Curriculum Improvisation a Reality in Different Landscapes

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A challenge

In many countries prescriptive curriculum texts and standardised tests have led to a narrowing of curriculums with many teachers feeling constrained and teaching to the tests.

Yet the diversity of human needs and wide variations in context and educational resources makes the conformity seem anomalous. Indeed, diversity requires recognition with creativity and imagination emphasised.

The central issue is tension between mandates for creativity and flexibility and tightly regulated curriculum reform aimed at improving standardised test scores.

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Multi-layered principles
of procedure

Design space

A multi-layered approach to curriculum would address this tension and provide a way forward.

These layers represent *principles of procedure* for construction and implementation of curriculums.

Layer # 1 – Situated perspective

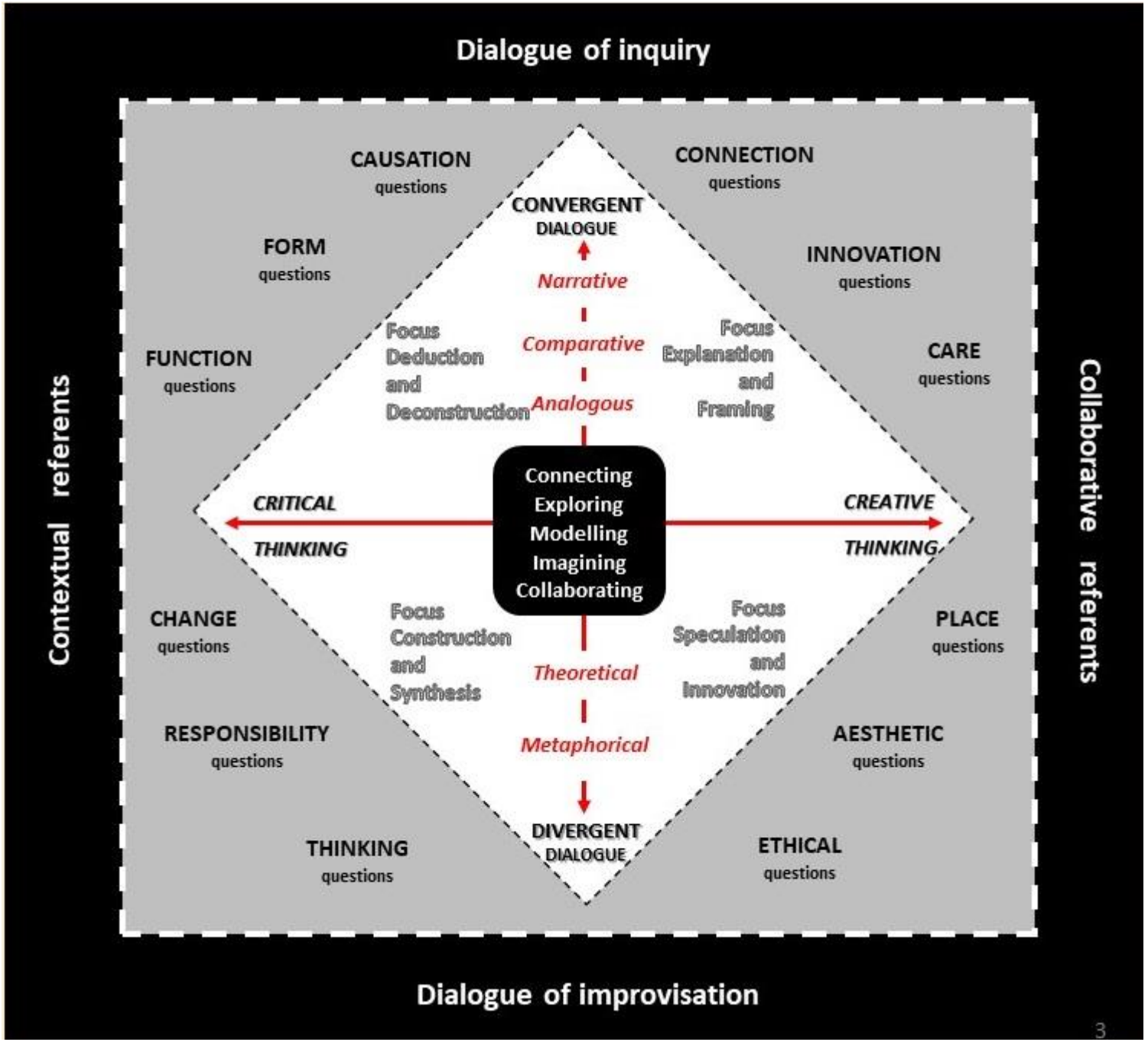
Layer # 2 – Generative questions

Layer # 3 – Learning drivers

Layer # 4 – Focused investigations

Layer # 5 – Thinking orientations

Together they create the multi-layered 'design space'. A summary is shown opposite



Layer 1. Situated perspective

These key elements are interdependent and synergistic.

- **A *dialogue of inquiry* where learners are engaged, individually and collectively, in a curious exploration of experience.**
- **A *dialogue of improvisation* around flexible inquiries which balance structure with freedom to meet the diverse needs, capabilities and aspirations of learners.**
- ***A contextual blend* of learners' backgrounds, experiences, prior knowledge and cultures, including situations which can be utilised for learning**
- ***A collaborative culture* which encompasses interactions and negotiations as well as cooperative processes among learners, teachers and where appropriate community people.**

Tightly regulated 'one size fits all' curriculum scripts do not sit well with the diversity inherent in these requirements.

Layer 2. Generative questions

Curiosity provokes questions which spark imagination and creativity. The generative questions set out here apply to all fields of knowledge and experience. They are generic.

When asked in specific contexts derivative questions emerge. Dialogue among learners and teachers is essential in getting these 'spin off' questions right and capable of investigation by learners.

Generic generative questions help balance curriculum coherence with diversity in learning and teaching.

Generative question	Descriptive label	Scope and meaning
What is it like?	FORM	Everything has a form with recognizable features which can be observed, identified and categorized.
How does it work?	FUNCTION	Everything has a purpose, a role or a way of behaving which can be investigated, described, and trialed.
Why is it like it is?	CAUSATION	Things do not just happen. There are causal relationships at work and actions have consequences.
How is it connected to other things?	CONNECTION	We live in a connected world of interacting systems in which the actions of any individual element affect others.
How is it changing?	CHANGE	Change is a process of moving from one state to another. It is universal and inevitable.
What is the role of place here?	PLACE	Time, space, location, situation, circumstance, and environment affect the ways people and communities can live and work.
Who might be responsible?	RESPONSIBILITY	People are not passive observers. They make choices and assume roles, which affect their lives and that of others.
How could people care for each other?	CARE	Caring for others is a key aspect of healthy communities. It draws on a sense of empathy, understanding and appreciation.
Where is the ethical reasoning?	ETHICAL	Ethical consideration is concerned with moral values and beliefs held and enacted by individuals, communities, and societies.
How is aesthetic sense manifest?	AESTHETIC	Aesthetic sense cultivates and values refinement, expression, sweetness, beauty, flexibility, design, and appeal.
How is the thinking evolving?	THINKING	Thinking is how people make sense of experience as well as create new ideas and ways of doing things. It is seldom static.
What might innovation add?	INNOVATION	To address challenges new or different ideas and ways of acting may be needed. Creativity and imagination are central.

Layer 3. Learning drivers

'Learning drivers' refer to a dynamic combination of thinking and dialogue through the medium of language. The thoughts and ideas generated may be formulated and expressed in words, symbols, sounds or visual pictures.

Thinking has two distinct synergistic elements. Creative thinking which stimulates imagination, and critical thinking which is based around analysis. Tension between the two kindles inventiveness and generates creativity.

Dialogue has many forms including-

- ***Narratives*** **that tease out ideas and information by means of stories**
- ***Comparisons*** **that connect ideas and practices through like-as associations**
- ***Analogies*** **that conceptualise thoughts by means of 'concrete' connections**
- ***Theories*** **that formulate models and extrapolations by means of hypotheses**
- ***Metaphors*** **that provoke figurative images, innovative ideas and practices**

Imaginative thinking and curious dialogue are at the heart of learning.

Layer 4. Focused investigations

The focus of investigations emanates from the ways in which thinking is manifest. Different foci reflect different intentions including-

- ***Deduction and deconstruction*** **facilitated by thinking critically around narrative, comparative and analogous conversations**
- ***Explanation and framing*** **facilitated by thinking creatively around narrative, comparative and analogous conversations**
- ***Construction and synthesis*** **facilitated by thinking critically around theoretical and metaphorical conversations**
- ***Speculation and innovation*** **facilitated by thinking creatively around theoretical and metaphorical conversations.**

These foci do not occur in isolation from each other. On the contrary, learners draw on all of them in their inquiries. Choice, as distinct from conformity, is paramount.

Layer 5. Thinking orientations

Mental processing is integral to thinking, understanding and acting. Orientations differ in nature, quality, and intention. They include –

- making connections
- exploring possibilities
- modelling designs
- collaborating with others
- creating innovations
- Visualising different realities
- Generating cultural perspectives

Thinking processes employed in inquiries reflect orientations like these.

Over prescription can circumscribe scope for creativity and imagination. For instance, limiting exploration of settlement in Australia to historical connections might miss possibilities for collaboration, or curtailing genre studies in literature could obscure creative opportunities for writers, or demoting modelling in the Arts or Media might overlook creative aspects of our culture, and confining scientific inquiries to fact and principle is unlikely to incite innovative ideas.

Multi-layered principles of procedure

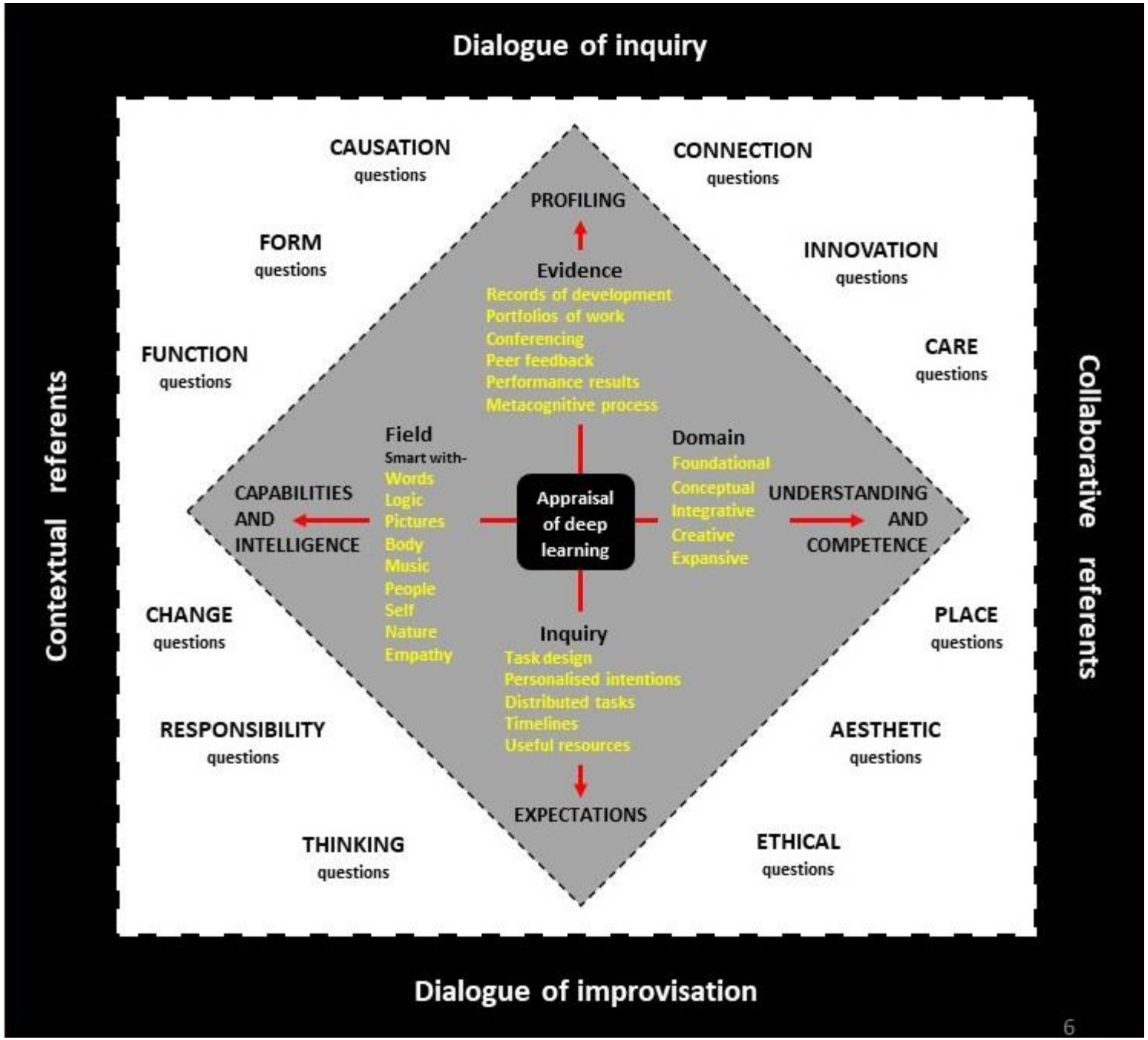
Assessment space

Standardised tests and benchmarking have skewed assessment towards performance and achievement.

They reduce processes for diagnosing individual learning needs and determining how best to make assessment an integral part of learning.

They diminish potential for building on needs and aspirations embodied in different educational landscapes.

A multi-layered approach to assessment accommodates diverse needs and conditions, and complements the principles of procedure described for a design space. A summary of the layers is shown opposite.



Four synergistic layers of assessment

Situated perspectives and generative questions from the design space shape the field of learning for assessment. The axes encircled by the generative questions identify a number of interdependent layers within assessment processes.

Layer # 1 - Expectations

What should explored, why and how inquiries can undertaken

Layer # 2 - Profiling

Evidence of learning by individual learners and groups of learners

Layer # 3 – Domains

Focus on the development of understandings and competencies

Layer # 4 - Capabilities

Attention to the scope of intelligences employed and developed

The generative questions selected, together with their derivative questions, can be seen as goals to guide assessment. As such they provide a basis for authentic appraisal.

Layer 1. Expectations

The expectations for inquiries need to be clear and shared with learners. Preferably by means of negotiation and collaboration to balance learning needs with the motivations and contexts of different learners.

This involves

- **Personalising intentions and outcomes**
- **Designing flexible learning tasks**
- **Distributing tasks for individual learners and groups of learners**
- **Negotiating timelines for completion**
- **Explaining the resources available**
- **Identifying evidence of learning to be collected**

The clarity gives substance and quality to assessments around the generative questions, and their derivative questions, that have been selected for a given inquiry.

Layer 2. Profiling

Profiling is an evidence-based process. To be reliable and authentic a broad range of evidence is needed.

The evidence may be compiled unedited or be annotated or be culled for what learners and/or their teachers consider to be examples of 'best' work.

The evidence may include-

- **Portfolios of learner's work**
- **Records of development**
- **Conferencing reflections**
- **Peer feedback**
- **Performance results**
- **Metacognitive processes employed**
- **Personal learning journals-logs.**

Profiling is a continuous process. It is designed to keep track of each learner's learning. As such it is integral to learning and teaching.

Layer 3. Capabilities

The term – 'capabilities' – as used here refers to the development and expression of different intelligences (or smartness in colloquial language). These include-

Field	Learners like to-
Word smart learners	Read. Write. Tell stories. Explore meaning.
Logic smart learners	Experiment. Figure things out. Work with numbers. Query.
Picture smart learners	View pictures/slides. Watch movies. Play with machines..
Music smart learners	Sing/hum/listen. Play instruments. Respond to music..
Body smart learners	Move around. Touch and talk. Use body language.
People smart learners	Have lots of friends. Talk to people. Join groups.
Self smart learners	Work alone. Pursue own interests. Independent
Eco smart learners	Observe things. Recognise things. Analyse things.

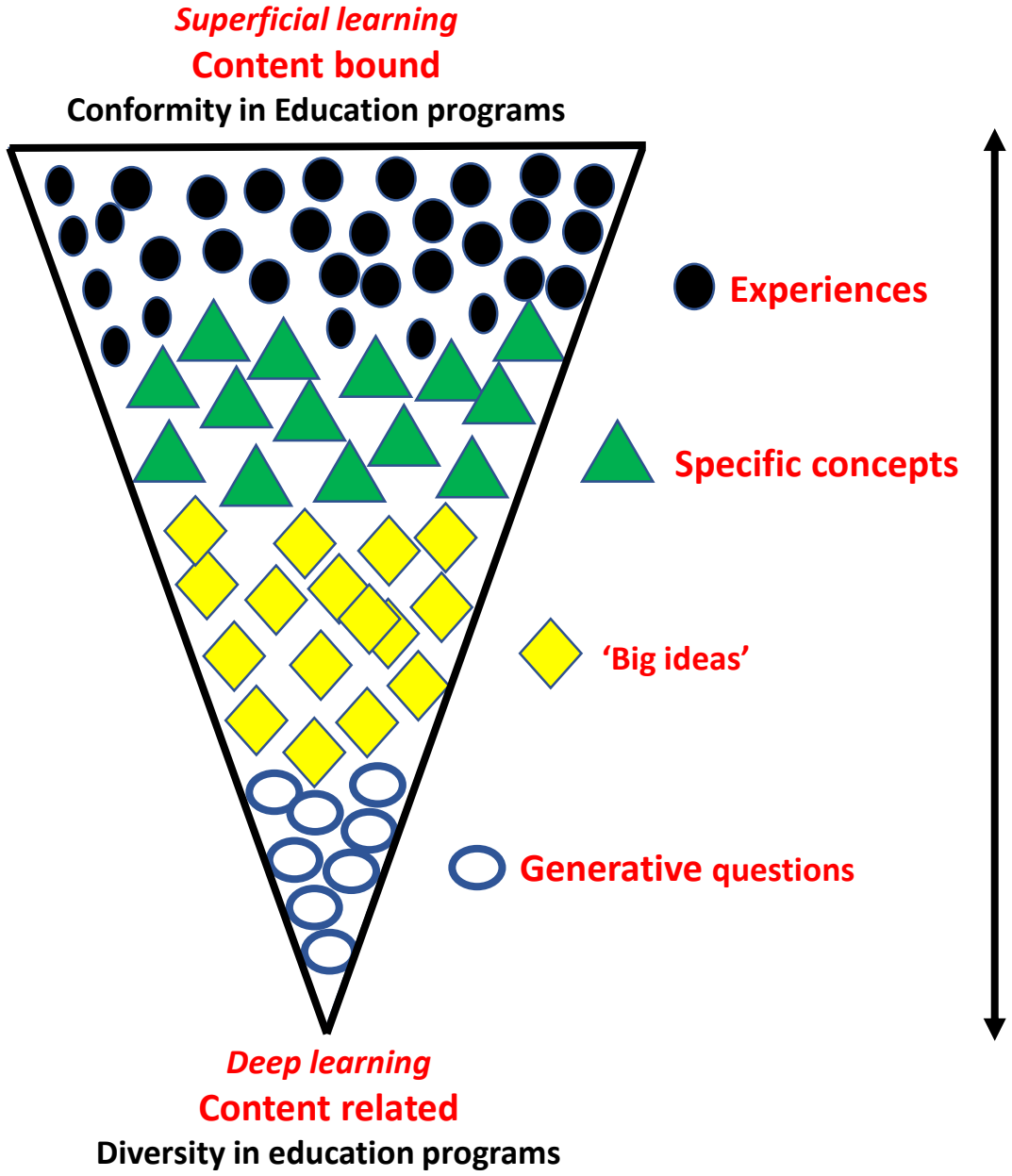
As is appropriate for specific subject matters, inquiries need to provide opportunities for learners to develop and express the complete range of intelligences.

Layer 4. Understandings

Generative questions direct learning towards deep understandings that encompass a number of interdependent domains. These include-

- **Foundational learning** required to develop capacity for learning more
- **Conceptual learning** required to make sense of knowledge and experience
- **Integrative learning** required to make connections between different fields of learning
- **Creative learning** required to generate innovative ideas, interpretations and applications
- **Expressive learning** required to represent ideas, interpretations and practices in diverse ways

Generative questions open up exploration of 'big ideas' and the specific concepts that relate to them within particular fields of learning.



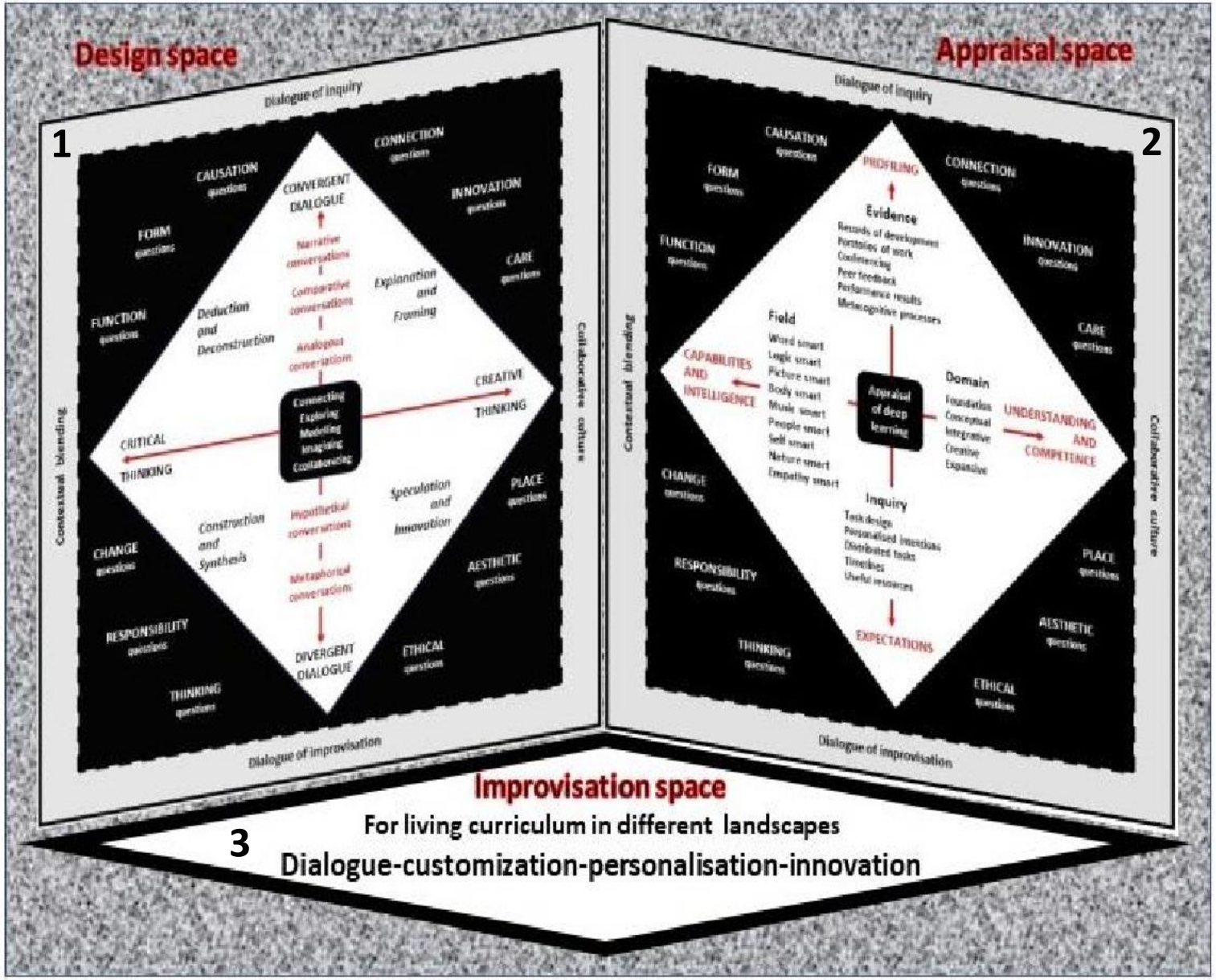
Multi-layered principles of procedure

Improvisation space

If the **design** and **appraisal** spaces are combined a third space is revealed. That is, an **'improvisation space'** . Key words that define the space include-

- **Dialogue** to reveal, understand and act
- **Negotiation** to clarify, share and decide
- **Customisation** to meet specific needs, circumstances and aspirations
- **Personalisation** to cater for the learning needs and aspirations individual learners
- **Innovation** to create stimulating, purposeful and insightful learning programs and activities.

Improvisation enables curriculum to be lived in diverse landscapes. It is at the heart of effective teaching and learning.



Rich inquiries

Rich inquiries meet the needs, conditions and aspirations within different educational landscapes. Development processes are iterative.

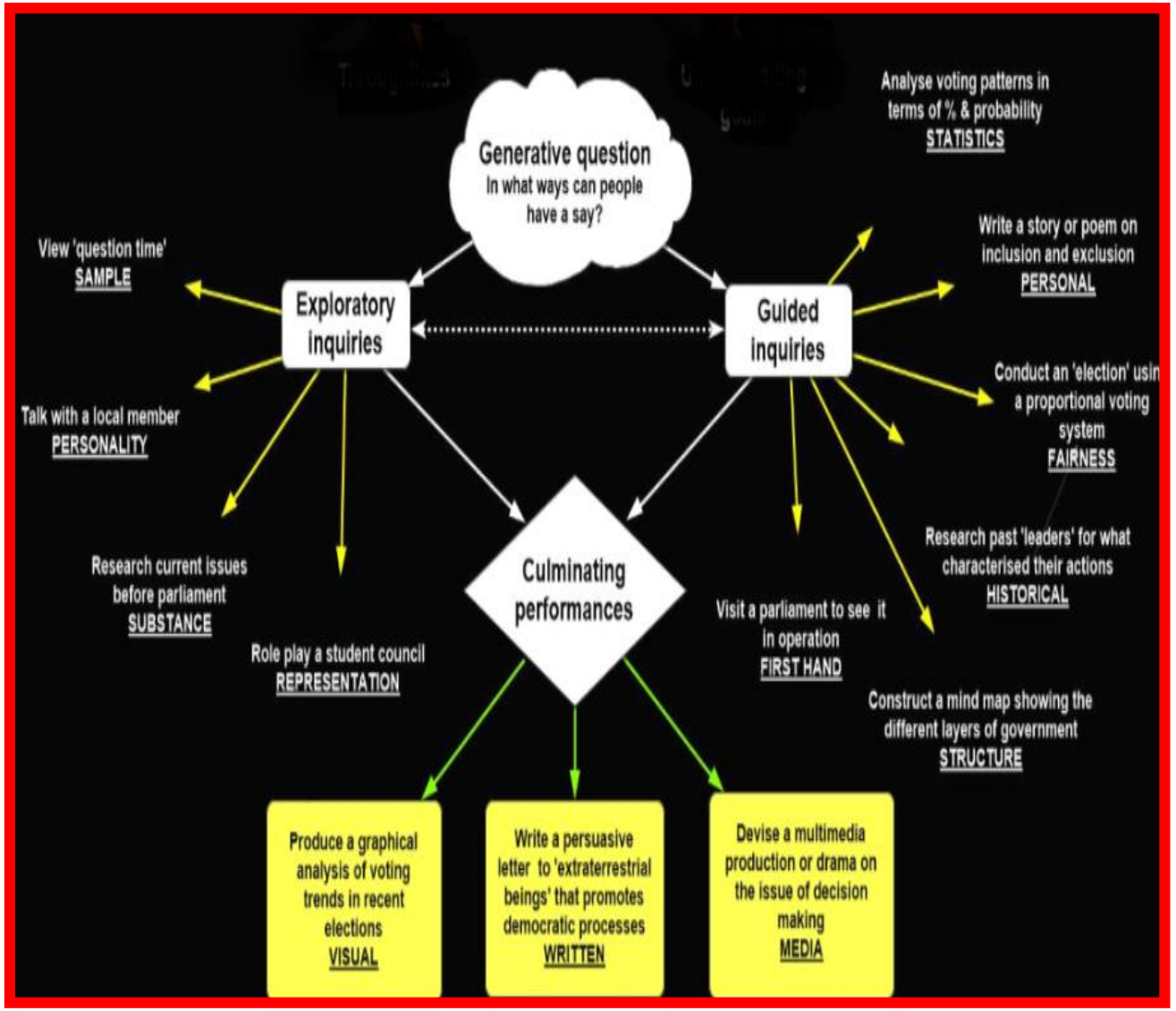
Design space strategy		
Find direction ▪ Situated perspectives ▪ Generative questions	**Choose strategies** ▪ Learning drivers ▪ Learning strategies ▪ Foci for investigations	**Determine outlook** ▪ Thinking perspectives ▪ Task expectations and purposes
Assessment space strategy		
Clarify goals ▪ Generative questions ▪ Derivative questions	**Collect information** ▪ Evidence of learners work and performance ▪ Wide range/variety	**Balance judgements** ▪ Learners attainments and future learning needs
Improvisation space strategy		
Focus on learning ▪ Personalise ▪ Contextualise ▪ Customise ▪ Innovate	**Focus on collaboration** ▪ Ongoing dialogue ▪ Negotiation and feedback	**Focus on benefits** ▪ Shared intentions ▪ Enhanced motivation ▪ Clear requirements

These deliberations need to be translated at three levels.

- **Exploratory inquiries** that open up the field for learning
- **Guided inquiries** that investigate to find out and learn more
- **Culminating performances** that give learners opportunities to demonstrate learning in different ways

Generative question for inquiry

In what ways can people have a say?



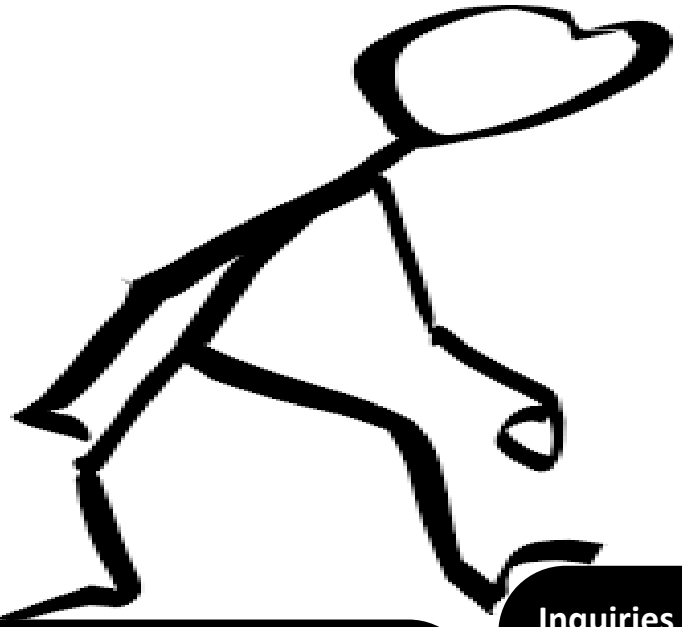
Dance on both legs

Generic generative questions are not skewed, in terms of emphasis or relevance, within different fields of learning. Instead, the issue is one of **selection to match the intentions** for learning.

They can be **applied to broad inquiries and to narrow focused studies.** For instance, aesthetic and ethical questions are as relevant to studies around percentage and its applications as they are to broader studies.

Curriculum improvisation processes **need to balance** broad inquiries designed to develop deep understanding with ongoing programs that develop specific knowledge and skills.

Experience has revealed that **two generic generative questions per inquiry** is practicable. Any more is difficult to manage.



Inquiries and learning that develop

Deep Understandings

- Broad in scope
- Trans-disciplinary
- Multiple contexts
- Integrated learning
- Modular studies

Inquiries and learning that develop

Competencies

- Specific knowledge and skills
- Targeted learning
- Narrow focus
- Autonomous studies
- Continuous development

Dancing a balance

Curious relations – 'big ideas'

Generative questions promote exploration of 'curious relations' or 'big ideas'.

Some possibilities for each generic generative question are shown in the table opposite.

These relations, together with the understandings embedded in them, can be scaled to meet year level requirements in extant curriculum scripts or in those that are developed afresh.

Accent on these relations could alleviate much of the overcrowding in curriculum scripts.

What is it like?	How does it work?	Why is it like it is?	How is it connected to other things?
FORM	FUNCTION	CAUSATION	CONNECTION
Drivers/Processes	Designs/Purposes	Consequences/Impacts	Circumstances/Conditions
Mechanisms/Operations	Effectiveness/Efficiency	Contexts/Situations	Initiatives/Opportunities
Materials/Properties	Power/Energy	Motivations/Inspirations	Networks/Relationships
Performance/Functionality	Processes/Workings	Outcomes/Conclusions	Power/Motivation
Structures/Arrangements	Roles/Corollaries	Patterns/Sequences	Intentions/Benefits
Wholes/Parts	Systems/Maintenance	Theories/Explanations	Systems/Sustainability
How is it changing?	**What is the role of place here?**	**Who might be responsible?**	**How could people care for each other?**
CHANGE	PLACE	RESPONSIBILITY	CARE
Adaptability/flexibility	Cultures/Backgrounds	Citizenship/Rights	Empathy/Understanding
Factors/Influences	Features/Factors	Justice/Prejudice	Friendship/Compassion
Growth/Development	Histories/Circumstances	Opinions/Decisions	Needs/Assistance
Movement/Flow	Interactions/Relationships	Participation/Initiative	Principles/Passions
Cycles/Sequences	Resources/Infrastructures	Personal/Collective	Cooperation/Respect
Transform/Redesign	Sites/Locations	Personalities/Affinities	Rights/Responsibilities
Where is the ethical reasoning?	**How is aesthetic sense manifest?**	**How is the thinking evolving?**	**What might innovation add?**
ETHICAL	AESTHETIC	THINKING	INNOVATION
Beliefs/Traditions	Appeal/Attraction	Alternatives/Possibilities	Creativity/Improvisation
Outcomes/Impacts	Designs/Formats	Collaborative/Independent	Flexibility/Adaptation
Equity/Equality	Images/Messages	Critical/Creative	Novel/Pragmatic
Justifications/Rightness	Realism/Interpretation	Imaginative/Inventive	Originality/Concept
Diversities/Decisions	Relationships/Linkages	Issues/Contradictions	Prototypes/Resources
Values/Moralities	Style/Flair	Reflections/Tensions	Research/Collaboration

Curriculum transformation

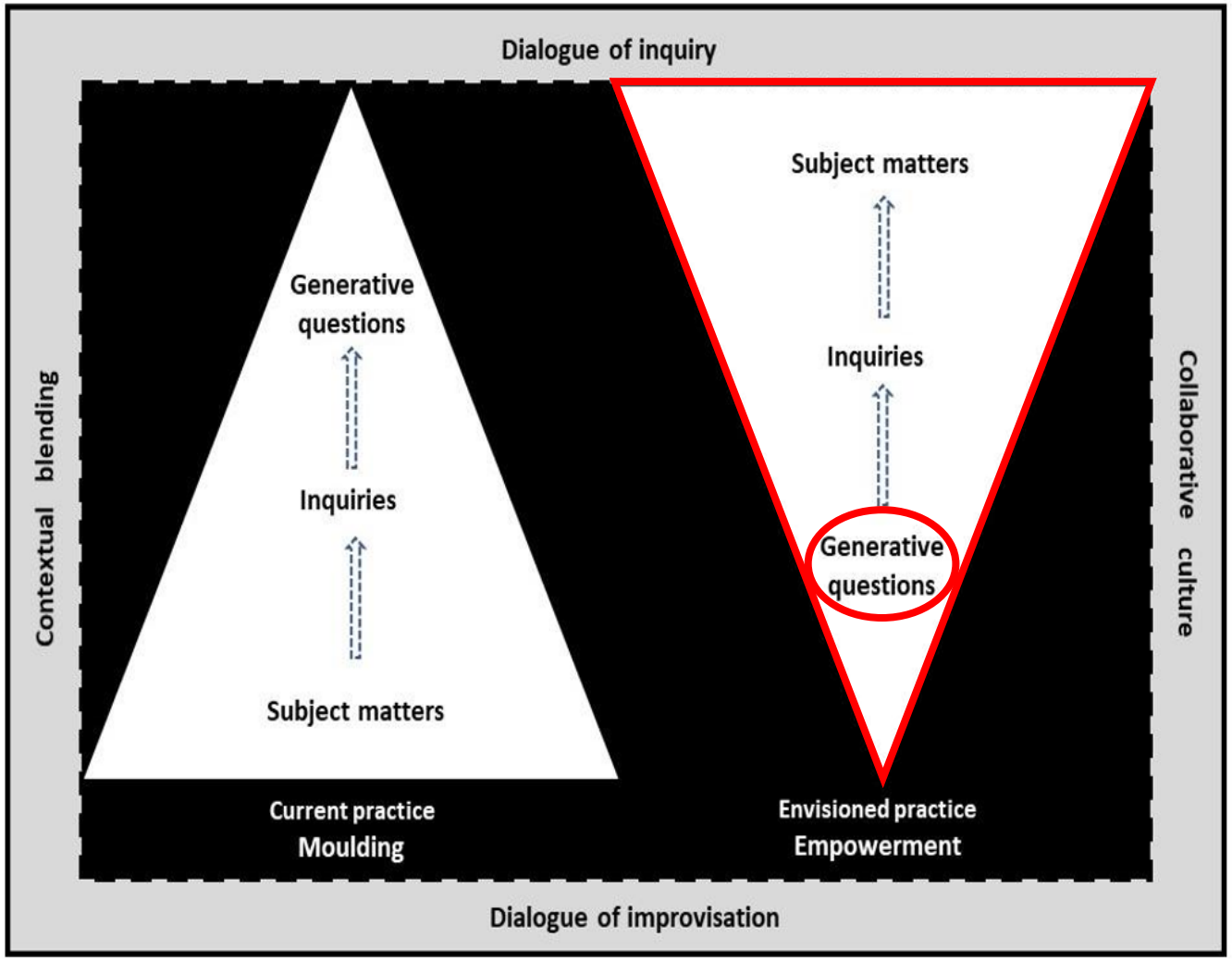
A multi-layered approach to curriculum would change the design and delivery of curriculum.

Learners pursuing generic generative questions would reorientate learning in ways that differ from current outcomes driven practices. Coverage of subject matters would become less of a concern.

Yet, learner's achievements and content requirements, with understandings and competencies clearly articulated, would still be important.

The generic generative questions outlined here represent a different 'core' for learning. One that is expansive and inclusive, not a reduction to something less than the whole.

The ability to apply these questions in multiple contexts and for diverse purposes is a life-long resource for all learners.



Generic generative questions might provide a means for resolving the disconnect between conformity and diversity.

Curriculum as a culture

Curriculum improvisation is a culture of possibility, not a technology or a mechanism. A culture where curiosity, questioning and diversity are hallmarks. An environment in which the actors have discretion and freedom to enact their creativity and exercise their talents. A climate through which different voices engage in a curious exploration of experience. A chance for communities of learners to pursue their dreams in ways that are meaningful and valuable to them.

"We are all visitors to this time, this place. We are just passing through. Our purpose here is to observe, to learn, to grow, to love… and then we return home."

Australian Aboriginal saying