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Diversity Across Giftedness: A specific case of School Science

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Diversity is a typical feature of most of the social settings. Even while conceptualizing the area specific giftedness the varying context, socio-cultural in specific, would make each situation unique.

At certain places presumption of incompetence may also be axiomatic (Example-Racism, Gender, colonized societies etc).

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As Lefrancois (1999), explains that “many ethnic minorities are vastly underrepresented among those selected for gifted programs. One reason is that many of them like so many of culturally different are underachievers”.

Because tasks valued in ordinary classroom programs are so different that they are not able to perform at par with their mainstream peers. Consequently they are hardly likely to be viewed as potentially gifted.

Maitra (2004) also explains, "There are some persistent myths about many children coming from a disadvantaged background. Their self concept, language, ability and culture are questioned or disapproved by teachers/ school authorities."

She goes on to suggest that "Ability is wide ranging and students can be able in one or more areas. Not all high able (gifted) are high achievers owing to their specific socio-cultural backgrounds".

Characteristics and values which are given importance in defining giftedness vary with diverse socio-cultural environments, ***so the concept of ability is neither constant nor universal.***

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‘Many students home and social environments are culturally congruent with school pedagogy, whereas other students encounter discontinuities of discourse patterns between home and school’ (Lee, 2003).

‘ Their own current conditions remain relatively unanalyzed, in part because the ideological perspectives they are offered (and the critical tools not made available) defuse both the political & economic history and the conceptual apparatus required for a thorough appraisal of their position’ (Apple, 2012).

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Cultural factors affect the expression of giftedness and talent. Sociocultural environments affect talent

Researchers who study talent development recognize that all achievements exist and are valued within a socio cultural context (Csikszentmihalyi, 1988; Freeman, 2005; Simonton, 1994; Sternberg, 2005; Tannenbaum, 1986).

Actions or outcomes are defined as achievements depending upon cultural values.

For example, Sternberg (2004) noted that in a tribal culture, being exceptional at gathering food, hunting, or understanding the medicinal properties of herbs will be highly prized and may define giftedness.

In societies that emphasize oral rather than written traditions, exceptional, expressive storytelling may be considered a hallmark of giftedness.
In other words, domains of giftedness and definitions of talent differ across cultures.

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Too often the children's beliefs and social practices mask their giftedness from the eyes of teachers who are not used to noting intelligent behaviour among them.

In schools where there is large number of socio-culturally diverse students, gifted children may go totally unrecognized.

These children may do poorly on typical standardized tests of mental abilities because of differences in language, and learning experiences.

They may also perform poorly in school because parents and peers may not value school learning, and teachers may assume that giftedness rarely exists in these students.

A moot question then emerges in front of us as educators, *how to adjust the* ***'lens of giftedness' for such students who are marginalised by the system?***

Science, as a school subject offers some of the unique learning opportunities to the students.

Which include
-open mindedness
-Critical mindedness
-willingness to suspend judgment
-Objectivity and intellectual honesty

It is a unique combination of
- Thought (theoretical framework)
- language (terminology)
- Representation (mathematical, graphical, diagrammatic, numerical etc)

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Science teaching in the schools, usually, focus upon developing

The conceptual understanding
The process skills &
The thinking skills

As also concentrating upon evolving

A scientific thought - *theoretical framework*
A scientific language - terminology
Multiple ways of representation - *mather*
graphical, num

The teachers play a central role in facilitating learning among students. They are required to make informed pedagogic choices, addressing the diversity among students and focusing upon the fundamental features of the subject, attempting to create a resonance between- the subject and the learner. This requires them to comprehend the uniqueness of both and fine tune for an infinite harmony.

The classroom processes are expected to lead to the development of creative aspects and appreciation of the meaning of the subject- where upon the subject becomes a cultural activity.

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The teachers are required to make informed pedagogic choices, addressing the diversity among students and focusing upon the fundamental features of the subject.

Under such a scenario insisting and/or maintaining a singular curriculum- including content , pedagogy and assessment, is a near impossible task.

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Science captures imagination. Science invites us to dream. For many, this is at the level of a true fantasy because there are few visible examples of successful science students among them. Science is a prohibited territory for many. A built-in system of support exists at both the institutional and social levels that nurture the interest, motivation, and success of limited few in science.

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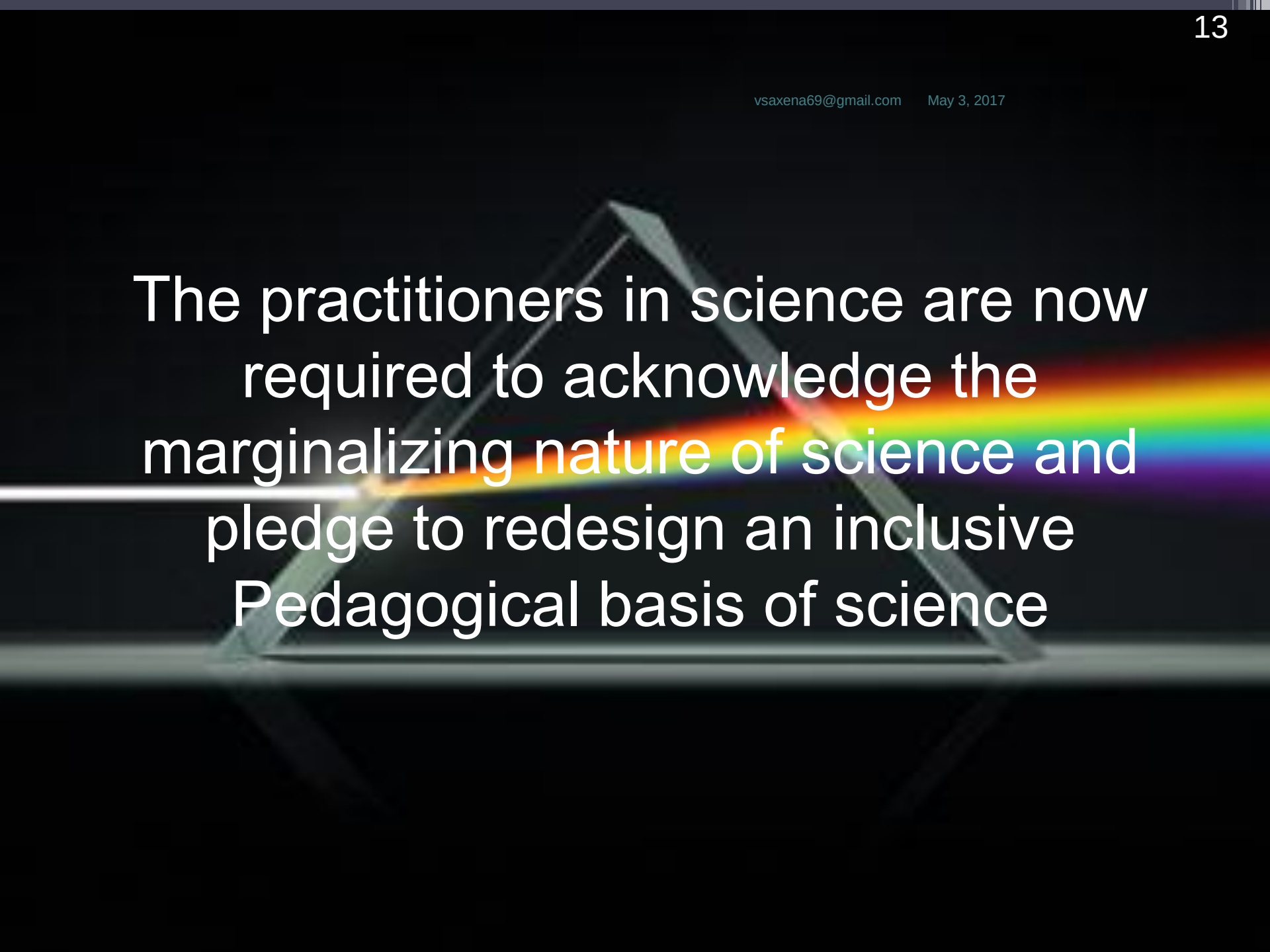

The practitioners in science are now required to acknowledge the marginalizing nature of science and pledge to redesign an inclusive Pedagogical basis of science

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The following nine tenets are proposed as the primary guiding principles for planning the classroom processes

- Each child has an innate ability to excel in one or multiple fields
- Although each child learns independently, there is a huge possibility of common patterns of learning existing among them.
- The learners are capable of planning the classroom processes for themselves
- The learners in a group may possess differential learning styles.
- The expression styles may also vary within a group

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- The daily life experiences of each child include a battery of events

- The concept formation is a complex process

- Identifying and addressing misconnects / alternative frameworks are essential to strengthen learning

- Apart from the medium for a given subject, there is a language specific to a subject. The learners need apparent discussion about this

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The ultimate goal of science education in India, is to foster science based attitudes and belief systems, enabling the citizens with the potential to think analytically and critically, breaking away from the hierarchal mode of thinking and empowering each to take a rational decision- a must for any democracy to succeed.

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Culturally sensitive education requires educators not only to learn new attitudes, new pedagogy and new content but also how to integrate these in their every day work with all gifted and talented students. By becoming socially responsive and culturally sensitive, teachers of the gifted will be able to bridge the fields of gifted education and culturally inclusive education.

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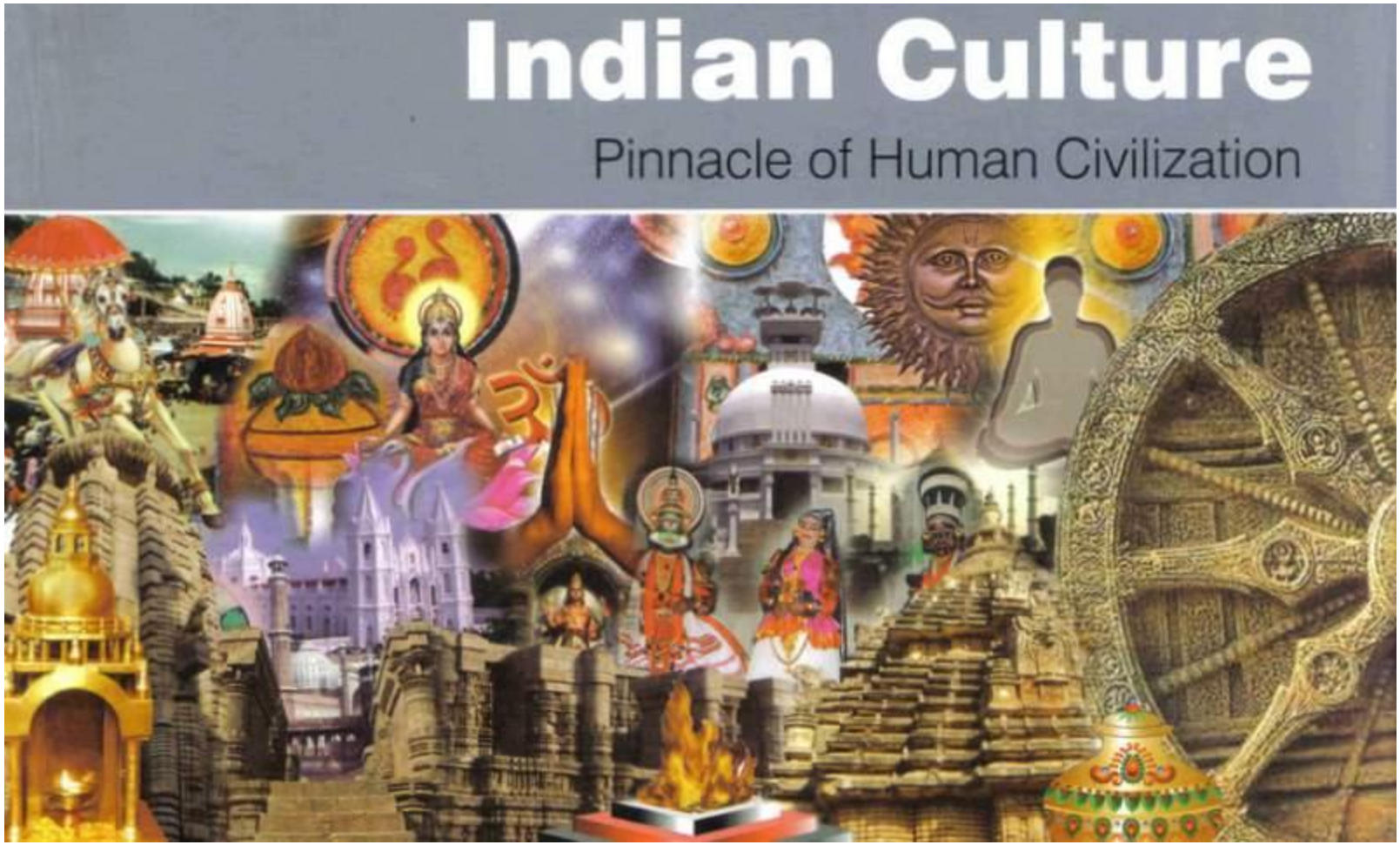

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