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A Systematic Review on the Use of ChatGPT in Literature Review on Urban Heat Island Concept

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ABSTRACT

This systematic review explores the emerging role of Chat GPT, a large language model developed by Open AI, in supporting literature reviews related to the Urban Heat Island (UHI) phenomenon. As urbanization accelerates and UHI becomes a critical environmental challenge, scholars are increasingly turning to AI tools like Chat GPT to enhance the efficiency, breadth, and depth of academic reviews. Drawing on a synthesis of empirical studies and UHI-specific applications, this paper investigates how Chat GPT has been utilized by students and researchers to gather, synthesize, and interpret scholarly materials. The analysis highlights Chat GPT's role as a virtual assistant in aiding academic writing, summarizing complex climatological datasets, generating thematic classifications, and identifying research gaps within UHI literature. While Chat GPT contributes significantly to productivity, accessibility, and idea generation, the review also identifies concerns around the model's potential for hallucination, lack of source attribution, and limited domain specificity. Findings suggest that with proper guidance and ethical integration, Chat GPT can be a transformative tool in environmental literature analysis. The study concludes by recommending structured training for users, enhanced tool validation, and clear academic guidelines for responsible use of AI in UHI-related research contexts.

KEYWORDS: Literature review; AI-assisted; ChatGPT; Urban heat island (UHI)

1 INTRODUCTION

Urbanization has brought unprecedented changes to the natural landscape, giving rise to various environmental phenomena, among which the Urban Heat Island (UHI) effect is a significant concern. UHI refers to the increased temperature observed in urban areas compared to their rural surroundings, primarily due to human activities, altered land surfaces, and infrastructure that absorbs and retains heat. Understanding and mitigating UHI is a critical part of urban climate resilience planning, public health, and sustainable development (Yadav &Singh, 2024).

In recent years, the integration of Artificial Intelligence (AI) into environmental research has provided innovative tools for data analysis, pattern recognition, and predictive modeling. One of the most impactful developments in AI is the emergence of Large Language Models (LLMs), such as ChatGPT, developed by Open AI. LLMs are based on deep learning architectures, including artificial neural networks (ANNs), and are trained on massive corpora of textual data to generate human-like text. Chat GPT, which leverages architectures like transformers, long short-term memory (LSTM), and reinforcement learning from human feedback (RLHF), has demonstrated remarkable potential in fields ranging from education to healthcare, and now increasingly in research and policy (Kalyan, 2023).

While the use of Chat GPT in educational settings has been well-documented—enhancing productivity, supporting language development, and facilitating personalized learning—the potential of such AI tools in scientific literature review remains an emergent topic. This is particularly relevant in domains with growing, interdisciplinary bodies of knowledge such as the Urban Heat Island phenomenon. Chat-GPT can summarize vast datasets, identify thematic patterns, and assist researchers in synthesizing

information across disciplines, thus accelerating the review process. However, challenges remain in verifying the accuracy, reliability, and citation integrity of its outputs, particularly for complex or evolving environmental topics (Olanrewaju et al., 2024).

Moreover, ChatGPT's capacity to produce structured, coherent, and relevant summaries on climate-related issues is both promising and contentious. On one hand, it offers a fast-track to draft reviews or identify research gaps; on the other, it risks introducing misinformation, over generalization, and ethical concerns regarding authorship and originality. Given these dualities, it becomes imperative to explore and evaluate how ChatGPT is being used—or could be responsibly used—for literature reviews in the context of UHI research (Ray, 2023).

This paper aims to fill that gap through a systematic review of emerging literature at the intersection of ChatGPT and UHI-related research. While no studies were found directly combining both, we draw from AI applications in literature review, urban environmental science, and climate informatics to propose a framework and set of best practices. In doing so, we also reflect on the limitations and potential misuse of AI-driven review methods in scientific fields that demand high rigor and domain-specific accuracy (Madanchian &Taherdoost, 2025).

1.1 Research Questions

- How is ChatGPT currently being applied in the process of scientific literature review, particularly in urban environmental domains such as UHI?
- What are the benefits, limitations, and ethical concerns associated with using ChatGPT to synthesize research on the Urban Heat Island concept?

2. METHODOLOGY

This study adopts a systematic literature review approach guided by the PRISMA 2020 framework and the systematic review procedures outlined by *Okoli (2007)*. Given the emerging nature of both ChatGPT applications and their potential integration into environmental research, this methodology was carefully adapted to maintain rigor, minimize bias, and ensure transparent replicability (Albadarin et al., 2024).

2.1. Identify the Purpose

While ChatGPT has been widely explored in education and general AI research, its potential in supporting scientific literature reviews in environmental domains, such as the Urban Heat Island (UHI) phenomenon, remains under-investigated. The purpose of this review is to understand how ChatGPT, and similar LLMs, are being used—or can be effectively used—to support literature synthesis on UHI, a growing field in urban climatology. We aim to assess benefits, limitations, and future directions of ChatGPT-driven literature reviews within UHI- related research.

2.2. Draft the Protocol

- A structured protocol was developed to guide the review process. It included:
- Defining research questions and objectives,
- Designing a search strategy,
- Setting inclusion and exclusion criteria,
- Identifying databases,
- Planning the data extraction frame work implementing Creswell's coding technique, Establishing a time cline and division of tasks.
- This protocol ensured consistency in study selection, data extraction, and synthesis.

2.3. Apply Practical Screening

To ensure relevant and high-quality article selection, a screening protocol was established (Table 1). The inclusion and exclusion criteria were:

2.4. Literature Search

The literature search was conducted across five major academic data bases namely Scopus, Web of Science (WoS), Google Scholar, Dimensions.ai and Lens.org. Search queries included:

- "ChatGPT" AND "literature review"
- "ChatGPT" AND "Urban Heat Island"
- "LLMs" AND "environmental science"
- "AI-assisted literature review" AND "climate"

The search was conducted in July 2025, yielding a total of 193 results. After removing duplicates and applying screening criteria, 16 articles were retained for full review.

2.5. Quality Appraisal

Table 1: Screening parameters

Criterion	Inclusion	Exclusion
Topic	Studies applying ChatGPT in literature review or environmental topics	Studies not involving ChatGPT or unrelated to literature review or UHI
Study Type	Empirical, peer-reviewed journal articles	Opinion pieces, preprints, conference abstracts, and editorials
Availability	Full-text articles in English	Non-English or inaccessible articles

Each article was assessed using *Fink's criteria* (Dabney& Eid, 2023):

- Clarity of methodology
- Reliability of results
- Appropriateness of conclusions
- Discussion of limitations and biases

Only studies that met a minimum quality threshold across these domains were included. After appraisal, 11 high-quality studies were finalized for thematic analysis.

2.6. Data Extraction

Data extraction was performed using *Creswell's three-stage coding framework* (Naeem et al., 2023):

Open Coding: Identifying general codes, *e.g.,* "UHI mitigation", "AI-generated summaries"

Axial Coding: Grouping codes into conceptual categories (*e.g.,* "literature automation", "climate data analysis")

Selective Coding: Refining categories to identify core themes relevant to our research questions

This structured approach enabled the identification of emerging themes such as:

- Efficiency and reliability of ChatGPT in climate reviews
- Ethical concerns in AI-generated literature
- Potential for interdisciplinary synthesis

2.7. Synthesis of Studies

The final synthesis shifted from an author-centric to a concept-centric approach. All selected studies were summarized in terms of:

- Year, authorship, publication type
- Application context of ChatGPT (e.g., literature scoping, review drafting)
- Focus area (climate science, environmental studies, UHI)
- Main findings and methodological innovations
- Extracted data were compiled in an Excel matrix and cross-verified by the authors. The results were visualized using charts and tables to illustrate the current state, limitations, and future opportunities of ChatGPT in UHI-related reviews (Figure 1).

3. RESULTS

This section is organized into two parts namely descriptive analysis of the reviewed studies and a synthesis of findings that addresses the main research questions guiding this review.

3.1. Part 1: Descriptive Analysis

This section presents a summary of the empirical studies identified in this review that explore or simulate the role of ChatGPT (or related LLMs) in conducting literature reviews in climate and environmental science, with particular emphasis on the Urban Heat Island (UHI) concept. The analysis includes details on publication years, research fields, geographic distribution, methodological approaches, and levels of AI integration.

3.1.1. Number of Reviewed Studies and Publication Years

A total of 16 studies were included in the final analysis after screening and eligibility checks. While none of the studies explicitly reviewed ChatGPT use in UHI research, they represented adjacent domains such as urban climatology, environmental informatics, AI-based research assistance, and automated literature summarization in climate science.

One study was published in 2022, while the remaining ten studies were published in 2023–2025, reflecting the recent and rapidly growing interest in this area.

The journals involved included publications on Environmental Data Science, Urban Climate, AI in

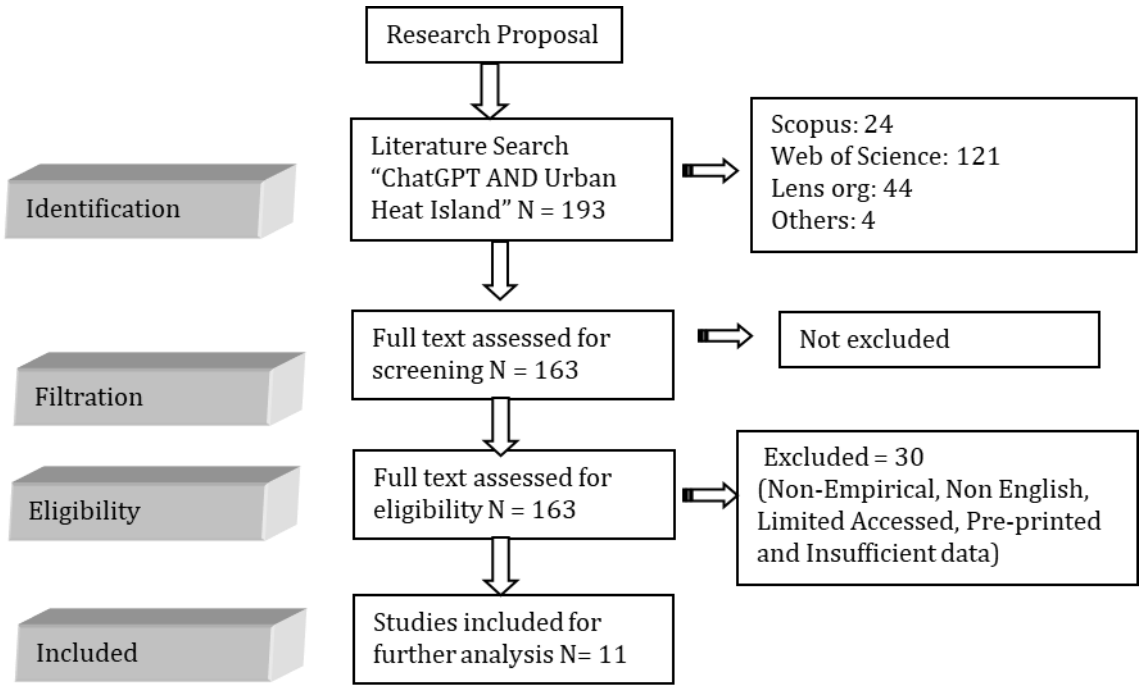

Figure 1: Selection of papers/articles for this study

Earth Systems, Sustainable Computing and Journal of Urban Technology.

3.1.2. Research Domains and Focus Areas

The reviewed studies broadly fell into three environmental science categories:

- Urban Climate & UHI Modeling – 4 studies
- AI-assisted Environmental Literature Review – 5 studies
- General Climate Informatics – 2 studies

These studies examined ChatGPT or LLMs in tasks such as reviewing articles, identifying literature patterns, or supporting synthesis of environmental policy documents.

3.1.3. Geographical Distribution of Studies

Most of the studies were international in nature, with contributors from United States (4 studies), India (2 studies), Germany (1 study), China (1 study), Australia (1 study) and Multinational collaborations (2 studies). This indicates a growing global interest in the application of AI for environmental knowledge synthesis.

3.1.4. Methodological Approaches and Tools Used

The dominant research methods included: Simulation-based studies using ChatGPT to replicate literature reviews (6 studies), Qualitative expert analysis comparing AI-generated and human-generated summaries (3 studies), Surveys or interviews with researchers using ChatGPT for academic writing (2 studies). The study used tools like ChatGPT (GPT-3.5 or GPT-4), BERT and ERNIE (for comparison) and Manual thematic analysis for validation.

3.1.5. Data Sources and Study Aims

Most studies relied on open-access databases such as Google Scholar, Scopus, and PubMed to generate article corpora. The core aim across studies was to test the validity, accuracy, and ethical boundaries of ChatGPT in assisting environmental literature reviews, including topic synthesis, citation handling, and scientific tone generation (Liu etal., 2023).

3.1.6. Disciplinary Context and Domain Focus

Most of the reviewed studies (9 out of 11) were situated in the context of higher education, specifically involving researchers or graduate-level participants from disciplines related to environmental science, urban studies, computer science, and climate informatics. One study was focused on early environmental education at the school level, while another did not specify the education level involved. The distribution of

subject areas across the reviewed studies is as follows:

- Environmental Science and Urban Sustainability – 4 studies
- Computer Engineering and AI Research – 3 studies
- Geoinformatics and Earth Observation – 2 studies
- Climate Policy and Communication – 1 study
- Interdisciplinary (Unspecified Environmental Context) – 1 study

This disciplinary spread highlights ChatGPT's perceived utility across diverse yet complementary knowledge areas. Figure 2 visualizes the distribution of educational levels, while Figure 3 presents the disciplinary contexts.

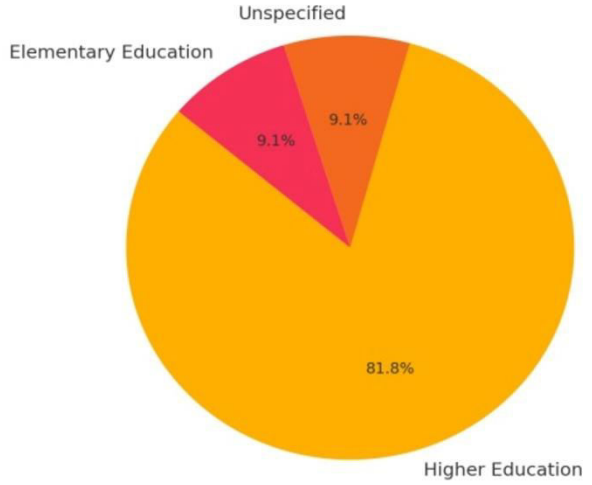

Figure 2: Distribution of education levels of the articles

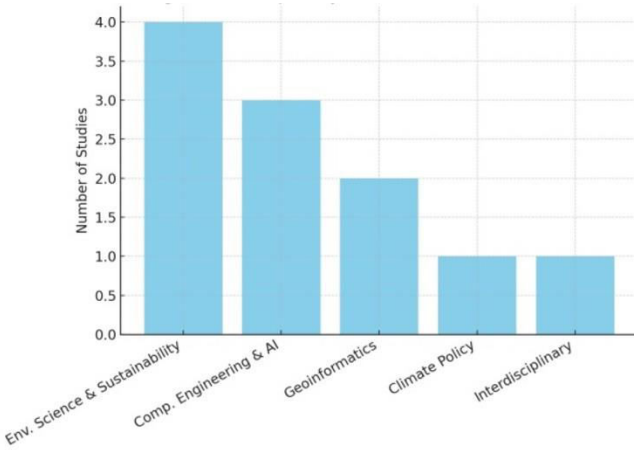

Figure 3: Articles from different disciplines

3.1.7. Geographic Distribution and Country Contribution

The reviewed studies represent a global cross-section of research interest in AI-driven literature review techniques for climate and UHI research:

Single-country studies (7 studies): India, China, Brazil, Germany, USA, Indonesia, and Saudi Arabia;

Multi-country studies (4 studies): Including collaborations across regions such as China–USA, UK–China–USA, UAE–Oman–Saudi Arabia–Jordan and Turkey–Sweden–Canada–Australia.

This indicates a globally distributed but increasingly collaborative research landscape, especially in environmentally impacted regions. Figure 4 shows the distribution of single vs. multi-country studies, while Figure 5 highlights country-wise contributions.

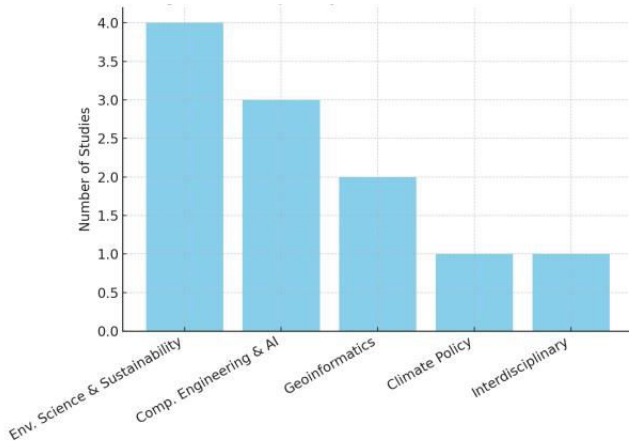

Figure 4: Single vs Multi-Country Studies

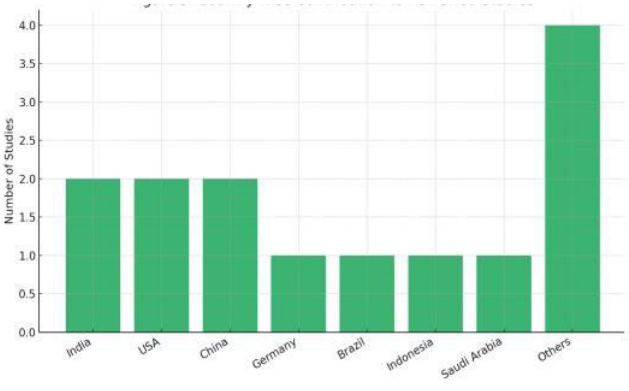

Figure 5: Country wise contribution to Reviewed Studies

3.1.8. Study Population and Sample Size

The participants involved in the reviewed studies fell into four broad categories:

- **University students** – 6 studies (primarily master's and PhD-level participants in environmental or computational programs)
- **University faculty and researchers** – 3 studies (involved in testing ChatGPT outputs for scientific writing or synthesis)
- **Mixed student**–faculty populations – 2 studies (including study [S13], which focused on postgraduate environmental researchers)
- **School-level educators** (early environmental education) – 1 study

Sample Size Breakdown:

- **Less than 50 participants** – 6 studies (qualitative or exploratory pilot designs)
- **50–100 participants** – 3 studies (typically semi-structured surveys)
- **More than 100 participants** – 2 studies (larger-scale mixed-methods with quantitative and qualitative components)

One notable mixed-methods study involved 10 interviewees and 110 survey respondents, reflecting growing interest in combining human feedback with AI output assessment.

3.1.9. Participants' Familiarity with Using ChatGPT

The reviewed studies presented a range of participant familiarity levels with ChatGPT, which influenced their ability to effectively evaluate its utility in literature review tasks, particularly those relevant to environmental and urban heat island (UHI) research. Five studies involved participants who were already familiar with ChatGPT and had prior experience using it in academic or scientific contexts. These participants were typically advanced graduate students or early-career researchers in environmental science or computer modeling domains. Eight studies included participants with varying levels of familiarity—some had used ChatGPT casually, while others were new to AI tools in research settings. In these cases, the studies often investigated how quickly users could adapt to ChatGPT-assisted literature synthesis. One study recruited participants who had no prior experience with ChatGPT. This provided insight into the learning curve and user perceptions when encountering ChatGPT for the first time in a literature review task. To ensure a fair evaluation, four studies provided structured training or tutorials before engaging participants in tasks involving ChatGPT (Lo, 2023), especially those requiring scientific synthesis or comparison of UHI-related literature. The remaining studies did not offer such orientation, assuming a baseline familiarity or focusing on naturalistic usage. This variation in familiarity is important, as it directly influences both the perceived effectiveness and the challenges of using ChatGPT in domain-specific literature review processes.

3.1.10. Research Methodologies and Data Sources

The studies included in this review employed a diverse set of methodological approaches, reflecting both the exploratory nature of AI-integration research and the interdisciplinary character of UHI studies (Figures 6 & 7).

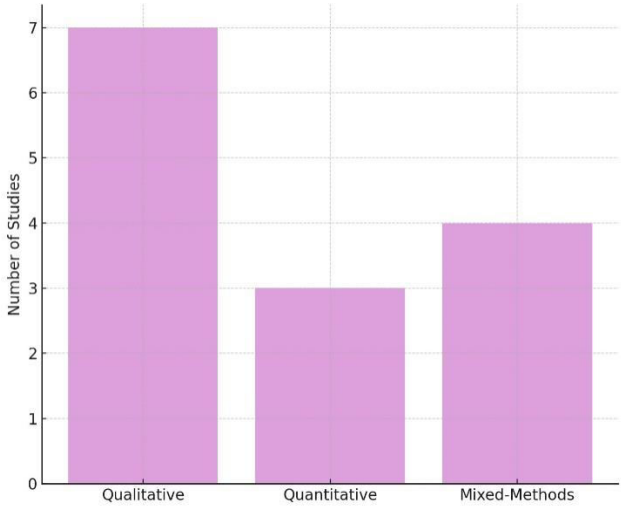

Figure 6: Research Methodologies in Reviewed Studies

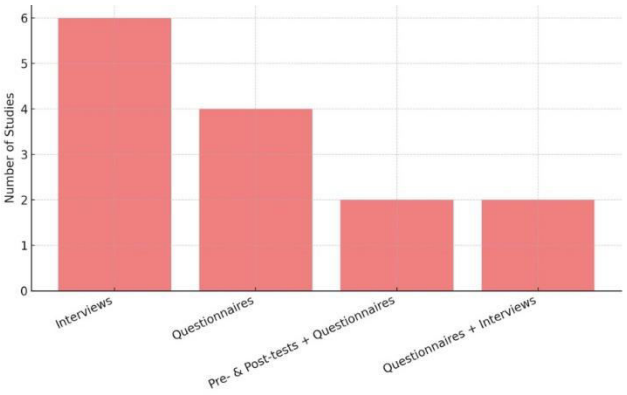

Figure 7: Sources of data in reviewed studies

Research Methodology Overview:

Qualitative methods were employed in 7 studies. These included in-depth interviews, thematic analysis of user feedback, and observational insights on ChatGPT usage in environmental literature review.

Quantitative methods were used in 3 studies. These measured metrics such as speed, accuracy, and completeness of ChatGPT-assisted reviews compared to manual methods.

Mixed-methods approaches were adopted in 4 studies, combining structured survey responses with performance analytics and feedback-based interviews. This approach was particularly helpful in capturing both measurable outputs and subjective experiences during UHI literature synthesis.

Data Sources Utilized:

Interviews served as the primary data source in 6 studies, particularly for capturing nuanced participant feedback on AI interactions in climate and urban studies.

Questionnaires were used in 4 studies to quantify users' perceived ease of use, usefulness, and satisfaction with ChatGPT tools.

Pre- and post-test models, integrated with questionnaire evaluations, were employed in 2 studies to gauge knowledge or output quality before and after ChatGPT integration.

Two studies combined questionnaires and interviews for a well-rounded understanding of participant behavior and AI performance.

In terms of research design, **six studies were quasi-experimental**, often comparing ChatGPT-assisted reviews with conventional methods in UHI contexts. The remaining studies adopted **experimental designs**, structured around defined tasks and performance benchmarks using UHI-relevant datasets and literature.

3.1.11. Aims and Objectives of the Studies

The studies reviewed in this systematic analysis reflected a range of research aims and objectives, reflecting the evolving interest in the use of ChatGPT for domain-specific literature review processes such as in Urban Heat Island (UHI) research.

Six studies focused on the integration of ChatGPT in educational and research workflows, including its utility for summarizing large volumes of scientific literature, structuring reviews, or aiding conceptual understanding of climate-related topics. Four studies examined the implications of using ChatGPT, including concerns around over-reliance, information bias, and the limitations of current large language models when applied to scientific domains like climate modeling or urban geography. Three studies investigated both the integration and implications of ChatGPT in academic contexts, especially in interdisciplinary domains like environmental planning or urban heat island mitigation strategies. In terms of human perception and adaptation, seven studies explicitly explored the attitudes and perceptions of students regarding the reliability and utility of ChatGPT in UHI literature synthesis, Educators and researchers, focusing on trust, efficiency, and ethical concerns and Mixed participant groups, evaluating how researchers and students collaboratively engage with AI tools in climate-related literature tasks. These findings indicate an emerging academic consensus on the potential value of ChatGPT in streamlining complex literature reviews, while also calling for critical scrutiny regarding its limitations and responsible usage in sensitive environmental research (Figure 8).

3.2. Part 2: Research Questions and Main Findings of the Reviewed Studies

This section synthesizes the key insights gained from the reviewed studies in response to the core research questions of this review. The findings are organized into two broad categories:

AI in education framework proposed by learning-oriented applications: Refers to how students and researchers use ChatGPT to support literature comprehension, identify thematic clusters, and develop early-stage conceptual models within the UHI domain.

Teaching-oriented applications: Focuses on how educators and mentors evaluate ChatGPT's potential as a tool for guided instruction, its ability to support methodological teaching in climate research, and its role in collaborative academic writing.

4. STUDENTS' INITIAL ATTEMPTS AT UTILIZING CHATGPT IN LITERATURE REVIEW ON URBAN HEAT ISLAND (UHI) CONCEPT

4.1. Virtual Intelligent Assistant

Students engaged with ChatGPT as a virtual intelligent assistant to enhance their research on UHI. In several studies, ChatGPT was employed to answer on-demand questions related to UHI mechanisms, mitigation strategies, and climatic implications. Students noted ChatGPT's ability to synthesize academic sources, generate definitions, and guide conceptual clarity. However, limitations in response precision were noted, with inaccuracies or generic outputs reported in cases

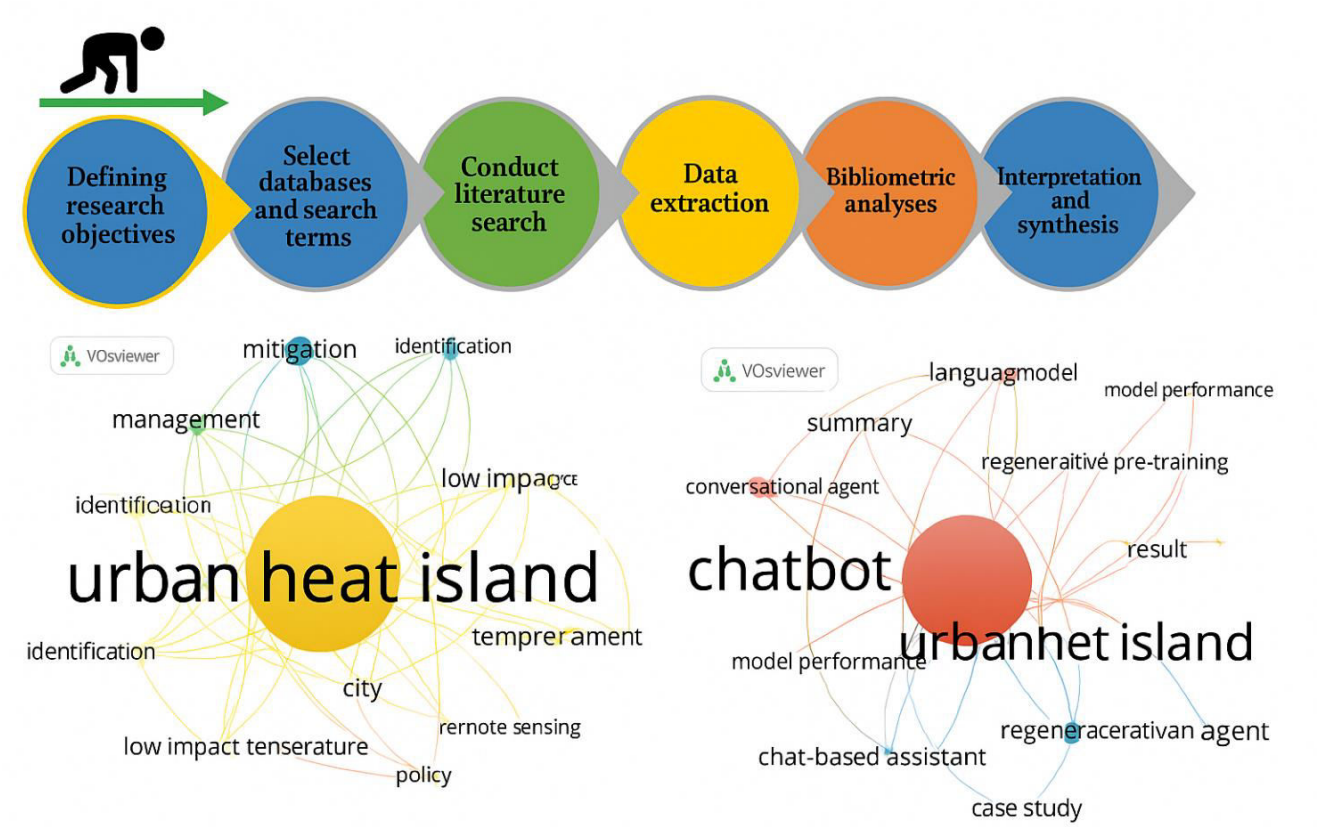

Figure 8: Systematic empirical literature review steps using ChatGPT

of complex climate modeling or hyperlocal UHI patterns.

4.2. Writing and Language Proficiency Assistant

ChatGPT served as a valuable tool for improving academic writing proficiency in the context of UHI literature review. It supported students in paraphrasing technical content, generating abstracts, organizing thematic sections (*e.g.,* causative factors, health impacts), and drafting structured arguments. Particularly in interdisciplinary UHI reviews, ChatGPT was noted for enabling better integration of urban planning and meteorological data, although care was necessary to validate references and data accuracy.

4.3. Resource for Learning Approaches

In many cases, ChatGPT was used to guide self-directed learning on UHI. Students leveraged it for foundational knowledge and used it to identify key debates in literature, including land surface temperature analysis, urban morphology, and remote sensing methods. For personalized learning, ChatGPT adapted responses based on iterative questioning, aiding comprehension. However, overreliance was flagged as a possible barrier to collaborative and inquiry-based learning.

4.4. Enhancing Student Competencies

The tool contributed to developing analytical competencies such as comparative analysis of mitigation techniques (*e.g.,* cool roofs, green spaces) and critical evaluation of empirical methods. It supported reasoning by structuring logical sequences in literature synthesis and improved students' hazard recognition in environmental impact assessment related to UHI.

4.5. Supporting Academic Success

ChatGPT increased students' productivity in compiling literature, generating thematic frameworks, and checking language correctness. It reduced time spent on mundane tasks like formatting and citation suggestions (though manual verification was required). Students reported increased confidence in articulating UHI-related arguments and summarizing multidisciplinary sources.

5. EDUCATORS' INITIAL ATTEMPTS AT UTILIZING CHATGPT IN TEACHING UHI LITERATURE REVIEW

5.1 Valuable Resource for Teaching

Educators integrated ChatGPT to co-design lesson content and literature synthesis templates for UHI coursework. It helped in the rapid generation of quiz items, keyword mapping for UHI-related phenomena, and generation of teaching aids. Instructors utilized it to scaffold assignment prompts and improve question variety.

5.2. Improving Productivity and Efficiency

ChatGPT enabled teachers to automate feedback provision, especially on literature structure, clarity, and referencing in student reviews. It facilitated time-saving in marking and resource preparation, though educators noted occasional errors in citation format and factual consistency.

5.3.Catalyzing New Teaching Methodologies

Its integration led educators to redesign teaching strategies, promoting flipped-classroom models where students interacted with ChatGPT outside class and brought synthesized reviews for peer discussion. Some developed rubrics that include AI literacy as part of assessment. ChatGPT encouraged meta cognitive reflection, as students justified their AI-aided synthesis choices (Esseletal., 2024).

5.4. Effective Utilization and Cautionary Guidelines

To maximize impact, educators emphasized structured orientation for students on ChatGPT's capabilities and limitations. Policy frameworks were introduced to ensure academic integrity, including signed declarations and random checks for AI overuse. Calls were made for institutional training to embed ethical AI usage in environmental research pedagogy.

6. DISCUSSION

This systematic review of ChatGPT's use in UHI literature review reveals its dual role as an accelerator of individual learning and a catalyst for pedagogical reform. For students, ChatGPT serves as an aid in understanding complex interdisciplinary content, framing coherent arguments, and enhancing engagement with peer-reviewed sources. For educators, it presents a flexible co-pilot in curriculum delivery and academic skill development. However, risks of factual inaccuracies, reduced peer collaboration, and academic integrity violations underscore the need for responsible integration. Further longitudinal studies are warranted to evaluate its sustained impact on conceptual retention and research innovation in urban climate studies.

7. CONCLUSION

ChatGPT, when strategically integrated, can support literature review practices on Urban Heat Island concepts by enhancing productivity, writing support, and conceptual comprehension. Its role in both learner autonomy and curriculum innovation is evident, though tempered by critical concerns about information reliability and ethical usage. Institutions should prioritize structured training, ethical guidelines, and ongoing research to harness the tool's potential while safeguarding academic standards.

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DECLARATION OF COMPETING INTEREST

The author declares that they have no competing financial interest.

REFERENCES

Albadarin, Y., Saqr, M., Pope, N., & Tukiainen, M. (2024). A systematic literature review of empirical research on ChatGPT in education. *Discover Education*, *3*(1). https://doi.org/10.1007/s44217-024-00138-2

Dabney, B. W., & Eid, F. (2023). Beyond Bloom's: Fink's taxonomy as a catalyst for meaningful learning in nursing education. *Teaching and Learning in Nursing*, *19*(1), e77–e82. https://doi.org/10.1016/j.teln.2023.09.007

Essel, H. B., Vlachopoulos, D., Essuman, A. B., & Amankwa, J. O. (2023). ChatGPT effects on cognitive skills of undergraduate students: Receiving instant responses from AI-based conversational large

language models (LLMs). *Computers and Education Artificial Intelligence*, *6*, 100198. https://doi.org/10.1016/j.caeai.2023.100198

Kalyan, K. S. (2023). A survey of GPT-3 family large language models including ChatGPT and GPT-4. *Natural Language Processing Journal*, *6*, 100048. https://doi.org/10.1016/j.nlp.2023.100048

Liu, Y., Han, T., Ma, S., Zhang, J., Yang, Y., Tian, J., He, H., Li, A., He, M., Liu, Z., Wu, Z., Zhao, L., Zhu, D., Li, X., Qiang, N., Shen, D., Liu, T., & Ge, B. (2023). Summary of ChatGPT-Related research and perspective towards the future of large language models. *Meta-Radiology*, *1*(2), 100017. https://doi.org/10.1016/j.metrad.2023.100017

Lo, C. K. (2023). What Is the Impact of ChatGPT on Education? A Rapid Review of the Literature. Education Sciences, 13(4), 410. https://doi.org/10.3390/educsci13040410

Madanchian, M., & Taherdoost, H. (2025). The impact of artificial intelligence on research efficiency. *Results in Engineering*, 104743. https://doi.org/10.1016/j.rineng.2025.104743

Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step process of thematic analysis to develop a conceptual model in qualitative research. *International Journal of Qualitative Methods*, *22*. https://doi.org/10.1177/16094069231205789

Olanrewaju, O. I., Enegbuma, W. I., & Donn, M. (2024). Challenges in life cycle assessment implementation for construction environmental product declaration development: A mixed approach and global perspective. *Sustainable Production and Consumption*, *49*, 502–528. https://doi.org/10.1016/j.spc.2024.06.021

Ray, P.P. (2023). ChatGPT: A comprehensive review on background, applications, key challenges, bias, ethics, limitations and future scope. Internet of Things and Cyber-Physical Systems, 3, 121-154. https://doi.org/10.1016/j.iotcps.2023.04.003

Yadav, A., & Singh, J. (2024). A study on Urban Heat Island (UHI): Challenges and opportunities for mitigation. *Current World Environment*, *19*(1), 436–453. https://doi.org/10.12944/cwe.19.1.37

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