How to initiate your child asking good questions

Make the conversation more relevant

Outcome: Have young students be able to engage in conversations using questions in a thoughtful and learning manner. Our students should understand the nature and make up of questions and how to use them in the learning/ conversation mode.

Background:

A **question** is an expression of inquiry that invites or calls for a reply or an interrogative sentence, phrase, or gesture. http://www.thefreedictionary.com/question

Isidore I. Rabi .. (Nobel Prize in Physics in 1944), says his mother would ask him each day when he returned from school **"did you ask a good questions today"** that made me become a scientist.

What is so important about questions and questioning? Questions allow young people to make sense of their worlds and to take action smartly. They are the most powerful tools we have for making decisions and solving problems-for inventing, changing and improving our lives as well as the lives of others. (learning to question to wonder to learn … Jamie McKenzie)

What makes a question good?

- A good question makes you think.
- A good question is one that does not have an immediate answer, because it requires some thinking, feeling and application to previous knowledge.
- A good question opens doors. It demands more than a yes or no answer.
- A good question penetrates the structure and meaning of the knowledge base to seek understanding.

The Structure of Questions

Open-ended questions are best for most learning situations, unless you have a particular reason for leading someone to a specific conclusion or actually need a fact supplied to you.

Try to avoid yes/no questions because they're usually a dead end. In contrast, open-ended questions:

- invite opinions, thoughts and feelings;
- encourage participation;
- establish rapport;
- stimulate discussion; and
- maintain balance between facilitator and participant.

To answer the question; "How to initiate your child asking good questions", It is recommended that

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the parent/teacher use the following process to develop the learning:

- Modeling … the process for the student
- Scaffolding … providing aids/templates for the student
- Coaching … providing feedback and support
- Reflecting (Meta-cognition) … having the child look at their methods
- Fading … giving the child space to be on their own

Modeling:

Children learn their question-asking habits from teachers and parents. If children are to be encouraged to raise questions that lead to investigation, this is one more reason for teachers to make the effort to ask more productive questions and fewer unproductive ones. Some specific ways in which teachers can practice and improve question skills are:

1. Provide a wide range of materials for children to respond to.

2. Practice and improve your questioning style so that it provides an example for the children.

3. Provide a climate of inquiry for children to work in.

4. Encourage children to form and to discuss their own questions.

5. Respond positively to children's spontaneous questions.

6. Listen with respect to each question and the child.

7. The atmosphere in the classroom must also be conducive to encouraging children to ask questions and learn from mistakes.

8. Use “Think aloud” to introduce metacognitive language to children, which model metacognitive processes. Here we raise awareness by using metacognitive language and self-questioning in the way we present explanations to pupils and model a particular problem solving process. We aid metacognition by bringing to conscious awareness our thoughts and feelings, and communicate them by thinking aloud.

If we wish to foster **curiosity, wonder and skepticism**, the following questions we can ask ourselves aloud, in front of our students often enough that they can become mental habits for ourselves and our students:

- What I am curious about is….
- What I do not yet understand is…
- I really want to find out..
- The mysteries and puzzles that really intrigue me are..
- If I could be somebody else … or visit another time period, that is what I’d want to

discover …
- I really wonder why…
- What intrigues me is…

Wondering is about entertaining and exploring possibilities. It is about hope and faith. It can also be about questioning and doubt … Wondering is why things are the way they are. At its best, wondering combines doubting and dreaming in a powerful partnership to test value.

Scaffolding

Some ways of showing that questions are welcome are by adding questions to displays and collections, introducing a problem corner in the classroom, creating lists of "questions to investigate," and making sure any work cards or worksheets are framed in terms of investigable questions. Regular discussion of questions is also important. Children, like teachers, do not find it easy at first to change the emphasis in their questioning from unproductive to productive. Novel materials are not necessarily the best stimulus; often more familiar ones help children raise questions, especially with a lead from the teacher to the kind of productive questions that can be asked.

Try playing **The Question Game** with your kids. To start, two participants decide on a topic to question. One person starts with an open-ended question, and then the other person responds with a related open-ended question. This goes back and forth as long as they can continue without making a statement or repeating a previous question. For example, the topic might be an object in the room, such as a light bulb:
A: Why is it important to have light?
B: Where does light come from?
A: How does light help people?
B: Where is light used?
A: What would happen if there were no light?
Try asking a question and going around the room, each person asking a question based on the one before.

This game can be modified by picking different type of questions and seeing how many variations can be made. As an example you can pick the category of probing questions or

Posting a list of metacognitive questions on the wall can help to remind children of the sorts of questions they can ask themselves, for example questions that assess awareness of learning (What have you learnt? What have you found out? What did you find hard? What did you do well? What do you need to learn/do next?), assessing attitudes and feelings (What do you like doing/learning? What do you feel good/not good about? What do you feel proud of?) And in setting targets (What do you need to do better? What would help you? What are your targets?)

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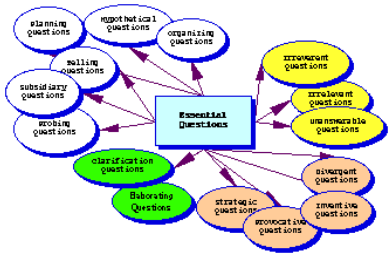
Maps: Organizing material for building questions and relationships.

Have the students build maps that relate objects, thoughts, concepts together to help create questioning ideas.



Coaching

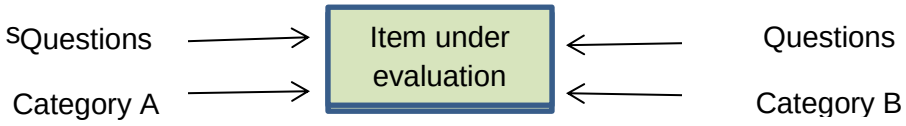
Once children begin to ask questions they will ask ones of all kinds; some will be difficult for teachers to handle, but it is important to find a way of doing so that does not make the child wish he or she had not asked. A strategy should be created for analyzing children's questions so that unproductive ones can be used productively. **We** should be asking our students , what questions do we need to ask of this situation. Whenever we encounter complex situations in our subjects, we pose certain crucial questions:

- What do we know?
- What are the givens?
- What do we need to find out?

Example:

Create an opportunity corner in the room where BUGs(Problems) are kept in cages. Students are encourage to bring in bugs and put them in a cage in the corner to have possible solutions to get it out of the cage. There is a review time where thoughts are discussed about the bugs. What questions would they have to determine the true problem and possible solutions?

Another way to support the child in understanding of how to form questions is to see that questions can come from a collection of tasks, elements or processes that give you the starting point for creating a question. It's breaking questions into categories to obtain more information, like the parts and the whole, a system view of developing questions



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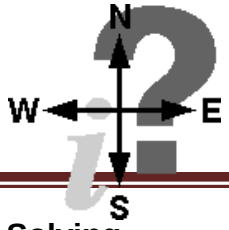
- As an example, we can take the problem solving process and use the major tasks as starting points for our question. What do we know about the problem definition?; What research has been done?, etc.
- If we are familiar with Ed Debono's "6 Hats" concept for collaboration, we could ask questions from each hat color. The red hat would give us questions about feeling, the white hat about facts, etc,. (6 hats … white hat, black hat, green hat, blue hat, yellow hat, red hat)
- 5 W and H (Why, What, When, Where, Whom and How)

- Bloom's Taxonomy of Educational Objectives (categories of questions)
  - Knowledge (Recall, Description …)
  - Comprehension (Understanding content …)
  - Application (Using knowledge in novel contexts …)
  - Analysis (Breaking complex issues into parts …)
  - Synthesis (Combining elements into novel designs …)
  - Evaluation (Using criteria to make judgments …)



Problem Solving

- *Problem Definition*
- *Research*
- *Develop Possible solutions*
- *Pick a few*
- *Build & Test*
- *Communicate*

Reflecting:

Students learn to monitor and direct their own progress, asking questions such as 'What am doing now?', 'Is it getting me anywhere?'. 'What else could I be doing instead?'. This general metacognitive level helps students avoid persevering in unproductive approaches, to remember to check ... and so on (Perkins & Salomon 1989 p21)

Donaldson (1978) quotes with approval Piaget's finding that children's reflection on problems and consideration of possibilities are important aspects of cognitive development: 'If the child is going to control and direct his own thinking, in the kind of way we have been considering, she must become conscious of it.' (p94). Feuerstein (1980) shows how adults can play a key role in encouraging this metacognitive awareness in children. The teacher can ask children about the successes and difficulties they have had with problems. Students can be encouraged to reflect on the kinds of thinking they have been engaged in, and to be conscious of those processes that have been helpful or have hindered their progress. This meta-discourse on the problem-solving process is an application of the way Vygotsky (1978) described language as the mediator of learning. As Adey & Shayer (1994) comment: 'The language of reasoning mediates meta-learning'.

Insightful questions

Insightful questions indicate that a student has an idea or a problem on which she is working, and wants to learn more about it. The student wants to explore and broaden his ideas. Exactly what is it that such a student wants to learn? Facts are not usually what he wants to learn. More typically, she

wants to learn about implications and alternatives, suggestions about his planned approach, different ways of looking at a problem, and so on. He wants someone to help him think through his ideas or problems on his own.

The role of the teacher/parent during the questioning process is to help the student see the shortcomings in his thinking. It is to open his eyes to alternatives, erroneous assumptions, and eventualities he has not considered. It is, most of all, to challenge the student to develop a deeper understanding of his own knowledge. In order for the student to gain such an understanding, she must experience expectation failure. A teacher should aim to provide the questions that will lead the student into the understanding cycle.

Asking questions at the right time is a critical role of a good teacher. This statement summarizes what we call the sounding board model of teaching. When teachers adopt the role of sounding boards, they should allow students to **speculate, wonder, imagine, and be creative**

.**Application of good questions**...**Leading a Discussion**

Good learning programs involve everyone in planning and activities, whether it's a discussion among your team about goals or a brainstorming session among kids planning a video project. Here are some good ground rules for leading a discussion:

- Make sure everyone is prepared. This could mean that everyone has received the hand-outs or that you've read aloud the story you want to talk about.
- Know your purpose. Is the goal to arrive at a decision or merely to brainstorm possible ideas that you'll follow up on later?
- Opinions should always be supported with evidence. If you're discussing a book, for example, ask follow-up questions about why the student believes what she does.
- Leaders only ask questions; they do not answer them.
- **Care about each question you ask. Avoid generic questions and prepare some good questions in advance**.
- Maintain a high energy level and enthusiasm. It's contagious!
- Spontaneous interpretive questions are an important part of all discussions. Preparing questions in advance will actually lead to better spontaneous questions as well.
- All good questions always lead to more questions. Be aware of practical and logistical issues, such as time limits, but never squelch enthusiasm when kids are on a roll.
- Whenever possible and appropriate, use techniques like mapping to provide a conceptual, visual structure to the ideas you're hearing. Let people see you writing their thoughts and ideas on the map.