



BRIDGING SKILL GAPS THROUGH MULTIDISCIPLINARY EDUCATION

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Abstract

The technological advancements and job requirements are changing at a fast pace, enhancing the requirement for specific skill sets for a particular job, thereby creating a skill gap in the workforce. Traditional higher education programs find it difficult to match the steps with these changes leading to skill gap in students' skills and the industry / workplace needs. Multidisciplinary education has emerged as a promising approach to address this issue as in such an approach we teach by combining knowledge from various disciplines. It is the multidisciplinary education through which students can be better equipped with a comprehensive set of skills, wider exposure, knowledge and varied competencies that are prerequisites for success in 21st century workforce. In such an approach we derive information from various disciplines while discussing the same topic. Thus, teachers can focus on diverse viewpoints at the time of illustrating a theme or concept. It gives us opportunities to embrace a holistic approach in education and groom adept teachers who are knowledgeable, skillful, techno savvy yet humane individuals with broader perspectives who can work successfully in fast changing multicultural and multilingual society. This paper explores the concept of multidisciplinary education and its potential in bridging the skill gap.

Key Words: *Multidisciplinary Education, Bridging the Skill Gap*

Introduction

“The purpose of education is to make good human beings equipped with skills and expertise.”—A. P. J. Abdul Kalam

The traditional education generally equips the individuals much with knowledge related to theory than skill-based and practical. As a result, our country is facing a significant skill gap crisis. The rapid speed of technological change and changing job market demands have resulted in a mismatch between the skills employees actually possess and those required from them. According to a report by the World Economic Forum “by 2022, more than a third of the desired skills for most jobs will be comprised of the skills that are not yet considered crucial to the job today.” Being Skillful is a passport to the employment. Employers prefer those candidates who can bring a diverse skill set to the office as these individuals tend to be more adaptable, multitalented and can handle

different responsibilities. Scott Adams is right when he says, “Every skill you acquire doubles your chances of success.”

Multidisciplinary education refers to an educational approach that integrates multiple disciplines or fields of study to provide students with a comprehensive understanding of a subject or concept. In other words, we can say that in multidisciplinary approach we can draw knowledge from different disciplines to make students understand their topic/issue. This approach recognizes that some concepts /problems are multifaceted and require solutions that draw on knowledge and insights from multiple disciplines. To quote Emily Dickinson, “The human brain is wider than the sky and because of its vastness, its only through multidisciplinary education and research we can get close to discoveries.”



Benefits of Multidisciplinary Education:

Multidisciplinary education offers several benefits that can help students acquire and update their skills and bridge the skill gap:

1. Development of Transferable skills:

Multidisciplinary education as envisioned in NEP 2020 intends to develop social, physical, intellectual, emotional and moral aspects of students in an integrated manner. It also helps students develop transferable skills such as:

- **Critical Thinking:** Such skills are developed when students think across disciplines to learn from other viewpoints. They also compare and contrast concepts as gained through different disciplines.



- **Self-Management:** Drawing knowledge from different subjects requires making choices on the part of students and manage their study choices. They have to decide their priority which helps in the development of self-management.
- **Adaptability:** Different subjects are viewed through different viewpoints. So students need to see different subjects and gain knowledge as required. This helps in making them adaptable to different points of view.
- **Analysis and Problem Solving:** When students look beyond their discipline boundaries and by studying a wider range of subjects, students develop deeper skills of evaluation. They can learn different approaches and are able to select the best one that can be used in particular situations to solve the problem.
- **Effective Communication:** By referring to different subjects, students come across different terms and expressions that helps in the development of their written and verbal communication.
- **Flexibility:** As students switch from one subject to another in multi-subject study, their ability and skill to adapt to different contexts increases which is one of the future-ready skills.
- **Synthesis of Ideas:** Students consolidate learning by combining ideas gained through various perspectives and disciplines thus enabling them to synthesize knowledge.

Such skills have been recognized as 21st century skills and are pre-requisites for multiple industries and job roles. Multidisciplinary education helps in acquiring these skills and make students future ready.

2. **Interdisciplinary Knowledge:**

When students draw knowledge and insights about a particular topic/concept from different disciplines, they get comprehensive understanding of a subject or issue. Thus multidisciplinary education helps students in getting interdisciplinary knowledge which can be applied in perspective of their own discipline.

3. **Real-World Application:**

Multidisciplinary approach to education encourages students to apply theoretical knowledge to real-world problems which helps in the development of practical skills and competencies among them. These competencies and skills are often termed as employability skills.

4. **Enhanced Creativity:**

Multidisciplinary education encourages students to think outside the boundaries of a single discipline which facilitates in fostering creativity among them. They try to see the problem from different points of view and angles to get deeper understanding about the same. Thus, divergent thinking always leads to creativity.

5. **Promotes Innovation:**



Multidisciplinary approach to education fosters creativity among students when they have to think out of the box and see the problem from different perspectives. Creativity leads to emergence of innovative ideas which is the need of the day.

Challenges and Limitations:

NEP 2020 has recommended a flexible curriculum which can be combination of various disciplines giving opportunities to students to choose languages and at the same time fields like Applied Sciences, Mathematics and Business Studies to develop versatility and other 21st century skills. While multidisciplinary approach to education has several benefits, there are also some challenges and limitations to be taken care of:

- **Curriculum Design:**

Designing a multidisciplinary curriculum can sometimes be challenging. It will require coordination and collaboration among faculty from different disciplines

- **Faculty Development:**

Faculty may require to attend faculty development programs to get oriented to application of multidisciplinary approach in education.

- **Assessment and Evaluation:**

Assessment and evaluation of students learning in a multidisciplinary program can be difficult.

Case Studies/Examples:

Many institutions and organizations have successfully implemented multidisciplinary education programs to bridge skill gaps. For example:

1. **Stanford University:**

The Hasso Plattner Institute of Design at Stanford University offers a multidisciplinary program in design thinking drawing insights from engineering, business and humanities. It proved to be helpful in bridging the skill gap among students.

2. **MIT's Integrated Learning Initiative:**

Integrated Learning Initiative of Massachusetts Institute of Technology offers a multidisciplinary program that combines STEM fields with the humanities and social sciences to facilitate development of skill-sets necessary for preparing well equipped workforce.

Conclusion

Multidisciplinary education has the potential to bridge skill gaps by providing students with a comprehensive sets of skills, knowledge and competencies. Though there are some challenges and limitations to be taken care of, the benefits of multidisciplinary education are far reaching and can be helpful in addressing the skill gap crisis. As the job market keeps on evolving, it is essential that educational institutions and organizations should prefer to use



multidisciplinary education to prepare students as highly skilled workforce and professionals who can be successful in 21st century.

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