

# The Impact of Task-Based Approach through Interdisciplinary Learning for Fostering Employability Skills among Technical Students

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## Abstract

With the increasing need for a workforce with diverse skill sets, educational institutions face the challenge of inventing teaching techniques that transcend disciplinary limits and foster crucial skills for career success. Task-Based Approach employs in creating and executing educational activities that revolve around real-world tasks, promoting a dynamic learning atmosphere. In contrast, Interdisciplinary Learning places emphasis on merging various disciplines to tackle challenges and find solutions. This study investigates the efficacy of using a Task-Based Approach (TBA) within an interdisciplinary classroom to foster the employability skills of students. This study also adds to the current discussion about teaching methods that ready students for prosperous careers in a professional environment that is more interconnected and complex. This research adopts a quantitative approach, where an online questionnaire distributed via Google Forms to assess the effectiveness of the Task-Based Approach in an Interdisciplinary classroom. The study examines a sample size of 760 technical students from selected colleges in Madhya Pradesh. The statistical technique employed for analysis is Multiple Linear Regression in the SPSS software version 2023, enabling the exploration of correlations and variations among independent and dependent variables. Overall, this study underscores the significance of implementing Task-Based methodology through an Interdisciplinary learning in nurturing employability skills among technical students, thereby making a meaningful contribution to their personal and professional success.

**Keywords:** Employability Skills, Interdisciplinary Learning, SPSS Software, Task-Based Approach, Technical Students.

## Introduction

In the changing realm of modern education, the challenge to prepare technical students for the complexities of the professional world extends beyond conveying theoretical knowledge. Many job advertisements do not list the specific subject matter expertise needed for the position; rather, the skills the applicant has acquired via their studies and other life experiences. The viewpoints and complexity of their standpoints are expanded in interdisciplinary students (1). An interdisciplinary student develops employable skills during their academic career, such as analytical and problem-solving abilities, self-management, communication and literacy, the ability to synthesize ideas, and adaptability. Similarly, the Task-Based Approach, grounded in the principles of experiential learning, deviates from conventional teaching by giving an importance on practical tasks and addressing real-world problem-solving.

At the same time, there is obvious pressure on higher institutions to increase on graduates' employability in order to defend the investment in higher fees, which has resulted for a greater importance on the practical application of knowledge. Higher education is still largely organised on a traditional, disciplinary basis, despite the fact that this changing landscape creates new needs for global citizens and future workers who are able to collaborate in interdisciplinary teams and take a holistic approach to complicated task challenges (2).

The study seeks to address the contribution of Task-Based Approach in an Interdisciplinary classroom for bridging the gap between academic practices and real-world application. The significance of the study focuses on incorporating a Task-Based Approach (TBA) as a pedagogical model in interdisciplinary classrooms, thereby preparing students in various career pathways.

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Through a thorough examination of the effects of TBA in interdisciplinary environments, this research aims to fill the gap and shed light on its capacity to refine the versatile skill set necessary for employability across various dynamic industries.

### **Literature review**

Business organizations and employers highlight a lack in skills among students and instruct universities to enhance their efforts in equipping graduates for the workforce. In response to the societal and economic expectations from both external and internal stakeholders, universities are actively exploring methods to enhance student employability. The curriculum strategy ensures that every student has assured access to relevant training aimed at boosting their employability (3). In many countries today, the Task-Based Approach is widely acknowledged as the benchmark for language teaching methods (4). It represents a pedagogical approach uniquely developed to enhance Second Language Acquisition (SLA). By immersing learners in authentic tasks that necessitate active use of the target language, TBA mirrors the dynamic nature of language communication (5). However, according to Ellis (6), TBA should not be viewed as a singular, but as all-encompassing solution. He suggests that both focused and unfocused tasks are integral to hybrid/Task-Based language acquisition. Focused tasks aim students to implicitly learn specific forms, whereas, unfocused tasks prioritize learner engagement and meaning-making.

Suntharesan (7) conducted an experimental study to enhance the communicative competence of L2 learners through Task-Based language teaching. The outcomes demonstrated that tasks in the language classroom generate motivation and create monotony among learners. Through the integration of Task-Based activities and the establishment of supportive learning environments, educators can cultivate positive learning outcomes, contributing to the overall success and satisfaction of language learners (8).

On the other hand, Interdisciplinary learning surpasses the traditionalism of individual disciplines, encouraging students to explore connections and intersections between different fields of study (9). It makes sense to combine knowledge from discipline-specific to develop a whole-institution strategy for enhancing student

employability (10). In a study conducted at the University of Salford in the UK (11), it was discovered that the interdisciplinary course was developed and implemented in the final year was successful. The comments, however, also stated that enough time was not cast aside for managing and delivering the training. Students may even be more capable of working on global challenges if they are aware of the diverse ways that different disciplines frame wicked problems and learn how to promote communication between them (12).

Interdisciplinarity is not an easy concept to teach or learn about, especially for academics who have spent most of their education and career entrenched in a disciplinary environment, as is pretty apparent. The topic of interdisciplinary learning and teaching provision becomes more important for institutions preparing students for a changing world while disciplines will continue to provide the basis of our knowledge (13).

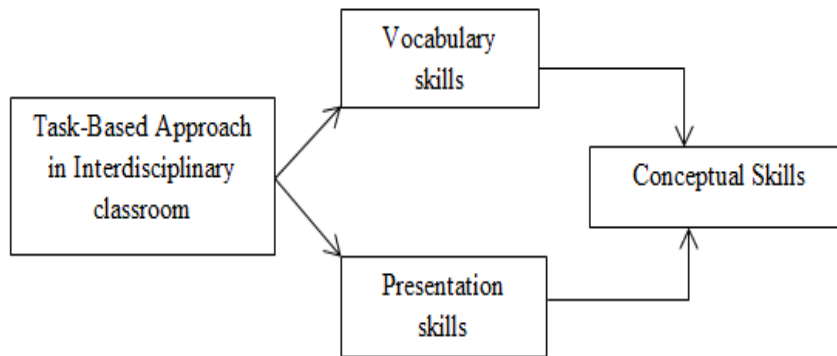
It is obvious that certain educational achievements associated with integrative methodologies, including written and verbal communication skills, teamwork proficiency, ethical decision-making, critical thinking, and the ability to apply knowledge in practical situations, align precisely with the outcomes accepted by both employers and university administrators as essential for all graduates (14).

### **Developing conceptual skills through Task-Based Approach within an Interdisciplinary classroom**

Task-Based Approach (TBA) in an interdisciplinary classroom represents an innovative and dynamic pedagogical strategy designed to foster students' capacity to comprehend, amalgamate, and apply abstract concepts across a spectrum of disciplines. TBA promotes collaborative work on tasks that include from diverse disciplines, allowing students to incorporate different perspectives (15). Participation in interdisciplinary tasks demands proficient communication, as students need to articulate concepts to peers from various academic backgrounds. Thus, it improves their communication abilities that makes a lucid and precise comprehension of the conceptual tasks. This educational strategy strengthens the connection between TBA and interdisciplinary learning, creating an environment that facilitates

the comprehensive development. In figure 1, the development of conceptual skills

through the TBA in an Interdisciplinary classroom is shown.

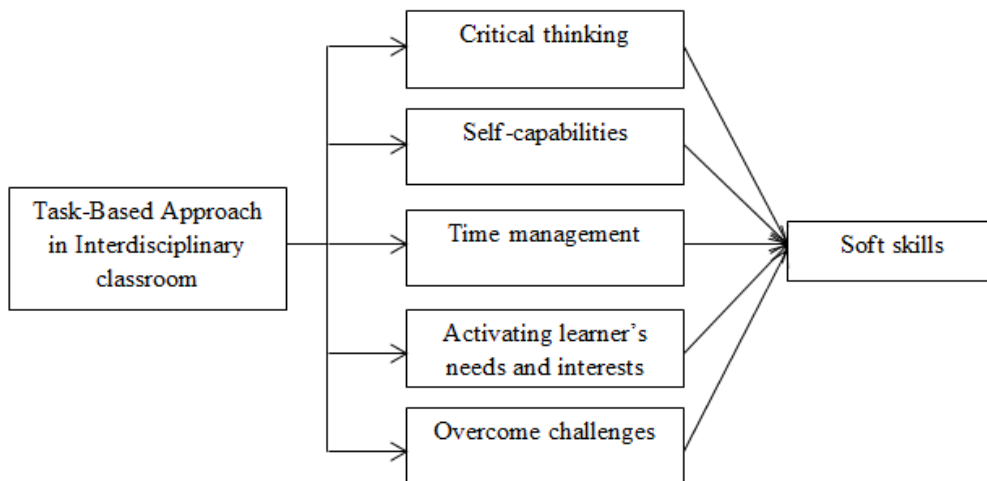


**Figure 1:** Theoretical framework of TBA in Interdisciplinary learning for developing conceptual skills

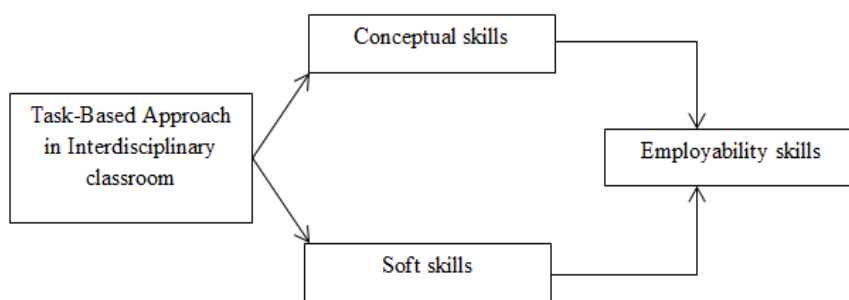
**Enhancing soft skills by implementing Task-Based Approach through Interdisciplinary learning.**

Integrating a Task-Based Approach (TBA) into an interdisciplinary classroom presents a strategic and effective approach to improve students' soft skills. Soft skills, which include communication, teamwork, adaptability, and interpersonal abilities, are crucial for success in different professional environments (16). Within

interdisciplinary classrooms, students face complex challenges that foster adaptability, flexible problem-solving approaches. This integration of TBA in an interdisciplinary learning serves as a comprehensive platform for refining soft skills. Through practical, real-world tasks, students develop a diverse skill set essential for navigating the changing professional demand. In figure 2, the development of soft skills through the TBA in an Interdisciplinary classroom is shown.



**Figure 2:** Theoretical framework of TBA in Interdisciplinary learning for developing soft skills



**Figure 3:** Theoretical framework of the hypotheses

**Objectives**

1. To analyse the importance of Task-Based Approach to develop employability skills among technical students.
2. To explore the advantage of Interdisciplinary learning among technical students to enhance employability skills.

**Hypotheses**

H<sub>0</sub>: There is no significant difference in developing conceptual skills through Task-Based Approach within an Interdisciplinary classroom.

H<sub>1</sub>: There is a significant difference in developing conceptual skills through Task-Based Approach within an Interdisciplinary classroom.

H<sub>0</sub>: There is no significant difference in enhancing soft skills by implementing Task-Based Approach through Interdisciplinary learning

H<sub>2</sub>: There is a significant difference in enhancing soft skills by implementing Task-Based Approach through Interdisciplinary learning.

In figure 3, the development of employability skills that constitutes both conceptual skills and soft skills through the TBA in an Interdisciplinary classroom is shown.

**Methodology**

This study employs a quantitative research design to examine the relationships between dependent

Variable and its predictors. The research aims to investigate the significance and the relation between variables. The data is analysed in SPSS software 2023 using multiple linear regression method as the analytical technique. The data for this study was collected through a convenience sampling method. A sample of 760 participants was selected for the study. The data was collected through a questionnaire which consisted of 13 questions that included their opinion on implementation of this approach and its impact. The data was coded in 5-point likert scale ranging from 1 to 5 (1-Strongly agree, 2-Agree, 3-Neutral, 4- Disagree, 5-Strongly disagree). The participants were the engineering students from selected technical colleges located at Madhya Pradesh, India. The data collection process ensured that the participants provided accurate and reliable responses to the survey questions.

In Table 1, the alpha coefficient for 13 items based on the implementation of Task-Based Approach in Interdisciplinary classroom is 0.872 which is greater than 0.75, suggesting that the items have relatively high internal consistency and fit for the study.

The histogram and P-P plot depicts that data is distributed normally across the population (Figure 4).

**Table 1:** Reliability of the variables

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.872	.873	13

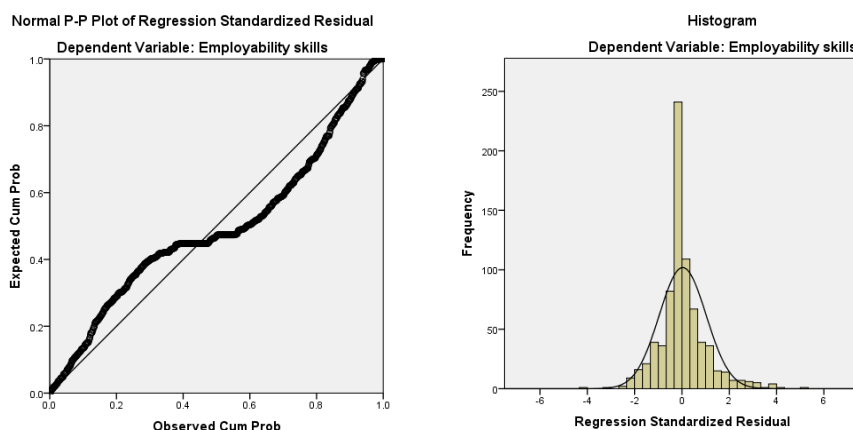


Figure 4: Normality plot

Table 2: Correlation among the dependent and independent variables

Dependent variable: Employability skills

		Language learning skills through TBA	Vocabulary skills through TBA	Student-centric through TBA	Conceptual skills through TBA	Conceptual skills through IL	Presentation skills through IL
Std. Cross-product	Employability skills	.926	.908	.916	.908	.914	.923
	Language learning skills through TBA	1.000	.930	.926	.915	.923	.922
	Vocabulary skills through TBA	.930	1.000	.918	.909	.917	.915
	Student-centric through TBA	.926	.918	1.000	.917	.921	.917
	Conceptual skills through TBA	.915	.909	.917	1.000	.914	.911
	Conceptual skills through IL	.923	.917	.921	.914	1.000	.924
	Presentation skills through IL	.922	.915	.917	.911	.924	1.000

The Table 2 shows the linear correlation values between the dependent variable and the independent variables. The range of the correlation coefficient is -1 to +1 in which 0.80 to 1.00 shows the highest correlation between the variables. The Pearson correlation for the dependent variable with the independent variables Language learning skills through TBA, Vocabulary skills through TBA, Student-centric through TBA, Conceptual skills through TBA, Conceptual skills through Interdisciplinary

Learning(IL), Presentation skills through IL, are 0.926, 0.908, 0.916, 0.908, 0.914 and 0.923. It can be said that the implementation of Task-Based Approach in an Interdisciplinary classroom among technical students develop conceptual skills such as learning a language, understanding the concepts of a subject and improves the presentation skills. It is evident that the direction of correlation values is positive and hence, the integration of this methodology is student-centric and leads for developing employability skills.

**Table 3:** Correlation among the dependent and independent variables  
Dependent variable: Employability

		Critical Thinking through TBA	Self-capabilities through TBA	Time management through TBA	Activating learner's needs and interests through TBA	Self-awareness through IL	Overcome challenges through IL
Std. Cros-	Employability skills	.909	.904	.904	.919	.916	.934
s-	Critical Thinking through TBA	1.000	.926	.914	.923	.907	.915
prod	Self-capabilities through TBA	.926	1.000	.914	.916	.917	.915
uct	Time management through TBA	.914	.914	1.000	.910	.909	.913
	Activating learner's needs and interests through TBA	.923	.916	.910	1.000	.928	.930
	Self-awareness through IL	.907	.917	.909	.928	1.000	.932
	Overcome challenges through IL	.915	.915	.913	.930	.932	1.000

**Table 4:** ANOVA table

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3120.133	13	240.010	582.354	.000
	Residual	307.867	747	.412		
	Total	3428.000	760			

The Table 3 shows the linear correlation values between the dependent variable and the independent variables. The range of the correlation coefficient is -1 to +1 in which 0.80 to 1.00 shows the highest correlation between the variables. The Pearson correlation for the dependent variable with the independent variables Critical Thinking through TBA, Self-capabilities through TBA, Time management through TBA, Activating learner's needs and interests through TBA, Self-awareness through IL, Overcome challenges through IL, are 0.909, 0.904, 0.904, 0.919, 0.916, and 0.934. It can be said that the implementation of Task-Based Approach in an Interdisciplinary classroom among technical students develop personality skills such as critical thinking, self-awareness, time management and to overcome the challenges. It is evident that the direction of correlation values is positive and hence, the integration of this methodology paves way for developing employability skills.

In Table 4, the sum of the squares between the variables is 3120.133 at degree of freedom 13. The F-static value is 582.354 at the significant value 0.000 which shows that the model is significant.

## Results and Discussion

It is obvious that organizations require employees who can work in a variety of irregular and unstructured environments. In this substantial change, the organizations require the same degree of adaptability. Although resistance to change is a widespread concern, universities must embrace novel ideas if they are to prepare students for the society of the future (1).

For the first and second objective, it is evident from the statistical analysis that the correlation value lies between -1 to +1 in which there is no possibility of multicollinearity. The p-value is 0.000 which is less than 0.05 shows that the model is significant and fit for the study. The findings show that the Task-Based learning in an Interdisciplinary setting is very important as it

enhances the conceptual skills such as vocabulary skills and presentation skills of a student. Similarly, it makes a significant difference in acquiring the soft skills such as critical thinking, identifying self-capabilities, time management, activating learners' interests and facing challenges. Thus, it can be said that implementing Task-Based methodology through an Interdisciplinary learning enhances students' conceptual skills, soft skills and personality skills which gradually leads to build employability skills among technical students.

In order to help students to tackle the major societal issues, one of the most important steps the NEP 2020 has taken is to enable them to learn from a variety of fields. Since that we cannot foresee what the issues of the future may be, this is particularly essential. An adoption of interdisciplinary techniques could aid students to face the global change as well as in applying their knowledge to various circumstances. Although the goal of interdisciplinary learning is to help students to bridge boundaries and adopt new perspectives, students who already have the broadest perspectives are also open to learn about other perspectives and vice versa. This highlights the question of how to educate students, especially those with limited perspectives (17). Our educational system wasn't created for the modern world; instead, it was created for a bygone period, and it hasn't given our children the tools they need to succeed in it.

Though the implementation of Task-Based learning is not student-centric, rather the instructors become the guide for its better outcome. It can be successfully incorporated by providing learning tasks where students work together across disciplines to finish projects or resolve real-world issues. The tasks must be interesting, genuine, and aligned with the talents that have been identified as a part of employability skills. Use feedback from students, instructors, and external stakeholders from these activities on regular basis to make improvements and review on the curriculum design.

## Conclusion

Hence, the seamless integration of TBA into Interdisciplinary learning environments holds significant promise due to its impact. Making students to perform tasks through theoretical knowledge not only improves expertise in specific subjects but also fosters a range of skills crucial for

success in various professional settings. The benefits of this study include the academics, majorly technical institutions to make capable of students in achieving the competitive job opportunities. The future scope of the study can be extended to various methods integrated with Task-Based approach in finding dynamic demands of the workplace.

## Abbreviation

TBA-Task-Based Approach

IL-Interdisciplinary Learning

SLA-Second Language Acquisition

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## Author Contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it.

## Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Ethics Approval

I undertake to abide by the ethical and safety guidelines, and the ethical principles underlying good practice guidelines appropriate to my discipline.

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