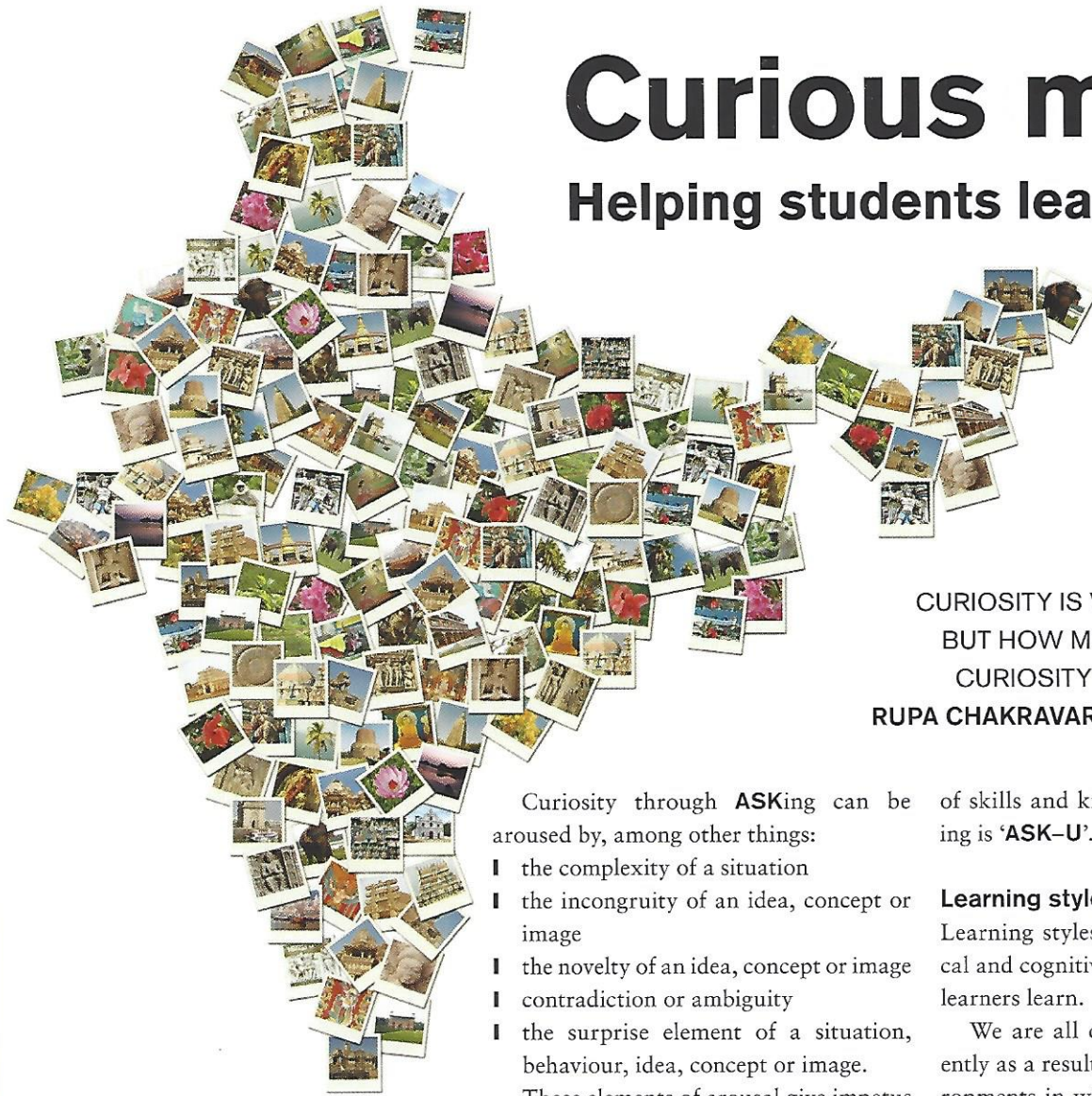


# Curious minds

## Helping students learn to learn



CURIOSITY IS VITAL FOR LEARNING,  
BUT HOW MIGHT YOU STIMULATE  
CURIOSITY IN YOUR STUDENTS?  
RUPA CHAKRAVARTHY HAS SOME TIPS.

Albert Einstein, the German-born theoretical physicist and father of the general theory of relativity, once said, 'I have no special talent. I am only passionately curious.'

Curiosity is a vital motivator in leading us to gain information about and adapt to our environment, in essence, in leading us to learn.

### What is curiosity?

Curiosity involves a desire for **K**-nowledge; it prompts exploratory behaviour that enables us to develop **S**-kills; and it motivates the arousal, direction and persistence of behaviour to **A**-pply that knowledge and those skills. Together, these form the acronym **ASK**.

Curiosity through **ASK**ing can be aroused by, among other things:

- l the complexity of a situation
- l the incongruity of an idea, concept or image
- l the novelty of an idea, concept or image
- l contradiction or ambiguity
- l the surprise element of a situation, behaviour, idea, concept or image.

These elements of arousal give impetus to epistemic curiosity, that is the desire to understand by exploring. Epistemic curiosity can be stimulated by instigating a thought process or creating an intriguing situation. The understanding that it generates is typically well remembered because the experience of arriving at it is intrinsically rewarding. This is why curiosity should be a key component of the teaching strategies we use to deliver the curriculum.

We use the **ASK** approach at Suncity School, Gurgaon, to focus on curiosity that stimulates the application of skills and knowledge for understanding.

The role of teachers is to stimulate students' interest, to invite them to reflect and then become curious enough to explore and investigate in order to learn. Our

of skills and knowledge for understanding is '**ASK-U**'.

### Learning styles

Learning styles describe the psychological and cognitive characteristics by which learners learn.

We are all different and learn differently as a result of differences in the environments in which we grow up, and the attitudes and beliefs we develop. These influence the way we acquire and apply skills and knowledge.

While our learning depends on our personal attitudes and beliefs it also depends on the situation.

Learning typically involves our senses in order to assimilate new information or further feedback on our skills, usually in three modalities, visual, auditory and kinesthetic, which often overlap.

Proponents of the use of learning styles in education recommend that teachers identify the preferred learning styles of their students and adapt their teaching methods to accommodate each student's learning style.

Our visual, auditory and kinesthetic



tandem with our cognitive domain we then choose ways to transform that experience into something meaningful and usable. Our learning style is thereby a product of:

- I how we grasp the experience – watch, hear or do, and
- I our emotional experience, that is, how we transform the experience by thinking or feeling.

Most of us do this by watching or listening and reflecting, or by initiating action and experimentation. Whether we watch or listen and reflect, or initiate action and experiment, we then choose how to transform the experience.

David Kolb describes this process cyclically in the following terms:

- I concrete experience or CE – having a new experience or reinterpreting an existing experience
- I reflective observation or RO – reviewing or reflecting on the experience
- I abstract conceptualisation or AC – learning as a result of the reflection, which gives rise to a new understanding
- I active experimentation or AE – applying or trying out the new understanding to see what results.

Following Kolb's learning cycle, some learners are 'convergers' – AC+AE – who are highly skilled in the practical application of ideas.

Others are 'divergers' – CE+RO – who are good at looking at the 'big picture' and organising smaller bits of information into a meaningful whole. They usually tend to be emotional and creative, and enjoy brainstorming to come up with new ideas.

Others are 'accommodators' – CE+AE – who are good at thinking on their feet and changing their plans in response to new information. They are risk takers who enjoy practice, and trial and error approaches.

Still others are 'assimilators' – AC+RO – for whom creating theoretical models is a great strength.

### Multiple intelligences

Howard Gardner in the 1980s defined

lems or to fashion products that are valued in one or more cultural settings. He identified eight intelligences:

- I linguistic intelligence or 'Word Smart'
- I logical-mathematical intelligence or 'Number/Reasoning Smart'
- I spatial intelligence or 'Picture Smart'
- I bodily-kinesthetic intelligence or 'Body Smart'
- I musical intelligence or 'Music Smart'
- I interpersonal intelligence or 'People Smart'
- I intrapersonal intelligence or 'Self Smart'
- I natural intelligence or 'Nature Smart.'

### Building a repertoire of learning strategies

To build a repertoire of learning strategies at Suncity School our starting point is to recognise that the learning style of each student is extremely important. Our **ASK-U** approach involves stimulating the learning of convergers, divergers, accommodators and assimilators, recognising that each student learns through a blend of multiple intelligences with preferences or emphases on particular intelligences related to particular disciplines or subject matter.

### What does ASK-U look like?

Let's see what the **ASK-U** approach looks like in terms of a repertoire of learning strategies addressing the learning of vowels and consonants.

Addressing Kolb's concrete experience or reinterpreting an existing experience, we might brainstorm to recall the first *sounds* an infant makes. Students' answers – crying, gurgling – enable reflective observation about these sounds in order to identify through abstract conceptualisation that they are vowels, which can be confirmed by active experimentation.

Asked likewise about an infant's first word, students' answers – mum, ppp and so on – will identify and confirm consonants. In each case, the learning involves the **A**-pplication of previous **K**-nowledge and **S**-kill.

Concrete experience of tongue twisters

nants further, and to explore why these typically involve consonants but not vowels.

You might think that Gardner's bodily-kinesthetic intelligence or musical intelligence would not be relevant here, but supposing you have identified students with such preferred intelligences, you might further explore vowels and consonants in, say, a relay race in which each runner in the relay passes a vowel or a consonant 'baton' to experience and reflect on how effectively vowels and consonants can be enunciated.

Active experimentation or recapitulation enables students to summarise and consolidate their learning, addressing vowels as sounds made without an impediment to the force of air emitted from the larynx and consonants as sounds made with any, even slight, impediment.

Finally, you might develop a diagram of the mouth with your students to identify the various parts of the mouth and how the larynx and different parts of the mouth enable us to make different sounds. This would enable Kolb's convergers to apply their concrete experience to the model and assimilators to apply their abstract conceptualisation of the model to their experience.

The **ASK-U** approach would thus complete a cycle of learning using various strategies and accommodating various learning styles and multiple intelligences – and, importantly, that cycle of learning would lead to understanding that students remember. **T**

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### REFERENCES

Kolb, D. (1984): *Experiential Learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

Gardner, H. (1993). *Multiple Intelligences: The theory in practice*. New York: Basic Books.