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From Placement Data to Actionable Insights: A Case Study for Improving Placement Outcomes at Institute

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Abstract: This case study investigates placement trends at Deogiri Institute of Engineering and Management Studies (DIEMS) from 2013-14 to 2023-24, focusing on Computer Science and Engineering (CSE), Mechanical Engineering (MECH), Electronics and Telecommunication Engineering (ECE), Civil Engineering (CE), and Master of Business Administration (MBA) programs. The study analyzes placement data, including the number of students placed, salary packages offered, and observations from a provided pie chart showcasing placements for 2023-24.
Keywords: Placement trends, employability, curriculum alignment, industry demands, salary packages, courses

Introduction:

Higher education institutions play a critical role in equipping students with the skills and knowledge necessary for success in the job market. A key indicator of program effectiveness in achieving this goal is placement success. This case study delves into placement trends at an educational institution, focusing on various academic programs offered. We leverage data on student placements, including the number placed and potentially salary packages offered. Additionally, a visual representation of student placement distribution across programs will be incorporated into the analysis.

Through this investigation, we aim to:

- Uncover patterns in student placements across different programs and years.
- Understand the factors influencing placement success for each program.
- Identify potential gaps between the institution's curriculum and industry demands.
- Propose recommendations to strengthen the placement program and enhance graduate employability.

This study serves as a valuable tool for the institution to refine its academic offerings and ensure its graduates are well-positioned to secure rewarding careers in their chosen fields.

Methodology:

This case study employs a data-driven approach to analyze placement trends at Deogiri Institute of Engineering and Management Studies (DIEMS) from 2013-14 to 2023-24. The focus will be on five programs: Computer Science and Engineering (CSE), Mechanical Engineering (MECH), Electronics and Telecommunication Engineering (ECE), Civil Engineering (CE), and Master of Business Administration (MBA).

1. **Data Sources:**

- Placement Data Provided by DIEMS: This is the primary data source and will include information on the number of students placed across different programs and years. It may also include details such as salary packages offered (availability may vary).
- Pie Chart of Student Placement Distribution (2023-24): This visual representation will provide insights into student placements for the most recent academic year.

2. **Data Analysis Techniques:**

- Descriptive Statistics: We will calculate descriptive statistics like frequencies and percentages to understand the distribution of students placed across programs and years.
- Trend Analysis: We will analyze trends in placement numbers over time for each program. This might involve techniques like time series analysis or visualization methods like line charts.
- Comparative Analysis: We will compare placement performance across different programs to identify potential variations and best practices.
- Salary Package Analysis : We will analyze the range and distribution of salary packages offered to graduates to understand industry trends and potential discrepancies between programs.

Data analysis by salary package:

1. **Minimum Salary package over the year**

- The minimum salary package shows some variability but generally stays within a close range across departments.
- A notable increase in the minimum package can be observed in the 2021-22 academic year, especially for Civil Engineering and Computer Science and Engineering.
- MBA consistently shows a lower range in the minimum package compared to technical courses.

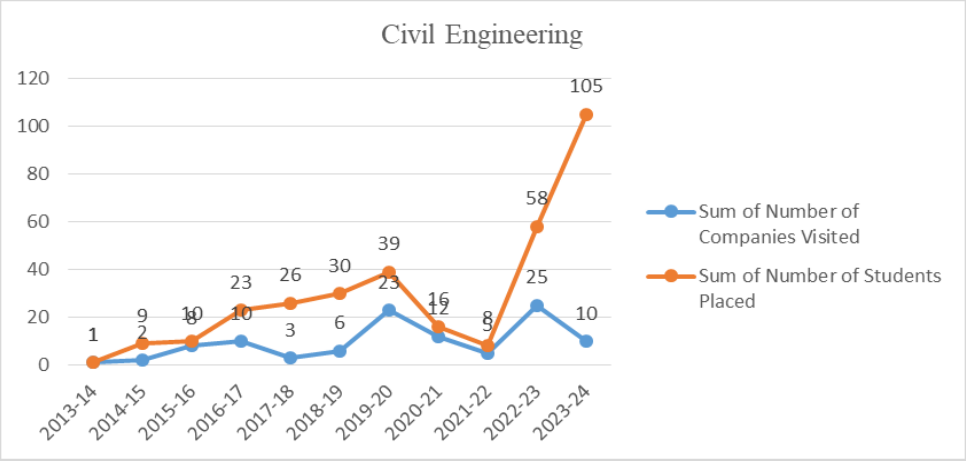
2. **Minimum Salary package over the year**

- The maximum salary package shows significant peaks in certain years, particularly for the Computer Science and Engineering department.

- There was a notable increase in the maximum package for Computer Science and Engineering in 2017-18, reaching 10 LPA.
- Civil Engineering also showed a significant peak in 2018-19 and 2021-22 with a maximum package reaching up to 9 LPA.
- There is a general upward trend in the maximum package for most departments, indicating improving placement opportunities.

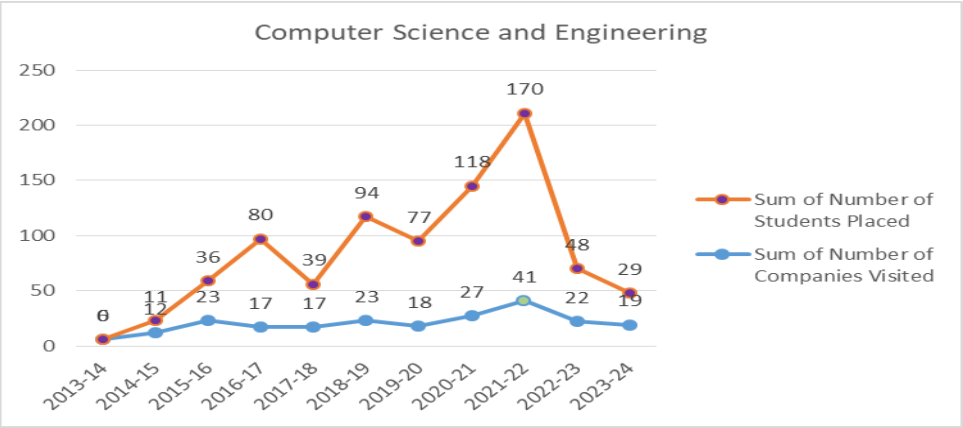
Data analysis by course name:

1. Civil Engineering



- High Number of Placements: Civil Engineering had the highest number of students placed (105) compared to other courses offered by DIEMS in 2023-24. This indicates a strong placement record in terms of the number of students securing jobs.
- Low Minimum Offered Package: However, a major concern is the minimum offered package of only 0.6 LPA (presumably Lakhs Per Annum) for Civil Engineering graduates. This is a very low salary and suggests a potential mismatch between the skills of graduates and industry demands.

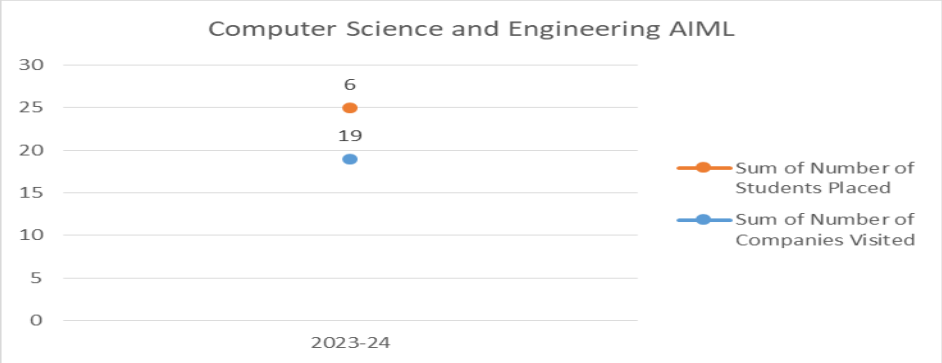
2. Computer Science and Engineering



- Chart shows the distribution of students placed across six courses offered by DIEMS in 2023-24, with CSE having the largest share (25.34%).
- CSE consistently has a high number of students placed, likely the highest compared to other courses at DIEMS. This indicates strong placement performance for the CSE program.

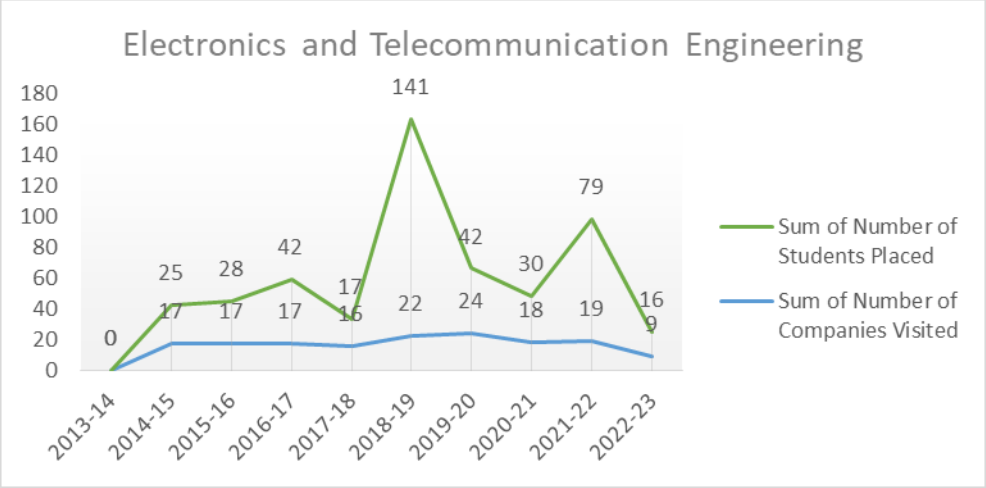
- The data suggests that the CSE program at DIEMS is successful in placing its graduates. By continuously monitoring placement trends, aligning the curriculum with industry needs, and focusing on developing well-rounded computer science skills, DIEMS can ensure its CSE graduates remain competitive in the job market.

3. Computer Science and Engineering AIML



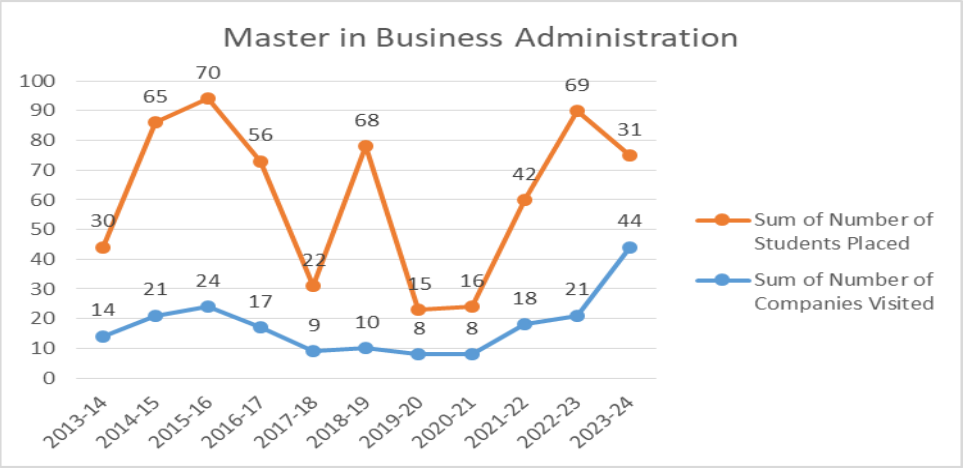
- Chart shows that only 2.22% of students enrolled in the CSE AIML program were placed in 2023-24. This is likely due to it being a new program with a smaller number of students compared to established programs
- As the program matures, consider establishing strong industry connections to create placement opportunities for graduates in companies working on AI and ML technologies

4. Electronic and Telecommunication Engineering



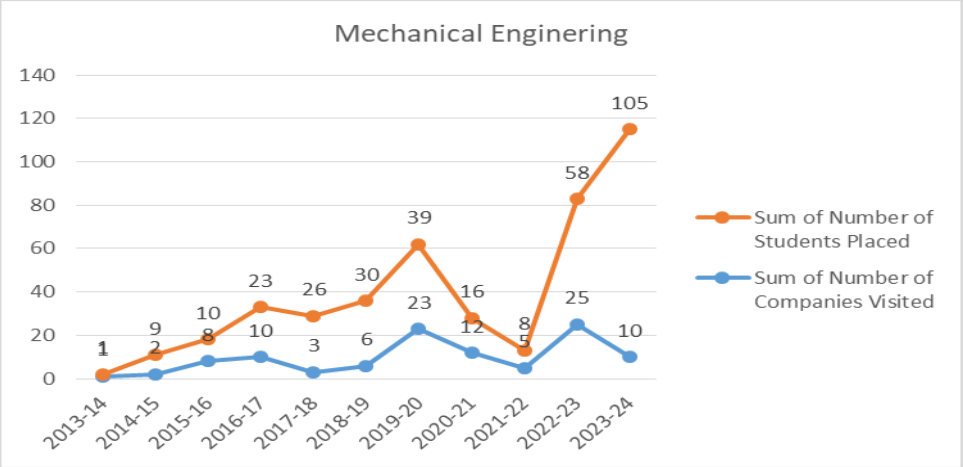
- There has been a steady increase in the number of companies visiting for ECE placements over the years.
- In 2013-14, there were only 17 companies visiting, whereas in 2023-24, there were 18.
- The number of students placed in ECE fluctuates throughout the years.
- There was a significant increase in 2018-19, with 141 students placed, which is the highest number for the period shown.
- In 2023-24, there were only 24 students placed, which is a considerable decrease compared to the previous year.

5. Master in Business Administration



- Number of Students Placed: The pie chart shows that 19.93% (or 69) of students enrolled in the MBA program were placed in 2023-24
- Comparison with Other Courses: Compared to some engineering courses (like CSE and Mechanical Engineering), the placement data suggests MBA might have a lower or similar number of students placed in a given year.

6. Mechanical Engineering



- Mechanical Engineering consistently places a good number of students.
- In the data provided for 2023-24, Mechanical Engineering has the second-highest number of students placed (81), following Computer Science and Engineering (CSE).

Recommendations for Improvement:

- Curriculum Review: Regularly review curriculums across all departments to ensure they align with current industry requirements and equip students with the latest skills and knowledge.
- Industry Collaboration: Collaborate with companies from different sectors to understand their specific needs and tailor curriculums accordingly.

- Skill Development Programs: Offer additional skill development programs or workshops to bridge any gaps between current curriculums and industry requirements. This can be particularly beneficial for Civil Engineering and MBA programs.
- Salary Negotiation Training: Provide training to students on salary negotiation skills to help them secure better offers.
- Geographic Diversification: Encourage students to explore placement opportunities in different regions that might offer higher salaries, especially for courses like Civil Engineering.
- Data Collection: Collect and analyze data on placement rates, average salary packages, and company visits for all courses across multiple years to gain a more comprehensive picture of placement trends at DIEMS.

Conclusion:

Overall conclusion regarding placement trends at Deogiri Institute of Engineering and Management Studies (DIEMS) from 2013-14 to 2023-24:

- Computer Science and Engineering (CSE): Consistently has the highest number of students placed and likely attracts the most companies
- Mechanical Engineering: Generally has a good placement record with a moderate number of students placed.
- Electronics and Telecommunication Engineering (ECE): Placement numbers vary, with a significant increase in 2018-19.
- Master in Business Administration (MBA): Placement numbers fluctuate, with a potential decrease in companies visiting for MBA placements in recent years. Salary package offered to MBA graduates might be lower compared to some engineering courses.
- Civil Engineering: The number of students placed varies, but a major concern is the consistently low minimum offered package, particularly in 2023-24 (0.6 LPA).
- Minimum Package: The minimum salary package shows some variability but generally stays within a close range across departments. However, the very low minimum offered to Civil Engineering graduates in 2023-24 is a concern.
- Maximum Package: There has been a general upward trend in the maximum package offered across most departments, indicating improving placement opportunities.

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