SOLO Taxonomy and
Questions, Questioners, Questioning

Pam Hook

www.pamhook.com
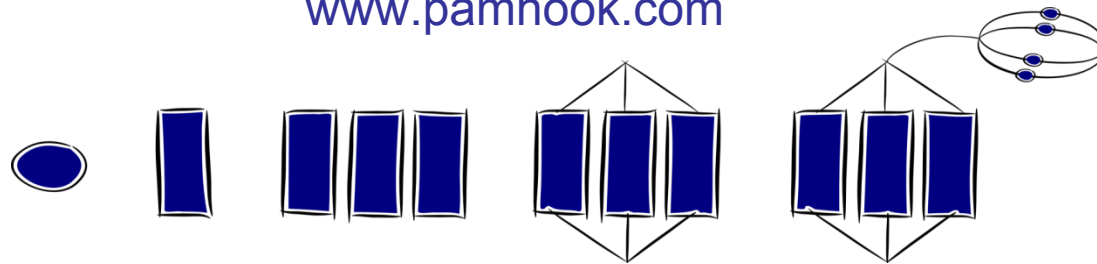
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"Once you have learned how to ask relevant and appropriate questions, you have learned how to learn and no one can keep you from learning whatever you want or need to know."

Neil Postman and Charles Weingartner
Teaching as a Subversive Activity

"…. the greatest invention since the birth of mankind is the **question.**" (Witte 2001)

"…… as teachers, the first thing we steal from our children is **their questions**." (Edwards 2001)

- *"Going in search of student questions is like travelling into a **linguistic Serengeti**"*

(Hook 2003)

How does "doing school" discourage questioning?

*Never mind what's Sanctifying Grace! That's none of your business. You are here to learn the catechism and do what you are told. **You are not here to be asking questions.***

<div align="right">

Angela's Ashes

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How can we develop student questioning, student questioners, and student questions?
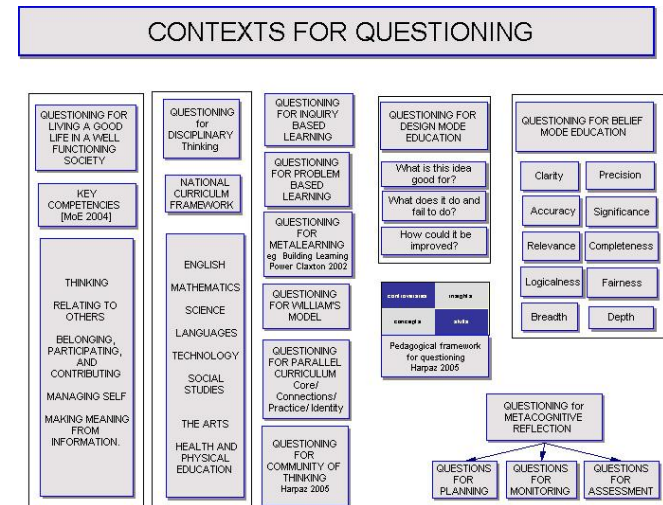
Helping students become better questioners requires:

- Contexts for **Questioning**

- Dispositions for **Questioners**
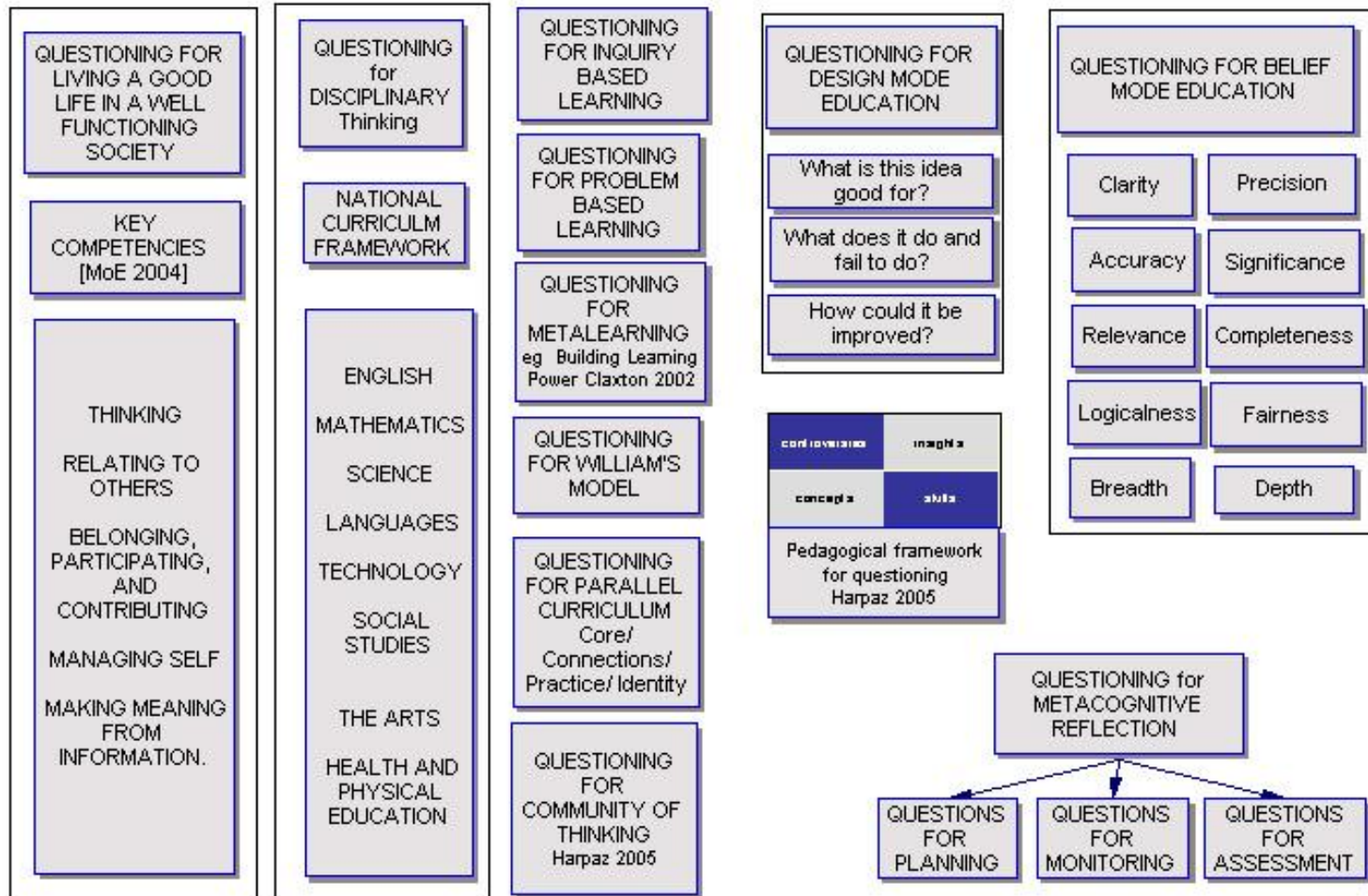
- Frameworks for **Questions**

Contexts for Questioning

Why do you value student questioning in your learning community?

In society and in schools the questioner is oftentimes marginalised as a trouble maker and maverick ...
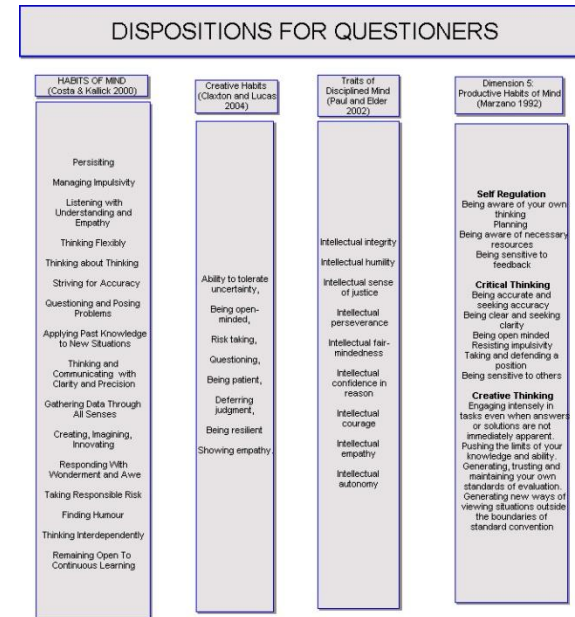

CONTEXTS FOR QUESTIONING

CONTEXTS FOR QUESTIONING

QUESTIONING FOR LIVING A GOOD LIFE IN A WELL FUNCTIONING SOCIETY

KEY COMPETENCIES [MoE 2004]

THINKING

RELATING TO OTHERS

BELONGING, PARTICIPATING, AND CONTRIBUTING

MANAGING SELF

MAKING MEANING FROM INFORMATION.

QUESTIONING for DISCIPLINARY Thinking

NATIONAL CURRICULM FRAMEWORK

ENGLISH

MATHEMATICS

SCIENCE

LANGUAGES

TECHNOLOGY

SOCIAL STUDIES

THE ARTS

HEALTH AND PHYSICAL EDUCATION

QUESTIONING FOR INQUIRY BASED LEARNING

QUESTIONING FOR PROBLEM BASED LEARNING

QUESTIONING FOR METALEARNING eg Building Learning Power Claxton 2002

QUESTIONING FOR WILLIAM'S MODEL

QUESTIONING FOR PARALLEL CURRICULUM Core/ Connections/ Practice/ Identity

QUESTIONING FOR COMMUNITY OF THINKING Harpaz 2005

QUESTIONING FOR DESIGN MODE EDUCATION

What is this idea good for?

What does it do and fail to do?

How could it be improved?

| controversia | insgha |
| concepta | skvla |

Pedagogical framework for questioning Harpaz 2005

QUESTIONING FOR BELIEF MODE EDUCATION

Clarity	Precision
Accuracy	Significance
Relevance	Completeness
Logicalness	Fairness
Breadth	Depth

QUESTIONING for METACOGNITIVE REFLECTION

| QUESTIONS FOR PLANNING | QUESTIONS FOR MONITORING | QUESTIONS FOR ASSESSMENT |

Dispositions for Questioners

How do you value student questioning behaviours in your learning community?

DISPOSITIONS FOR QUESTIONERS

HABITS OF MIND (Costa & Kallick 2000)

Persisiting

Managing Impulsivity

Listening with Understanding and Empathy

Thinking Flexibly

Thinking about Thinking

Striving for Accuracy

Questioning and Posing Problems

Applying Past Knowledge to New Situations

Thinking and Communicating with Clarity and Precision

Gathering Data Through All Senses

Creating, Imagining, Innovating

Responding With Wonderment and Awe

Taking Responsible Risk

Finding Humour

Thinking Interdependently

Remaining Open To Continuous Learning

Creative Habits (Claxton and Lucas 2004)

Ability to tolerate uncertainty,

Being open-minded,

Risk taking,

Questioning,

Being patient,

Deferring judgment,

Being resilient

Showing empathy.

Traits of Disciplined Mind (Paul and Elder 2002)

Intellectual integrity

Intellectual humility

Intellectual sense of justice

Intellectual perseverance

Intellectual fair-mindedness

Intellectual confidence in reason

Intellectual courage

Intellectual empathy

Intellectual autonomy

Dimension 5: Productive Habits of Mind (Marzano 1992)
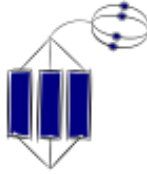
Self Regulation
Being aware of your own thinking
Planning
Being aware of necessary resources
Being sensitive to feedback

Critical Thinking
Being accurate and seeking accuracy
Being clear and seeking clarity
Being open minded
Resisting impulsivity
Taking and defending a position
Being sensitive to others

Creative Thinking
Engaging intensely in tasks even when answers or solutions are not immediately apparent.
Pushing the limits of your knowledge and ability.
Generating, trusting and maintaining your own standards of evaluation.
Generating new ways of viewing situations outside the boundaries of standard convention

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Self Assessment Rubric for Asking Questions

Self and peer assessment rubrics coded against SOLO Taxonomy

	I can ask anyone relevant and appropriate questions when seeking answers, and I can reflect on my questioning.	
	I can ask my family, friends, teacher and people I don't know, like experts, relevant/ appropriate questions when seeking answers	
	I can ask my family, friends, classmates and teachers questions when seeking answers	
	I can ask my family and close friends questions when seeking answers	
	I need help to ask a question	

Frameworks for Questions

How can you design a questioning curriculum?

How can you design a developmental sequence of questioning frameworks to build student expertise in making questions?

Student questions change with different questioning frameworks.
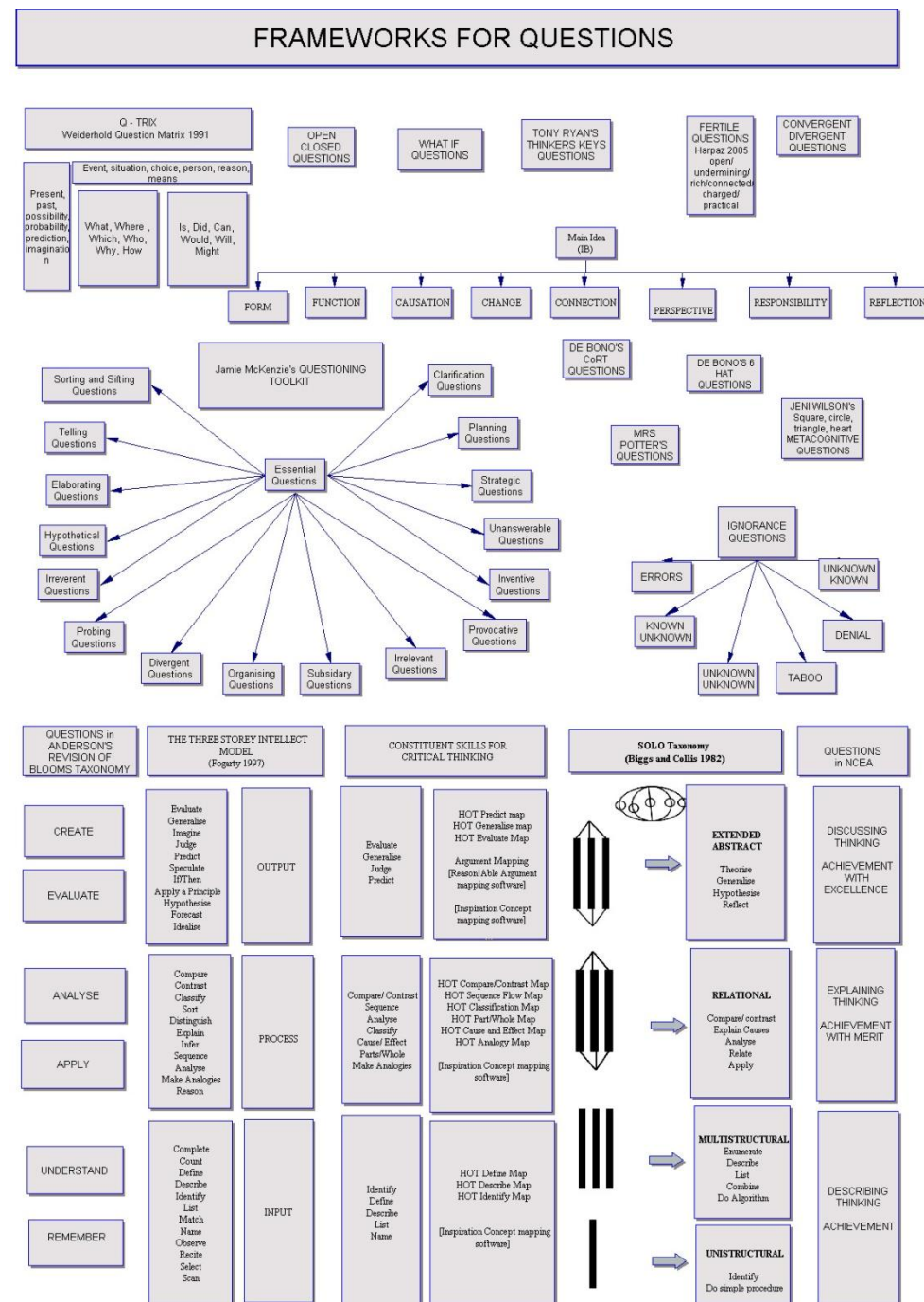
SOLO Taxonomy and HOT Maps as a Questioning Framework.

Self Assessment Rubrics for Formulating Questions

Self and peer assessment rubrics coded against SOLO Taxonomy

	I can make questions that go beyond the subject and make links to other concepts.	
	I can make questions that link information relevant to the subject	
	I can make questions that bring in more than one idea relevant to the subject.	
	I can make questions that bring in one idea relevant to the subject.	
	I need help to make a question	

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transforming learning outcomes

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