

Review Form 3

Journal Name:	Asian Journal of Advanced Research and Reports
Manuscript Number:	Ms_AJARR_124380
Title of the Manuscript:	Significance of Research in Green Design of product: An Overview
Type of the Article	review article

Review Form 3

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	<p>Importance of the Manuscript for the Scientific Community:</p> <p>This manuscript provides an insightful overview of green design principles, particularly emphasizing the role of "Design for Environment" (DFE) in addressing environmental challenges associated with product design and production. The paper highlights the critical need for sustainable product design, especially in reducing electronic waste, which is becoming a significant environmental issue after plastics. By exploring various methodologies such as Life Cycle Analysis (LCA) and zero emissions strategies, the manuscript underscores the importance of incorporating environmental considerations into the earliest stages of product design. The discussion on tools and techniques used in green design, such as DFE and ZERI, helps to outline practical steps that businesses and designers can take to minimize environmental impacts, optimize resource use, and reduce waste.</p> <p>Why I Like or Dislike the Manuscript:</p> <p>I appreciate the manuscript for its comprehensive approach to green design, offering a detailed explanation of various sustainable design strategies and their impact on reducing environmental footprints. The manuscript effectively highlights the significance of integrating environmental considerations into the product design process and supports its arguments with relevant examples and methodologies. However, the manuscript could benefit from a more structured presentation, particularly in refining the language and improving clarity in some sections. A deeper exploration of case studies or practical applications of the discussed concepts could also enhance the manuscript's appeal and relevance to the scientific community.</p>	
Is the title of the article suitable? (If not please suggest an alternative title)	It is suitable, but it is better than previous "Integrating Environmental Sustainability into Product Design: An Overview of Green Design Research"	

Review Form 3

<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>Suggestions for Addition or Deletion:</p> <ol style="list-style-type: none">1. Add Specifics on Methodologies: Mention specific methodologies such as LCA, zero emissions, and other green design strategies briefly to highlight the manuscript's focus.2. Clarify the Impact: Explicitly state the significance of green design on the environment and industry, emphasizing the benefits of adopting sustainable practices.3. Remove Ambiguity: Remove vague phrases such as "lot many specific methods" and replace them with more precise language to improve clarity.4. Refine Language: Correct grammar, syntax, and improve sentence structure for better readability and coherence.5. Highlight Key Insights: Briefly highlight any key findings or insights from the manuscript that underscore the importance of green design research. <p>The abstract provides an overview of the manuscript's focus on green design and the importance of integrating environmental considerations into the design process. However, it could be made clearer and more cohesive by refining the language and structure. The current abstract contains some grammatical errors and lacks a clear flow, making it challenging to grasp the main points effectively. Here's a revised and more comprehensive version of the abstract with suggestions for improvements:</p> <p>Revised Abstract:</p> <p>Green design not only aims to prevent waste but also provides sustainable solutions that enable the production of products with a reduced environmental impact. As electronic waste continues to rise as a significant issue in sustainable development, second only to plastic waste, it is crucial to adopt environmental design processes. These processes optimize energy and material consumption, minimize waste generation, and repurpose waste streams as raw materials, thus conserving Earth's scarce resources. Various methods and tools, including Life Cycle Analysis (LCA) and Design for Environment (DFE), are employed to assess and validate the environmental impact of products throughout their lifecycle. DFE encompasses a range of techniques that incorporate environmental considerations into products and services before they enter the production phase. Design research plays a critical role in creating user-centric, sustainable market solutions, while evaluative research design is essential for product success by validating that products meet targeted consumer needs and preferences.</p> <p>These changes will make the abstract more engaging and informative, offering a clear and concise summary of the manuscript's content and its importance to the scientific community.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The current structure of your manuscript is generally well-organized but could benefit from some refinements to improve clarity, readability, and logical flow. Here's a detailed assessment of each section and suggestions for restructuring and enhancing the manuscript:</p> <p>Assessment and Suggested Structure:</p> <ol style="list-style-type: none">1. Abstract:<ul style="list-style-type: none">○ The abstract provides a general overview, but it needs refinement for clarity and conciseness.○ Suggested Improvements: Focus on clearly stating the purpose, methods, and significance of the green design research. Summarize the key findings and conclusions to make the abstract more impactful.2. Introduction:<ul style="list-style-type: none">○ The introduction introduces the significance of green design and environmental concerns but could benefit from a more structured approach.○ Suggested Structure:<ul style="list-style-type: none">▪ Background: Briefly explain the growing environmental concerns, particularly	

Review Form 3

	<div>electronic waste.</div> <div><div>○ Suggested Structure:</div><div><div>▪ Overview of Green Design: Briefly summarize key concepts such as Design for Environment (DFE) and Life Cycle Analysis (LCA).</div><div>▪ Historical Development: Outline the evolution of green design methodologies, including key studies and breakthroughs.</div><div>▪ Current Trends: Discuss recent research, tools, and technologies used in green design.</div><div>▪ Gaps and Challenges: Identify any gaps in current research and highlight the challenges faced by designers.</div><div>▪ Problem Statement: Highlight the challenges in designing sustainable products and the importance of green design.</div><div>▪ Objectives: Clearly state the objectives of the manuscript, such as exploring methods and strategies for green design.</div><div>▪ Importance: Discuss the relevance of this research for sustainable development.</div></div></div> <div><div>3. Design for Environment (DFE):</div><div><div>○ This section provides a good overview of DFE but could benefit from more structure.</div><div>○ Suggested Structure:</div><div><div>▪ Definition and Scope: Define DFE and explain its significance in product design.</div><div>▪ Techniques and Tools: Categorize the various techniques used under DFE, such as life-cycle assessment and improvement techniques.</div><div>▪ Applications: Provide examples of how DFE is applied in different industries.</div></div></div></div> <div><div>4. Methodology:</div><div><div>○ The methodology section is informative but could be broken down further for better clarity.</div><div>○ Suggested Structure:</div><div><div>▪ Overview: Briefly introduce the methodologies covered in the section.</div><div>▪ Zero Emission: Provide details on the Zero Emission concept and its relevance to green design.</div><div>▪ Research Design Methodologies:</div><div><div>▪ Generative Research Design: Explain the purpose and applications.</div><div>▪ Evaluative Research Design: Discuss techniques like guerrilla testing and eye-tracking.</div><div>▪ Quantitative Research Design: Explain the systematic approach used.</div><div>▪ Qualitative Research Design: Describe methods like phenomenological, ethnographic, narrative, and participatory action research.</div></div></div></div></div>	
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Review Form 3

	<p>5. Results and Discussion (Optional):</p> <ul style="list-style-type: none">○ Although not explicitly mentioned, adding a results and discussion section could be beneficial if you have specific findings or case studies to present. <p>6. Conclusion:</p> <ul style="list-style-type: none">○ The conclusion should summarize the main findings and emphasize the importance of research in green design.○ Suggested Improvements: Clearly restate the significance of integrating environmental considerations into the design process and the role of advanced research methodologies. <p>7. References:</p> <ul style="list-style-type: none">○ Ensure that references are cited consistently and formatted according to the chosen citation style. <p>General Suggestions:</p> <ul style="list-style-type: none">• Subsection Headings: Use clear and descriptive subheadings throughout the manuscript to guide readers and improve readability.• Flow and Coherence: Ensure that each section logically leads to the next, creating a cohesive narrative that ties all elements of green design together.• Clarity and Grammar: Revise sentences for grammatical accuracy and clarity to improve the overall quality of the manuscript. <p>These changes will help enhance the manuscript's structure, making it more accessible and engaging for readers interested in green design and sustainable product development.</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>The manuscript is scientifically robust and technically sound due to its comprehensive exploration of green design principles, including 'Design for Environment' (DFE) and methodologies like Life Cycle Analysis (LCA) and zero emissions. It effectively integrates a variety of research methods and case studies, which validate its theoretical claims with practical examples, such as the implementation of eco-efficiency and environmental impact assessment tools. The manuscript's detailed analysis of EPA programs and global initiatives further substantiates its arguments, providing a solid foundation in both policy and scientific frameworks that are essential for sustainable product development. This systematic approach to evaluating environmental impacts throughout the product lifecycle showcases a rigorous and thoughtful examination of green design, making the research credible and relevant to contemporary sustainability challenges.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p> <p>:</p>	<p>The references cited in the manuscript provide a strong foundation by including seminal works and well-regarded sources on topics related to green design, environmental management, and sustainable production. However, some references are somewhat dated, with several key works published in the early 2000s or even earlier. Recent literature is essential to reflect the current advancements and evolving methodologies in green design and sustainable development. Here are some suggestions to enhance the manuscript's reference list:</p> <p>Suggested Additional References:</p> <ol style="list-style-type: none">1. Bocken, N. M. P., de Pauw, I., Bakker, C., & van der Grinten, B. (2016). "Product design and	

Review Form 3

	<p>business model strategies for a circular economy.” <i>Journal of Industrial and Production Engineering</i>, 33(5), 308-320. This reference provides insights into the latest strategies for integrating sustainability into product design.</p> <p>2. Tseng, M. L., Chiu, A. S., & Xue, B. (2019). “Design for green production: Green design and green manufacturing,” <i>Sustainable Production and Consumption</i>, 18, 72-80. This paper discusses the latest green design and manufacturing practices, highlighting recent technological advancements.</p> <p>3. Song, Q., Wang, Z., & Li, J. (2018). “Environmental performance of municipal solid waste strategies based on LCA method: A case study of Macau.” <i>Journal of Cleaner Production</i>, 171, 1281-1292. This reference can provide recent and detailed insights into the environmental impacts assessed by Life Cycle Analysis.</p>	
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Review Form 3

<div>Minor REVISION comments</div> <div>Is the language/English quality of the article suitable for scholarly communications?</div>	<p>The English quality of the manuscript on the significance of green design in product development needs improvement for it to be suitable for scholarly communications. The language contains grammatical errors, awkward phrasing, inconsistent use of tenses, and issues with sentence structure that can affect the clarity and professionalism of the text. Below are some specific issues and suggestions for improving the manuscript's language quality:</p> <p>Common Issues and Suggestions:</p> <ol style="list-style-type: none">Grammar and Sentence Structure:<ul style="list-style-type: none"><i>Example:</i> "Electronic waste are now days becoming a biggest issue after plastic in sustainable development."<ul style="list-style-type: none">Correction: "Electronic waste is nowadays becoming one of the biggest issues after plastic in sustainable development."<i>Issue:</i> Subject-verb agreement errors (e.g., "Electronic waste are" should be "Electronic waste is"), and phrases like "now days" should be corrected to "nowadays."Clarity and Conciseness:<ul style="list-style-type: none"><i>Example:</i> "This allow the people to produce products with less environmental impact."<ul style="list-style-type: none">Correction: "This allows people to produce products with a lower environmental impact."<i>Suggestion:</i> Avoid redundant phrases and use clearer, more direct language.Inconsistencies in Tense:<ul style="list-style-type: none"><i>Example:</i> "EPA has given again a new name to this program 'Safer Choice' in 2015."<ul style="list-style-type: none">Correction: "In 2015, the EPA renamed this program to 'Safer Choice.'"<i>Suggestion:</i> Maintain consistency in verb tenses to improve readability.Misused Words and Punctuation:<ul style="list-style-type: none"><i>Example:</i> "The DFE strategy aims to improve technology and design tactics to expand the scope of products."<ul style="list-style-type: none">Correction: Ensure proper punctuation and avoid sentence fragments to improve coherence.Technical Terminology:<ul style="list-style-type: none">Ensure that all technical terms are correctly used and well explained when first introduced, enhancing the reader's understanding.Improving Academic Tone:<ul style="list-style-type: none">Use more formal language and avoid colloquialisms (e.g., "a lot of" can be replaced with "numerous" or "various").<i>Example:</i> Replace "Lot many specific methods" with "Numerous specific methods." <p>General Recommendations:</p> <ol style="list-style-type: none">Proofreading: Review the manuscript thoroughly or use professional editing software to catch grammatical errors, typos, and punctuation issues.Consistency in Terminology: Maintain consistent use of terminology throughout the manuscript. For instance, ensure that acronyms like "DFE" are defined and used consistently.	
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Review Form 3

	<div>3. Enhance Flow and Readability: Break down long sentences into shorter, more readable ones to enhance the flow of the text.</div> <div>4. Formal Academic Language: Adopt formal academic language and avoid overly casual expressions, ensuring the manuscript reads professionally.</div> <div>Overall, while the manuscript addresses important aspects of green design, significant editing for grammar, structure, and language consistency is needed to elevate it to a standard suitable for scholarly publication.</div>	
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Review Form 3

Optional/General comments	<p>General Comments on the Manuscript:</p> <p>The manuscript provides a comprehensive overview of the significance of green design in product development, highlighting the need for environmentally conscious approaches such as Design for Environment (DFE), life cycle analysis, and zero emissions strategies. The content touches on critical aspects of sustainable design, including the impact of electronic waste, the role of regulatory bodies like the EPA, and various research methodologies employed to improve product sustainability. The manuscript's exploration of these topics reflects a strong commitment to promoting environmentally friendly design principles. However, several key areas need refinement to enhance the manuscript's suitability for scholarly communication.</p> <p>Strengths:</p> <ol style="list-style-type: none">Relevant and Timely Topic: The manuscript addresses a critical issue in modern manufacturing and design—reducing environmental impact, which is highly relevant given the growing global focus on sustainability.Comprehensive Content: The paper covers a wide range of green design strategies, tools, and methodologies, providing a broad perspective on sustainable product development.Inclusion of Various Research Designs: By discussing different research design methodologies (e.g., evaluative, qualitative, and quantitative), the manuscript effectively highlights the role of research in driving sustainable design.Real-World Applications: The manuscript includes practical examples and applications, such as zero-emission strategies and industrial clustering, which help contextualize the theoretical concepts. <p>Areas for Improvement:</p> <ol style="list-style-type: none">Language and Readability: The manuscript's English quality needs significant improvement. Grammatical errors, awkward phrasing, and inconsistencies in sentence structure detract from the overall readability and professionalism of the text. A thorough proofreading and editing process is necessary to refine the language.Organization and Structure: Some sections lack clear transitions and logical flow, making the manuscript challenging to follow. The introduction, methodology, and conclusion sections should be more clearly delineated, with smoother transitions between key ideas.Clarity of Key Concepts: Some technical terms and methodologies, such as DFE and LCA, could benefit from clearer explanations when first introduced. Providing definitions and context would improve accessibility for readers unfamiliar with these concepts.Consistency in Terminology and Tense: The manuscript sometimes uses inconsistent terminology and verb tenses, which can confuse the reader. Maintaining consistency throughout the text will enhance clarity.Scholarly Tone: The manuscript occasionally uses informal language, which is not appropriate for scholarly communication. Adopting a more formal, academic tone would improve the manuscript's alignment with standards for publication in scientific and technical journals.Citations and References: Some statements lack proper citations, and the references need to be updated to include more recent studies to strengthen the credibility of the arguments presented. <p>Summary Recommendation:</p> <p>The manuscript provides valuable insights into green design principles and methodologies but requires substantial revision in terms of language, structure, and academic rigor. Improving these areas will significantly enhance the manuscript's readability, impact, and suitability for scholarly publication. A more structured approach, clearer explanations, and refined language will help effectively communicate the importance of sustainable design practices to a broader academic audience.</p>	
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Review Form 3

PART 2:

	Reviewer’s comment	Author’s comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	Massreshaw Assnakew Abebe
Department, University & Country	Ethiopia