

REVIEWER'S REPORT

Manuscript No.: IJAR-57439

Title: The Age-Curiosity Paradox: A Cross-Sectional Analysis of Scholarly Curiosity Among Generation Alpha Students.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality	√			
Techn. Quality		√		
Clarity		√		
Significance	√			

Reviewer's ID: JPR- 212

Detailed Reviewer's Report

Overall Assessment:

This is a highly original, well-conceived, and thought-provoking study that challenges a long-standing assumption in educational psychology—the "curiosity dip" with age. The paper introduces the novel "Age-Curiosity Paradox" and provides empirical evidence from a Generation Alpha cohort that curiosity may actually rebound significantly during the transition to formal operational thinking. The research is timely, relevant, and has important implications for pedagogy, curriculum design, and educational policy, particularly in the context of India's NEP 2020. The methodology is sound, the statistical analysis is appropriate, and the findings are clearly presented. I recommend acceptance with minor revisions to address a few areas for clarification and strengthening.

Summary of Strengths:

- High Originality and Theoretical Contribution:** The "Age-Curiosity Paradox" is a valuable new conceptual framing. The author skillfully integrates Piagetian developmental theory with contemporary digital learning contexts to propose that curiosity evolves qualitatively (from perceptual to epistemic) rather than simply declining.
- Clear Research Design:** The quantitative, cross-sectional design is appropriate for investigating grade-level differences. The use of simple random sampling across public and private schools in Lucknow strengthens external validity.
- Robust Statistical Analysis:** The application of One-Way ANOVA ($F=100.027$, $p<0.001$) and Tukey HSD post-hoc tests is correct and clearly reported. The 24.24-point surge in curiosity from Class 7 to Class 8 is a striking and compelling finding.
- Excellent Categorization of Curiosity Levels:** Table 1's use of normative grouping ($M\pm SD$) to classify students into Low, Moderate, and High curiosity levels provides a clear baseline and demonstrates that nearly one-third of students exhibit high scholarly curiosity.
- Practical and Timely Significance:** The study directly informs the implementation of inquiry-based learning called for by India's NEP 2020. The conclusion that secondary school is a "window of opportunity" rather than a period of burnout is both important and actionable for educators.

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6. **Appropriate Acknowledgment of Limitations:** The author honestly addresses geographical scope, sample size, cross-sectional design, and generalizability, which demonstrates scholarly maturity.

Areas Requiring Minor Revision (for "Accept after minor revision"):

The following points should be addressed to further strengthen the manuscript. None are fatal to the core argument.

1. **Page 4, Line 89 (Literature Review – Structure & Repetition):** The literature review section contains some repetition of ideas presented in the introduction (e.g., the definition of Generation Alpha, the "curiosity dip," Piaget's stages). Consider consolidating and streamlining to avoid redundancy. For example, the detailed explanation of the Formal Operational Stage appears in both the Introduction and Literature Review. Move the full theoretical exposition to the "Theoretical Framework" section and keep the Introduction more focused on the research problem and gap.
2. **Page 7, Lines 179-181 (Theoretical Framework – Missing Citation for "Epistemic vs. Perceptual Curiosity"):** The distinction between 'perceptual curiosity' and 'epistemic curiosity' is central to your argument. While you cite Litman (2019) and Hidi & Renninger (2019), the classic source for this distinction is **Berlyne, D. E. (1954, 1960)**. Adding this foundational citation would strengthen the theoretical grounding. Suggested addition: "As Berlyne (1960) originally distinguished, perceptual curiosity (the drive for novel sensory stimulation) differs fundamentally from epistemic curiosity (the drive for knowledge and understanding)."
3. **Page 7, Line 187 (Inconsistent Font/Symbol – "(M±SD)(M±SD)"):** In the text under Objective 1, the mathematical notation appears with a mix of fonts and a stray backslash. Please reformat to clean notation, e.g., $(M \pm SD)$.
4. **Page 8, Lines 216-219 (Participant Description – Missing Age Range):** You describe participants by grade (6-9) but do not provide the corresponding age range. Since the study is fundamentally about cognitive development and age, please add the mean age or age range for each grade level (e.g., "Class 6: ages 10-11, Class 7: 11-12, etc."). This is critical for linking your findings to Piaget's age-based stages.
5. **Page 11, Table 3 (Reporting of Results – Missing Effect Size):** The ANOVA result is highly significant, but the practical significance would be enhanced by reporting **effect sizes** (e.g., partial eta-squared, η^2). Please add effect sizes for both the overall ANOVA (Table 2) and the Class 7 vs. 8 comparison (Table 3). For example: " $\eta^2 = 0.61$ " for the ANOVA indicates a very large effect.
6. **Page 12, Line 312 (Discussion – Missing Comparison with Previous "Curiosity Dip" Studies):** The discussion correctly rejects the traditional "curiosity dip." To strengthen your argument, explicitly name and contrast your findings with classic studies that reported a decline (e.g., **Engel, 2011; Gottfried et al., 2001**). State clearly: "Unlike Engel's (2011) observational study showing a 90% decline in spontaneous questioning from kindergarten to grade 5, our findings reveal a significant rebound in *scholarly* curiosity at grades 8-9."
7. **Page 14, Line 355 (References – Formatting Inconsistencies):** Several references have formatting errors or missing information:
 - Abildina et al. (2025) – The journal name appears corrupted ("OPJEV Becmu Heprepshoro O6pa3obanua"). Please verify and correct.
 - Bowman, R. (2011) – Missing DOI or journal volume/issue? The provided link is a generic book publisher, not the journal article.
 - Digennaro, S., & Borgogni, A. (2015) – Journal name "Encyclopaedia" is incomplete; likely missing a subtitle or volume.
 - Mcleod, J. K. (2011) – This is a dissertation. The DOI is incorrect (belongs to a different publisher). Please remove or correct.

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- Nagy, A., & Kölcsey, A. (2022) – The journal "Metszetek" citation seems incomplete (year 2022 vs. volume 6 from 2017). Please verify.
- Perform a complete check of all references against a standard style guide (APA 7th recommended).

Suggestions for the Author (Optional, Not Required for Acceptance):

- **Future Research Direction (Page 13, Line 340):** You mention longitudinal research and AI-enhanced environments. A more specific recommendation would be valuable. For example: "Future longitudinal studies should track the same cohort from Class 6 to Class 12, measuring curiosity at multiple time points. Additionally, experimental studies could test whether AI-driven adaptive learning platforms that provide immediate, personalized information-gap resolution further amplify the curiosity rebound observed in this study."
- **Pedagogical Implication (Page 12, Line 324):** The term "dynamic pedagogical approach" is somewhat vague. Consider offering one concrete example, such as: "For instance, project-based learning modules that allow Class 8 students to independently investigate self-selected, interdisciplinary problems could directly leverage the epistemic curiosity surge documented here."

Conclusion:

This is a strong, publishable manuscript that makes a meaningful and original contribution to the educational psychology literature. The "Age-Curiosity Paradox" is a well-supported and important finding for educators, curriculum developers, and policymakers—especially in the Indian context. The required revisions are minor and pertain mainly to clarification, consistency, and citation completeness. With these adjustments, the paper will be even more rigorous and impactful. I congratulate the author on excellent work