasks for book 1 and 22 tasks for book 2. One would have expected more Analytical task on the topic of Dynamics of Market since it has to do more on the analysis of the market structures especially the Demand and Supply that determines market equilibrium. However, this finding is in line with Igbaria, (2013) who emphasized that offering lower-level tasks to students is very important because it forms the move to higher cognitive level. The finding also agrees with that of Razmjoo & Kazempourfardm (2012) who found most of the tasks in the textbook to be the Knowledge skill tasks. This may imply that the tasks in both textbooks may have called for limited answers rather than the Higher-Order-Cognitive tasks. The textbooks are intended for the 10th graders who are just beginning to learn the basics in the Dynamics of Market thus, lower-order-tasks would be most preferable to fit the entire learners' population.

In the Comprehension tasks, our finding showed a total of 8 tasks in book 1 and 22 tasks in book 2 which are dominated with the verbs 'describe' and 'explain'. Having such a high task in both textbooks than the Application and Analysis tasks in both textbooks could be quite reasonable in this study as learners are expected to comprehend and interpret information based on context. For example, task on page 75, book 2 asks learners to 'Explain the role that markets play in the economy of South Africa'. However, this finding contradicts the findings from Wijaya, Heuvel-Panhuizen & Doorman (2015) that context-based tasks in the Indonesia textbooks analyzed were low in number. Another interesting finding is on Application tasks. There were 2 and 1 application tasks respectively in book 1 and book 2. The number of application tasks are quite few and below our expectations. One expects that more tasks on application would suffice owing to the fact learners are expected to interpret data and apply it to economics phenomena. The finding resonates

with the Diagnostic report that noted lack of application and interpretation of DM questions to economic issues (Senior Certificate Diagnostic Report, 2021 Pg 96). Furthermore, the application tasks most times require knowledge of some principles of Dynamics of market and rules to understand the questions. If the textbooks do not provide adequate application questions, learners will surely be wanting in that area. The finding concurs with that of Anderson et al. (2001) who found that tasks that fall under Application level entails the use of rules, formulae, and steps to find the solutions to the problems of which students are failing to do so.

Another finding shows that less tasks on Analysis, Synthesis and Evaluation fall under the Higher-Order Cognitive level particularly the Synthesis tasks in book 1 and book 2 representing 5% and 7% tasks respectively in both textbooks. This finding is contrary to the finding by Sidek (2010) who reported that tasks based on synthesis were more in percentage than other cognitive level tasks. We found that although book 1 adapted more tasks on Higher-Order Cognitive level especially on Evaluation than book 2, there is only one task on the Analysis tasks in book 1. This finding resonates with that of Arifin & Retnawati (2017) who found less High-Order Cognitive tasks in textbooks than Low-Order Cognitive tasks. The finding is indeed surprising in the learning of economics itself because Higher order cognitive skills are mostly desired for economists as it equips them to think logically, analytically, and critically as economists. In this regard, we can safely say that to a lesser extent, the tasks provided from both Grade 10 economics textbooks have not provided learners with adequate Opportunity-to-learn Dynamics of market thus there were not enough room to develop learners' cognitive skills. This finding concurs with the finding of Manzi, Mosia & Moreeng (2021) who found that there was little or no Opportunity-to-Learn provided for learners by the teachers to learn the concept of Imperfect Market in Dynamics of Market.

CONCLUSION

Based on the textbooks analyzed, it is possible to conclude that the economics textbooks have not presented learners with enough Opportunity-to-learn Dynamics of Market for the Grade 10 graders. The tasks presented in both textbooks were predominantly of Lower-Order Cognitive skills which may not help the learners to develop their Higher-Order Cognitive and analytical skills. This study is significant because it helps both educators and policy makers to explore more on 'must-have features' of economics textbook before it could be prescribed for use. According to the analysis and findings, the results from two economics textbooks may not be representative of other economics textbooks. Consequently, additional research should include other economics textbooks from higher grades. The study has implications for both teachers and learners to understand the crucial role economics textbooks play in improving learners' understanding of the Dynamics of Market. It makes contribution to international literature on textbook analysis in the field of economics education, this is rare in economics education studies. It is recommended that Higher- Order tasks should be included in future editions of the Grade 10 economics textbooks suggesting the need to analyze economics textbooks in high schools for effective learning to take place. Although the study analyzed specific textbooks, its findings shed light on how learning opportunities relate to performance more generally thus promoting further research on textbook analysis.

REFERENCES

- Abid, N., & Moalla, A. (2019). The promotion of the good intercultural speaker through-intercultural contacts in a Tunisian EFL textbook. *Language and Intercultural Communication*, 20(1), 37–49. <https://doi.org/10.1080/14708477>.
- Aguirre-Munoz, Z., & Boscardin, C. K. (2008). Opportunity to Learn and English Learner

- Achievement: Is Increased Content Exposure Beneficial? *Journal of Latinos and Education*, 7 (3), 186-205. <https://doi.org/10.1080/15348430802100089>
- Anderson, L. W., D.R. Krathwohl, P.W. Airasian, K.A. Cruikshank, R.E. Mayer, P.R. Pintrich, J. Raths & M.C. Wittrock (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. Abridged Edition. White Plains, NY: Longman.
- Andersson-Bakken, E., Jegstad, K., Bakken, J. (2020). Textbook tasks in the Norwegian school subject natural sciences: what views of science do they mediate? *International Journal of Science Education*. <https://doi.org/10.1080/09500693.2020.1756516>
- Arek-Bawa, O. & Dhunpath, R. (2017). Assessment and Cognitive Demand in Higher Education Accounting Textbooks. *Alternation* 24,2 (2017) 140 - 166 DOI: <https://doi.org/10.29086/2519-5476/2017/v24n2a8>
- Arifin, Z. & Retnawati, H. (2017). *Pengembangan Instrumen Pengukur Higher Order Thinking Skills. Matematika Siswa SMA Kelas XPythagoras* 12 98-108
- Bakken, J. & Andersson-Bakken, E. (2021): The textbook task as a genre. *Journal of Curriculum Studies*, DOI: 10.1080/00220272.2021.1929499
- Bertram, C. A; Cynthia, C; Mthiyane, C.C.N., & Naidoo, J. (2021). The tension between curriculum coverage and quality learning: The experiences of South African teachers. *International Journal of Educational Development*. 81(102353)
- Burdina, M., & Sauerb, K. M. (2015). Teaching economic principles with analogies. *International Review of Economics Education, Elsevier*, (20)29-36. DOI: 10.1016/j.iree.2015.10.001
- Carroll, J. B. (1963). A model of school learning. *Teachers College Record*, 64(8), 723-733.
- Celik, B. (2017). Task-Based Learning: An Effective Way of Developing Communication Skills. *International Journal of Social Sciences and Educational Studies* 4(2) 109-114.
- DOI:10.23918/ijsses.v4i2sip104
- Chabongora, B. N. (2011). Investigating Opportunities to Learn Grade 10 Algebra: Case studies of three Catholic secondary schools [*Thesis, University of South Africa*].
- Chabongora, B. N., & Jita, L. C. (2013). Opportunities to learn (OTL) Grade 10 algebra in three South African Catholic secondary schools. *Journal of Educational Studies*, 12 (1),172-188. <https://hdl.handle.net/10520/EJC157141>
- Charalambous, C. Y., Delaney, S., Hsu, H.Y., & Mesa, V. (2010). A comparative analysis of the addition and subtraction of fractions in textbooks from three countries. *Mathematical Thinking and Learning*, 12(2), 117–151. <https://doi.org/10.1080/10986060903460070>
- Cueto, S., Guerrero, G., Leon, J., Zapata, M., & Freire, S. (2014). The relationship between socioeconomic status at age one, opportunities to learn and achievement in mathematics in fourth grade in Peru. *Oxford Review of Education*, 40(10), 50-72. <https://doi.org/10.1080/03054985.2013.873525>
- Department of Basic Education (DBE), (2017). *National Curriculum Statement Grades 10-12. Curriculum and Assessment Policy Statement. (Economics). Further Education and Training Phase Grades 10-12*. Pretoria, Government Printer
- Department of Basic Education (DBE) (2020). *National Senior Certificate Diagnostic Report (2020). Part 1: Content Subjects*. <https://wcedportal.co.za/eresource/196376>
- Desimore, L., Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Fan, L., Zhu, Y., & Miao, Z. (2013). Textbook research in mathematics education: Development status and directions. *ZDM*, 45(5), 633–646.

- Gillies, J. & Quijada, J.J. (2008). *Opportunity to Learn: a high impact strategy for improving educational outcomes in developing countries*. Washington, DC: USAID.
- Gracin, D. G. (2018). Requirements in mathematics textbooks: A five-dimensional analysis of textbook exercises and examples. *International Journal of Mathematical Education in Science and Technology*, 49(7), 1003–1024. <https://doi.org/10.1080/0020739X.2018.1431849>
- Grouws, D. A., Tarr, J. E., Chávez, Ó., Sears, R., Soria, V., & Taylan, R. D. (2013). Curriculum and implementation effects on high school students' mathematics learning from curricula representing subject-specific and integrated content organizations. *Journal for Research in Mathematics Education*, 44(2), 416–463.
- Hadar, L.L., & Ruby, T.L. (2019). Cognitive opportunities in textbooks: the cases of grade four and eight textbooks in Israel. *Mathematical Thinking and Learning*, 21(1) DOI:10.1080/10986065.2019.1564968
- Hoadley, U. & Galant, J. (2016). An analysis of the Grade 3 Department of Basic Education workbooks as curriculum tools. *South African Journal of Childhood Education* | 6, (1) DOI: <https://doi.org/10.4102/sajce.v6i1.400> |
- Igbaria, A. (2013). A Content analysis of the WH-questions in the EFL textbook of Horizons. *International Educational Studies*, 6(7), 200-224. <http://dx.doi.org/10.3102/00346543049002280>
- Iwuchukwu, S.U. (2001). Evaluation of three recommended English Language textbooks for Junior Secondary School of Rivers State. *Unpublished M.Ed Thesis, University of Port Harcourt*.
- Khoo, Y.Y., & Fitzgerald, R. (2017). "Peer Learning with Concept Cartoons Enhance Critical Thinking (CRiTT) and Performance in Secondary School Economics," *Journal of Economics and Economic Education*, 18 (1) 1-13.
- Krause, U., Béneker, T., & Tartwijk, J. V. (2021). Geography textbook tasks fostering thinking skills for the acquisition of powerful knowledge. *International Research in Geographical and Environmental Education*, 31(1), 69-83. <https://doi.org/10.1080/10382046.2021.1885248>
- Krippendorff, K. (2018). *Content analysis: An introduction to its methodology (4th ed.)*. California: Sage.
- Kurniawati, F. T. (2020). Attributes of Students' Critical Thinking Skills on Economics: A Rasch Model Analysis. *Proceedings of the 5th Padang International Conference on Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA-5)*. *Advances in Economics, Business and Management Research*, 152
- Lopus, J. S., & Paringer, L. (2015). *The Principles of Economics Textbook California State University, East Bay* lynn.paringer@csueastbay.edu. *International Handbook on Teaching and Learning Economics*.
- Malyshkin, V., G. (2016). *Market Dynamics. On Supply and Demand Concepts*. arXiv preprint arXiv:1602.04423 tH
- Manzi, W., & Moreeng, B. (2021). Grade 12 Learners' Perceptions of Opportunities to Learn Imperfect Market Structures: Frances Baard District. *International Journal of Learning, Teaching and Educational Research*.
- Manzi, W., & Moreeng, B. (2023). Challenges Facing Implementation of Economics Curriculum: The Experiences of Francis Baard District Teachers. *Universal Journal of Educational Research*, 11(1), 1 - 13. DOI: 10.13189/ujer.2023.110101.
- McDonnell, L M. (1995). Opportunity to Learn as a Research Concept and a Policy Instrument. *Educational Evaluation and Policy Analysis*. 17, (3) 305-322
- National Senior Certificate Diagnostic Report (2021). *Part 1: Content Subjects*. <https://www.education.gov.za/Portals/0/Documents/Reports/2021NSCReports/2021%20Diagnostic%20Report%20Part%201%20Content%20Subjects.pdf?ver=2022-02-08-103527-000>
- Ogbonnaya, I. C. (2022). Using TPACK framework to Examine Economics Teachers' In-

- tegration of Technology in the Teaching of Market Dynamics. *African Perspectives of Research in Teaching & Learning – (APORTAL)* 6 (1) (2022).
- Ogbonnaya, U.I. (2021). The Opportunity to Learn Euclidean Geometry in Two Mathematics Textbooks of Tenth Grade in South Africa. *EDUMATIKA Jurnal Riset Pendidikan Matematika* Volume 4, Issue 2.
- Opara, I. M. & Enang, T.E. (2023) Readability and Content Coverage Indices of Three Approved Mathematics Textbooks for Senior Secondary School Three in Akwa-Ibom State, *International Journal of Quantitative and Qualitative Research Methods*, 11, (1)12-23
- Otieno, H. & Povey, H. (2022). Mathematics textbooks and self-regulated learning: responses from students in three Kenyan secondary schools, *Research in Mathematics Education*, DOI: 10.1080/14794802.2022.2089907
- Pratama, G. S. & Retnawati, H. (2018). Urgency of Higher Order Thinking Skills (HOTS) Content Analysis in Mathematics Textbook. *J. Phys.: Conf. Ser.* 1097 012147
- Qian, Y. (2022). Analyzing Task Types Used in Four High School English Textbooks in China. *English Language Teaching*; 15, (10) 1916-4742. E-ISSN 1916-4750
- Razmjoo, S., & Kazempourfard, E. (2012). On the representation of Bloom's Revised Taxonomy in Interchange Coursebooks. *The Journal of Teaching Language Skills (JTLS)*, 4(1171-204). Retrieved from http://jtls.shirazu.ac.ir/article_336_0.html
- Schmidt, W. H. (2012). Measuring content through textbooks: the cumulative effect of middle-school tracking. In G. Gueudet, B. Pepin, & L. Trouche (Eds.), *From text to "lived" resources: Mathematics curriculum materials and teacher development (mathematics teacher education)*, 7, 143–160. Springer: Dordrecht
- Sidek, H. (2010). An analysis of the EFL secondary reading curriculum in Malaysia: approaches to reading preparation for higher education (*Dissertation*). University of Pittsburgh.
- Stol, G. (2013). An investigation into the opportunity to learn that is available to Grade 12 mathematics learners. *South African Journal of Education*. 33(1) 1 <http://www.sajournalofeducation.co.za>
- Suparno, E., & Ghina, G. (2019). *Analysis of the Use of Critical Thinking in the Economic Education Graduation Learning Process* (Based on the Learning Achievements of the Economic Education Study Program in State University of Jakarta) Available at SSRN: <https://ssrn.com/abstract=3395557>
- Surjosuseno, T., & Watts, V. (1999). Using Bloom's Taxonomy to teach reading in English as a foreign language classes. *QJER*, 15(2), 227-244. Retrieved from <http://www.iier.org.au/qjer/qjer15/>
- Tarr, J.E., & Grouws, D. A., Chávez, O., & Soria, V. M., (2013). The Effects of Content Organization and Curriculum Implementation on Students' Mathematics Learning in Second-Year High School Courses. *Journal for Research in Mathematics Education* 44, (4), 683–729.
- Taylor, S. & Fintel, M. (2016). Estimating the impact of language of instruction in South African primary schools: A fixed effects approach. *Economics of Education Review*, 50, 75-89, ISSN 0272-7757, <https://doi.org/10.1016/j.econedurev.2016.01.003>
- Wijaya, A. & Heuvel-Panhuizen, M. & Doorman, M. (2015). Opportunity-to-learn context-based tasks provided by mathematics textbooks. *Educ Stud Math* (2015) 89:41–65. DOI 10.1007/s10649-015-9595-1
- Yin, R. K. (2018). *Case study research and applications: Design and methods (6th ed)*. California: SAGE Publications.