Questions, Critical Thinking, and Language Proficiency

Rosanne Zeppieri, *West Windsor-Plainsboro Regional School District (NJ), retired* and *The Language Center: College of Arts and Sciences, Rutgers University (NJ)*

ABSTRACT

Research confirms that critical thinking plays a fundamental role in decision making and problem solving, skills that are essential to function as successful adults in a complex world. Consequently, it has been a focus of educational research for decades. Faculty meetings and teacher training sessions repeatedly run sessions on ways that teachers can adapt their methodology to foster higher-level thinking. This article discusses the definition of critical thinking and the pivotal role that questioning can have in developing those skills. Out of the hundreds of questions teachers ask daily, few demand higher-level thinking. In fact, most ask for basic information or check for current learning rather than causing students to infer, analyze, evaluate, or demonstrate creativity. Further, the article includes a sampling of teaching techniques adapted from cooperative learning and other disciplines that have the potential to transform the world language classroom into a vibrant, learner-active space where students use critical thinking to solve problems.

Keywords: questioning, critical thinking, proficiency

Introduction

There are legitimate reasons that critical thinking remains a topic of faculty meetings and teacher training sessions. It can be overwhelming for teachers–who have large amounts of content to cover–to find time to include opportunities for students to explore different perspectives related to content or to identify underlying assumptions; curriculum and standardized tests frequently require students to

NECTFL *Review*, Number 92, March 2024, pp. 155-164. © 2024 by Northeast Conference on the Teaching of Foreign Languages.

internalize a body of information, rather than question what they are learning. Some teachers lack training in critical thinking skills; others do not believe that young children have the capacity to think critically. However, toddlers demonstrate the beginnings of critical thinking. They ask numerous questions, solve problems they encounter in their world, make use of what they know/have learned to make decisions. Typical three-to five-year old children question everything they see and hear. Their curiosity is unlimited. They are ready for challenging learning experiences when they begin their schooling.

What are critical thinking skills? (Critical Thinking, n.d.).

- Interpretation: figuring out what something means from text, context, physical, and emotional cues.
- Analysis: discerning what a question or problem means by examining its elements and how they connect to one another.
- Inference: considering the outcomes of different options.
- Evaluation: assessing the credibility and reliability of a claim.
- Explanation: giving reasons, describing evidence, telling why a given approach or method was used, how a set of standards for success were selected and used.
- Self-regulation: evaluating and revising one's thoughts based on evidence discovered.

Today, the ability to think critically is more important than ever. We are bombarded daily with an ever-increasing amount of information and disinformation from social media, television news programs, radio, newspapers, podcasts, the internet—all of which makes it essential to be able to discern what is valid, what is partisan, and what information means for oneself and for society. Schools need to be leaders in promoting, expanding, and perfecting thinking skills that equip students to deal with this phenomenon.

Teachers have the unique opportunity to play a pivotal role in building critical thinking through the types of questions they ask and the manner in which they pose those questions. They ask hundreds of questions a day. However, most are low-level, procedural, or display questions. Black, Harrison, Lee, Marshall, and Wiliam (2004) state that, "More effort has to be spent in framing questions that are worth asking: that is, questions that explore issues that are critical to the development of students' understanding" (p.11-12). And for language teachers, questions also need to elicit more thoughtful answers and richer dialogue.

As shown in Tables 1 and 2, small changes in how questions are formulated have the effect of causing substantive improvements in students' thinking and language use. Asking more "how" and "why" questions, probing for additional information by asking follow-up questions, and allowing students to question one another prompt higher-level thinking and result in more complete and complex responses in the target language.

Asking effective questions is both an art and a science. There are many teachers who ask high-level questions intuitively. However, with adequate preparation, all teachers can conduct powerful, thought-provoking questioning sessions. Bloom's

Table 1
Levels of Questions

Low-level questions	High-level questions
What's in your bedroom? (one-word responses)	How do your possessions reflect who you are? (explanation)
What are you wearing today? (one-word responses and we already know the answer)	What do the clothes you wear tell others about you? (inference)
What expressions do the French use when greeting others? (one-word responses)	Describe one or two cultural differences you noticed during your stay in France and how those changes affected you. (explanation)
	How did you structure your paragraph so that it engages your readers? (self-regulation)

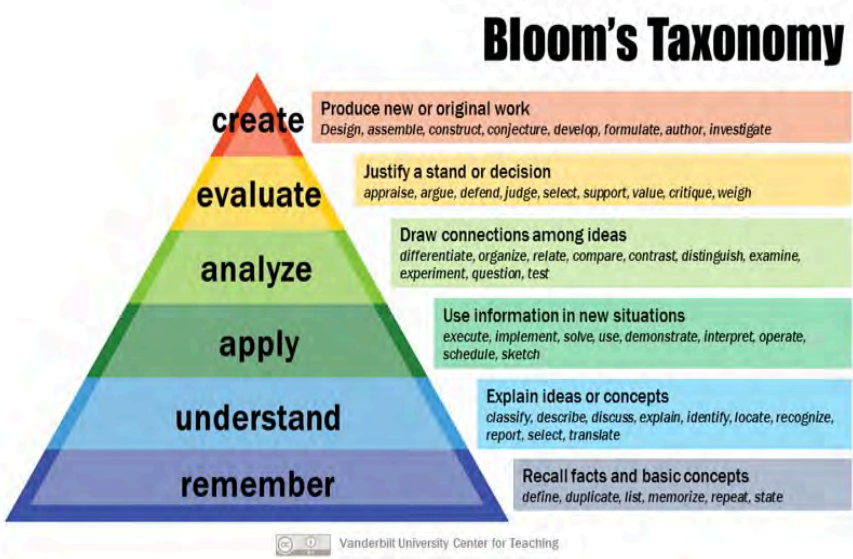
Table 2
Original Versus Reframed Questions

Original Question	Reframed Question
Which words does the author use to describe the main character in the story?	Why did the author use the word "ambitious" to describe the main character?
Would you prefer to attend a French or American school?	Explain how a French or American school would best suit your needs.
Who are the best teachers in your school?	What makes Mr. or Ms. X a "good" teacher?
Which sites did you visit in Paris during your trip?	Tell me about the most amazing day you had during your time in Paris. What made that day amazing?

Revised Taxonomy (Figure 1, p. 158) (Armstrong, 2010), Norman Webb's Depth of Knowledge (DOK) Framework (Guido, 2022), and Fink's (2013) Taxonomy of Significant Learning all add insights into questioning and its impact on student learning.

Bloom's Taxonomy begins with knowledge/memory questions and slowly pushes to seek more information as the levels of questions become more complex. The questions range from basic understanding to creation of new ideas with one question building on the previous one. Teachers, however, do not need to begin questioning at the knowledge level. They might begin a question/answer sequence at the inference level to check that students have acquired basic information about a topic. If so, they can continue to explore students' understanding by asking higher-level questions. If students are not able to answer the inference questions, teachers revert to lower-level questioning until it is clear that students have acquired the requisite knowledge. Teachers can also use the taxonomy as a tool for differentiation. They can target specific students for questions that suit their level

Figure 1
Levels of Questions Based on Bloom's Revised Taxonomy



(Armstrong, 2010)

This graphic, released under a Creative Commons attribution license, shows an overview of the hierarchical thinking processes on the revised version of Bloom's taxonomy. Retrieved from cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/. Vanderbilt University Center for Teaching. Flicker. https://www.flickr.com/photos/vandycft/29428436431. Created: 19 November 2020. CC BY 2.0

of understanding and push those students toward higher levels of thinking. When planning learning tasks with the taxonomy in mind, teachers encourage classroom discourse that is rich, meaningful, and interesting to students. All students have a legitimate role in the learning process; problem-solving activities arise as do debates that include analysis and evaluation of evidence (Vickram, 2023).

Norman Webb's DOK Framework (Guido, 2002) focuses on the complexity of understanding needed to answer questions and engage in learning tasks, not merely the difficulty factor. A level one knowledge question might ask for a definition of a complicated term or the names of all the presidents of the United States (difficult but not complex). A level two question might ask a student to compare and contrast two items or ideas. A level three question/task might ask for more inference or analysis, and a level four question/problem would target multifaceted, authentic problems with variable outcomes. Both frameworks guide teachers to focus on asking a range of questions at different levels that guide students to not only think but to reason using their knowledge and skills (Guido, 2022).

Another important aspect of questioning is how teachers ask questions. Often, they call a student's name and then ask a question. This process signals to the other students that they do not need to formulate a response. Consider the

results when teachers ask a question to the whole class, allow a few seconds (10 to 20) for everyone to process the question and formulate an answer, provide an opportunity for them to turn and talk with a classmate to share their ideas or steal a response if needed, then call on a few respondents. Everyone has had the opportunity to participate in the thinking and learning. Although the change may not appear significantly different, it energizes a classroom and heightens the level of student engagement. Student responses are generally more complete and contain higher-level language.

In a world language classroom, as is the case in all other disciplines, it is easy to teach, question, and assess without pushing students to higher-level thinking. The following teaching techniques–which are examples of interactive, learner-centered approaches–can further increase critical thinking when the teacher's prompts and questions require interpretation, analysis, evaluation, problem-solving, and creativity, and involve all students in using language during the time they spend in classrooms. Most of these strategies are not original, but learned from colleagues in all disciplines, at workshops and conferences, and during collegial discussions. Although they have prescribed protocols for implementation, the classroom teachers adapt and revise the techniques to meet learning objectives and students' needs.

It is important to note that before using these protocols, students need to be prepared, both for what the teacher expects as outcomes and the vocabulary chunks and structures that will allow them to stay in the target language when working with classmates. It is important that teachers directly present and practice language chunks students will need to converse in the target language, post those expressions on a large chart in the classroom, on a word wall, or allow students to make individual chat mats with commonly used expressions.

- *Follow Up Questions:* Teachers ask a variety of questions after students respond to questions in order to elicit more information, to spark authentic dialogue, and deepen students' thinking. For example:
- Why? Can you say more? How do you know that? Do you have evidence to support your response? Class, do you have any questions for your classmate (who gave the response)? Do you disagree with his response? Please give your reasons. Do you have a different idea? Please elaborate.
- *Pose-Pause-Pounce-Bounce:* This questioning strategy elicits input from the entire class by altering the typical questioning models of Ask-Response-Evaluate or Ask-Response-Evaluate-Teacher Answers the Question. In these cases, conversation is stifled and deep thinking discouraged. However, if the teacher poses a well-formulated question, waits for at least 10-20 seconds for all students to formulate a response, and then calls on a student to answer the question, more students become cognitively engaged and responses are improved. Often, this strategy results in whole-class dialogue in which teacher-to-student and student-to-student dialogue ensues. Conversations occur naturally.
- *Think-Pair-Share:* This is a simple, no-prep strategy that can be used

repeatedly during a lesson to encourage student-to-student exchanges in the target language. When the class is unable to answer a question or proceed with an exercise, teachers give a visual or verbal cue for students to turn and talk. Once teachers hear a few appropriate responses, they reconvene the class, ask for a response, and continue with instruction.

- *Numbered Heads Together:* This protocol works well for review, formative assessment, and small-group student discussions. Students form groups (preferably four students per group) and they count off; the teacher poses a question or states a problem. Students confer in their groups to agree on a response(s); the teacher calls a number and the designated student in each group becomes the respondent; once the initial response is given, the teacher asks the other students with the same number if they agree with the response or asks them to elaborate. This technique, similar to turn-and-talk and think-pair-share, adds short, focused student-to-student exchanges of information and ideas.
- *Speed Dating:* This protocol is used for short classroom dialogues among students. The teacher arranges the classroom to facilitate pair conversations. Desks are facing each other or a long table is set up with spaces for students to sit opposite one another when talking. The teacher asks a question, poses a problem, or sets up a role play situation. On the teacher's signal, students converse about the topic with the classmate seated opposite; they have mini "speed" discussions (3 to 5 minutes). When cued by the teacher. students rotate to a different peer and discuss the same or a different topic on their discussion "dates." The teacher's questions must signal higher-level thinking. This is student-centered, kinesthetic, interactive, and attention-span friendly.
- *Chat Stations:* This technique generates high level discussions among students as they answer the teacher's questions, solve problems, or discuss similarities or differences between cultures. The teacher attaches butcher paper or large stickies around the room, each with a discussion question, prompt, or problem. Working in pairs or small groups of no more than four, students move from chat station to chat station on a cue from the teacher. Their discussions must be in the target language. They record their responses on a handout or on the poster paper. Once each pair or group has addressed all prompts, the teacher reconvenes the class to debrief the task using students' responses.
- *Keep the Conversation Going:* The goal is to use as much classroom time as possible for student-to-student dialogue and to teach typical conversational expressions that mimic authentic dialogue. It provides short, focused opportunities for students to discuss open-ended questions with a classmate with the goal of maintaining the conversation as long as possible. Teachers pose a question based on a curriculum topic, a cultural phenomenon, or a current event in the target culture. Pairs of students try to sustain a conversation as long as they can about

one question dealing with the stated topic (essential and/or guiding questions work well). Teachers say, write, or project a question; students find a conversation partner and begin to talk. This can be used at the start of a lesson to resurface current knowledge, as a transition from one lesson segment to another, or as closure. Teachers time the conversation and ask the pair that spoke the longest to model their dialog in front of the class. Prior to implementing this activity, teachers introduce and practice conversation starters, expressions that maintain/extend a conversation, and language that brings a conversation to an end (Table 3). These phrases can be explicitly taught and posted on a word wall for students to use as they interact with one another or each student might create an individual "chat mat" with these and other useful expressions. It is best to teach one or two expressions at a time and ask students to use them during the conversations when appropriate.

Table 3

Vocabulary to Maintain and Extend Conversations

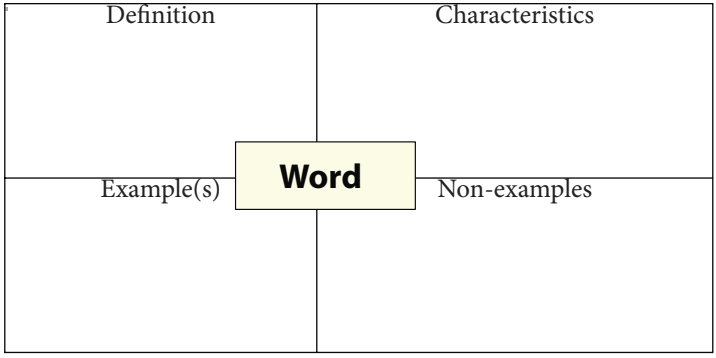
Conversation Starters	Maintaining a Conversation	Interjections	Ways to End a Conversation
Hello. My name is... Hey, nice to see you. How's it going? Excuse me. Can we talk? I have a question. I'm in a hurry. Only have a few minutes to talk. Do you have a minute?	Er…I didn't understand that. Can you please repeat that? Would you speak more slowly? Do you mean…? I think that…. I believe… In my opinion… For me… Can you tell me more about…? I have a question. I agree/disagree because…	Awesome! Right. Uh huh. That's awful. I'm sorry. Good for you.	Sorry. I have a date/class/an appointment. Can we talk more about this later? I have to go now. See you soon. Take care. It was good to see you. Say hello to your family for me. Call me Text me.

- *Socratic Circle:* This activity is often used by social studies or English teachers. Students sit in two concentric circles, an inner and outer circle. Teachers begin a discussion by posing one of the unit essential questions, by making a controversial statement, or by asking students to take a stand on an issue studied in class. The students in the inner circle begin to talk to one another giving their opinions and supporting ideas with information previously learned during the unit or read in authentic documents. Students in the outer circle listen, take notes, and write questions they have about the discussion topic. There is no leader. Rather, it is the responsibility of all the inner circle students to participate in beginning the discussion, keeping the discussion going,

and ending when the question has been sufficiently explored. Teachers only interrupt when the discussion stalls. At that point, teachers either end the talk or ask a follow-up question to promote additional comments from the students. Next, students in the inner circle turn to the student(s) seated behind them and answer any questions that their classmates might have. The students then change places (the inner circle becomes the outer circle and the outer circle students move to the inner circle) and a new conversation starter is announced.

- *Agreement Circles:* Students stand in a large circle in the center of the classroom. Teachers pose a thought-provoking question, provide thinking time (five to ten seconds), and then ask students to show their agreement or disagreement by forming smaller agreement or disagreement circles. In those circles, students share their ideas. Next, students reorganize into mixed circles of those who agree and disagree to defend their positions. The conversations continue. At any time, a student might decide to change his opinion and argue for the other side of the issue.
- *The Frayer Model or Square:* This is a graphic organizer (see Figure 2) that helps students determine or clarify the meaning of words, expressions, and/or cultural practices. It can be used prior to reading an authentic text in order to activate background knowledge, preview vocabulary, or after reading to assess comprehension or guide interpretation. It is also useful to clarify and expand students' vocabulary (Plankers, n.d.).

Figure 2
The Frayer Model



The boxes can be altered to suit the task. For example, the expression in the middle might be "Spanish Meals" and the boxes labeled Similarities to American meals, Differences Between Cultures, Which I Prefer, Why I prefer Spanish/American meals. Teachers can use students' work to generate conversation by asking low- and high-level questions.

There are innumerable strategies that begin with questions and that foster engagement, discussion, and higher-order thinking. However, it is teachers' well-formulated questions that encourage students to share ideas with a partner; it is the manner in which teachers select a student to respond, when and how they ask follow-up questions, how they encourage students to comment on their classmate's answers or elaborate further on a topic that make these strategies successful. When observing these strategies in action, it is apparent that students feel empowered to talk about important ideas and issues, the atmosphere in the classroom is energized, and the learning is meaningful and important.

To summarize the impact of questioning on critical thinking and language development, it is important to remember that excellence in thought has to be cultivated and teachers can and should purposefully plan questions and learning tasks that are interesting to learners, ensure that all students have time to process language and formulate a response, and extend authentic conversations by probing students' answers. They should prepare follow-up questions, include students in commenting and questioning fellow classmates, make the classroom a place for authentic exchanges of information and ideas, and ask the challenging questions.

References

Armstrong, P. (2010). Bloom's Taxonomy. Vanderbilt University Center for Teaching. **https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy**

Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2004). Working inside the Black Box: Assessment for Learning in the Classroom. *Phi Delta Kappan*, *86(1), 8-21*. **https://doi.org/10.1177/003172170408600105**

Critical Thinking. (n.d.) School of Medicine and Health Sciences: The George Washington University. Office of Student Life & Academic Support. **https://oss.smhs.gwu.edu/sites/g/files/zaskib231/files/2020-10/critical_thinking.p**

Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses, revised and updated*. Wiley.

Guido, M. (2022, August 8). Depth of knowledge: 4 DOK Levels & Proven Strategies to increase rigor. prodigygame.com. **https://www.prodigygame.com/main-en/blog/webbs-depth-of-knowledge-dok/#:~:text=DoK%20questions%20for%20math,to%20progress%20through%20the%20story**

Plankers, M. (n.d.). Language and literacy: The Frayer model. El Education. **https://eleducation.org/curriculum/protocols/frayer-model/**

Vickram, P. (2023, July 22). The art of asking questions: Bloom's taxonomy and Socratic methods for promoting critical thinking in school. LinkedIn. **https://www.linkedin.com/pulse/art-asking-questions-blooms-taxonomy-socratic-methods-preethi-vickram/**

Rosanne Zeppieri retired from the West Windsor-Plainsboro Regional School District in NJ where she served as a Supervisor of World Languages (K-8) and a Supervisor of Instruction (K-12). For several years, she has taught an assessment

course at Rutgers University aimed at world language educators. As a consultant for the Startalk Program, a federal grant administered by the National Security Agency (NSA), she provided oversight and supervision of programs for teachers of critical languages and of immersion language programs for K-16 students. She has also worked as an independent consultant for local and national school districts and organizations. She is a Past President of the Fellowship of Language Educators of New Jersey (FLENJ) and the 2019 Chairperson of the Northeast Conference on the Teaching of Foreign Languages (NECTFL).