

Best Practices Adopted by Department to Improve Rigor of Project Work At UG Level

Problems Identified:

1. A common problem amongst students at the UG level undertaking projects is that they are not completely aware of what exactly they are doing in the project. This knowledge becomes critical when facing the interviews in the campus placements as a result of which students might be rejected Also research culture needs to be developed amongst students.
2. This problem was evident from the feedback received from the HR personnel conducting the interviews.

Approach to solve the problem:

In order to resolve the problem, IT Department has initiated Project Based Learning (PBL) activity and Research based learning (RBL) from Second Year IT mini-projects to Third Year IT minor-projects to Final Year IT major projects.

Deployment:

For the deployment of approach, **project based learning** activity was started from A.Y. 2016-17 with Mini(SE level), Minor(TE level)& Major(BE level) projects. Students are able to define project definition from second year only which can be further extended to Minor & Major projects. So students will be very clear about their projects from second year only. Advantage of this practice of project deployment is students are able to answer about projects in placement activities. Students can participate in project competition in SE or TE only.

Research based learning activity started from A.Y. 2020-21 for TE & BE students. This activity started to develop research culture in various domains amongst students. Advantage of this practice is to gain learning of literature survey, research paper writing, designing, development & deployment of product. Also, students are able to understand the concept of patent and how to convert the product into Intellectual property rights. Students can participate in various national and international project competitions.

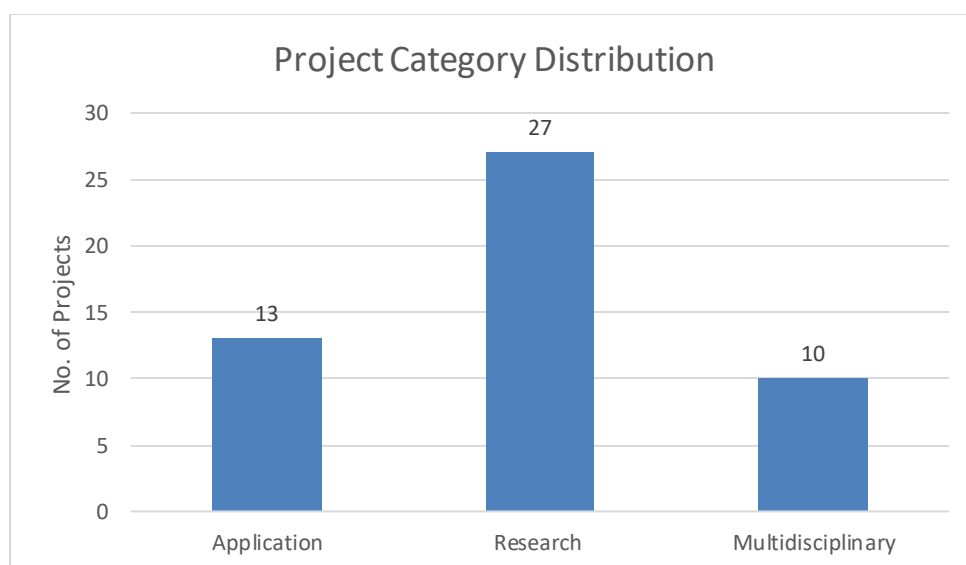
For the deployment of our approach, department has prepared a complete Project Activities Calendar with details of documents to be submitted on fortnight basis. Students are required to submit detailed literature survey & project synopsis in the given format. These documents accumulate all the desired perspective of the entire project and should also be reviewed by the guide and reviewer twice in a semester. At the same time, the project group needs to present their idea in the form of presentations in order to understand the SDLC: Industry Perspective.

Another good approach for deployment of project is, during industrial visit some problem definitions are identified & converted to project idea. So students can be involved in outhouse & consultancy projects.

Project based learning is commenced via surveying the real life problems useful for society/Industry/Government/Institute and then formulating of ideas. Project deployment can be as follow:

1. Identification of problem definition through studying existing system, real life problems, industrial need etc.
2. Survey the literatures and articles (By referring research papers/Web Articles/Books), Gap identification, Current systems Vs. Existing systems, Problem Definition, Feasibility study, Objectives of the system, Scope of the system, features of system, Listing Functional & non-functional requirements in the form of Requirements Analysis Document (RAD). Also design the architecture of System.
3. Validation of project synopsis (Guide & Reviewer).
4. Designing of the system(Block diagram, DFDs, Database design)
5. Finalize and Documents all the above requirements in the bluebook.
6. Implementation, testing & validation of the project.
7. Finalize and documents all the details in blackbook.
8. Convert the project into product & launch the product into market.

Learning: By the above approach, it is observed that students can elaborate their projects in more detail during their placement activities. Core, Multidisciplinary and industry oriented /Outhouse projects have increased. Statistics of A. Y. 2020-21 is shown as follow:





Outcome /Impact: The impact of this practice is that all students have started to identify projects from second year onwards with understanding of project life cycle..Students can publish their paper work in journals & also can participate in project competition in various institutes. Also, students can implement granted projects.

Future challenges:

1. To get out house and consultancy projects.
2. To convert project into product & launch the product in market.
3. To be updated with modern tools & technologies for project development.

Sd/

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