# CASE STUDY

## Using a Learning Plan as a Tool to Enhance Student Engagement & Performance in a Capstone Engineering Laboratory Module

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## PROJECT AIMS

To improve student understanding of the module assessment, specifically what is being assessed, why it is being assessed and why a particular approach is being used.

## INTERVENTION & IMPLEMENTATION

The intervention was to use a learning plan similar to a training plan or training needs assessment used in the workplace.

The stages of implementation were as follows:

1. Development of Learning Plan Structure
2. Initial Consultation with Fourth Year Students
3. Learning plan introduced to students during lab induction session
4. Implementation in module for all students

## EVALUATION & IMPACT

Students were recruited to act as consultants, and two focus group sessions were held.

Students ranked the skills/competences they felt were important and then considered questions on the value of the learning plan, impact on practicals, feedback provided and views on focusing on individual strengths and weaknesses.

A feedback capture grid was used for this activity.

## AT A GLANCE

"FOR IT TO WORK WELL, THERE HAS TO BE TRUST AND OPENNESS ON BOTH SIDES BUT I BELIEVE THAT STUDENTS WILL ALWAYS RECOGNISE WHEN A SINCERE ATTEMPT IS BEING MADE TO CONSIDER THEIR NEEDS AND THEIR PERSPECTIVE."

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## Using a Learning Plan as a Tool to Enhance Student Engagement & Performance in a Capstone Engineering Laboratory Module

DR. AISLING O'GORMAN
MTU DEPARTMENT OF PROCESS, ENERGY AND TRANSPORT

## 1. PROJECT AIMS

This laboratory module incorporates investigative work on classical and novel unit operations and builds on learning from similar modules offered in the earlier years of the chemical engineering programme.

This project aims to improve student understanding of the module assessment, specifically what is being assessed, why it is being assessed and why a particular approach is being used.

## 2. INTERVENTION & IMPLEMENTATION

The intervention was to use a learning plan similar to a training plan or training needs assessment used in the workplace.

The stages of implementation were as follows:

**1. Development of Learning Plan Structure**
A learning plan template was developed with three sections - identify gaps in skills/competences, propose strategy to help develop skills/competences identified and reflection

**2. Initial Consultation with Fourth Year Students**
Fourth year students (n=4) agreed to act as consultants at this stage, to check whether the focus on development of skills and competencies would translate well to the third years and provide feedback on the structure of the learning plan.

**3. Learning plan introduced to students during lab induction session**
The intervention and rationale for same was introduced and development of skills and competences discussed.

**4. Implementation in module for all students**
Both module instructors implemented intervention, with 10% of mark for each practical allocated to the learning plan and rubrics revised accordingly.

## 3. EVALUATION & IMPACT

Students (n=16) were recruited to act as consultants, and two focus group sessions were held with 8 students in each.

Students ranked the skills/competences they felt were important and then considered questions on the value of the learning plan, impact on practicals, feedback provided and views on focusing on individual strengths and weaknesses.

The last part of the session was directed towards how the intervention as a whole was working and what could be changed.

A feedback capture grid was used for this activity.

## 4. SUMMARY & RELFECTIONS

I found that the students who volunteered to act as consultants for me were very interested in the fact that I was doing a piece of research and they seemed to be genuinely interested in supporting me. I wouldn't say that my thinking on my learning relationship with students has changed because it is already very positive but this work certainly reinforces the benefits of a partnership approach. Obviously for it to work well, there has to be trust and openness on both sides but I believe that students will always recognise when a sincere attempt is being made to consider their needs and their perspective.

Having the time allocation finally gave me the chance to carve out some space for myself to work on something that was very meaningful to me. It was great to feel that there was finally some recognition that work like this needs time. The structured briefings were also useful to keep me on track. Even at this stage in my career, it is good to reflect on my practice and how it may be improved. Some of the reading I have had time to do has given me some food for thought in this area.

## 5. RESOURCES & REFERENCES

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