Enhancing Grammar Learning through Asking Structured Questions

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Abstract- Questioning, no doubt, helps promote learners' awareness of cognitive, affective, and psychomotor domains of instructional objectives in instruction, thus facilitating learning. This article seeks to propose question types based on learning objectives in terms of Bloom's taxonomy, and further elaborate the relationships between question types and students' different learning stages as exemplified via English clausal structures.

Keywords: learning objectives, grammar, learning strategies

Introduction

As Hussain (2003) puts it, teachers have mistakenly equated quantity of questions with quality. That is, if the questions posed to students are not structured in a way to promote learning, questioning per se can be a sheer waste of time. To structure questions, the instructor must tune up his questions in order to foster an integrated understanding of the theoretic or conceptual bases of the subject, the competence to carry on logical inference from those bases, the ability to solve a broad range of problems in different situations, and knowledge that lasts long enough for transference or application. Questioning without structures is no better than the traditional lecture-style "transmissionist" teaching and drill-and-practice, which cannot achieve such an objective (Hake, 1998; Hestenes et al., 1992; McDermott, 1991, 1993; Mestre, 1991; Redish & Steinberg, 1999). This article seeks to offer a framework for questioning in class on the basis of structured questions that may help students become successful learners.

Merits of Questioning

In the course of instruction, a successful teacher must take into account the teaching objectives, assessment, student diversity, teaching materials, instruction methods, and the teacher himself. Questioning based on teaching objectives helps monitor students' progress and check if certain objectives are achieved; questioning can also serve as a backup for formative assessment, which may provide immediate, guiding feedback for students and teachers; questioning in consideration of student diversity helps individualized instruction; questioning offers reference for material design and revision; questioning enables teachers to adjust teaching methods within the least possible delay; questioning broadens the teacher's perspectives when the answers given by students vary. As Hake (1998) indicates, by making students think about questions and answer them (and discuss them within small groups or as a class) they will engage themselves with what is taught and actively learn. Among the variables involved in instruction, teaching objective plays the pivotal role. It is only when questioning is made consistent with the objective that all the rest of variables can be optimally managed. Therefore, types of questions will fall under the categories defined on the basis of teaching objectives, as the taxonomy proposed by Bloom in this paper.

Question Types

Bloom identified three distinct domains in learning objectives: cognitive, affective, and psycho-motor. Each domain cannot be left unemployed or isolated if instruction is to be successful, so are the questions based on any of the cognitive, affective, and psycho-motor domains.

Firstly for the cognitive domain, Bloom's original model includes six sub-categories of cognitive domain (from simple to complex in the hierarchy below): *knowledge, comprehension, applying, analyzing, synthesizing, and evaluating*. Note that *evaluation* is the ultimate objective of instruction in cognitive domain, but in order to help students reach such a goal state, the teacher needs to lead students to go through *knowledge, comprehension, application, analysis, and evaluating what is learnt*. Further, to facilitate knowledge, one must first seek *comprehension.* And to intensify one's *understanding*, one must manage to *apply* what is learned, and to facilitate *evaluation*, one must be provided with opportunities to exert *analytic* capacity (e.g., ability of looking at things from different angles), and evaluation is always rooted from capability of *synthesizing*. Questions for each sub-category can be exemplified in terms of the topic of English clausal structures below:

1. Knowledge:

Questions under this sub-category mainly refer to recall of information, knowledge of dates, events, location, or knowledge of major issues, ideas, and mastery of topics.

e.g., What is a clause?

What is a nominal (adjectival/ adverbial) clause?

2. Comprehension:

Questions under this sub-category refer to grasping meaning, translating knowledge into new context, interpreting facts, comparing, contrasting, ordering, grouping, inferring causes, and predicting consequences.

e.g., Can you distinguish between nominal and adjectival clauses?

Can you predict the possible locations of nominal (adjectival/adverbial) clauses?

3. Application:

Questions under this sub-category refer to using information, methods, concepts, theories in new situations, solving problems based on required skills or knowledge,

e.g., Can you demonstrate how to use nominal/ adjectival/adverbial clauses?

Can you give us an example by creating a sentence with a nominal/ adjectival/ adverbial clause?

4. Analysis:

Questions under this sub-category refer to finding patterns, organization of parts, recognition of hidden meanings, and identification of components.

e.g., Why is the clause after the main verb nominal/ adjectival/ adverbial by nature?

What is the structure of the main clause when there is a nominal/ adjectival/ adverbial clause in the sentence?

5. Synthesizing:

Questions under this sub-category refer to adopting old ideas to create new ones, making generalization from given facts, relating knowledge from several areas, predicting, and drawing conclusions,

e.g., Can you create a sentence consisting of three different clauses?

Can you formulate a pattern for each individual clause?

6. Evaluating:

Questions under this sub-category may refer to comparison and discrimination between ideas, assessing value of theories, presentations, making choices based on reasoned argument, verifying value of evidence, recognizing subjectivity. e.g., Can you rank the difficulty level of the three clauses (nominal, adjectival, and adverbial)?

Can you explain why adjectival clauses seem to be more difficult for Chinese learners?

Next on the affective domain, values, or more precisely perhaps with perception of value issues, feelings, attitudes, emotions, motivations of learning, among others are the major concerns. The affective domain also manifests subcategories from *receiving, responding, valuing, organization, to characterizing by value* (Kratwohl, Bloom and Masia, 1956). Students will have to display their willingness to learn by receiving, before they can do the responding, and then learning can gradually become part of students' value system on the basis of value organization and conceptualization. Questions for each sub-category of this domain can also be exemplified in terms of English clausal structures below (following the cognitive domain):

7. Receiving:

Questions under this subcategory refer to attending to something in the settings; one would listen to a lecture or presentation about, for example, clausal structures.

e.g., *Are you aware of the differences among different clausal structures?*

Have you noticed the spatial differences of different clausal structures?

8. Responding:

Questions under this subcategory refer to displaying some new behaviors out of experience; the students would answer questions about the concept/ model or might rewrite lecture notes out of class.

e.g., Will you rewrite/ reorganize the lecture notes at home? What will you most likely to do after you have listened to lectures regarding clausal structures?

9. Valuing:

Questions under this subcategory refer to displaying some definite devotion or commitment; the student might begin to think how writing may be modified to make the best use of different clausal structures presented.

e.g., Will you consider using more clausal structures in your writing?

How confident are you in applying nominal/adjectival/adverbial clausal structures in your writing?

10. Organization:

Questions under this subcategory refer to integrating a new value into one's general value system, prioritizing the ranking among one's general value set; the student would begin to make long term commitments to using what is learned.

e.g., Among the non-verb structures, which ones do you feel most intriguing?

Can you prioritize the ranking among the syntactic structures that you will be likely to use in your writing?

11. Characterization by Value:

Questions under this subcategory refer to acting in accordance with the new value; the student would be firmly committed to utilizing the clausal structures to develop or arrange various structures in writing paragraphs based on what he learns.

e.g., Do we have a Mr. Nominal/ Adjectival/ Adverbial Clause here?

Do you feel eager to apply clausal structures in your writing?

Lastly, psychomotor domain essentially draws attention to the fundamental role of <u>imitation</u> in skill acquisition, which manifests subcategories from *observing, imitating, practicing, to adapting.* Questions for each sub-category of this domain can also be exemplified below (following the affective domain):

12. Observing:

Questions under this subcategory refer to attending of a physical event actively; the student observes a more experienced person in his/her performance of the target skill; the student is asked to observe sequences and relationships and pays particular attention to the procedural aspects of learning.

e.g., *What do you see in the course of nominal/ adjectival/ adverbial clauses construction?*

Do you see the procedures of combining the two individual sentences into one in terms of nominal/ adjectival/ adverbial clauses?

13. Imitating:

Questions under this subcategory refer to copying a physical behavior of a model; the student begins to acquire the basic skills involved in a learning task; the student consciously follows directions and procedures under supervision.

e.g., *Did* you *notice* the specific procedures of constructing a nominal/ adjectival/ adverbial clauses? And can you repeat the procedures?

Can *you* show me the first / second / third step of constructing a nominal / adjectival/ adverbial clause as I showed you just now?

14. Practicing:

Questions under this subcategory refer to trying a specific physical activity time and again; the student keeps performing the entire sequence; the performance becomes more or less automatic and habitual.

e.g., *How many times have you actually practiced the nominal/ adjectival/adverbial clauses?*

Were you aware of the specific procedures while you were practicing the clausal structures?

15. Adapting:

Questions under this subcategory refer to making adaptation; making minor adjustments in the activity to become more proficient; making refinement of the acquired skill.

e.g., *Did you ever do self adjustment to make better us of clausal structures taught?*

Have you encountered the situation where you need to make adjustment of the clausal structures?

Questions as Feedback for Instruction

Questioning in class provides opportunities for students to think, to channel their attention, spur inter-student discussion, and promote sharing of knowledge. A lot of studies have supported the fact that questioning can become the very core of classroom instruction, replacing the "transmit and test" paradigm with a cyclic process of question posing, deliberation, commitment to an answer, and discussion (Dufresne & Gerace, 2004). In sum, the teacher can adopt questioning as a tool to stimulate further learning activities such as discussions, or group procedures, and to monitor students' states of learning in comparison with the learning objectives.

Answers to each question from students may serve as a monitor for teachers to carry on further instruction. Note that the subcategories of each domain may parallel with those of the other domains. The correspondence among the subcategories of each domain on different stages can be elaborated as the Table below:

Table 1. Correspondence among the Subcategories of Each Domain

Stage Domain	Stage 1	Stage 2	Stage 3
Cognitive	*knowledge(1)*	*comprehension(2),* *applying(3),* *analyzing(4)*	*synthesizing(5),* *evaluating(6)*
Affective	*receiving(7),* *responding(8)*	*valuing(9),* *organization(10)*	*characterizing by value (11)*
Psycho-motor	*Observing(12)*	*practicing(14)* *imitating(13)*	*adapting (15)*

Note also that the classifications of question types into three stages are tentative and may seem arbitrary, but such classification may help the teacher make a choice either to move on to the next stage or to go back to the previous stage depending on the students' answers as feedback. To elaborate, students who can give positive and definite answers to questions of a stage are to receive the instruction of the next stage, and students who fail to give positive and definite answers to questions of a certain stage are to receive the instruction of the previous stage. For example, if students cannot give satisfactory answers to questions in Stage 2 (*comprehension, applying, analyzing, valuing, organization, practicing, and imitating*), then the teacher will have to go back to the previous stage (Stage 1), and carry on some kind of instruction to help students review what is involved in the stage (*knowledge, receiving, responding, and observing*), and master what is involved in the Stage 2. On the other hand, if students can give satisfactory answers to questions in the Stage 2, then the teacher will naturally move on to the next stage (synthesizing, evaluating, characterizing by value, and adapting), and focus on instructing students and help them master what is involved in the Stage 3. As to what instruction techniques can be adopted for each stage, there is no panacea, universal or apply-all approach, but it is generally believed that the programmed instruction design or mastery learning based on behavioral principles are suggested for the Stage 1, and the discovery learning, meaningful learning, or other constructivist approach are though to be effective for the Stage 2, and lastly, cooperative learning, especially the jigsaw methods, as well as task-based approach are good for the Stage 3.

Conclusion

Questioning in class is a powerful medium in orienting students, monitoring progress, tuning the focus, adjusting instructional methods, and assessing performances, but it is only a tool, and should be coordinated with other interactive activities. We admit — from our teaching experience that posing questions to students is hard and takes time especially when the instructional setting is basically teacher-centered, in which students are passive, and exhibit high affective barrier. However, it is believed that if questions posed to

students are well structured and organized, questioning can be made creative, constructive, time and energy-saving, thus most likely optimizing the learning results. Questions prompting students to do analysis, synthesis, and evaluation are particularly powerful and inspiring, and those questions requiring computational or simple factual knowledge based on memory, rather than understanding and reasoning, are of little value. Further, questions regarding affective and psycho-motor domains cannot be isolated because learning cannot be complete without the integration of the cognitive, affective, and psycho-motor domains. These three domains are interdependent, with one reinforcing another. It is, therefore, imperative that teachers should foster the habit of asking multi-dimensional (cognitive, affective, and psycho-motor related), more thought provoking questions so that learners' involvement in and the devotion to the process of learning will be secured.

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