

REVIEW ARTICLE

Catalyzing Constructed Environment Concept in the New Education Policy 2020: A Conceptual Analysis Based on the Pentagonal Review Matrix

A S Sochipem Zimik^{1*}, Arup Barman², Santosh Kumar Ranjan³

¹Department of Management, SRM University, Gangtok, India

²Department of Management, Assam University, Silchar, India

³Centre for Korean studies, JNU, New Delhi, India

Corresponding Author: A S Sochipem Zimik. Email: scpzimik@gmail.com

Received: 28 March, 2025, Accepted: 03 June, 2025, Published: 09 June, 2025

Abstract

This study aims to explore the concept of the "Constructed Environment (CE)" in the context of course design within the framework of the New Education Policy 2020 (NEP 2020). By synthesizing perspectives from various academic and professional sources, the study emphasizes the significance of the constructed environment, particularly its impact on industries such as tourism. The study seeks to introduce this concept into the educational system, aligning it with the policy reforms set forth in 2020. Utilizing a descriptive methodology, the research outlines two primary objectives: first, to assess the academic relevance of the constructed environment within the context of the NEP 2020, and second, to perform a Pentagonal Review Matrix analysis on CE concepts and institutional research. CE has emerged as an effective model for sustaining and advancing industrial development. It encourages policymakers to adopt conscious strategies and enables constructors to become more competent and adaptive, while also considering tourist psychology. CE's relevance strongly supports its integration into the education system through the NEP 2020. Backed by field data, tourist experiences, academic research, and successful global implementations, CE offers a rational foundation for adoption. It enhances stakeholder awareness, improves performance outcomes, and builds investor confidence by promoting sustainable practices and long-term economic resilience. Furthermore, the study takes the opportunity in critically underscoring the potential benefits of incorporating CE concept into the Indian education system, advocating for its role in enhancing the competency and effectiveness of education in comparison to other developed nations. Ultimately, the study highlights the urgency of adopting CE concepts to strengthen the educational landscape.

Keywords: Constructed Environment; New Education Policy 2020; Pentagonal Review Matrix; Investment; Collaborative Effort; Stakeholders

Introduction

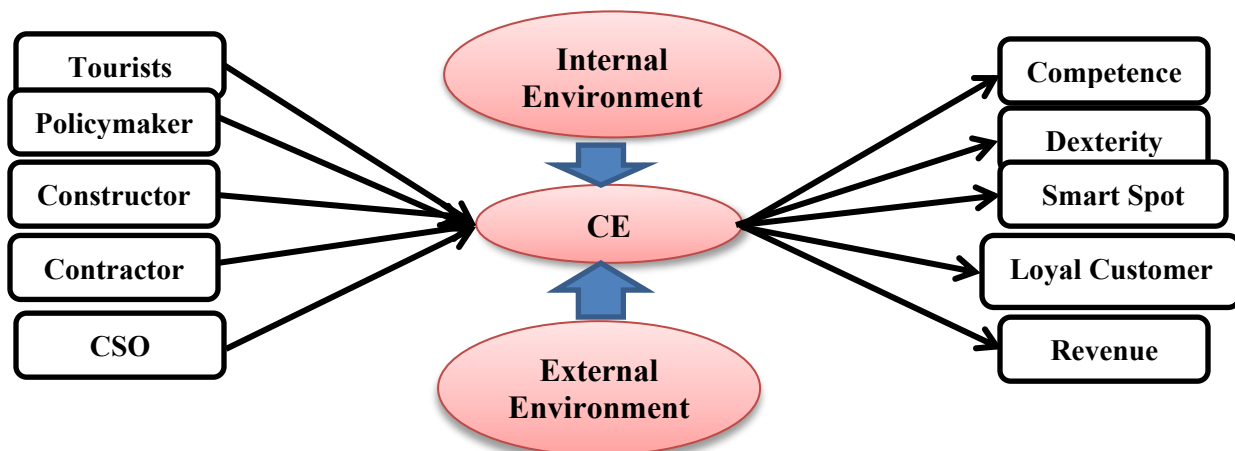
The adage "Rome was not built in a day" exemplifies the gradual and strategic efforts necessary to achieve transformative outcomes (Hampton & Gent, 1984). In the context of India's education system, this philosophy

underscores the urgency of fostering aspirations aligned with long-term development (Srivastava, 2017; Dey, 2023; Fernandes & Nirgude, 2024). The National Education Policy (NEP) 2020 embodies a forward-thinking framework aimed at equipping the world's largest youth population with knowledge and skills. Given that individuals under the age of 25 constitute a significant proportion of India's demographic (Silver et al., 2023); the scope of NEP is both ambitious and noble. The NEP serves as a foundational initiative to enhance the competency of Indian youth, fostering interactions with experts and prioritizing education as a critical area of time and resource investment (Mainul & Razzak, 2023; Vettukad, 2024). Among various sectors, tourism has emerged as a promising industry with substantial potential to attract global attention and drive economic sustainability. This study focuses on evaluating the interplay between tourism and education, investigating their combined impact on professional and academic development. Despite the severe disruptions caused by the COVID-19 pandemic, the tourism industry has demonstrated remarkable resilience and a natural capacity for recovery (Zill, 2022; Tichaawa & Saarinen, 2024; Efthimiou, 2024). This research aims to elucidate the importance of tourism from both academic and professional perspectives, contributing to a deeper understanding of its global potential. Furthermore, to integrate diverse viewpoints from stakeholders, this study emphasizes the relevance of the CE, aligning research objectives with industry trends and the evolving preferences of tourists.

Constructed Environment (CE)

The concept of the CE was first introduced by Zimik and Barman in their extensive body of research (Zimik & Barman, 2021; Zimik & Barman, 2023; Zimik & Barman, 2023). CE serves as a framework to unify and synthesize diverse perspectives, integrating recommendations and insights derived from various research questions and contributions. Building on this foundation, the present study aims to further explore and apply the concept of CE in the context of India's NEP. The NEP provides a platform to incorporate CE concepts into academic discourse, creating opportunities for broader integration and practical application within educational frameworks. The concept of the CE has significantly influenced the integration of tourist opinions into practical applications within the tourism industry. While the industry has succeeded in identifying s faced by tourists, there remains a lack of substantial efforts to address these challenges effectively.

Figure 1. CE working mechanism and its result deliverance for tourism development



Source: Author s Construct

The role of stakeholder awareness and commitment in shaping policies that align with tourist preferences is critical; as such measures directly influence tourist satisfaction and engagement.

This necessitates an examination of the skills, competencies, and experiences required for the sustainable development of the tourism sector. Collaboration among contractors, developers, state officials, and bureaucrats is essential for creating competitive destinations that foster tourist loyalty and drive revenue generation. The implementation of CE relies heavily on comprehensive policies, advanced technologies, and a commitment to sustainability, addressing economic, social, technological, and environmental dimensions. At its core, CE emphasizes the importance of stakeholder experience, skills, and consciousness in driving tourism industry development and ensuring its long-term viability. This concept has gained momentum and attention due to its universal applicability across industries, making it essential to be integrated into the academic curriculum rather than being confined solely to research. The dynamic nature and flexibility required for change, combined with the involvement of experts and experienced professionals from various fields, the competence and awareness of stakeholders, interdepartmental collaboration, sustainability-focused outputs, practical feasibility, and investigative approaches, underscore the necessity of CE as a critical framework for practical applications. The adaptability and practicality of CE make it a compelling and ethical approach, which this study aims to highlight as a core argument. By advancing CE from a theoretical concept to one of academic significance, the study seeks to deepen its relevance and application. Given the demands of professionalism and contemporary needs, it is imperative that this research garners greater attention and support, ensuring the effective implementation of CE under the NEP. This focus is essential to address sustainability challenges and promote economic vitality, aligning with the pressing needs of the present era.

Aims and Scope

Given the pressing surrounding tourism and its potential for future growth, there is an undeniable need to move beyond conventional scholarly approaches and engage with the subject in greater depth. This study aims to synthesize the collective insights of various academic works to contribute meaningfully to the discourse. With the implementation of the NEP in 2020, the study seeks to explore the policy's potential in shaping academic considerations for the tourism industry. Existing literature predominantly highlights the positive influence of academic perspectives, positioning NEP as an ideal platform to foster the growth and prominence of tourism development initiatives. To advance the understanding and practical application of the CE, this research goes beyond surface-level discussions to address critical research gaps. By doing so, it aims to enhance the acknowledgment and integration of CE concepts within tourism and academic frameworks.

Objectives

To align with the aims and scope of the study, the research is structured into two objectives:

- To propose the addition of constructed environment concepts as a course within the NEP 2020 framework
- To perform a Pentagonal Review Matrix analysis on Constructed Environment application in education

Literature Review

A comprehensive analysis of the extensive body of literature was conducted to align with the scope of the study, generating themes that reflect both commonalities and unique contributions. A semi-systematic literature review was employed, focusing on the objectives, methodologies, findings, and distinctive aspects of the studies, which were synthesized using the Pentagonal Review Matrix (PRM), detailed in Appendix A. Key themes emerging from the analysis include infrastructure education for tourism, tourism marketing strategies, and the exploration of the potential integration of CE concepts into the Indian education system.

To streamline and enhance the literature review process, this study introduces a matrix-based approach termed the PRM to systematically evaluate contributions across five key dimensions. Despite the extensive body of literature in the education and tourism sectors, such a structured format remains underexplored in broader academic contexts. The matrix framework offers a rational and efficient method for synthesizing literature, particularly in fields with diverse and overlapping themes. This raises several pertinent research questions:

1. What is the PRM?
2. How is it formulated?
3. Why is the PRM significant?

While this approach may be refined in future research through the addition of further dimensions or keywords, its current implementation serves the pioneering objective of this study—offering a comprehensive, tabulated, and analytically rich literature review. This methodology allows for deeper insights and broader justification, positioning the PRM as a valuable tool in academic inquiry.

Table 1: Literature Review base on the Methodology

SI	Methodology (s)	Contributor (s)
1	Descriptive	Zimik & Barman (2023); Zimik et al., (2022); Zimik & Barman (2021); Zimik & Barman (2023); Zimik & Barman (2024); Franco et al., (2022); Nethaji & Sangeetha (2020); Ivanov & Soliman (2023); Verma & Kumar (2021); Kurien & Chandramana (2020); Kumar et al. (2024); Mir et al., (2024)
2	Models Analysis with statistics tools	Ramis et al., (2023); Kunwar(2013); Gupta & Dixit (2021)

Source: Appendix A

The table above summarizes the methodologies adopted in the domain under review. It is evident that the majority of studies employed a descriptive research design, with a smaller proportion utilizing model-based approaches and statistical analyses. This trend may be attributed to the emerging nature of the concepts involved, which are still in the early stages of theoretical and empirical development.

Table 2: Literature Review base on the objective

SI	Objective (s)	Contributor (s)
1	CE for Tourism Development	Zimik & Barman (2023); Zimik et al., (2022); Zimik & Barman (2021)
2	CE requirement in tourism education	Ramis et al., (2023); Ivanov & Soliman (2023); Kunwar(2013); Nethaji & Sangeetha (2020)
3	NEP significance in Education	Verma & Kumar (2021); Kurien & Chandramana (2020); Gupta & Dixit (2021)

Source: Appendix A

The above table presents a synthesis of the core objectives addressed in the reviewed studies. It highlights key themes related to development, education, and the implementation of the National Education Policy (NEP). The findings indicate that a significant portion of the research has been driven by the growing need to support sustainable industrial practices, reflecting the increasing relevance of these areas in contemporary academic and policy discourse.

Table 3: Literature Review base on the Findings

SI	Findings	Contributor (s)
1	Competence of various stakeholder	Zimik & Barman (2023); Zimik et al., (2022); Zimik & Barman (2021); Zimik & Barman (2023);
2	Education and state roles for tourism Development	Franco et al., (2022); Nethaji & Sangeetha (2020); Ivanov & Soliman (2023); Mir et al., (2024)
3	sustainable Tourism & Economic benefit	Kunwar(2013); Gupta & Dixit (2021); Verma & Kumar (2021)

Source: Appendix A

The table above presents the key findings of the study, revealing that most of the reviewed literature consistently identifies and emphasizes the critical need for stakeholder competence, the pivotal role of education, and the contributions of the state. These elements are recognized as essential and rational foundations for promoting industrial sustainability.

In reviewing the existing literature, a pentagonal matrix framework was employed to analyze various research contributions based on their methodologies, findings, objectives, similarities, and uniqueness. A significant body of work underscores the importance of education in fostering societal, economic, and biodiversity balance. Zimik and Barman (2021) highlighted the importance of integrating stakeholders into the tourism industry, advocating for initiatives aligned with the NEP. Franco et al. (2022) introduced a unique global approach to educational programs, emphasizing standardized outcomes across countries. Nethaji and Sangeetha (2020) proposed a strong agenda for state involvement in education, suggesting that expert interventions are crucial for improving educational systems. A critical assessment of artificial intelligence (AI) in education by Ivanov and Soliman (2023) revealed that education should play a pivotal role in introducing new industrial platforms. Their systematic review of the relationship between tourism and education further identified sustainability as a key research focus. Kunwar (2013) argued that tourism education is an essential strategy for achieving sustainable development in the tourism sector. Kumar and co (2024) discovered that motivation, personality, and effort play critical roles in tourist behavior, with significant implications for tourism education. Gupta and Dixit (2021) emphasized the importance of tourism infrastructure in shaping effective educational strategies for tourism development. In their discussions on the NEP, Kurien and Chandramana (2020) and Verma and Kumar (2021) addressed the need to adapt educational practices for the 21st century, highlighting the development of competent youth and improvements to the education system.

In parallel with various research contributions, substantial work has been undertaken in the areas of infrastructure development, stakeholder competence, and academic interventions—emerging as recurring themes aimed at enhancing the performance of the tourism industry. A growing body of literature highlights the importance of academic engagement and stakeholder awareness in driving sustainable outcomes. To assess the uniqueness of specific contributions, Zimik and Barman (2023) introduced the concept of CE in the context of

the tourism industry. Their work represents a pioneering effort that bridges pragmatic application with academic inquiry, marking a notable advancement in the field. This contribution is particularly significant as it draws a parallel with the historical transition of Total Quality Management (TQM) from industrial practice to academic discourse. In a similar vein, the present study seeks to integrate CE principles into the educational framework through India's NEP 2020. This integration offers a unique and timely contribution by promoting industrial sustainability, enhancing stakeholder awareness, and equipping professionals with the competence to engage with the psychological dimensions of tourism.

Upon reviewing these contributions, it is evident that there is a noticeable gap in research regarding the integration of the CE concept into the NEP. This study aims to address this gap and contribute to the ongoing discourse on the future of education policy.

Methodology

This study adopts a descriptive research methodology, incorporating various contributions within the study domain. Secondary data from diverse sources, including books, scholarly articles, websites, and reports, have been analyzed to derive meaningful insights. Given the exploratory nature and complexity of the subject, a qualitative approach is employed to ensure a comprehensive understanding. To examine the mechanisms of the NEP 2020 and CE concepts, relevant models and their applications are discussed in detail. Despite the growing discourse on NEP and the extensive literature on education, there remains a lack of distinct studies that integrate diverse stakeholder perspectives and address pragmatic challenges in education. This gap necessitates a descriptive approach grounded in a rigorous review of existing research literature. Accordingly, this study aligns its methodology with its objectives to provide a well-founded analysis.

NEP 2020 for Enhancement of Indian Education System

Education is inherently multifaceted, and the NEP proposes a novel interdisciplinary approach that warrants serious consideration. This approach also emphasizes the importance of aligning with global advancements, particularly the progressive developments observed in Western education systems. The traditional education model, which focuses heavily on the transmission of information within a limited timeframe, calls for a transformation into a more dynamic and student-competency-oriented system. This shift is crucial as current educational outcomes, despite significant efforts and investments by the state remain below expected standards (Khan, 2024; Nganji et al., 2022). To address these challenges, it is recommended to introduce meaningful concepts and interventions at an early stage of education. Initiatives such as school outreach programs play a vital role in fostering student awareness and aligning them with comprehensive educational objectives. A notable feature of the NEP is its challenge to conventional education practices, which often emphasize expertise in a narrow domain while neglecting broader, interdisciplinary knowledge. NEP aims to address this gap by highlighting the vast opportunities available and encouraging a more holistic approach to education. The policy emphasizes the need for effective management of multidisciplinary frameworks to ensure a more flexible and dynamic implementation process. This vision is supported through expert interventions, including programs, seminars, and collaborative initiatives, which are integral to the NEP's strategy. The CE is uniquely positioned within this framework to enhance implementation outcomes by adopting a pragmatic approach. The extensive expertise and experience embedded within NEP make it a suitable platform for CE to receive the necessary focus and rational attention. By addressing existing gaps and areas for improvement, CE can adopt a more

proactive and practical approach to achieving educational and developmental objectives under the NEP framework.

Impact of CE on Tourism Development and Indian Education System

Based on the comprehensive discussion, the CE emerges as the ultimate response to various uncertainties surrounding the NEP. Conceptually, it can be argued that CE represents the future trajectory of NEP, serving as a flexible framework capable of addressing doubts and accommodating necessary modifications or changes in response to evolving questions and challenges.



Figure 2: Impact of CE on NEP 2020 and Tourism

Source: Authors Construct

A key aspect of the CE is its emphasis on fostering professional identity, which warrants careful consideration. CE integrates knowledge from diverse disciplines, creating a multidimensional framework for knowledge creation that can positively impact the tourism sector. This interdisciplinary approach aligns with the transformative objectives of the NEP, which actively encourages opportunities for incorporating foreign language learning as a tool for tourism development (Abduvakhabova, 2020). The effectiveness of CE is reflected in the positive outcomes achieved through collaborative strategies, aligning with the goals of enhancing tourist satisfaction and understanding tourist psychology through education (Çınar, 2020; Vaduva et al., 2020). It can be argued that policies rooted in collaboration and the production of competent, interdisciplinary outputs lead to sustainable outcomes, reinforcing the value of CE within the NEP framework (Diddi & Pandya, 2024; Sonwal, 2023). As noted by Zimik and Barman (2023) in their scholarly work, it is essential to consider and encourage investment in the CE within the tourism industry. However, this study aims to extend the application of CE beyond tourism to other sectors. The broad and expansive potential of CE's application forms a key focus of this research (Tomasi et al., 2020). The sustainable principles associated with CE have instilled confidence in investors, highlighting the importance of investing in CE. The generation of ideas requires robust support from CE, and a critical analysis of the various aspects related to it, coupled with a thorough assessment, has strongly affirmed the long-term potential for project growth and sustainability.

Result and Discussion

It is important to note that no aspect of the CE is permanent; it requires constant adaptation and change. The study, conducted with a focus on surveillance and examination, emphasizes the importance of hard work and the application of marketing concepts, including simulations and market experiments of policies, to achieve positive outcomes. This core focus of the study must be acknowledged with appropriate feasibility and practical consideration. The seriousness and strong commitment to practical application challenge conventional policymakers to deliver results through conscious, expert-driven approaches. This aligns with the ongoing effort to address research gaps within the NEP. CE has functioned as a catalyst for adapting innovative ideas and concepts already implemented globally, fostering flexibility and progress in the policy framework.

Currently, the concept of the CE has been implemented as an online course in prestigious institutions such as Oxford Home Study, demonstrating the practical application of these concepts. However, it is important to note that the full potential of CE in terms of academic excellence cannot be fully realized through limited platforms for disseminating information. Given the evolving dynamics of education and industry, coupled with technological advancements, there is a strong recommendation for adopting a pragmatic approach to CE. In many developing countries, including India, the recognition and implementation of CE concepts remain limited. Thus, there is a clear need to incorporate these concepts into the Indian education system through the NEP 2020. Moreover, a compelling case is made for the application of CE in educational frameworks, with a focus on practical implementation in line with the practices of developed nations—a strategy that has not yet been fully realized. Education provides an ideal platform to showcase the importance of implementing CE concepts and their benefits for the tourism industry. The global adoption of CE is reflected in numerous tourism reports and research publications, with notable contributions from Zimik and Barman (2023), who provide a pragmatic report on the status of CE. These works underline the need for a shift from theoretical to practical approaches in CE, making the concepts more accessible and understandable at both scholarly and foundational educational levels. This study advocates for the inclusion of CE in India's educational system through NEP 2020. The scholarly approach has successfully integrated education within the global context, primarily through research articles. Reports from UNWTO (2020), OECD (2024), UNWTO (2024), and WTTC (2019) provide reliable sources for the academic implementation of CE. Each literature review parameter offers a distinctive approach, addressing methodology, objectives, findings, and the uniqueness and similarities across various studies. This comprehensive review enables readers to understand the academic applications of CE and its potential to advance the tourism industry.

The opportunity to consider recommendations and improvements, with real-time applicability from various disciplinary perspectives such as technology, resources, efforts, and financial investment, further underscores the importance of CE in applying these concepts. This highlights the need for greater attention to CE's potential for practical implementation.

Conclusion and Recordation

In conclusion, the conceptualization of the CE has often been viewed as a limitation, a perception that this study strongly advocates for reconsideration. The findings from the discussion present a compelling argument for the integration of CE within the NEP. While NEP continues to uphold traditional educational principles, it must adapt to the evolving knowledge landscape and, if feasible, pave the way for the establishment of a new academic discipline, such as 'Constructed Environment.' Given the opportunities and growing interest, it is

essential for CE to receive equal emphasis, supported by dedicated funding and amendments for its incorporation into academic curricula. The implementation of CE concepts is a promising and sustainable approach, as demonstrated by successful applications in developed nations. This provides a solid foundation for its adoption in the academic sphere through NEP 2020. The flexibility of NEP allows for the inclusion of external expertise, facilitating a broader exchange of knowledge. This positive integration supports the shift from traditional educational models to those that embrace CE, fostering innovation and sustainability. In light of these considerations, this study strongly advocates for the formal implementation of CE concepts, positioning them as a vital component for the future of education and industry.

Recommendations

- **Skill Enhancement through Vocational Opportunities:** It is recommended that the NEP focus on providing students with real-world exposure through vocational training, enhancing their skills and knowledge to align with tourism industry demands and offering CE as a course under its wing.
- **Integration of Local and Advanced Knowledge:** The NEP should incorporate both local expertise and advanced skills to ensure that tourism industries are able to adapt to seasonal trends and sustain long-term growth for delivering real time data tracking and analysis.
- **Stakeholder Involvement in CE Implementation:** Given the collaborative nature of CE, the involvement of various stakeholders in its implementation through the NEP would create an ideal framework for tourism development. This gives more interest and enthusiasm for opt the course.
- **Steady Development through CE Integration:** The integration of CE in the NEP offers a significant advantage over educational systems that have not adopted CE, ensuring a steady and sustainable development model for tourism education.
- **Interdisciplinary Approach to Tourism Development:** The interdisciplinary nature of CE provides tourism education with the opportunity to access cutting-edge industry knowledge, promoting a holistic approach to tourism development.
- **Raising Awareness through CE:** One of the key benefits of CE is its ability to raise awareness among stakeholders for sound economy and ecology, enabling the NEP to gather rich insights into the challenges and potential for improving tourism performance.
- **Encouraging the Adoption of CE across Education Levels:** The NEP 2020 should actively encourage the adoption of CE across various educational stages, from secondary to higher education, to ensure a comprehensive understanding of the concept.
- **Opening Platforms for Expert Collaboration:** The NEP should create platforms for industry experts and experienced stakeholders to engage with students, fostering a dynamic exchange of knowledge and ideas. This has been the true intention of CE intended to deliver.
- **Flexibility of CE in Education:** CE's inherent flexibility allows it to accommodate diverse ideas, making it an ideal framework for practical, experience-based learning and fostering discussions on feasibility and real-world application.
- **Collaborative Efforts for Understanding Tourist Psychology:** CE promotes collaboration among state organizations and private institutions, providing an integrated approach to understanding and addressing tourist psychology, which is crucial for improving tourism experiences.

- **Enhancing Competence in Industry Practices:** CE's focus on industry competence and dexterity makes its integration into the educational system a logical and beneficial move, ensuring that students are well-prepared for the demands of the tourism industry.
- **Leveraging India's Education System for CE Implementation:** Given the vast reach of the Indian education system, it presents an unparalleled opportunity to implement CE through the NEP 2020, benefiting millions of learners and contributing to the development of a sustainable tourism industry.

One of the key features highlighted in the working mechanism of CE is its involvement of multiple stakeholders. In this context, the awareness and collaboration across various departments to improve tourist destinations are facilitated by the implementation of CE concepts within the tourism industry. Investing in CE presents an ideal approach due to its high sustainability, which aligns with achieving tourist expectations. The real-world application of CE can drive positive industry outcomes by shaping policies and efforts that incorporate tourist psychology and expectations, while also aligning with the perceptions and competencies of stakeholders. This underscores the significance of CE in practical applications, particularly within the academic framework provided by NEP 2020. The pentagonal review offers a robust research assessment, demonstrating the feasibility of CE through scholarly analysis and the practical recommendations derived from the PRM, promoting a more pragmatic approach to implementation. One of the key take away of this study is the necessity for academic institutions to move beyond rigid, fundamental courses and adopt forward-thinking approaches that foster academic advancement and excellence. The CE concept aims to contribute to this transformation by enhancing the delivery of expertise in a dynamic and interdisciplinary manner.

Declaration: The authors confirm that the content of this manuscript is original, has not been published in any form, and is not being reviewed by any other publication.

Acknowledgment: Special thanks to Professor Arup Barman for his invaluable guidance and genuine support, which have greatly contributed to my current position. I am also deeply grateful to Professor Santosh for his kindness and assistance in completing my research work.

Funding: NA

Conflict of interest: The authors confirm that they have no financial or personal conflicts of interest that may have affected the findings of this study.

Ethics approval/declaration: NA

Consent to participate: NA

Consent for publication: Approve by all the authors

Data availability: The data used in this study are secondary in nature and have been sourced from various publicly available websites, books, and articles.

Authors contribution: Professor Barman served as the principal investigator of the study, contributing through continuous and rigorous discussions, monitoring the progress of the report, and guiding idea generation. Dr. Zimik was responsible for drafting and documenting the development of key concepts, while Professor Santosh contributed by developing the analytical matrix and compiling the literature review section.

Appendices

Appendix A: Pentagonal Review Matrix

SI	Particular	Method	Objectives	Findings	Similarity	Uniqueness
1	Zimik & Barman (2023)	Descriptive	CE as the important aspect for tourism Development	Competence of stakeholders are essential	Infrastructure as the key elements of CE is essential for tourism	CE concepts need to be incorporated while framing policies
2	Zimik et al., (2022)	Descriptive	Analyze & construct a tourist satisfaction model	Acuteness of policies maker in tourism and infrastructure	Accounting fourteen pillars in tourism	Tourist behavior depends on Spot, Motivation, Influencer, & Route mode
3	Zimik & Barman (2021)	Descriptive	Analyze the impact and status of CE in Manipur	Poor performance and for economic sustenance; the role of CE is significance	Policies need to favor tourism industries	Triangulation review matrix
4	Zimik & Barman (2023)	Descriptive	Analyze the status of CE in global	Consciousness of stakeholder need to perceive tourist expectations	Tourism with CE could result in economic viable	Maslowian triangle adoption to understand tourist psychology
5	Zimik & Barman (2024)	Descriptive	Analyze the role of stakeholder in explicit and implicit	Stakeholder serve as a backbone to tourism	Competence in tourism activities is the need of the hour	Construction of competence matrix
6	Franco et al., (2022)	Descriptive	Academic approach in line with the tourist expectations	Education tourism has a good opportunity and scopes	Education tourism is the promising and growing trend	Globally analyzing the mobility program of tourism
7	Nethaji & Sangeetha (2020)	Descriptive	Analyze the professional expert involvement in academic	The state need to consent from the institutions	State encourage tourism education system	Skills and knowledge for tourism development need to be redefine
8	Ivanov & Soliman (2023)	Descriptive	Evaluate the disturbance cause by Chat GPT on tourism education	University needs to assess and modify its teaching approach for tourism study	Digitalization and AI would impact tremendously in future	Application of AI and comparing with the education institute
9	Ramis et al., (2023)	Bibliometric Analysis	Analyze the relation between tourism and education	Most of the articles work are based on sustainability principles	Tourism study mainly focus on the environment, culture, & social promotion	The sensitization of sustainability depends on stakeholder consciousness
10	Kunwar (2013)	Descriptive with the help of model	Conduct tourism and education as disciplinary approach	Many social scientist and activities has considered the economic, social, and cultural aspect of the industries.	Tourism education as the main source of tourism development	Technical and skill orientation of the education
11	Kumar et al. (2024)	Descriptive	To examine the critical view point of tourist viewpoint	Analysis the motivate tourist venture the destinations	Stakeholder strategies, responsibility toward sustainable tourism	Collaborative perspectives of motivation, personality, attitude, and environment

12	Mir et al., (2024)	Descriptive	A systematic review methods	Government and association involvement is essential for tourism development	Tourism serving community is essential for tourism development	Cultural involvement enhance economic status and hospitality
13	Gupta & Dixit (2021)	Descriptive with ANOVA	Share suggestion to enhance tourism educations	Involvement of local entrepreneur is essential for tourism development	Adequacy in education is essential for tourism industries	Education related to tourism infrastructure is essential
14	Kurien & Chandramana (2020)	Descriptive	To analyze the impact of NEP on higher education	Highlights the develop professionalism in multidisciplinary	Education policies is essential for new generation learner	Evidence base decision policies of the NEP performance
15	Verma & Kumar (2021)	Descriptive	NEP enhance the standard of education	NEP intend to work as the need of the 21 st century	NEP 2020 serve as the prerequisite for improving the education system in India	investigating various education policies implemented in India with the pros and cons assessment

Reference

- A. Barman & S. Zimik. (2021). Developing Tourism in Northeast India- Need for a Censure of its Policy & Governance. World Education Organisation, , NA.
- A. Barman & S. Zimik. (2021). Developing Tourism in Northeast India- Need for a Censure of its Policy & Governance. World Education Organisation, NA.
- A. Dias, J. Viana, & L. Pereira. (2024). Barriers and policies affecting the implementation of sustainable tourism: the Portuguese experience. *Journal of Policy Research in Tourism, Leisure and Events*, , pp. 1–19, <https://doi.org/10.1080/19407963.2024.2314514>.
- A. Kumar, S. Singh, & K. Singh. (2024). Understanding Sustainable Tourist Behaviour Through a Critical Perspective of Motivation, Personality, Attitude, and Environment Sustainable Tourist Behaviour Through a Critical Perspective. In NA, *Achieving Sustainable Transformation in Tourism and Hospitality Sectors*Chapter: Chapter-17 (pp. 279-293). NA: IGI Global publishing.
- A. Kurien & S. Chandramana. (2020). Impact of New Education Policy 2020 on Higher Education. *Atma Nirbhar Bharat: A Roadmap to Self-reliant India* (p. DOI:10.6084/m9.figshare.13332413.v1). Thiruvalla: NA.
- A. Mandic, Ž. Mrnjavac, & L. Kordić. (2018). Tourism Infrastructure, Recreational Facilities And Tourism Development. *Tourism and Hospitality Management*, Volume 24, Issue 1, pp. 1-22.
- A. Morales, J. Martínez, & S. McCabe. (2016). Seasonal concentration of tourism demand: Decomposition analysis and marketing implications. *Tourism Management*, Volume 56, pp. 172-190.
- A. Shardy, A. Razak, & M. Jaafar. (2014). Public Tourism Infrastructure: Challenges in the Development and Maintenance Activities. *SHS Web of Conferences* (pp. 1-7). NA: EDP Sciences.
- A. Yousaf, I. Amin, & J. Santos. (2018). Tourists' Motivations to Travel: A Theoretical Perspective on the Existing Literature. *Tourism and Hospitality Management*, Volume 24, No. 1, pp. 197-211.
- Abdovakhabova, U. (2020). Education in Tourism Industry-Challenges and Opportunities. 6.
- Afsahhosseini, F. (2020). Technology in Tourism. *Culture, People and Technology – The Driving Forces for Tourism Cities: Proceedings of the 8th ITSA Biennial Conference 2020* (pp. 368-381). UK: The British Library.
- B. Boers & S. Cottrell. (2007). Sustainable Tourism Infrastructure Planning: A GIS-Supported Approach. *Tourism Geographies*, Volume 9, Issue 1, pp. 1-21, <https://doi.org/10.1080/14616680601092824>.

- B. Nethaji & R. Sangeetha. (2020). A study on tourism education in India. *Malaya Journal of Matematik*, Volume S, No. 2, pp. 1489-1491.
- B. Seetanah, J. Devi, MJ Lamport, & S. Rojid. (2011). Does Infrastructure Matter In Tourism Development? *University of Mauritius Research Journal*, Volume 17, Issue 1, DOI:10.4314/umrj.v17i1.70731.
- Barman, A. (2013). Atithi Devo Bhava: In Search of Ways for Tourism Innovation in North East India. *National Seminar on Promotion of International Tourism Circuit in North East India- The Prospect, Priorities, and Strategic Options* (p. <http://dx.doi.org/10.2139/ssrn.2217306>). Silchar: ICSSR.
- C. Barros & B. Sousa. (2019). Price and Marketing Strategy in Tourism Contexts: A preliminary study to mitigating seasonality. *International Journal of Marketing, Communication and New Media*, Volume 7, No 12, pp. 24-38.
- Çınar, K. (2020). The Digital Revolution: Impact on Tourism Education. 8(4).
- Dalir, S. (2024). Innovative strategies to tackle seasonality issue in hospitality and tourism industry. *International Journal of Contemporary Hospitality Management*, Volume 36, No. 5, pp. 1690-1709. <https://doi.org/10.1108/IJCHM-09-2023-1382>.
- Dey, R. (2023, November 19). UNESCO. Retrieved December 6, 2024, from UNESCO Web site: <https://www.uil.unesco.org/en/articles/india-national-education-policy>
- Dogra, T. (2020). Impact of Covid-19 on the Tourism Industry in India. *International Journal of Advanced Research*, Volume 8, Issue 11, pp. 273-278, DOI:10.21474/IJAR01/12006.
- E. Munaf, S. Amar, Idris, D. Wanda & Z. Alhadi. (2019). The effect of infrastructure development on the development of tourism area and living environment of Carocok Beach, Painan. *The 1st International Conference on Environmental Sciences* (pp. 1-6). NA: IOP Conf. Series: Earth and Environmental Science 314.
- E. Šimková & J. Holzner. (2014). Motivation of Tourism Participants. *Social and Behavioral Sciences*, Volume 159, pp. 660 – 664.
- Efthimiou, S. (2024). The Adaptation of Tourism Industry and COVID-19. *Theoretical Economics Letters*, Volume 14, No.6, DOI: 10.4236/tel.2024.146103 .
- F. Fernandes & O. Nirgude. (2024). Decentralized Education in India: Unleashing the Power of Gurukul Wisdom and Artificial Intelligence for Access, Equity, and Elevated Learning Quality. *Library Progress International*, Volume 44 No. 3, pp. 530-540 .
- G. Hampton & A. Gent. (1984). *Marketing Aspects of International Business*, Volume 7. NA: Springer Nature.
- H. Aguinis, S. Kraus, J. Poček, N. Meyer, & S. Jensen. (2023). The why, how, and what of public policy implications of tourism and hospitality research. *Tourism Management*, Volume 97, <https://doi.org/10.1016/j.tourman.2023.104720>.
- H. Parlindungan, A. Masatip, & H. Manurung. (2021). Tourism Investment and Financial Digital . *European Journal of Science, Innovation and Technology*, Volume 1, Issue 4, pp. 30-44.
- H. Verma & A. Kumar. (2021). New Education Policy 2020 of India: A Theoretical Analysis. *International Journal of Business and Management Research*, Volume 9, Issue 3, pp. 302-306.
- I. Sánchez & R. Andreu. (2012). Cooperation between public and private tourism sectors in the Costa Blanca Region (Spain). *Athens Tourism Symposium: International Scientific Congress on Current Trends in Tourism Management and Tourism Policy with a special track titled "Managing Tourism in Times of Crisis"* (p. DOI:10.13140/2.1.3945.6965). Athens: NA.
- J. Abbas, R. Mubeen, P. Iorember, S. Raza, & G. Mamirkulova. (2021). Exploring the impact of COVID-19 on tourism: transformational potential and implications for a sustainable recovery of the travel and leisure

- industry. *Current Research in Behavioral Sciences*, Volume 2, <https://doi.org/10.1016/j.crbeha.2021.100033>.
- J. Diaz & D. Kien. (2019). *Tourism Finance: Investing and Financing in Sustainable Tourism*. *Jurnal Ekonomi dan Bisnis Jagaditha*, Volume 6, pp. 72-77.
- J. Khadaroo & B. Seetanah. (2007). Transport infrastructure and tourism development. *Annals of Tourism Research*, Volume 34, Issue 4, pp. 1021-1032, <https://doi.org/10.1016/j.annals.2007.05.010>.
- J. Lopes, P. Rodrigues, A. Borges, & E. Vieira. (2020). The role of intangible factors in the intention of repeating a tourist destination. *International Journal of Tourism Policy*, Volume 10, Issue 4, DOI: 10.1504/IJTP.2020.10034921.
- J. Prats & J. Duro. (2018). Tourist seasonality and the role of markets. *Journal of Destination Marketing & Management*, Volume 8, pp. 23-31.
- K. Nganji, J. Escamilla, J. Fung, & S. Hosseini. (2022). Impact of global government investment on education and research development: A comparative analysis and demystifying the science, technology, innovation, and education conundrum. *Global Transitions*, Volume 4, pp. 11-27.
- K. Ying & G. Krishnapillai. (2018). Young Domestic Tourists – Are They Motivated To Travel? *Advanced Science Letters*, Volume 24, Issue 5, pp. 3444-3449.
- Kunwar, R. (2013). Tourism Education, Curriculum Spaces, Knowledge Production, and Disciplinary Pluralism. *The Gaze Journal of Tourism and Hospitality*, Volume 9, pp. 83-155.
- L. Silver, C. Huang, & L. Clancy. (2023, February 9). Pew research Center. Retrieved December 6, 2024, from Pew research Center Web site: <https://www.pewresearch.org/short-reads/2023/02/09/key-facts-as-india-surpasses-china-as-the-worlds-most-populous-country/>
- Lu, Y. (2022). The Measurement of High-Quality Development Level of Tourism: Based on the Perspective of Industrial Integration. *Sustainability*, Volume 14, Issue 6, <https://doi.org/10.3390/su14063355>.
- M. Mainul & R. Razzak. (2023). A Comprehensive Analysis Of The New Education Policy 2020 In India: Implications, Challenges, And Opportunities For Transforming The Education System. *Education and Society*, Volume 47, Issue 2, pp. 122-129.
- M. Mir, B. Shelley, & C. Ooi. (2024). Uses of tourism resources for educational and community development: A systematic literature review and lessons. *Tourism Management Perspectives*, Volume 53, <https://doi.org/10.1016/j.tmp.2024.101278>.
- M. Ramis, P. Rosello, J. Balaguer, & A. Garcia. (2023). Research Progress on the Role of Education in Tourism and Hospitality. A Bibliometric Analysis. *Journal of Hospitality & Tourism Education*, pp. 1-11, <https://doi.org/10.1080/10963758.2023.2180377>.
- McLoughin, T. (2023, December 6). World Travel Market. Retrieved November 26, 2024, from World Travel Market Web Site: <https://hub.wtm.com/blog/trends/seasonality-in-tourism-how-to-adapt-your-marketing-strategy/>
- N. Franco, J. Sánchez, & E. López. (2022). Educational Tourism. *Journal of Administrative Science*, Volume 4, Issue 7, pp. 26-31.
- Nguyen, Q. (2021). Impact of Investment in Tourism Infrastructure Development on Attracting International Visitors: A Nonlinear Panel ARDL Approach Using Vietnam's Data. *Economies*, Volume 9, Issue 3, pp. 2-19.
- OECD. (2024). *OECD Tourism: Trends and Policies 2024*. Paris: OECD: Organization for Economic Cooperation and Development.

- P. Shill & B. Dey. (2023). Maslow's Hierarchy of Needs Theory in Sustainable Development in the Context of Tourism and the Opportunities and Challenges of Tourism: Chattogram Context. *Journal of Social Sciences and Humanities*, Volume 3, Issue 1, 172-197.
- P. Štumpf & T. Kubalová. (2024). Tangible or intangible satisfiers? Comparative study of visitor satisfaction in a nature-based tourism destination in the pre- and during-COVID pandemic. *Journal of Outdoor Recreation and Tourism*, Volume 46, <https://doi.org/10.1016/j.jort.2024.100777>.
- Pandya, K. D. (2024). Impact of NEP 2020 on Tourism Sector of M.P. through Higher Education Programmes. 14(1).
- R. Ramírez, M. Sánchez, H. Naranjo & J. Serrano . (2021). Tourism governance during the COVID-19 pandemic crisis: A proposal for a sustainable model to restore the tourism industry. *Environment, Development and Sustainability*, Volume 24, , pp. 6391–6412.
- S, Zimik & A. Barman. (2022). Cross-National State of Affairs on Performance of Tourists Attraction a Comparison Among India, Singapore, and Thailand. *The Interdisciplinary Research Journal of he AIIAS Graduate School*, Volume10, Issue 2, pp. 813-837.
- S. Gupta & S. Dixit. (2021). Contribution on Tourism Education in Creating Workforce for Tourism Industry: A Critical Assessment. *International Journal of Education, Modern Management, Applied Science & Social Science*, Volume 03, No. 02, pp.56-59.
- S. Ivanov & M. Soliman. (2023). Game of algorithms: ChatGPT implications for the future of tourism education and research. *Journal of Tourism Futures*, Volume 9, No. 2, pp. 214-221.
- S. Naik & D. Garge. (2023). A Study of Government Ingenuities: A Case Study of Tourism and Hospitality Industry in Maharashtra Post Covid-19. *The Online Journal of Distance Education and e-Learning*, January 2023 Volume 11, Issue 1, pp. 39-46.
- S. Tomasi, G. Paviotti, & A. Cavicchi. (2020). Educational Tourism and Local Development: The Role of Universities. *Sustainability*, Volume 12, Issue 17, pp. 2-15, DOI:10.3390/su12176766.
- S. Vaduva, S. C. (2020). The economic and social impact of a university education upon the development of the Romanian tourism industry. 27.
- S. Wen, X. Cai, & J. Li . (2021). Pro-Poor Tourism and Local Practices: An Empirical Study of an Autonomous County in China. *Sage Open*, Volume 11, Issue 2, <https://doi.org/10.1177/21582440211022740>.
- S. Zimik & A. Barman. (2021). Constructed Environment as Unkempt Issue in North East Indian Tourism : A Review Based Triangulation for Research. *International Journal of Multidisciplinary Educational Research*, Volume 10, Issue 5, pp. 137-153.
- S. Zimik & A. Barman. (2021). Constructed Environment as Unkempt Issue in North East Indian Tourism : A Review Based Triangulation for Research. *INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH*, Volume 10, Issue 5, pp. 137-153.
- S. Zimik & A. Barman. (2021). Whether Northeast India wishes to exploit its Tourism Potential? Some doubts. *International Journal of Creative Research Thoughts*, Volume 9, Issue 5, pp. 836-841.
- S. Zimik & A. Barman. (2021). Whether Northeast India wishes to exploit its Tourism Potential? Some Doubts. *International Journal of Creative Research Thoughts*, Volume 9, Issue 5, pp. 836-841.
- S. Zimik & A. Barman. (2022). Cross-National State of Affairs on Performance of Tourists Attraction a Comparison Among India, Singapore, and Thailand. *The Interdisciplinary Research Journal of he AIIAS Graduate School*, Volume10, Issue 2, pp. 813-837.
- S. Zimik & A. Barman. (2023). Emergence of Constructed Environment Concept for Tourism: A Study Base on Triangulation Review. 10th International Baskent Congress on Humanities and Social Sciences (pp. 381-386). Baskent: NA.

- S. Zimik & A. Barman. (2023). Emergence of Constructed Environment Concept for Tourism: A Study Base on Triangulation Review. 10th INTERNATIONAL BASKENT CONGRESS ON HUMANITIES AND SOCIAL SCIENCES (pp. 381-386). Baskent: NA.
- S. Zimik & A. Barman. (2023). Global Trend and Roles of Constructed Environment in Tourism Development. *European Economics Letters*, Volume 13, Issue 3, pp. 783-793.
- S. Zimik & A. Barman. (2023). Global Trend and Roles of Constructed Environment in Tourism Development. *ralkjglka*, pp. 783-793.
- S. Zimik & A. Barman. (2023). Investment in Constructed Environment for Tourism Development. *Formosa Journal of Multidisciplinary Research*, Volume2, Issue 11, pp. 1799-1814, DOI:10.55927/fjmr.v2i11.6883.
- S. Zimik & A. Barman. (2024). Emerging Competencies for Tourism Management. In NA, *Futuristic Trends in Management*; Volume 3, Book 24 (pp. 208-217). NA: IIP Series.
- S. Zimik & A. Barman. (2024). Next Dynamics in Designing Artificial Intelligence to Support Tourism Development. *International Journal of Engineering Technologies and Management Research*, Volume 6, Issue 11, pp. 44-57, DOI:10.29121/ijetmr.v11.i6.2024.1465.
- S. Zimik & A. Barman. (2024). Next Dynamics in Designing Artificial Intelligence to Support Tourism Development. *International Journal of Engineering Technologies and Management Research*, Volume 6, Issue11, pp. 44-57, DOI:10.29121/ijetmr.v11.i6.2024.1465.
- S. Zimik & A. Barman. (2024). Role of Constructed Environment for Tourism Development: A Global Trend Analysis base on Triangulated Review. *Journal of Business Management and Economic Development*, Volume 2, Issue 1, pp. 159-190.
- S. Zimik & A. Barman. (2024). Sustainable Tourism through Novel Approach. *International Journal of Research and Review*, Volume11, Issue 5, pp. 252-266, DOI:10.52403/ijrr.20240530.
- S. Zimik & H. Goenka. (2021). Investigating Tourism Industries though the Lenses of Functional Management: A Concept Note. In NA, *Exploring the Paradigms for North East Development* (pp. 193-257). Guwahati: A M Publication.
- S. Zimik & H. Goenka. (2021). Investigating Tourism Industries though the Lenses of Functional Management: A Concept Note. In NA, *EXPLORING THE PARADIGMS FOR NORTH EAST DEVELOPMENT* (pp. 193-257). Guwahati: A M Publication.
- S. Zimik, A. Barman & R. Dey. (2022). Re-designing Tourists' Satisfaction Models through review Triangulations. *The British Journal of Administrative Management*, Volume 58, Issue 154, pp. 196-209.
- Sharma, M. (2009). *Tourism Infrastructure Development: A sustainable Approach*, First Editions. NA: Kaniska Publication.
- Smith, W. (2005). Seasonality in Tourism. *Annals of Tourism Research*, Volume 32, Issue 2, pp. 512-513.
- Sofronov, B. (2018). The Development of the Travel and Tourism Industry in the World. *Annals of Spiru Haret University Economic Series*, Volume18, Issue 4, pp. 123-137, DOI:10.26458/1847.
- Sonwal, P. (2023). Impact of the National Education Policy 2020 on Education Tourism and Hospitality in India . 3(3).
- Srivastava, K. (2017). Role of Philosophy of Education in India . *Tattva-Journal of Philosophy*, Volume 9, No.2, , pp. 11-21.
- T. Albayrak, M. Caber, & S. Aksoy. (2010). Relationships of the Tangible and Intangible Elements of Tourism Products with Overall Customer Satisfaction. *International Journal of Trade Economics and Finance*, Volume 1, Issue 2, pp. 140-143.

- T. Lacy, M. Battig, S. Moore, & S. Noakes. (2002). *Public/Private Partnerships for Sustainable Tourism*. Singapore: Asia Pacific Economic Cooperation Secretariat.
- T. Tichaawa & J. Saarinen. (2024). From recovery to resilience building in tourism. *Development Southern Africa*, Volume 41, pp. 667-668.
- UNWTO. (2020). *Global Code of Ethics for Tourism*. Madrid: UNWTO: United Nation World Tourism Organization.
- UNWTO. (2024). *UN Tourism Barometer*. Madrid: UNWTO: United Nation World Tourism Organization.
- V. Pertiwi & B. Harmawan. (2022). Tourism Management Issues and its Relationship with the Sustainable Development Goals. *Jurnal Borneo Administrator*, Volume 18, Issue 1, pp. 51-64.
- Vettukad, T. (2024, May 14). DPU. Retrieved December 6, 2024, from DPU Web site: <https://acs.dypvp.edu.in/Blogs/empowering-indias-future-the-promise-of-national-education-policy-nep>
- W. Teniwut & T. Ngangunb. (2020). The Effect of Tangible and Intangible Aspects on Satisfaction of Seaweed Information Center's End-Users in Indonesia. *Internaitonal Journal of Business*, Volume 25, Issue 1, pp. 99-110.
- WTTC. (2019). *Travel and Tourism: Global Economic Impact & Trends 2019*. London: WTTC: World Travel and Tourism Council.
- Yogesh, E. Khedkar, & S. Pawar. (2019). Challenges and solutions to the development of the tourism and hospitality industry in India. *African Journal of Hospitality Tourism and Leisure*, Volume 8, Issue 3, pp. 1-11.
- Z. Khan. (2024, February 7). Financial Express. Retrieved December 7, 2024, from Financial Express Web site: <https://www.financialexpress.com/jobs-career/education-despite-an-increase-in-spending-a-large-number-of-students-in-india-still-struggle-for-quality-education-3386386/>
- Zill, Z. (2022). Tourism Sector Recovery Amidst of Covid-19 Pandemic. *Journal of Digitainability Realism & Mastery*, Volume 1, pp. 67-72.