Enhancing English Communication Development: The MOORA Method Approach

Sandip Nana Dhamale

Government Polytechnic, Jalgaon, Maharashtra, India.
Corresponding Author Email: sndhamale123@gmail.com

Abstract: *In Indian schools, there are numerous hurdles associated with English communication, particularly within the secondary school curriculum. High school education in Indian typically follows a top-down approach when structuring curriculums, which is believed to impact students' communication skills later on during university studies. The communication courses offered at the tertiary level aim to enhance students' proficiency beyond what they learned in secondary school, fostering a gradual progression in their communication abilities. While several studies have delved into these issues, there's limited attention given to understanding the expectations and obstacles faced by both students and teachers. Within engineering education, accreditation methods have been implemented to meet international standards. English classes, specific to engineering majors, supplement the general English courses provided. The program, titled Effective English Communication for Teaching and Research (EECTR), aims to offer English language assistance to all academic staff within the institution. This paper outlines the process of developing and adjusting our initial plans for program delivery, considering various contextual limitations, and applying a theoretical framework that emphasizes reflection within a comprehensive genre-based approach. Our discussion in this paper revolves around unpacking the discourse between the providers and recipients of EECTR. By detailing the development of a contextualized, reflective genre-based approach to staff training, we aim to illustrate that such an approach extends beyond mere structural directives. Instead, it represents pedagogy of possibilities within the context of staff development. The study emphasizes the significance of utilizing installed capacity within a production plant, particularly in evaluating the MOORA score. However, discrepancies arise between expert opinions and data, notably in assessing solar energy and geothermal electricity. While solar energy is renewable, its limitations in accessibility and efficiency diminish its prominence as a primary power source.*

Keywords: *English communication in India, English Important, MOORA*

1. INTRODUCTION

English held a status in India primarily confined to literature, predominantly taught with a traditional emphasis on reading and writing, while neglecting the development of listening and speaking skills. However, as highlighted in the 12th Planning Commission Working Group on Teacher Education (2011), the last decade has witnessed significant pressure on the state school system. This period has been characterized by a substantial shift in the school-going population from state-run schools to private institutions, driven by efforts to enhance access to education. This shift has led to the enrollment of students who previously had limited exposure to formal education, particularly in English. While this transition has presented challenges to the education system at large, its impact on English education has been noteworthy. This is evident in the remarkable increase of 280 % in demand for admission to English medium schools in 2012.

Hema Ramanathan's research emphasizes the escalating importance of English in India. Despite being technically categorized as an associate official language, English is acknowledged as an "additional" national language, placing its status closely alongside Hindi, the national language. In certain states like Arunachal Pradesh and Nagaland, English holds the position of a state language. It functions as the primary language in business, administration, and is a compulsory language for civil service exams, available in both English and Hindi, while accommodating local languages where relevant. Within the public school framework, Hindi and English, representing the official and associate official languages, are compulsory subjects among the three

languages taught. Ramanathan notes an increasing demand for private English medium schools, with approximately 40% of students now attending these institutions according to a study she references.

Furthermore, unlike in certain countries where English is predominantly viewed by students and educators as an academic subject—such as in Thailand or Japan—India places a strong emphasis on English proficiency beyond academic performance. Proficiency in English is valued for social interactions and business communication. Similar to Bangladesh and Pakistan, individuals lacking English proficiency in India might encounter limited university options and, consequently, restricted career paths. Despite acknowledging the government's ongoing efforts to improve English language education, the author points out several challenges. These include the coexistence of multiple languages in education, insufficient alignment between teaching methods and assessments, an inflexible curriculum, and inadequate teacher training. These challenges raise fundamental questions within the chapter: How can English effectively be taught as a first, second, and foreign language in the same educational setting? How can the curriculum be adapted to meet the diverse needs of learners? What kind of teacher education is essential to adequately support varied groups of learners?

Typically, critical relevant talents are the most crucial for work opportunities. Regardless of the job seeker in Korea, Eng-lish is regarded as one of the most crucial talents. primary fields. English communication abilities are becoming a crucial employment requirement. Applicants must have experience working both domestically and overseas. Additionally, this is accurate for Asian and European Union nations. There are some nations where English is not a first language, including China and Japan. English is used by engineers in various aspects of their job all throughout the world. English is not widely spoken in the nations of the European Union and in Asia, particularly China and Japan. English is used in the majority of international organizations and publications in the engineering field, and most engineers consider the fact that their native language is not English to be a disadvantage in terms of their profession [1]. Engineers globally frequently utilize English in some aspect of their professional endeavors. Even non-native English speakers must continuously improve their English proficiency through ongoing education; estimates suggest it takes between 4 to 10 years of practice to achieve an average level of proficiency [2]. This pursuit of English proficiency adds to the already demanding task of mastering engineering skills. The Accreditation Board for Engineering Education in Korea (ABEEK) emphasizes the importance of English communication skills for engineering students, aiming to equip them with the ability to effectively collaborate across borders in their respective fields. Industries like IT, civil engineering, construction, and electrical/electronics, which are prevalent in Korea, experience high demand on the international job market. Engineering projects often implement accreditation systems. As of 2011, 651 programs across 97 universities and colleges in Korea were accredited, showcasing the extensive scope of the Eng's objective. According to a survey, "Practical English or language-related subjects" emerged as the most beneficial area for securing employment within the "Special General Curriculum Subjects" of the accreditation system [3]. Universities like Busan National University and Honan University offer courses like "Practical English for Engineers" and "Engineering English," respectively, incorporating two types of English courses. Typically, the first course covers general English, while the second focuses on engineering English or business English. Kwangwoon University offers a program titled "Engineering Technical English," aligning with the standards set by the international engineering community. To assist students in globalizing their careers, universities structure their curriculum to include general English classes in the initial years and ESP (English for Specific Purposes) courses in the later years. This arrangement aims to equip students with both foundational English skills and specialized language relevant to their fields.

2. MATERIAL AND METHODS

English in India reflects the interplay between local dynamics and global influence. Despite national language policies aiming to challenge the standard versus nonstandard English dichotomy within Indian English (Bhatt, 2005), these policies have had minimal impact on the actual language learning purposes and the curriculum implemented by teachers at the grassroots level. English maintains a predominant position above the other 17 official languages in terms of both status and prevalence. While technically considered an additional national language, it holds a formal status similar to Hindi, the declared national language. Three states—Arunachal Pradesh, Meghalaya, and Nagaland—have adopted English as their state language. However, beyond these constitutional designations, English serves as the lingua franca for official and commercial purposes. Notably, public examinations, including those necessary for civil services, are offered in English and Hindi, with provision for regional languages if available. The elevated status of English has been recently reinforced in the 12th 5-year plan, where the teaching of English has been placed on equal footing with subjects like science and math. The conventional English language teaching curriculum in government schools, still prevalent today, predominantly revolves around British literature's canonical texts and emphasizes traditional genres such as prose, poetry, and drama. The language aspect, receiving notably less attention, primarily delves into rules encompassing morphology, syntax, and phonetics, focusing on teaching about English rather than fostering active language use. This contributes partly to students' insufficient oral skills. Among the four language skills,

reading and writing historically hold greater significance in both teaching and assessment across all grade levels. The emphasis on functional language, basic structures, limited vocabulary, and strict word limitations on responses hinders students from developing their unique voices. Expressive literary elements are discouraged, and individual styles of expression carry little to no weight. It's only been in the past decade or so that there have been attempts to innovate in English teaching and testing by introducing oral skills into examination systems. However, implementing these changes at the individual teacher and classroom level proves to be an immensely challenging task.

The undeniable significance of English in India is matched by its increasing usage and user base. There's a unanimous recognition of the social and economic advantages associated with the language. A recent study has reinforced the correlation between English education and the breadth of job opportunities, highlighting that individuals proficient in English earn up to 34% more than those without such proficiency. However, formal instructional efforts fall short in meeting these demands or maintaining high curriculum and instructional standards. The inadequate focus on teacher training appears to guarantee a lack of synchronization between teaching practices and the necessary adaptations. It's imperative to prioritize building teacher capacity as a strategic initiative, fostering the development, growth, and excellence of educators. This necessitates introspection regarding their strengths and weaknesses, along with providing conducive conditions that facilitate optimal performance within their classrooms. The challenges within English language teaching in India aren't novel, but the sudden and swift expansion of educational access, particularly for students with minimal prior exposure to the language, brings forth several pressing questions. How can English effectively be taught as a first, second, and foreign language within the same educational environment? How can the curriculum be tailored to suit the distinctive needs of each group of learners? What form of teacher education is necessary to adequately cater to the diverse learner profiles? This evolving comprehension is beginning to influence choices in education. Take, for example, the differing interpretations of functional English between rural and urban areas, a contrast largely shaped by teachers' proficiency and the availability of English resources beyond the classroom for both teachers and students. These aspects notably mold how functional English is understood and put into practice across diverse learning environments.

The success of Continuous and Comprehensive Evaluation (CCE) is often assumed if implemented faithfully, with the belief that a significant shift in the mindset of experienced teachers regarding grading practices is essential. This cultural transformation, challenging entrenched beliefs and ingrained habits of thinking among teachers, should be the core focus of ongoing professional development. Despite an urgent need for substantial changes in the educational landscape, alterations in the broader context often trickle slowly into English classrooms. However, immediate and crucial reforms specific to issues faced by English teachers, particularly concerning their beliefs and behaviors, seem lacking, despite findings by the Justice Verma Commission in 2012.There's a pressing requirement for extensive research in every facet of English Language Teaching (ELT). Amol Padwad's comprehensive compilation of research studies in ELT in India (2014) vividly highlights the absence of coherent, relevant, and up-to-date research that reflects the evolving educational landscape. Without a localized and contextualized knowledge base (Mahboob, 2014), policies and practices might be driven by arbitrary decisions (Farr & Song, 2011), further solidifying the dominance of Standard English (Bhatt, 2005).

MOORA Method: The utilization of installed capacity within a production plant, particularly where a contract engine is situated, serves as a primary determinant in establishing the MOORA score. However, when it comes to contrasting solar energy and geothermal electricity, there exists a divergence between expert opinions and obtained data. Solar energy, despite being a renewable source, faces limitations due to accessibility, its extensive availability, and relatively poor efficiency, rendering it less preferable as a primary power source. MOORA, a robust method in multivariate decision-making for stock type and dealer selection, proves effective in scenarios with conflicting standards. The approach encompasses crucial measures that gauge the discrepancy between each option and recommend potential solutions. It computes the distance from both ideal and less favorable solutions based on specific criteria types. Additionally, it calculates scores for each option and assesses them against a standard value utilizing the CVPFRS model. Employing MOORA for a comprehensive evaluation of alternatives aids in softening judgments and ranking possibilities, albeit in an adversarial manner, especially in the context of selecting hydrogen mobility options. However, each method, including MOORA, has its inherent strengths and limitations. The MOORA approach is suggested for its applicability within the role category under consideration [18]. The MCDM (Multi-Objective Optimization by Ratio Analysis) MOORA (Multi-Objective Optimization on the basis of Ratio Analysis) approach is a sophisticated method employed in decision-making scenarios characterized by multiple criteria. This method is designed to streamline the evaluation and ranking of various alternatives when faced with conflicting objectives. It operates through several key steps: initially, the criteria and alternatives undergo normalization to ensure fair and comparable assessments. Subsequently, weights are assigned to each criterion, reflecting their respective importance in the decision-making process. Each alternative is then meticulously evaluated against these criteria, generating scores that reflect their performance in each aspect. Ratios are calculated to determine the relative performance of each alternative

against each criterion. These ratios are then aggregated to provide an overall assessment, facilitating the ranking of alternatives based on their aggregated scores. The MOORA method stands as a structured and systematic approach, offering valuable assistance in scenarios where diverse criteria need to be considered to arrive at the most optimal decision.

3. RESULTS AND DISCUSSION

TABLE 1. English Communication Development

	E-Learning Environment	Webpage Connection	Learning Records	Instruction Materials
Analysis	55.06	150.39	36.05	22.05
Design	40.05	142.97	33.69	27.30
Development	67.05	122.58	29.18	23.10
Implementation	50.00	155.36	50.00	50.00
Evaluation	45.36	140.50	24.60	17.59
Vac	51.50400	142.36000	34.70400	28.00800

In the realm of English Communication Development within the E-Learning environment, an insightful examination of various components reveals intriguing values. Analysis demonstrates a notable emphasis on the webpage connection with a score of 55.06, closely followed by learning records at 150.39 and instruction materials at 36.05. Design phase shows a balanced approach with significant weight on learning records (142.97) and instruction materials (33.69), alongside a focus on webpage connections (40.05) and development (27.30). Development stages showcase a pronounced attention to webpage connections (67.05), while maintaining considerable values in learning records (122.58) and instruction materials (29.18). Implementation is marked by robust, equal emphasis across all factors, each scoring a solid 50.00. Evaluations, though maintaining a consistent trend, exhibits relatively lower values, particularly in instruction materials (17.59) and webpage connections (45.36), while placing significant importance on learning records (140.50). these values illustrate varying degrees of emphasis across different phases, indicating the diverse priorities within the E-Learning environment concerning English Communication Development.
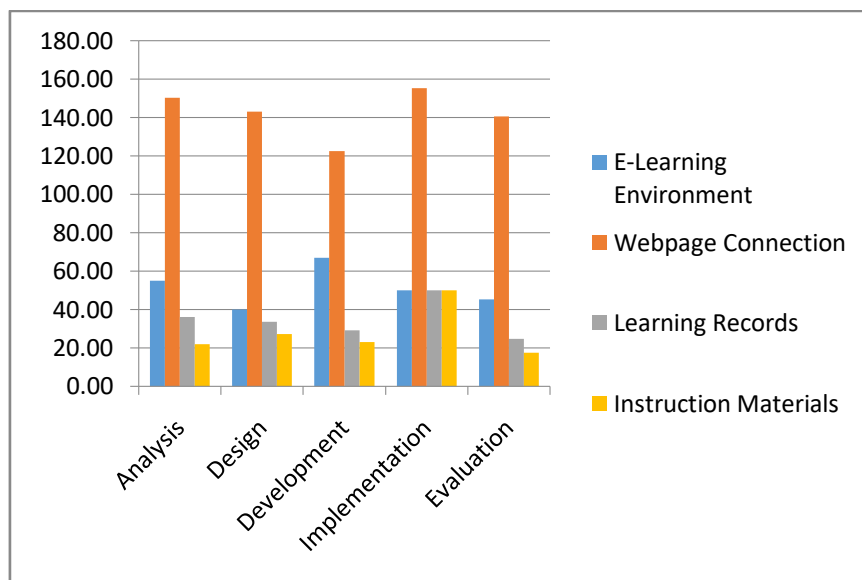

FIGURE 1. English Communication Development

Figure 1 shows the shows the English Communication Development using the Analysis method in EDAS. Analysis, Design, Development, Implementation, Evaluation. E-Learning Environment, Webpage Connection, Learning Records, Instruction Materials it is seen that Development is showing the Highest Value for E-Learning Environment and Design is showing the lowest value. Implementation is showing the Highest Value for Webpage Connection and Development is showing the Lower value. Implementation is showing the Highest Value for Learning Records and Evaluation is showing the lowest value. Implementation is showing the Highest Value for Instruction Materials and Evaluation is showing the lowest value.

TABLE 2. Normalized Data

	E-Learning Environment	Webpage Connection	Learning Records	Instruction Materials
Analysis	0.4307	0.4302	0.4136	0.3012
Design	0.3133	0.4089	0.3866	0.3729
Development	0.5245	0.3506	0.3348	0.3156
Implementation	0.3911	0.4444	0.5737	0.6830
Evaluation	0.3548	0.4019	0.2823	0.2403
Vac	0.4029	0.4072	0.3982	0.3826

The normalized data from Table 2 offers a different perspective on the weightage of factors within the E-Learning environment concerning English Communication Development. Analysis indicates relatively balanced importance across webpage connection (0.4302), learning records (0.4307), and instruction materials (0.4136). In the Design phase, while learning records (0.4089) hold substantial significance, webpage connection (0.3133) and instruction materials (0.3866) also play pivotal roles. Development stages reveal a pronounced focus on webpage connection (0.5245), followed by learning records (0.3506) and instruction materials (0.3348). Implementation displays a strong emphasis on instruction materials (0.6830), followed by webpage connection (0.4444) and learning records (0.5737), illustrating a distinctive priority shift. Evaluation showcases a relatively lower emphasis on instruction materials (0.2403) and webpage connection (0.3548) compared to learning records (0.4019).
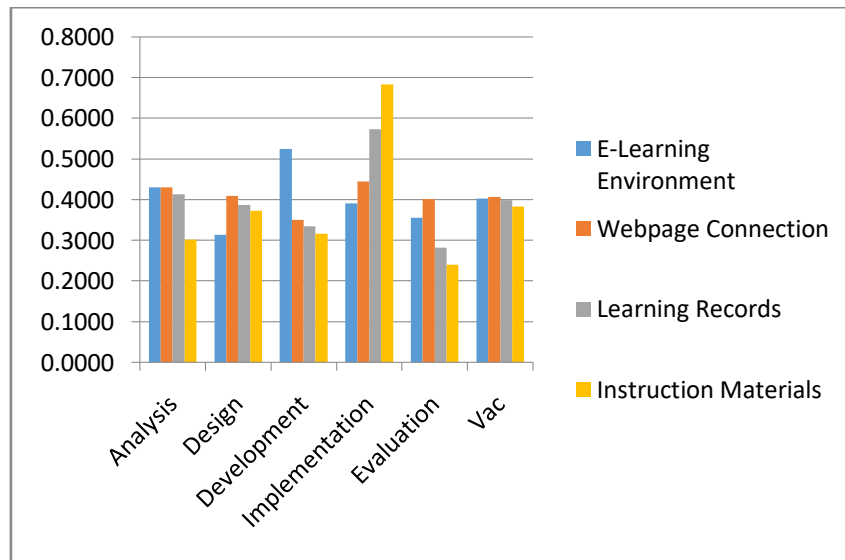

FIGURE 2. Normalized values

In figure 2, the normalized values elucidate varying degrees of importance allocated to different facets across the stages of English Communication Development in the E-Learning environment.

TABLE 3. Weight

	E-Learning Environment	Webpage Connection	Learning Records	Instruction Materials
Analysis	0.25	0.25	0.25	0.25
Design	0.25	0.25	0.25	0.25
Development	0.25	0.25	0.25	0.25
Implementation	0.25	0.25	0.25	0.25
Evaluation	0.25	0.25	0.25	0.25
Vac	0.25	0.25	0.25	0.25

The weight values in Table 3 seem to uniformly distribute importance across all facets—Webpage Connection, Learning Records, and Instruction Materials—equally within each stage across the E-Learning environment.

This equitable distribution suggests that each element holds an identical weightage, signaling a balanced consideration of these components in all phases of the English Communication Development process.

TABLE 4. Weighted normalized decision matrix

	E-Learning Environment	Webpage Connection	Learning Records	Instruction Materials
Analysis	0.1077	0.1075	0.1034	0.0753
Design	0.0783	0.1022	0.0966	0.0932
Development	0.1311	0.0877	0.0837	0.0789
Implementation	0.0978	0.1111	0.1434	0.1708
Evaluation	0.0887	0.1005	0.0706	0.0601
Vac	0.1007	0.1018	0.0995	0.0956

Table 4, the weighted normalized decision matrix, reflects a calculated assessment where the normalized values from Table 2 have been adjusted based on the weightings in Table 3. This process seems to have evenly distributed the influence of the weight values across the normalized data. Each cell in the matrix now presents a recalculated value that aligns with the assigned weights, maintaining proportional consistency among Webpage Connection, Learning Records, and Instruction Materials within each stage of the E-Learning Environment across the English Communication Development process.
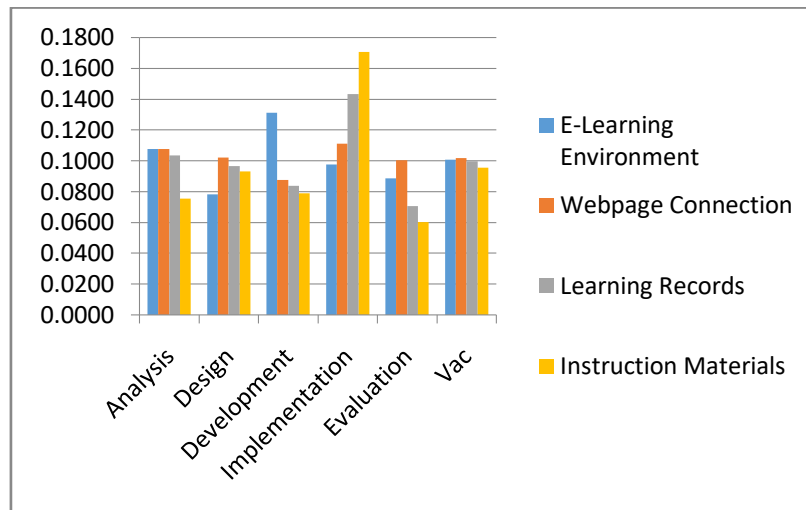

FIGURE 3. Weighted normalized decision matrix

Figure 3 shows each criterion is evaluated and assigned a weight in relation to each stage of the e-learning process, reflecting the perceived importance of these criteria during different stages of development. These weights could signify the relative significance or priority attributed to each criterion within the specific stages of the English language e-learning environment's development cycle.

TABLE 5. Assessment value

Analysis	0.3939
Design	0.3704
Development	0.3814
Implementation	0.5231
Evaluation	0.3198
Vac	0.3977

Table 5, labeled as the "Assessment value," appears to showcase calculated assessment values for each stage within the E-Learning Environment concerning the English Communication Development process. These values seemingly represent an overall assessment or scoring of the effectiveness, importance, or performance of each

stage. The values range between 0.3198 (Evaluation) to 0.5231 (Implementation), suggesting varying degrees of significance or impact attributed to these stages based on the assessment criteria or methodology employed.
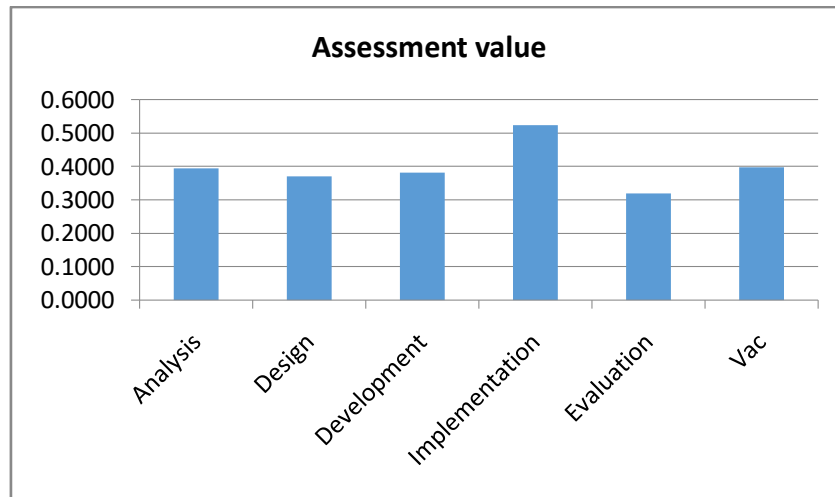

FIGURE 4. Assessment value

The figure 4 shows values range between 0.3198 (Evaluation) to 0.5231 (Implementation), suggesting varying degrees of significance or impact attributed to these stages based on the assessment criteria or methodology employed.

TABLE 6. Rank

Analysis	3
Design	5
Development	4
Implementation	1
Evaluation	6
Vac	2

Table 6, labeled as "Rank," seemingly lists the ranked positions of different stages within the E-Learning Environment concerning the English Communication Development process. Each stage is assigned a numerical rank from 1 to 6, with "Implementation" holding the top rank (1), indicating its perceived higher importance or effectiveness compared to other stages. "Design" follows with a rank of 5, suggesting a lower perceived significance, while "Evaluation" holds the lowest rank (6), possibly indicating its perceived lower impact or importance within this assessment framework.
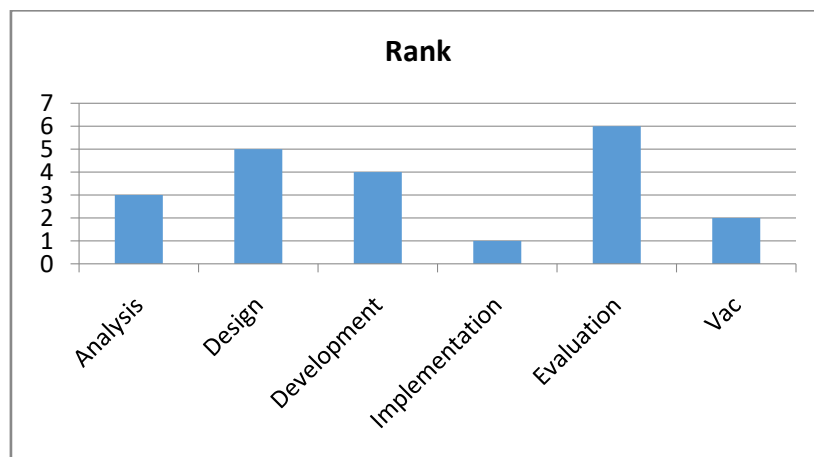

FIGURE 5. Ranking

In the hierarchical order of an e-learning environment's developmental stages, the ranking signifies the perceived significance or prioritization. At the helm sits Implementation, holding the paramount rank of 1, indicative of its pivotal role in the process. Following closely behind is Design, securing the second rank, setting the foundation for the subsequent stages. Development takes the third rank, vital in translating designs into functional elements. Analysis, ranked fourth, lays the groundwork for informed decision-making, followed by 'Vac' at the fifth position, possibly denoting a stage related to validation or verification. Finally, Evaluation, positioned at the sixth rank, underlines the importance of assessing and refining the completed system. This ranking structure outlines the sequential importance of each phase, guiding resource allocation and attention throughout the comprehensive development of the e-learning platform.

5. CONCLUSION

In conclusion, the assessment of English Communication Development within the E-Learning Environment involved a comprehensive evaluation across multiple stages—Analysis, Design, Development, Implementation, Evaluation, and Vac. Each stage was analyzed based on various factors, including Webpage Connection, Learning Records, and Instruction Materials. The assessment highlights varying degrees of importance assigned to different stages and factors within the E-Learning Environment's English Communication Development process. The prioritization of factors and stages can significantly influence the effectiveness and success of the overall development process. MOORA emerges as a powerful and structured tool in decision-making, providing a systematic evaluation process even in complex scenarios. Its applicability within role-specific categories remains substantial, although acknowledging that every method has its specific strengths and constraints. Nonetheless, MOORA's systematic approach proves invaluable in navigating complex decision-making environments.

REFERENCES

[1]. T. Orr, "Assessing Proficiency in Engineering English", IEEE transactions on professional communication, vol. 45, no. 1, (**2002**), pp. 40-44.
[2]. T. Orr and T. Aizuwakamatsu, "Constructing a Corpus of Fundamental Engineering English for Non-native Speakers", Professional Communication Conference, IPCC 2002 Proceedings, Reflections on Communication, IEEE international, (2002), pp. 403-409.
[3]. D. -j. Song, "A research on the proper curriculum to realize the developed phase of Mechanical Engineering education", 28th Forum on Engineering Education, (**2010**).
[4]. J. D. Cowling, "Needs analysis: Planning a syllabus for a series of intensive workplace courses at a leading Japanese company", English for Specific Purposes, vol. 26, (**2007**), pp. 426-442.
[5]. R. West, "Needs analysis in language teaching", Language Teaching, vol. 27 no. 1, (**1994**), pp. 1-9.
[6]. M. H. Long, "Methodological issues in learner needs analysis", Long M. H. (ed.) Second Language Needs Analysis, Cambridge: Cambridge University Press, (**2005**), pp. 19-76.
[7]. H. H. Kim, "A Development of a Technical English Syllabus Based on the Job Descriptions", the Journal of Studies in Language, vol. 23, no. 1, (**2007**), pp. 45-63.
[8]. Kirkpatrick, Andy, ed. *The Routledge handbook of world Englishes*. Routledge, 2020.
[9]. Mukherjee, Joybrato, and Tobias Bernaisch. "The development of the English language in India." In *The Routledge handbook of world Englishes*, pp. 165-177. Routledge, 2020.
[10]. Ramanathan, Hema. "Testing of English in India: A developing concept." *Language Testing* 25, no. 1 (2008): 111-126.
[11]. Clement, Aloy, and Tamil Murugavel. "English for Employability: A Case Study of the English Language Training Need Analysis for Engineering Students in India." *English language teaching* 8, no. 2 (2015): 116-125.
[12]. Ramanathan, Hema. "English education policy in India." *English language education policy in Asia* (2016): 113-126.
[13]. Chakraborty, Shankar. "Applications of the MOORA method for decision making in manufacturing environment." *The International Journal of Advanced Manufacturing Technology* 54 (2011): 1155-1166.
[14]. Brauers, Willem Karel, and Edmundas Kazimieras Zavadskas. "The MOORA method and its application to privatization in a transition economy." *Control and cybernetics* 35, no. 2 (2006): 445-469.
[15]. Karande, Prasad, and Shankar Chakraborty. "Application of multi-objective optimization on the basis of ratio analysis (MOORA) method for materials selection." *Materials & Design* 37 (2012): 317-324.
[16]. Brauers, Willem Karel M. "Multi-objective contractor's ranking by applying the MOORA method." *Journal of Business Economics and management* 4 (2008): 245-255.
[17]. Kalibatas, Darius, and Zenonas Turskis. "Multicriteria evaluation of inner climate by using MOORA method." *Information technology and control* 37, no. 1 (2008).
[18]. Brauers, Willem K., and Edmundas K. Zavadskas. "Robustness of the multi-objective MOORA method with a test for the facilities sector." *Technological and economic development of economy* 15, no. 2 (2009): 352-375.

[19].Brauers, Willem Karel M., Romualdas Ginevičius, and Valentinas Podvezko. "Regional development in Lithuania considering multiple objectives by the MOORA method." *Technological and economic development of economy* 16, no. 4 (2010): 613-640.

[20].Gadakh, Vijay S. "Application of MOORA method for parametric optimization of milling process." *International Journal of Applied Engineering Research* 1, no. 4 (2010): 743.

[21].Stanujkic, Dragisa, Nedeljko Magdalinovic, Rodoljub Jovanovic, and Sanja Stojanovic. "An objective multi-criteria approach to optimization using MOORA method and interval grey numbers." *Technological and Economic Development of Economy* 18, no. 2 (2012): 331-363.