



Conceptualizing Creativity Among General Stream Secondary School Students: A Theoretical Framework

Modi Bhumika Pravinchandra

Research Scholar

Faculty of Education

Swaminarayan University, Kalol

Guide-Dr. Ranchhodbhai k.Prajapati

Faculty of Education

Swaminarayan University, Kalol

Abstract

Creativity is widely acknowledged as a critical twenty-first-century competency, yet its conceptualisation and measurement among General Stream secondary school students — learners who follow a broad, non-specialised curriculum rather than a narrowly defined Science, Commerce, or Arts track — remains theoretically under-developed. This paper advances a theoretical framework, termed the CGSS (Creativity of General Stream Students) framework, that conceptually organises creativity as a multidimensional construct comprising fluency, flexibility, originality, and elaboration, situated within antecedent (domain-relevant knowledge, classroom climate, and task motivation) and outcome (problem-solving, academic engagement, and multidisciplinary adaptability) variables. Drawing on Guilford's structure-of-intellect model, Torrance's componential conceptualisation of creativity, and Amabile's componential theory, the paper argues that available creativity instruments — including the Torrance Tests of Creative Thinking, Guilford's divergent-production tests, the Wallach-Kogan Creativity Tests, and the Runco Ideational Behavior Scale — are either generic, laboratory-oriented, or developmentally mismatched to Indian General Stream secondary school learners, and are rarely contextualised to their specific curricular position. A conceptual model is proposed together with an operational definition and a staged blueprint for future scale construction — domain specification, item generation, content validation, try-out administration, item analysis, and factor-analytic validation. The paper concludes by outlining the theoretical and pedagogical implications of a validated



creativity measure for this population, and situates its relevance within the broader multidisciplinary and competency-based vision of NEP 2020.

Keywords: *creativity, General Stream, secondary school students, theoretical framework, scale construction, divergent thinking, Gandhinagar District*

1. Introduction

Creativity — the capacity to generate ideas, solutions, or products that are both novel and contextually appropriate — occupies a central place in contemporary educational thought, yet its systematic conceptualisation for specific school populations remains uneven (Guilford, 1967; Torrance, 1974). Much of the foundational creativity-assessment literature was developed on general or Western school populations and applied uniformly across educational contexts, with limited theoretical attention to how curricular positioning — for instance, whether a student is enrolled in a subject-specialised stream or a broad, General Stream — might shape both the expression and the appropriate conceptualisation of creativity.

General Stream secondary school students occupy a distinctive curricular position: unlike Science or Commerce stream peers, they are not funnelled into narrow disciplinary specialisation, and their learning spans multiple subject domains without the structural boundaries that more specialised streams impose. This paper argues that this position warrants a dedicated theoretical treatment of creativity, rather than a straightforward borrowing of instruments developed for other populations. Accordingly, this paper's central aim is to conceptually differentiate and organise the dimensions of creativity as they apply to General Stream secondary school students, and to translate this conceptualisation into a theoretical foundation for future measurement.

1.1 Rationale and Significance

A theoretically grounded conceptualisation of creativity specific to General Stream learners serves two purposes. First, it clarifies a construct that has often been treated as either a generic cognitive ability or a domain-specific talent (e.g., artistic or musical creativity), neither of which adequately captures the broad-based, cross-disciplinary creative potential this population is theorised to



possess. Second, it provides the necessary theoretical groundwork for the future construction of a psychometrically sound instrument — a Creativity of General Stream Students Scale (CGSS-Scale) — paralleling scale-construction work already undertaken for related constructs among secondary school students of Gandhinagar District.

1.2 Objectives of the Paper

- To conceptually examine creativity as a multidimensional construct applicable to General Stream secondary school students.
- To identify and organise the theoretical dimensions of creativity through an integrative review of divergent-thinking and componential creativity theories.
- To propose a conceptual framework (the CGSS framework) depicting antecedents, dimensions, and outcomes of creativity among General Stream learners.
- To outline a staged methodological blueprint for the future construction and validation of a CGSS-Scale.

2. Theoretical Foundations

The proposed framework draws on three complementary theoretical strands, each contributing a distinct lens on how creativity arises and can be conceptualised among General Stream learners.

2.1 Divergent-Thinking Theory

Guilford's (1967) structure-of-intellect model distinguishes divergent thinking — the generation of multiple possible solutions to an open-ended problem — from convergent thinking, which seeks a single correct answer. This distinction supplies the conceptual basis for treating creativity as a measurable cognitive operation in its own right, rather than as a residual category within general intelligence, and underlies the fluency and flexibility dimensions of the proposed framework.

2.2 Componential Conceptualisation of Creativity

Torrance's (1974) operationalisation of creativity into fluency, flexibility, originality, and elaboration remains the most widely used componential structure in educational creativity research



and provides psychometric precedent — most notably the Torrance Tests of Creative Thinking (TTCT) — that informs, without fully replicating, the present framework's dimensional structure.

2.3 Amabile's Componential Theory of Creativity

Amabile's (1996) componential theory situates creativity at the intersection of domain-relevant knowledge, creativity-relevant processes, and task motivation, thereby supplying the antecedent side of the proposed framework: creative output is theorised to depend not only on cognitive ability but on the knowledge base, classroom climate, and motivational conditions under which General Stream students engage in academic tasks.

3. Review of Existing Instruments and the Conceptual Gap

A range of instruments has historically been used to assess creativity, summarised in Table 1. While each has made a substantial contribution to the field, none was designed to capture creativity specifically as it manifests among Indian General Stream secondary school students, and few offer classroom-level applicability suited to this curricular context.

Table 1. Representative Existing Creativity Instruments and the Conceptual Gap Addressed by the Proposed CGSS Framework

Instrument	Author(s) / Year	Primary Focus	Limitation Relative to Proposed CGSS Framework
Torrance Tests of Creative Thinking (TTCT)	Torrance (1966, 1974)	Figural & verbal fluency, flexibility, originality, elaboration	Generic; not normed on Indian General Stream learners
Structure-of-Intellect Divergent Production Tests	Guilford (1967)	Divergent-production abilities across content types	Laboratory-oriented; limited classroom applicability
Wallach-Kogan Creativity Tests	Wallach & Kogan (1965)	Associative and ideational fluency, untimed game-like format	Designed for younger children, not secondary level content
Runco Ideational Behavior Scale (RIBS)	Runco et al. (2001)	Self-reported everyday ideational behaviour	General trait measure; not stream/school-contextualised

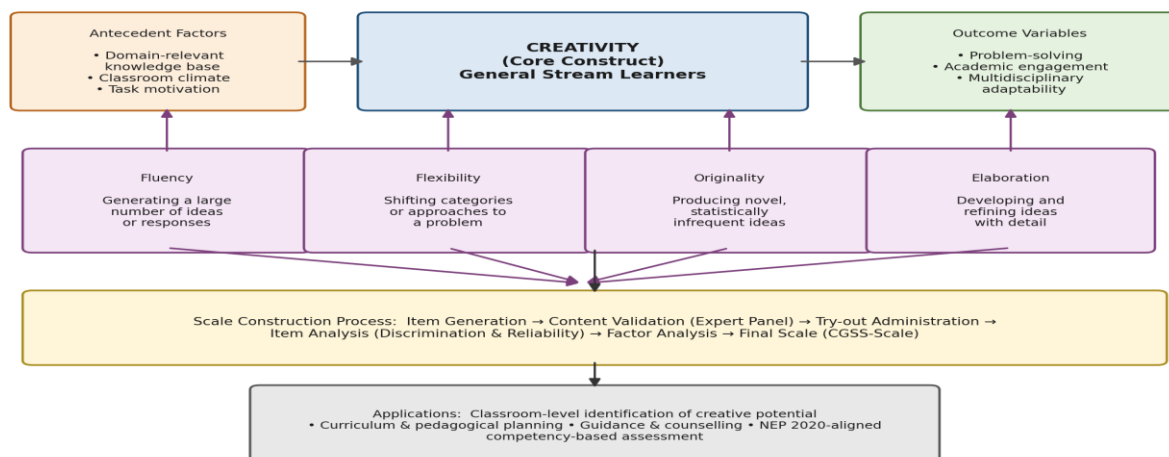


This comparative reading suggests a clear conceptual gap: existing instruments are either generic and decontextualised (TTCT), laboratory-oriented with limited classroom applicability (Guilford's tests), developmentally mismatched (Wallach-Kogan, designed for younger children), or measure general ideational traits without reference to stream-specific curricular demands (RIBS). None was developed with explicit attention to the broad-based, cross-disciplinary learning context of General Stream secondary school students in India. This gap constitutes the conceptual warrant for the CGSS framework proposed in the following section.

4. Proposed Conceptual Framework

Integrating the theoretical strands above, creativity is defined, for the purposes of this framework, as a General Stream secondary school student's capacity to generate a range of ideas (fluency), approach problems from varied perspectives (flexibility), produce novel and infrequent responses (originality), and develop those responses with meaningful detail (elaboration), shaped by domain-relevant knowledge, classroom climate, and task motivation, and expressed through problem-solving, academic engagement, and adaptability across disciplinary contexts. Figure 1 depicts the resulting model.

Figure 1. Theoretical Framework for Conceptualizing Creativity Among General Stream Secondary School Students (CGSS Framework)





4.1 Antecedent Factors

Antecedents shape the conditions under which creative potential is expressed. These include the student's domain-relevant knowledge base accumulated across the broad General Stream curriculum, the classroom climate established by teaching practices and openness to exploratory work, and task motivation, consistent with Amabile's (1996) componential account.

4.2 The Four Dimensions of Creativity

The core construct is organised into four interrelated but empirically separable dimensions, each corresponding to a proposed subscale of the future CGSS-Scale:

Fluency: the capacity to generate a large number of ideas, responses, or solutions within a given task.

Flexibility: the capacity to shift categories or approaches, considering a problem from multiple perspectives.

Originality: the capacity to produce novel, statistically infrequent, or unusual ideas and products.

Elaboration: the capacity to develop, refine, and add meaningful detail to an initial idea.

4.3 Outcome Variables

The framework theorises that creativity, so conceptualised, contributes to enhanced problem-solving ability, greater academic engagement, and adaptability across the multidisciplinary academic and career pathways increasingly available to General Stream students under NEP 2020's flexible curricular structures.

5. Methodological Blueprint for Future Scale Construction

Translating the conceptual framework into a validated instrument would require a staged psychometric process, summarised below and depicted in the lower band of Figure 1.



5.1 Domain Specification and Item Generation

Each of the four theoretical dimensions would first be operationalised into an item pool through review of existing creativity literature, teacher and student input, and task-based item formats suited to General Stream classroom content.

5.2 Content Validation

The item pool would be reviewed by a panel of subject-matter experts — educational psychologists, General Stream subject teachers, and curriculum specialists — for relevance, clarity, and dimensional fit, using a content validity ratio or index, consistent with standard scale-construction practice (Lawshe, 1975).

5.3 Try-out Administration

The refined item pool would be administered to a try-out sample of General Stream secondary school students, using a Likert or task-based response format appropriate to the item type.

5.4 Item Analysis and Reliability

Item-total correlations and discrimination indices would be computed to identify and remove weak items, with internal consistency estimated using Cronbach's alpha for the overall scale and each proposed subscale.

5.5 Factor-Analytic Validation

Exploratory and, in a subsequent sample, confirmatory factor analysis would be used to examine whether the empirical item structure supports the theorised four-dimensional model.

6. Implications

6.1 Theoretical Implications

The framework contributes to educational psychology by explicitly conceptualising creativity for a curricular population — General Stream students — that has received comparatively little



dedicated theoretical attention, and by integrating divergent-thinking, componential, and motivational perspectives within a single testable model.

6.2 Pedagogical and Policy Implications

A future validated CGSS-Scale would allow teachers to identify and nurture creative potential among General Stream students in a manner consistent with NEP 2020's emphasis on multidisciplinary, competency-based education, supporting curriculum planning and guidance practices tailored to this learner population.

7. Limitations and Future Directions

As a theoretical paper, this framework has not yet been empirically tested; its four-dimensional structure and the proposed antecedent-outcome relationships require confirmation through the staged validation process outlined in Section 5. Future research should examine measurement invariance across gender and school type, and should explore how creativity, as conceptualised here, relates to academic achievement and subject-choice patterns among General Stream students of Gandhinagar District.

8. Conclusion

This paper has argued that creativity among General Stream secondary school students is a distinct, multidimensional construct warranting dedicated theoretical treatment rather than direct application of instruments developed for other populations. By integrating divergent-thinking, componential, and motivational perspectives, the proposed CGSS framework offers a conceptually coherent foundation for the future construction of a CGSS-Scale capable of informing pedagogy, guidance, and curriculum planning consistent with the multidisciplinary, competency-based vision of NEP 2020.



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