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| **Frontiers in Multidisciplinary Research and Development**  Journal Homepage: <https://samjohnparr.github.io/Frontiers-Journal> |

**Keep titles succinct and informative, avoiding acronyms, formulas, and field-specific shorthand.**

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| **Article Info** |  | **ABSTRACT** |
| ***Article history:***  Received month dd, yyyy  Revised month dd, yyyy  Accepted month dd, yyyy |  | Write a single paragraph of approximately 150–250 words that briefly covers the purpose or background, the method or approach, the principal quantitative or qualitative results, and the key conclusions or implications. Avoid references in the abstract; if a citation is essential, use APA in-text style such as “(Lopez & Cruz, 2021).” Do not introduce abbreviations that are not defined in the abstract itself. Provide three to six keywords on the line following the abstract. Favor specific, searchable terms that complement rather than duplicate words in the title. |
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1. **INTRODUCTION**

Open with a concise overview of the problem area that situates the work for a broad scholarly audience. State the specific problem or research gap the paper addresses, briefly synthesize the most relevant literature to position the study, and articulate the objectives or research questions and, where appropriate, the hypotheses. If the work introduces a novel framework, dataset, instrument, or algorithm, a short conceptual or theoretical background may be included here or as a brief subsection before the Method.

Follow APA 7th edition for both in-text citations and the reference list. Narrative citations take the form “Martinez (2020) reported …” and parenthetical citations take the form “(Martinez, 2020).” When a source has three or more authors, cite as “Santos et al. (2022)” or “(Santos et al., 2022)” from the first mention onward. Multiple sources in one parenthesis are ordered alphabetically and separated by semicolons, as in “(Reyes, 2019; Tan & Singh, 2021).”

1. **METHOD**

This section must contain a level of detail sufficient for independent reproduction. Authors shall open with a concise statement of the study design or methodological paradigm and, where applicable, cite any preregistration or protocol identifiers. All procedures must be described in the sequence they were performed, with enough specificity that another researcher could repeat them without consulting the authors.

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Manuscripts reporting experiments, surveys, observational designs, clinical or field studies, or qualitative research shall describe the design and setting, the time frame, and any allocation, masking, or blinding procedures. The source population, eligibility criteria, sampling or recruitment strategy, and the final analytic sample must be specified, including reasons for exclusions. All measures, instruments, and operational definitions shall be identified with reliability and validity evidence and appropriate citations. The analysis strategy must be stated with precision, naming statistical models or qualitative coding frameworks, the software and version used, criteria for model selection, handling of missing data, corrections for multiple testing when relevant, and diagnostic or robustness checks. Ethical safeguards must be summarized, including the name of the approving body and the reference number for ethics review, consent procedures, data-security measures, and any data-sharing constraints. SI units shall be used where applicable, and abbreviations must be defined at first use.

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Papers centered on mathematical modeling shall begin by formulating the problem clearly and listing all assumptions. Governing equations must be presented with unambiguous definitions of variables and parameters, together with initial and boundary conditions and any nondimensionalization or scaling transformations. When the work relies on established results for existence, uniqueness, stability, or well-posedness, the specific theorems and sources shall be cited; where such results are proved by the authors, the manuscript shall outline the argument in the main text and provide full proofs in an appendix. Numerical methodology must be described with replicable detail, including the discretization scheme, mesh or grid characteristics, time-stepping, stabilization or regularization, solver algorithms, tolerances, and stopping criteria. Statements on consistency, stability, and convergence should be supported analytically or by verification studies, and numerical error must be quantified, preferably against benchmarks or manufactured solutions. If parameters are estimated or calibrated, the manuscript shall explain identifiability, estimation procedures, uncertainty quantification, and sensitivity analysis. All software, libraries, and versions must be named; hardware specifications shall be provided when they materially affect results.

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Computational manuscripts shall document dataset provenance and licensing, inclusion dates, and inclusion/exclusion criteria, together with a complete record of preprocessing, feature engineering, normalization, tokenization, augmentation, and dimensionality reduction. The partitioning of data into training, validation, and test sets, or the exact cross-validation design, must be specified in a way that prevents leakage; temporal, hierarchical, or subject-level dependencies must be handled explicitly. Model specifications must be complete, including architectures or mathematical forms, loss functions, optimization procedures, regularization, and all hyperparameters with either fixed values or search ranges and selection rules. Baselines and ablations shall be justified, and evaluation metrics must be defined precisely; uncertainty should be conveyed through confidence intervals, bootstrap intervals, or equivalent procedures, and calibration or class-imbalance handling reported when relevant. Compute environment details shall include operating system, software stack and versions, random seeds, CPU/GPU model, RAM, training duration, and total compute budget; determinism settings shall be stated when available. Data governance and ethics must be addressed by describing consent, de-identification, access controls, and any fairness or harm analyses suitable to the application. Reproducibility artifacts. code, configurations, and, when possible, containers or environment files, shall be made available with a persistent identifier or immutable commit hash.

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All manuscripts shall identify and justify any deviations from preregistered plans. Software and version numbers must be named wherever analysis depends on them. At the end of the paper, authors shall provide statements on data, materials, and code availability that enable reproduction, or a justified explanation for any restrictions. Where applicable, authors shall also state compliance with community reporting checklists relevant to their design or domain.

1. **RESULTS AND DISCUSSION**

Present results in the order established by the Method or research questions. Report estimates with effect sizes and 95% confidence intervals where applicable, give exact *p*-values, and cite each table or figure at first mention; use visuals to clarify, not duplicate, the text. If Results and Discussion are separate, keep Results strictly factual and reserve interpretation; if combined, state each finding followed immediately by its interpretation in light of prior work and stated objectives.

For empirical and mixed-methods studies, begin with the sample or corpus and any deviations from the analytic plan, then report primary outcomes before secondary or exploratory analyses. Make model assumptions, diagnostics, missing-data handling, and multiple-testing adjustments explicit. When qualitative components are included, present themes with concise evidentiary excerpts and explain how they corroborate or nuance quantitative findings.

For applied mathematics and mathematical modeling, state the main results precisely (for example, theorems, bounds, stability or convergence claims) and, if full proofs are deferred, give a brief proof roadmap and point to the key lemmas. For numerical studies, document verification and validation succinctly: grid or time-step independence, observed convergence order, error norms against benchmarks or manufactured solutions, and sensitivity to parameters and assumptions.

For data science and machine learning, report performance exactly as prespecified, distinguishing validation from test results. Define all metrics at first use and accompany point estimates with uncertainty (for example, confidence or bootstrap intervals, repeated-seed variation). Summarize ablations and baselines to isolate each component’s contribution, note calibration and class-imbalance handling when relevant, and include a brief error analysis. When compute budget or hardware materially affect outcomes, state their impact.

For theoretical or pure mathematics, organize around the logical path to the main results. State each result precisely, outline the argument enough to audit dependencies, and provide brief examples or counterexamples that clarify sharpness or scope. Document any computer-assisted steps and how correctness was ensured.

Conclude by relating the findings to prior literature, stating key limitations and their impact on validity and generalizability, and identifying what is robust versus provisional. Close with the specific contribution and implications for practice, policy, theory, or future work.

**Tables, Figures, and Equations**

Number tables consecutively as “Table 1,” “Table 2,” and so on, and place each table after its first mention in the text or group them at the end according to editorial preference. Use concise, titles above tables in Title Case, for example, “Table 1. Participant Characteristics,” and include notes below as needed for clarifications, abbreviations, and significance levels. Number figures consecutively as “Figure 1,” “Figure 2,” and so forth, and place each figure after first mention. Supply captions below figures in sentence case, such as “Figure 2. ROC curves for the three classifiers.” Submit photographs at a minimum of 300 dpi and line art as vector files when possible; authors must secure permissions for any material not created by them. Center mathematical equations, italicize variables, and number equations flush right in parentheses when they are referenced, for example,

(1)

Use MathType or the built-in equation editor to ensure consistent rendering.

**Table 1.** Participant Characteristics

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**Figure 1.** Total Score Distribution with ±1 SEM Band.

1. **CONCLUSION**

State the study’s central takeaway in a few focused sentences that follow logically from the Results and Discussion. Emphasize contribution and relevance rather than repeating the abstract. Avoid new citations here.

**Data availability statement**

Describe what data exist, where they are hosted, and any access conditions. If sharing is restricted, state why and how qualified researchers can request access. If no data were generated or analyzed, say so. Name the repository with a persistent identifier when available.

Example wording to adapt: The data supporting the findings of this study are available in [Repository Name] under accession [DOI or handle]. De-identified participant-level data and analysis code will be shared upon reasonable request to the corresponding author for academic use, subject to [ethics approval / data-use agreement]. Third-party data licensed from [provider] are not publicly shareable; metadata and processing scripts are provided to enable replication.

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**Funding**

Identify funding sources and grant numbers, and state the funders’ roles, if any, in study design, data collection, analysis, decision to publish, or manuscript preparation. If there was no funding, state this explicitly.

Example wording to adapt: This work was supported by [agency name] grant [number] to [PI initials]. Additional support was provided by [institutional program/fellowship]. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

**CRediT authorship contribution statement**

List each author’s roles using the CRediT taxonomy and ensure that contributions align with authorship criteria. Use past tense and parallel structure. If roles overlap, indicate joint responsibility.

Example wording to adapt: A.B. conceived the study and acquired funding. A.B. and C.D. designed the methodology. E.F. curated the data and performed the formal analysis. C.D. implemented software and ran experiments. A.B., C.D., and E.F. interpreted results and wrote the original draft. All authors reviewed and edited the manuscript and approved the final version.

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State any financial or personal relationships that could be viewed as influencing the work. If none exist, make an explicit “no conflicts” statement.

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**Acknowledgments**

Thank individuals and organizations who contributed but do not meet authorship criteria, such as technical staff, data providers, or advisory input. Obtain permission from named individuals.

Example wording to adapt: The authors thank [names] for technical assistance and [unit/lab] for access to facilities. We are grateful to [data provider] for access to [dataset/resource] and to [colleague] for comments on earlier drafts.

**REFERENCES**

**Journal article**

Barana, A., Conte, A., Fissore, C., Marchisio, M., & Rabellino, S. (2019). Learning analytics to improve formative assessment strategies. Journal of e-Learning and Knowledge Society, 15(3), 75–88. https://doi.org/10.20368/1971-8829/1135057

**Conference example**

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