Bloom's Taxonomy and Moroccan Children's Vocabulary and Critical Thinking Skills Development

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Abstract

Children normally feel unable or less confident to express their ideas clearly, freely, and critically both orally and in writing when learning a language. Research has demonstrated that children's early exposure to Bloom's Taxonomy levels in stories has a "remarkable power" on them (Dickinson, et al. 2012) and helps develop their language and critical-thinking skills (Egan, 1997; Curtain & Dahlberg 2004). The aim of this research project is to investigate the role of Bloom's Taxonomy in the development of the vocabulary and critical-thinking skills of young Moroccan English learners. The study adopts a qualitative approach and addresses two research questions, namely, (i) To what extent does Bloom's Taxonomy contribute to the development of the children's vocabulary and critical thinking skills? (ii) How can the children's vocabulary and critical-thinking skills development be justified? The comparison and analysis of the children's story reviews at the start and end of a term reveals significant improvement, among the Moroccan young learners, especially the average ones. They are able to use a wider range of more appropriate and accurate vocabulary and to make use of a more extended, analytical and relevant discourse. Hence, children's early exposure to Bloom's Taxonomy is highly recommended as it contributes to the development of their vocabulary and critical-thinking skills.

Keywords: Accurate vocabulary, Bloom's taxonomy, critical-thinking skills, English learning, language development, Moroccan children

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Introduction

Learning a foreign language can be either an exciting and motivating experience or a real challenge. One explanation for this problem might be related to the children's limited vocabulary in the language acquired, as a result of a lack of reading stories in English both at school or at home. Good readers are likely to develop larger vocabularies over time, while poor readers, who are not familiar with print experience a slow vocabulary development (Cunningham & Stanovich, 1991, 1997; Nagy & Anderson, 1984; Nagy & Scott, 2000). Another explanation refers to the fact that learners who do not read or are not encouraged to read by their parents or their teachers find it difficult to discuss ideas, interpret information and reach or sustain a high level of thinking that good readers are able to reach (Rubin, 1983).

Therefore, reading in general and reading stories, in particular can help learners develop a wider range of vocabulary and be able to discuss ideas related to the stories that go beyond the concrete lines of the text, and result in a more relevant, creative, and extended discourse both orally and in writing, especially when they are exposed to the Bloom's Taxonomy levels. These levels do, indeed, help learners move from a mere remembering of the story events to more critical thinking, analysis, and evaluation of the information in a more creative and sound way. Oster (1989) confirms that literature enables learners to write more creatively.

The aim of the current study is to investigate the writing progress of 30 pre-intermediate Moroccan young learners, through their exposure to Bloom's Taxonomy levels for 12 weeks. The main objective is to reveal the role of Bloom's Taxonomy and find out about the other factors related to their reading habits that can explain their progress.

Review of the Literature

The Benefits of Reading Stories to Young Children

Over the years, research has demonstrated the numerous benefits of using stories with young learners in the classroom. First of all, reading stories to children raises their print awareness. In other words, children who are read to regularly start to understand that written language is linked to oral language and that it uses letters and words to convey messages and information. The habit of seeing print, and observing adults' reactions to print, helps children to become familiar with written texts and helps them to recognize its various forms and how books work (De Temple, 2001).

Moreover, scholars argue that children who are aware of print at an early age can develop better reading skills and achieve relative academic success sooner than those who are not.

Cunningham & Stanovich (2003, p. 35) claim that: "... the amount of print children are exposed to has profound cognitive consequences, and that the act of reading itself serves to increase the achievement differences among children." This achievement can be shown in the improvement of their vocabulary and reading skills, given that the vocabulary used in every day speech is often limited and repetitive, whereas reading books offers learners an opportunity to learn new vocabulary related to varied topics. As a result, they enrich their vocabulary. For bilingual or multilingual children, reading can be an easy way to improve their language skills and crucial in developing their fluency (Bonfiglio, 2017).

Bloom's Taxonomy, named after a psychologist Benjamin Bloom, is known to develop and strengthen children's linguistic and cognitive abilities.

The Effects of Bloom's Taxonomy on the Children's Vocabulary and Critical Thinking Skills

According to (Bloom, et al. 1956) and (Anderson, et al. 2001), human thinking skills can be divided into six different categories: remembering, understanding, application, analysis, evaluation, creation. The example questions provided for each category are related to the second story, "Three Wishes from a Fish," which participants were asked to write a review about.

Remembering: At this level, students are usually asked simple questions to remember or recall information or knowledge about the story. Questions such as: "How many main characters are there in the story?" or "Where were the fisherman and his wife living at the start of the story?" are usually asked at this stage. Most learners of different levels are able to provide factual answers as they can be either right or wrong. This level can help learners use new words more accurately.

Understanding: This level requires students to understand the meaning of the story and answer questions, such as: "Can you describe the fisherman's wife?" or "Why do you think the fish agreed to grant the fisherman's first wish?" The answers to these questions reveal the learners' understanding of the story and offer them the opportunity to expand on their ideas. Therefore, learners can start demonstrating signs of critical-thinking skills, which can be further developed at the next levels. Nevertheless, understanding can be a challenge for weak students, who might know the answer but feel intimidated due to a lack of appropriate vocabulary in English.

Application: Learners at this level are supposed to apply previously learned knowledge from the book to other new situations. Questions such as: "Why did the fisherman tell his wife about the talking fish?" or "What could have happened if the fisherman hadn't told his wife about the fish?" Applying their previous knowledge to new situations can help learners develop their ideas in a more critical way.

Analysis: This level encourages the child to examine the information gathered from the book, compare and contrast events and start thinking about other alternatives to the events of the story. Questions such as "What would you do if you were the fisherman's wife?" or "Why do you think the fish didn't grant the wife's last wish?" can be helpful at this level and can make moving to the next level easy and smooth.

Evaluation: At this level, children start evaluating the events of the story, giving their opinions and justifying them without real right or wrong answers, and accepting other different opinions. Questions like: "Do you think the fish should grant the wife's last wish?" or "How is the fisherman different from his wife?" are appropriate at these level and good students are usually the first ones who feel ready and confident to answer them, especially if they are exposed to them in previous situations. Over time, weak students can demonstrate the ability to answer such questions appropriately and imaginatively if they are given more time to reflect on their ideas, especially in writing. This level can be conducive to the last level of Bloom's Taxonomy, creation, if dealt with appropriately in the classroom.

Creation: This level can help the learners to use their prior knowledge and skills to create their own story that makes sense to them and to the world around them. "Thinking is a purposeful, organized, cognitive process that we use to make sense of the world" (Chaffee, 2000, P.1). Questions such as: Find another ending to the story or write a poem about the fisherman can be asked at this level. This level can be the end product for learners after reading a story because it allows them to clearly show accurate use of appropriate vocabulary that helps them to link their ideas in a more logical, critical, and creative way.

To sum up, using Bloom's Taxonomy levels not only fosters the children's linguistic skills during stories in the classroom, but it also enables them to move beyond mere language learning to the strengthening of their thinking and creative skills, especially if these levels are exploited appropriately by teachers and if learners of different levels are given equal opportunities to make their voices valued

Research Methodology

The Study

The study is an action-research project which adopts a qualitative research approach. The study focuses on the development of the linguistic and cognitive abilities of Moroccan pre-intermediate English learners. Broadly speaking, Moroccan children grow up in a bilingual environment where they start learning French, their first foreign language, at an early age, usually from the third year of primary school in the public sector. Children from affluent families start learning French and even English long time before their peers in the public sector. English has been gaining ground recently and competing with French in some domains. While it is still far behind French in terms of number of speakers, it is increasingly becoming the most prestigious language among young people and the first choice for the languages being learnt not only among educated people and rich families, but also among modest families because Moroccans believe that English will help their children advance educationally and professionally. At an early age, many families take their children to English language centers to learn English (Benjelloun, 2017).

Participants

The study involved 30 Moroccan primary pre-intermediate learners (8-10 years old) who belong to rich families and attended a three-hour class for 12 weeks in a well-known center for learning English as a foreign language. Most learners have been in the same center for three consecutive academic years. They have shown interest in learning English and seemed to enjoy learning it through stories and drama. The best ones are very enthusiastic about learning English and participate actively in the story-based tasks. The average ones have built their confidence gradually and seem to feel proud of their achievements. The weak students require, however, more support and scaffolding on the part of the teacher, especially during story-reading activities.

Data Collection Instruments

The data used in this study were collected through the use of two types of instruments, namely (i) children's written reviews of two different stories at the start and end of the second term and (ii) a focus group with the parents and children so as to collect some background information about child-parent shared reading.

A book reading task was chosen as the main instrument. Children were asked to review two different books at the start and end of the second term. At the start of the term, they were asked to read a story of their own choice at home to encourage them to read for pleasure and write a review of the story in the classroom with the help of a worksheet. This was also an opportunity for the teacher to identify their strengths and weaknesses, and to assess their prior knowledge of Bloom's Taxonomy levels, especially in terms of their vocabulary and critical-thinking skills.

Throughout the term, the teacher and the children read different stories together during the last hour of each session, called "Activity Hour." During the story time, children were directly exposed to Bloom's Taxonomy levels through answering questions related to each level. (Refer to the theoretical background for the questions). Children were encouraged to register in the school library and borrow stories in English to read at home. In the middle of the term, after the exploitation of a story called "The Ant and the Grasshopper" using almost all the levels of Bloom's taxonomy prior, during, and after the reading of the story, the children had to write a review of the book with the teacher's assistance. The aim of this activity was to provide a sample of a good review and explicitly direct the children's attention to these levels.

At the end of the term, a second, age-appropriate story with lots of colourful, eye-catching pictures was carefully chosen. It was appealing to both boys and girls and was selected to maximise their enjoyment of learning English through stories. Moreover, based on Krashen's theory of language acquisition (1985), the story was beyond the learner's language level (i (input) +1) so as not to be too easy or too difficult for them to understand and to help them guess words from the context and infer their meanings.

The story, "Three Wishes from a Fish," by Yara S. Mignon, illustrated by Sandra Cammell, is about a fisherman who lives with his wife in a little house. One day while he is fishing, the fisherman catches a talking golden fish which begs him to save its life. The fisherman complies and lets it go, but when he tells his wife what happened, she gets angry and asks him to go back to the sea and ask the fish for a bigger house. The fish grants them their wish and promises them two more wishes. But the wife does not remain content for long and wishes for a palace instead of the bigger house. She then wishes to be the queen so she could give orders to people. Her wishes are granted, but the greed of the fisherman's wife increases and she also wishes to be the queen of the weather. Her last wish is not granted and, finally, the couple returns to their old house.

After reading and discussing the story in the classroom, the children were given a worksheet similar to the one at the beginning of the term and were asked to write a review of the story. The teacher, then, wrote several questions related to the levels of Bloom's Taxonomy on the board and encouraged the children to use their answers to help them write the review. (For examples of the questions, refer to the section: *The Effects of Bloom's Taxonomy on Children's Vocabulary and Critical Thinking Skills*.) This scaffolding on the part of the teacher was useful for children to feel secure and understand how to complete the review.

The use of Bloom's Taxonomy levels in the children's story reviews were assessed in terms of vocabulary range and accuracy in addition to their critical-thinking skills through the extent and relevance of their discourse.

Focus Group

Both parents and children were asked different questions about their reading habits and strategies at home. Most children stated that they usually read stories in French and have become more interested in reading stories in English this term, though they feel they still need to improve their accuracy. They have also registered in the centre library and borrowed stories on a regular basis. However, their parents had divergent opinions. Most of them claimed that they do not read stories in English with their children, though they strongly believe that English is very important for their children's academic and professional success. Some of them are fully aware of how reading stories in English can expedite their progress. Some, however, believe that it is the exclusive duty of teachers and schools to help their children make progress through stories or through other means.

Data Collection Analysis

The qualitative data grouped the students into three groups (weak/average/good) for their pre-intermediate level, which falls under the A2 level according to the Common European Framework of Reference (CEFR). This division was based on the criteria used for assessing students' writing as shown in the following descriptors for writing at the A2 level or (A2 Flyers), which is equivalent to pre-intermediate level. For example, A2 learners can: link groups of words with simple connectors like 'and', 'but' and 'because' and use the most frequently occurring connectors to link simple sentences in order to tell a story or describe something as a simple list of points (Pre-A1 Starters, A1 Movers and A2 Flyers revisions, 2018).

The Common European Framework of Reference (CEFR) is a useful and well-known tool for the assessment of languages in the classroom. The students' writings were easily assessed and the first and second reviews were compared and evaluated as groups in terms of the range and accuracy of their vocabulary as well as the extent and relevance of their critical-thinking skills. The students' examples were displayed in the tables below without any corrections of their spelling, grammatical and punctuation mistakes. The objective is to show the language problems students had at the beginning of the term and how much progress they have made at the end of the term.

Findings

The findings of the study are related to the children's development of vocabulary and critical-thinking skills.

Vocabulary: Accuracy and Range

Accuracy and range are two of the fundamental aspects that teachers across the globe usually refer to when assessing students' writing. Table 1 below shows the development of students' vocabulary range from Term 1 (T1) to Term 2 (T2) for three months at different degrees.

Table 1. *Students' vocabulary range*

Students' vocabulary range			
Students' Levels	Weak students	Average students	Good students
1ST Review	Chicken, egg, cool, funny	Elephants, old, tall, fat, big, fall, funny	: Summer, duck, cold, winter, swan, funny
2nd Review	Fisherman, silly, woman, hungry, let, go, queen	Fisherman, beautiful, angry, let, go, amazed, palace, butler, upset, disappointed, fishing, went, back, back, old, moral, greedy	Golden, fish, upset, palace, granted, wish, stop, fishing, angry, weather, swim, away, queen

As it clearly appears in the above examples, while the weakest students used a range of vocabulary in their second review of the story, most of the average and good students were able to use a wider range of vocabulary. All of them, though, demonstrated the use of the first level of Bloom's Taxonomy, which is remembering the key words of the story (e.g. the fisherman, golden, fish, women, greedy, amazed, palace), they still need to improve their accuracy, especially spelling for weak students as demonstrated in table 2.

Table 2. *Students' accuracy (spelling)*

Students' accuracy	Weak students	Average students	Good students
1ST Review	Beache, musique, children, storie, appel, hose	Laidy, seck, liek	Descided, tink, agly
2nd Review	Wife, expansive, palase	Say, magic, wife	Asked, weather, upset

Critical thinking skills: Extent and Relevance

As far as the extent of the children's discourse is concerned, there were some differences between the different types of learners as shown in the following table.

Table 3. *The Extent of Children's Critical-thinking Skills*

<i>The Extent of Children's Critical-thinking Skills</i>			
Students' Levels	Weak students	Average students	Good students

1ST Review	"The chicken has a egg!"	"After that a lot of animals and the grandma was after him."	I liked the story "because it was good."
2nd Review	"The fish sad no."	"After that, she want a palace, be a queen and the queen of the weather but it was not possible because they had three wishes."	I liked the story because "it has a good moral and cause it's full of vocabulary."

As the above examples demonstrate, both average and good students exhibited a higher level of Bloom's Taxonomy by analysing the events of the story and evaluating the story itself and giving their opinions using linking words, such as because, but, and, etc., which fall under the descriptors for the A2 level. However, the weak students still need more improvement with the extent of their discourse.

Children's Relevant Critical-thinking Skills

As far as the relevance of their discourse is concerned, even though the two reviews of the good students are coherent and relevant, both weak and average students showed far more progress in their second reviews, compared to their first ones, analysing the events in a more logical and relevant way as it appears in the following examples.

Table 4. *Children's Relevant Critical-thinking Skills*

Students' levels	Weak Students	Average Students	Good Students
1ST Review	"Yonder Chan kille Kocona Chan and kidnape Tara to love them."	"They likes this that or orther, all differents but all happy."	"I'm fast and you can't catch me."
2nd Review	"The fisherman was a good man, he let hem go, but hes wife was very greedy she want a lot and a lot of wishes."	"After that, the wife was amazed because the fisherman have a big house, and after a palace with a butler."	"The fish was beautiful but very small to eat. Then, the fisherman let him in the lake."

Implications

The above findings provide evidence for the students' progress and have a number of implications. Although they showed some progress in their lexical diversity and the relevance of their discourse

and made use of the first two levels of Bloom's Taxonomy (i.e. remembering and understanding), weak students still need to improve the accuracy of their vocabulary and the extent of their discourse. They need more time to read more stories to build their confidence and be able to expand on their ideas. As it is the case of any other skill, learning to write requires time and practice. Moreover, writing may make the learners feel intimidated and may bring up feelings of doubt and insecurity (Cutrara, 2018). The lack of the necessary help at home can be an extra-linguistic factor behind this finding. In fact, most parents of the weak students affirmed that they do not read stories in English with their kids and that they, too, need to improve their English. In contrast, good students were able to come up with more accurate words in their second reviews (see table 1 above). Students consciously or unconsciously reproduced the sounds /s/, /ʌ/ and /θ/ correctly in the words */asked/*, */weather/*, and */upset/*. They also generated a wider range of vocabulary when expressing their views of the story and analysed the events in a more critical way, resulting in a more extended discourse compared to their first reviews. Yet, in both reviews, good students managed to produce a relevant discourse, linking their ideas in a more coherent and logical way. In comparison to their peers, good students were also able to express their ideas more confidently, freely, coherently and logically.

Nevertheless, the most striking finding was among the average students, the majority of the students in the study. This group showed progress in all their linguistic and cognitive abilities. In terms of their vocabulary, they demonstrated a good understanding of the story as shown in their use of a more accurate, appropriate, and expansive range of vocabulary, which helped them to produce a more extended and relevant discourse in their second reviews. This tremendous progress in the average students can be attributed to a number of factors, among which are the following: (i) Average students may have found the stories stimulating and motivating. (ii) They could self-evaluate their progress and feel more confident, and were willing to do better. (iii) Consequently, they felt much more comfortable expressing their ideas. In fact, the students who asked the highest number of questions related to understanding, responded positively to questions, analysed the events of the story and even made up the end of the story were predominantly average level students. Another explanation behind this achievement can be related to the fact that the story chosen for the second review was meaningful and comprehensible and children usually write effectively about something they understand well. In addition, the average students may have felt more responsible for their own learning. Moreover, during the focus group, most of their parents attributed their children's progress to the pleasure they take in reading stories in English. Though most of the parents claimed that they do not read stories in English with their children, they strongly believe that English is very important for their children's academic and professional success. Some of them are fully aware of the vital role reading stories in English plays in the acquisition of English. They do not, however, read stories with them for many reasons. First, they do not have much time to do so and they also need to improve their English. Second, some parents believe that it is the exclusive duty of the teachers and schools to help their children make progress through stories or through other means. Some parents, however, expressed an interest in learning English in order to read stories in English with their children.

Conclusion

Children' early language production can shape their future academic and professional success. Many experts in the field of education in the last decades have emphasized the importance of

children's early exposure to stories and its role in improving the children's vocabulary and strengthening their critical-thinking skills. The objective of the study was to investigate the extent to which 30 pre-intermediate Moroccan young learners from affluent families, who were exposed to Bloom's Taxonomy levels for about 12 weeks, were able to use a range of appropriate and accurate vocabulary in a coherent, analytical and extended discourse in their reviews of a story they read in the classroom.

Most features of Bloom's Taxonomy were evident in the children's language production. The weak students remembered, understood and started analyzing the events of the story, while the average and good students were able to convey messages in a clear, concise, relevant, coherent, and critical way, using a wider range of appropriate and accurate vocabulary, besides remembering and understanding the story.

Similar studies on children of limited or low-income families will definitely open new avenues for other researches for a better understanding of the development of vocabulary and critical-thinking skills of Moroccan children at school through stories, and help identify the factors behind the achievement gap that exists between children of lower-income and less-educated parents and their more-privileged counterparts

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References

- Anderson, L.W., Krathwohl, D.R., Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., & Wittrock, M.C. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A revision of Bloom's Taxonomy of Educational Objectives*. New York: Pearson, Allyn & Bacon.
- Benjelloun, M. (2017). *The lexical and Morpho-Syntactic Features of Academic Language in Moroccan Children's Register at Home and at School*. Unpublished Doctoral Dissertation. Faculty of Letters & Human Sciences. Mohammed V University in Rabat. Morocco.
- Bloom, B.S. (Ed.). Engelhart, M.D., Furst, E.J., Hill, W.H., Krathwohl, D.R. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.

- Bongiflio, C. (2017). *Importance of Reading with Young Children: 10 Great Benefits*. Retrieved from: <https://bilingualkidspot.com/2017/10/19/benefits-importance-reading-young-children>.
- Chaffee, J. (2000). *Thinking Critically*. USA: Houghton Mifflin Company.
- Cunningham, A & Stanovich, K. (2003). *Reading Can Make you Smarter*. The H.W. Wilson Company.
- Cunningham, A. E., & Stanovich, K. E. (1997). Early reading acquisition and its relation to reading experience and ability 10 years later. *Developmental Psychology*, 33(6), 934-945
- Cunningham, A. E., & Stanovich, K. E. (1991). Tracking the Unique Effects of Print Exposure in Children – Associations with Vocabulary, General Knowledge, and Spelling. *Journal of Educational Psychology*, 83(2), 264-274.
- Curtain, H. & Dahlberg C. A. (2004). *Languages and children: Making the match: New languages for young learners*. (3rd ed.). Upper Saddle River, NJ: Pearson Education.
- Cutrara, J. (2018). *Why Writing with Confidence Really Matters and How You Can Do It*. Retrieved from: <https://www.grammarly.com/blog/writing-with-confidence/>
- De Temple, J. M. (2001). *Parents and children reading books together*. In D. K. Dickinson & P. O. Tabors (Eds.), *Beginning literacy with language*. Baltimore, MD: Paul H. Brookes Publishers..
- Dickinson, D.K., Griffith, J.A., Golinkoff, R.M. & Pasek, K.H. (2012). *How Reading Books Fosters Language Development around the World*. Child Development Research Volume 2012, Article ID 602807, 15 pages. <http://dx.doi.org/10.1155/2012/602807>
- Eggan, K. (1997). *The Educated Mind: How Cognitive Tools Shape Our Understanding*. The University of Chicago Press. .
- Krashen, S. (1985). *The input hypothesis: Issues and implications*. London: Longman
- Oster, J. (1989). Seeing with different eyes: Another view of literature in the ESL class. *TESOL Quarterly* 23 (1): 85-103.
- Nagy, W. E., & Anderson, R. C. (1984). How Many Words Are There in Printed School English. *Reading Research Quarterly*, 19(3), 304-330.
- Nagy, W. E., & Scott, J. A. (2000). *Vocabulary processes*. In M. L. Kamil, P. Mosenthal, P. D. Pearson & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 269-284). Mahwah, NJ: Erlbaum.
- Pre A1 Starters, A1 Movers and A2 Flyers Revisions. (2018). Cambridge English Qualifications. Available at: [http:// https://www.cambridgeenglish.org/Images/461823-young-learners-revision-publication.pdf](http://https://www.cambridgeenglish.org/Images/461823-young-learners-revision-publication.pdf)
- Rubin, D. (1983) *Teaching reading and study skills in content areas*. Reading and thinking. Trenton State College.