

13th Annual

Thinking & Learning Conference

JAN HOEGH

Saturday 21 May

Questioning Sequences in the Classroom
Session 3

MELBOURNE

JAN HOEGH

Jan Hoegh is associate vice president of Marzano Research in Colorado. As a member of the Marzano Research team, she has contributed to several books published by Hawker Brownlow Education.



During her 28 years in education, Jan has been a classroom teacher, building-level leader, professional development specialist, high school principal and curriculum coordinator. She previously served as assistant director of statewide assessment for the Nebraska Department of Education, where her primary focus was Nebraska State Accountability test development. An active member of several educational organisations, she was president of the Nebraska Association for Supervision and Curriculum Development.

As well as a bachelor of arts in elementary education and a master of arts in educational administration, Jan has also earned a specialisation in assessment from the University of Nebraska-Lincoln.

A message from Hawker Brownlow Education

We hope that you have found these conference papers and the accompanying sessions useful. Please be aware that the contents of these papers are the intellectual property of the speaker and no reproduction for any purpose is authorised. We urge you to take care of this booklet. Replacement copies will not be made available either during or after this conference.

Published in Australia by



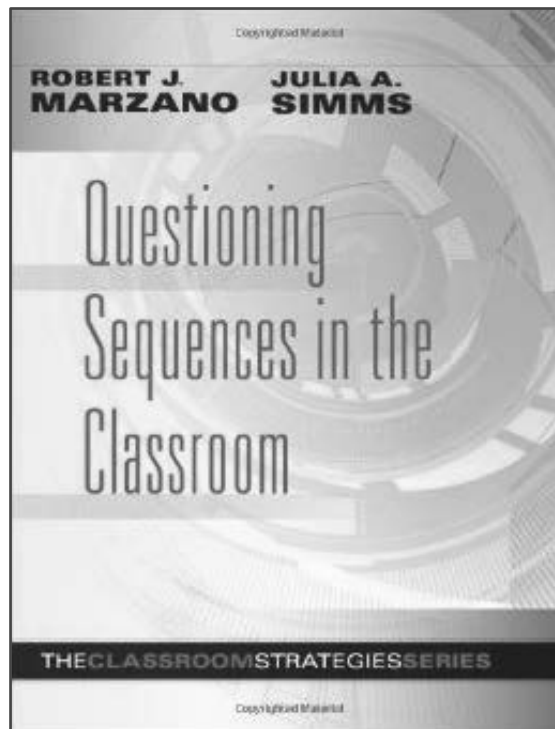
This handout was created by Hawker Brownlow Education for the proceedings of the Hawker Brownlow 13th Annual Thinking & Learning Conference. All rights are reserved by Hawker Brownlow Education. It is a violation of copyright law to duplicate or distribute copies of this handout by any means for any purposes without prior permission in writing from Hawker Brownlow Education. Professors and workshop presenters must first secure written permission for any duplication rights. For copyright questions, permission requests, or information regarding professional development contact:

Hawker Brownlow Education
P.O. Box 580, Moorabbin, Victoria 3189, Australia
Phone: (03) 8558 2444 Fax: (03) 8558 2400
Toll Free Ph: 1800 334 603 Fax: 1800 150 445
Website: www.hbe.com.au
Email: orders@hbe.com.au

© 2016 Hawker Brownlow Education
Printed in Australia

CODE: MELJH0203
0516

Questioning Sequences in the Classroom



May 2016

**Ms. Jan K. Hoegh
Associate Vice President**





1) Classroom questioning has been the subject of educational debate in the United States for more than one hundred years.

888.849.0851 marzanoresearch.com

 MARZANO Research Laboratory

Multiple Choice:

2) On average, how many questions do teachers ask during a school day?

- (a) 50
- (b) 125
- (c) 240
- (d) 395

888.849.0851 marzanoresearch.com

 MARZANO Research Laboratory



3) Higher-order questions are best for improving student achievement.

888.849.0851 marzanoresearch.com

 MARZANO Research Laboratory

Notes:

Teachers typically wait less than one second after asking a question before calling on a student to answer. Teachers wait even less time before speaking after the student has answered.

Teachers ask many questions. Most teacher questions are at the lowest cognitive level—known as fact, recall, or knowledge.

Not all students are accountable to respond to all questions. Teachers frequently call on volunteers, and these volunteers constitute a select group of students.

Teachers often accept incorrect answers without probing; they frequently answer their own questions.

Marzano Research 2016 ♦ marzanoresearch.com



February 2013 | Volume 70 | Number 5 Creativity Now! Pages 76-77

Art and Science of Teaching/Asking Questions – At Four Different Levels

Robert J. Marzano

Questioning is a potentially powerful tool that teachers can use to help students better understand academic content. However, simply asking more questions of more students might not produce the desired effect.

In working with and observing teachers, I've found that the questions they ask students can be organized into four levels, each of which demands deeper thinking of the student.

Level 1: Details

Level 1 questions ask students to recall or recognize details about specific types of information. For example, a teacher might ask, "What is one of Jack London's most popular works, and what is it about?" or "Describe some important characteristics of the Rocky Mountains in the United States."

We commonly think of Level 1 questions as "lower level." However, they have their place in learning new content because teachers commonly begin by asking students questions about narrower types of information—such as specific people (like Jack London); specific groups and organizations (like the U.S. Congress); and specific intellectual, artistic, and cognitive products (like the Greek play *Prometheus Bound*)—before progressing to more general and abstract content, such as mental processes and procedures (like rounding techniques in mathematics).

Level 2: Characteristics

Level 2 questions move the focus to the general category to which a Level 1 topic belongs. For example, a Level 2 question about Jack London might be, "Jack London is thought of as an adventure writer. What are some characteristics of writers who specialize in adventure stories?" or "What are some differences between older mountain ranges like the Rocky Mountains and newer mountain ranges like the Olympic Mountains in Washington State?" Here the focus shifts from a specific person (Jack London) or place (the Rocky Mountains) to the general category to which that person or place belongs (outdoor adventure writer, mountain ranges).

Level 2 questions ask students to describe the characteristics of a given category. This might involve comparing and contrasting characteristics, such as those of two different mountain ranges. Such questions might also ask students to identify elements that fit within a category. For example, a Level 2 question about the Battle of Gettysburg might ask students to consider some other battles from wars they've studied that have had a similarly large loss of life.

Cognitively, Level 2 questions require a broader perspective than Level 1 questions require. Instead of thinking of Jack London in isolation, for example, students must consider him as part of a larger system.

Marzano Research 2016 ♦ marzanoresearch.com

Level 3: Elaborations

Level 3 questions ask students to elaborate on the characteristics of and elements within a category. Typically, such questions require students to explain the reasons something happens. For example, a teacher might say, "Explain why adventure writers tend to participate in adventurous situations themselves" or "Explain why older mountain ranges are less jagged." Level 3 questions can also require students to explain the effect of something. In a discussion about the Battle of Gettysburg, a teacher might ask, "What effect does major loss of life in a single battle have on ending or prolonging a war?"

Level 3 questions are more cognitively complex than Level 2 questions because students must explain the working dynamics of how or why certain things occur or exist.

Level 4: Evidence

Level 4 questions require students to provide support or evidence for their elaborations. They might ask students to identify sources that support their elaborations. A teacher might ask, "What sources support your conclusions about why older mountain ranges are less jagged?" They may require students to explain the reasoning behind their elaborations; the premises, rules, or generalizations they used to form their conclusions; or any exceptions that their conclusions don't seem to explain. When answering Level 4 questions, students might even find errors in premises, rules, or generalizations they previously thought to be true.

A teacher can initiate Level 4 questions in class, but these typically require extra time to answer because students must articulate sources or information or analyze their own thinking. Consequently, Level 4 questions frequently become homework that students begin in class but turn in later.

Planning for Deep Thinking

To plan for this type of leveled questioning, teachers first must consider the specific details they want to highlight about a topic and then construct appropriate Level 1 questions. Next, they must consider the general category to which their topic belongs and the characteristics of that general category. They will need to construct Level 2 questions around these. Teachers can ask Level 1 and Level 2 questions of the entire class, making sure that all students have opportunities to respond.

When constructing Level 3 questions, teachers need to consider which specific characteristics they would like students to explain. Because Level 3 questions are typically rather complex, the teacher might organize students in groups to formulate explanations. Each group might present explanations, followed by a class discussion of those explanations.

Finally, when designing Level 4 questions, teachers need to consider whether they want students to cite specific sources for their explanations, examine the logic of their own reasoning, or qualify their conclusions. Level 4 questions typically take more than a single class period to address and might even extend across multiple class periods, so it's necessary to take into account how long students will be given to complete such assignments.

Planning a lesson that uses all four of these levels can transform classroom questions into analytic tasks that require students to think at increasingly complex levels.

Robert J. Marzano is cofounder and CEO of Marzano Research Laboratory in Denver, Colorado. He is the author of *The Art and Science of Teaching* (ASCD, 2007) and coauthor, with Tony Frontier and David Livingston, of *Effective Supervision: Supporting the Art and Science of Teaching* (ASCD, 2011).

Four Levels of Questions

DETAIL	CATEGORIES (CHARACTERISTICS)
Description:	Description:
ELABORATION	EVIDENCE
Description:	Description:

The art of teaching relies heavily on effective questioning techniques. Questions have the potential to change classrooms and strengthen student achievement. Through our questions, our students become thinkers, and they learn the important traits of perseverance, risk taking, creativity, and flexibility.

Please read and discuss each question. Label according to the following:

D = detail

C = category

EL = elaboration

EV = evidence

_____ List the various types of eruptions that can occur in a volcano.

_____ How would you express each of the following numbers if you were rounding to the nearest 100?

4,789; 234; 1,117; 205

_____ Compare and contrast the different effective ways to distribute your weight when executing the following types of shots in basketball:

Free throw, jump shot, set shot, and layup

_____ Why did you conclude that starfish are interesting animals?

_____ What traits do dogs, horses, and monkeys share that are true about all mammals?

_____ Identify one of Mark Twain's most popular books and provide a brief description of the storyline.

_____ Explain the underlying reason for one of the differences between the Senate and the House of Representatives.

_____ List some defining characteristics of Greek tragedies?

_____ What sources support your conclusion that older mountain ranges are less jagged than newer mountain ranges?

_____ What is the terrain surrounding New Orleans, Louisiana, like?

_____ What effect does major loss of life in a single battle have on ending or prolonging a war?

Learning goal:

The Model:	Your example:
Questions about DETAILS :	
Questions about CATEGORIES :	
Questions that require students to ELABORATE on their previous answers:	
Questions that require students to provide EVIDENCE for their elaborations:	

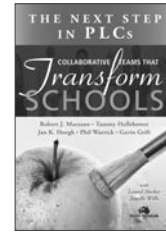
Response Strategies that Support Every Student Responding *Every Time!*

Strategy:	Notes:
<i>Technology Tools:</i>	<ul style="list-style-type: none"> • http://www.superteachertools.com/instantclassroom/random-name-generator.php • http://www.barryfunenglish.com • Plickers.com

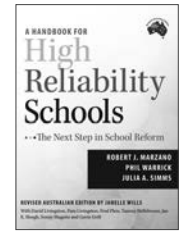
RELATED RESOURCES

Available from Hawker Brownlow Education

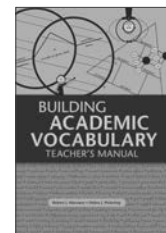
Qty	Code	Title	Price
	MRL2779	A Handbook for High Reliability Schools	\$29.95
	MRL2861	A School Leader's Guide to Standards-Based Grading	\$27.95
	MRL5249	Becoming a Reflective Teacher: The Classroom Strategies Series	\$39.95
	105153	Building Academic Vocabulary: Teachers Manual	\$27.95
	104017	Building Background Knowledge for Academic Achievement	\$29.95
	MRL6741	Coaching Classroom Instruction: The Classroom Strategies Series	\$39.95
	MRL7484	Collaborative Teams That Transform Schools: The Next Step in PLCs	\$35.95
	MRL2878	Proficiency Scales for English and Mathematics Standards	\$38.95
	MRL2496	Questioning Sequences in the Classroom: The Classroom Strategies Series	\$29.95
	107001	The Art & Science of Teaching: A Comprehensive Framework for Effective Instruction	\$23.95
	MRL7634	The Highly Engaged Classroom: The Classroom Strategies Series	\$35.95
Total (plus freight) \$			



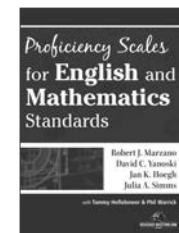
MRL7484



MRL2779



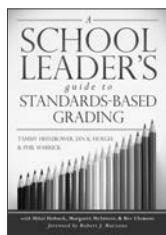
105153



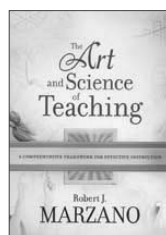
MRL2878



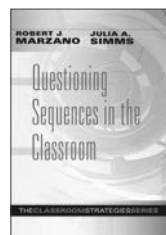
104017



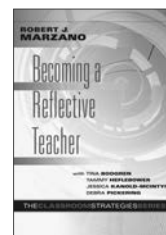
MRL2861



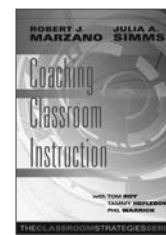
107001



MRL2496



MRL5249



MRL6741



MRL7634

Attention Order Number

Name of School

Address

..... State P/Code

Country

Email:

Yes, I would like to receive emails from Hawker Brownlow Education about future workshops, conferences and the latest publications.

Terms of Trade

- Prices are quoted in Australian dollars (\$AUD) and include GST
- All prices are subject to change without notice.
- For New Zealand customers, at the time of invoice, we will convert the amount into New Zealand dollars (\$NZD) so that you can pay by cheque or credit card in New Zealand dollars (\$NZD).
- Full money-back guarantee.
- We do realise it is difficult to order sight unseen. To assist you in your selection, please visit our website <www.hbe.com.au>. Go to 'Browse Books' and most titles will give you the option to view the first few pages of the book. Click 'View Contents' on your selected book page.
- We will supply our books on approval, and if they do not suit your requirements we will accept undamaged returns for full credit or refund. Posters are for firm sale only and will not be sent on approval. Please be aware that delivery and return postage is the responsibility of the customer.
- Freight costs are determined at Australia Post rates, with a minimum delivery charge of \$9.50 within Australia and \$15.00 for New Zealand for each order.
- Please provide your street address for delivery purposes.

To place an order, request a catalogue or find out more about our resources:

Call
1800 334 603
(03) 8558 2444

Fax
1800 150 445
(03) 8558 2400

Online
www.hbe.com.au

Mail
Hawker Brownlow Education
PO Box 580,
Moorabbin, VIC 3189

Do you want to know all about the latest professional development events in your area? Be the first to find out about new releases from world-renowned and local authors with the HBE e-newsletter! Upcoming titles will feature authentic assessment and digital media, along with a strong focus on success in mathematics and literacy. Sign up to our FREE e-newsletter at www.hbe.com.au.

Online 'On Account' ordering now available!

If you have a pre-existing account with Hawker Brownlow Education, you can now order online and pay using that account.