To
The Vice-Chancellor
VIT Bhopal University

27/07/2022

Sub: Letter of Consent

Sir,

I Pradeep Singh Shaktawat father of Chakshu Shaktawat reg. no. 20BCE10376 student Computer science & engineering (core) course at VIT Bhopal University and resident Neemuch (M. P.) do hereby permit my daughter to attend the student experimental learning programm to be conducted at Bangalore between 12th September 2022 and 16th September 2022.

I undertake that:

1. I am fully aware of the COVID-19 pandemic and the risks associated with travelling to the city during the programme days.
2. I assure full responsibility for the safety, discipline and code of conduct during the stay, programme proceedings and travel for my son/daughter/ward during the entire duration of the programme. We understand that it is our sole individual responsibility and shall not hold the VIT Bhopal University responsible in any way for this.
3. I recommend my daughter/ward to stay at University recommended venues / local guardian's or relative's houses. (This is only for girl students if you have recommended a local guardian's or relative's house; please fill up details for 4).
4. The details local guardian's / relative's house where your daughter/ward will be staying during the programme.

Name	Mr. Manish Dube
Address	Nitesh Flushing Meadows, Block D Flat no. 1002, Seeghehalli, Bangalore, Karnataka
Mobile Number	83034 86651
Land Line / Alternate Mobile Number	
Email Id	
Landmark	

5. I would ensure that my son/daughter/ward shall follow all the guidelines, and SOPs given by the University for the programme.
6. I assure you that my son/daughter/ward will attend all the sessions organized by the University with proper discipline.
7. I assure you that my son/daughter/ward will strictly follow all SOPs of VIT Bhopal University experiential learning.
8. I assure you that my son/daughter/ward will not indulge in any unethical activities, violate the rules and regulation which will defame the name of VIT Bhopal University failing which we accepts the University action on the same.

Name: Pradeep Singh Shaktawat

Mobile: 7777078853

Signature of the Parent

To
The Vice-Chancellor
VIT Bhopal University

27/07/2022

Sub: Letter of Consent

Sir,

I……Pradeep Singh Shaktawat……father/mother of……Chakshu Shaktawat……... reg no……20BCE10376……., student of ……SCSE (core)……course at VIT Bhopal University and resident of ……Neemuch (M. P.)……..do hereby permit my daughter/son/ward to attend the student experiential learning programme to be conducted at Pune between 5th September 2022 and 9th September 2022.

I undertake that:

1. I am fully aware of the COVID-19 pandemic and the risks associated with travelling to the city during the programme days.
2. I assure full responsibility for the safety, discipline and code of conduct during the stay, programme proceedings and travel for my son/daughter/ward during the entire duration of the programme. We understand that it is our sole individual responsibility and shall not hold the VIT Bhopal University responsible in any way for this.
3. I recommend my daughter/ward to stay at University recommended venues / local guardian's or relative's houses. (This is only for girl students if you have recommended a local guardian's or relative's house; please fill up details for 4).
4. The details local guardian's / relative's house where your daughter/ward will be staying during the programme.

Name	Vignahar Prasad
Address	09/ Vignahar Prasad, Mohan Wadi, Pune
Mobile Number	83185 67207
Land Line / Alternate Mobile Number	
Email Id	
Landmark	

5. I would ensure that my son/daughter/ward shall follow all the guidelines, and SOPs given by the University for the programme.
6. I assure you that my son/daughter/ward will attend all the sessions organized by the University with proper discipline.
7. I assure you that my son/daughter/ward will strictly follow all SOPs of VIT Bhopal University experiential learning.
8. I assure you that my son/daughter/ward will not indulge in any unethical activities, violate the rules and regulation which will defame the name of VIT Bhopal University failing which we accepts the University action on the same.

Name: Pradeep Singh Shaktawat……

Mobile: 9425078852……

Signature of the Parent

Case Study-2

HUM1002

Emotional Intelligence – E11+E12

Submitted by: Chakshu Shaktawat

Reg. No. 20BCE10376

Question 1: How will you define and rate Mr. Srivastava's emotional intelligence by applying Goleman's model of EI?

As a CEO, Mr. Manohar Srivastava can apply emotional intelligence to achieve self-awareness, objectivity and equality, all in the name of improving results, workplace culture and employee fulfilment.

Goleman breaks down EQ into five components:

1. **Self-awareness**

   Emotions can affect team for a CEO. When Mr. Srivastava was newly appointed as a CEO for the newly acquired southern banking institute, he had his own methods and strategies which he felt highly about and we could see those traits in that first meeting he set up with all his employees in the bank. We could say this because of this statement he said, "I expect total dedication. If you cannot commit to our new vision and strategies, then this is not the right place for you. Commitment starts by being on time."
   He had strictly scheduled the meeting, and when the turnover wasn't what he expected it to be, he got a little agitated with the employees and even ordered the staff to shut the door for late comers. This shows he was really affected with all the events; he wasn't comfortable with himself at that moment.
   This could have been easily being resolved if Mr. Srivastava had been open towards staff on the first day. Then he could have implemented the punctuality as the basic requirements for the staff.

2. **Self-Regulation**

   Mr. Srivastava's impulsive and irrational order of closing the door for employees who were late, made the people under him not to trust him. An emotionally charged environment is usually fraught with unresolved conflicts. It feels tense and distracting. The employees wouldn't have felt they could contribute without fear of reprimand. Calm in the face of adversity is not a natural response, or something you're born with. Self-regulation is a skill Mr. Srivastava need to practice and there are great rewards if he could master it. He became approachable, able to deal with conflict, create a nurturing environment and lead by reliable example.

3. **Motivation**

   Goleman's third component refers to motivation for enjoyment, rather than money or a promotion.
   By the case study, we could see that the newly acquired banking institution has a long standing reputation as a friendly institution with traditional values, and it prides itself

on its exemplary customer service. The current staff has even prepared a comprehensive package outlining the bank's vision and key customer success stories that demonstrate their commitment to exemplary service and low customer and employee turnover.
This all shows how they were motivated to work for the bank and are really happy working there. It has been disrupted when Mr. Manohar tried implementing his own strategies and methods which could have made employees demotivated to work there and had led to increase in turnover of about 25 percent and involuntary turnover was up 10 percent. Previous customer numbers were decreasing and customer complaints were increasing.

What is motivation for enjoyment? You need to:

- Understand why you are passionate about your job
- Realise how much you want to lead
- Have an optimistic outlook.

Even in the face of a bad day, you can still find the silver lining, feel energised to fix problems and determined to cheer the people around you onto the next success.
It's self-motivation. You're doing it for you, to fulfil your personal goals and needs, to drive higher performance.

4. Empathy

If Mr. Srivastava can understand the emotions of others and relate to them, he could have seen problems from all perspectives and make objective decisions. Empathy defuses bias.
Mr. Srivastava met with the executive team and outlined the strategies, goals, numbers, and deadlines. A meeting was held with senior staff members responsible for reporting progress. Market growth numbers were up, and new business numbers were increasing. This shows how much he is goal oriented he is. The day he could have made everyone a little comfortable with him around the hospital with little empathy, instead of becoming a little intimidating

Being empathic means you're a good listener and interpreter, attuned to body language and expressions.
An empathic manager is considerate, balanced, and fair.
Applying empathy gives you a superpower. You can read what your employees need from you – when they need challenging, when they need constructive feedback, and when they need more training.

5. Social Skills

It's important to build a strong rapport with your team.
Not only is it part of good leadership, but it's also essential to boosting staff productivity and increasing loyalty.

Mr. Srivastava lack in social skills, which made him less approachable. When the quarter report result came, he asked for inputs and everybody were quite as they were not comfortable to speak in front of him about the situation.

Having solid social skills such as active listening, verbal communication, nonverbal communication, leadership and persuasiveness enables you to connect with your team.

By these factors we could say that Mr. Srivastava's emotional intelligence doesn't have that ten on ten rating and he lacks most of the features of an Emotionally intelligent person, therefore he need to up his EQ with the help of Goleman's model we discussed.

Case study

Design for Plastic in Electric Vehicles

DSN2096 – Engineering Design – B13

Submitted by: Chakshu Shaktawat

Reg. No.: 20BCE10376

1. OBJECTIVE :

Advances in materials have an important effect on the design of engineering products. Matrial tech is one of those areas of design that rarely remains static: for the continual search of lighter, cheaper, stronger longer-lasting materials for use in engineered products.

This case study looks at one such example – the use of plastics in passenger cars. Cars will only sell if they perform well and look good. The industry is very competitive. Because of this intense competition, car designs more quickly – one of the best example being the use of plastic materials.

2. CAR DESIGN

The design of modern production car starts with the aerodynamic requirements of the bodyshell & the space constraints of the engine and passenger compartments

→ Bodyshell has monocoque design

→ Bodyshells, in which shell floor has a recessed 'hump' to house the transmission & drive shaft

→ A more common arrangement is for a transverse mounted engine & front wheel drive, floor is flat.

→ Uses ~~grade~~ carbon steel, tensile strength of 500 MN/m² and. Thickness. from 0.65 mm to 1.55 mm.

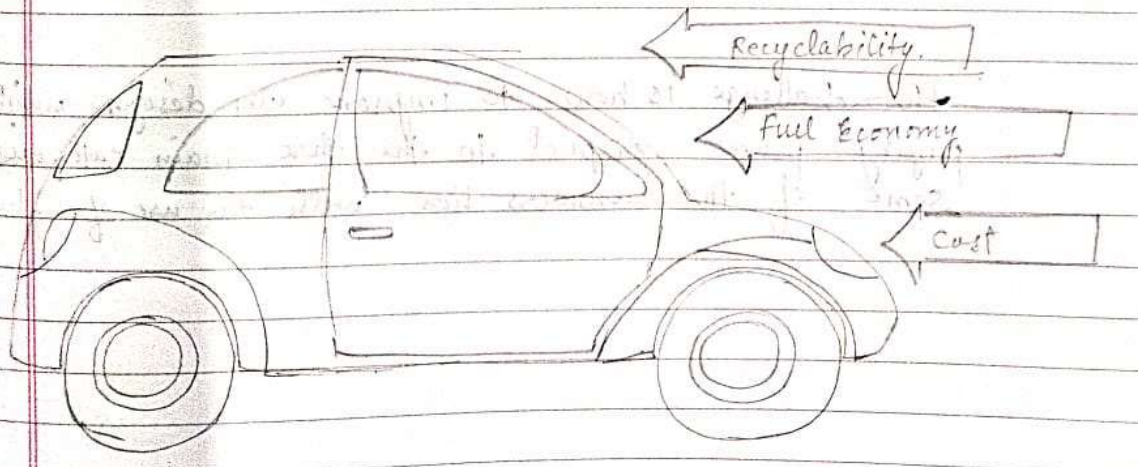
→ It should be crash resistance

Individual panel conditions :

Individual panels conditions - stresses & strains (deflection) are calculated using well-known theories of thin-walled structures. Panels are assumed to buckle or shear instability & deflections calculated accordingly. Panels are cold-stamped and then spot welded together to make up the monocoque shell. The manufacturing time for a bodyshell is on the critical path of the production schedule for all mass produced cars - they are not bought in from subcontractors like many of the mechanical, electrical & trim components. Bodyshell manufacture is expensive, tooling costs & maintenance costs are high, because of the nature of the accurate stamping operations required.

3. THE PROBLEM :

A car is a consumer product, rather than an industrial one, with the result that designs are predominantly customer-driven.



- Fuel Economy.

The easiest way to reduce a car's fuel consumption is to make car engine lighter. For an avg four passenger car, approx. 60% of the engine power is needed just to move the car's own weight without any passengers.

- Recyclability.

More of a technical constraints than an overt objective. There is always a balance to be achieved between the advantages & disadvantages of using new materials to replace steel.

- Cost.

New designs & technical developments affects mainly 3 production cost categories
→ tooling costs.
→ production time costs.
→ materials costs.

The challenge is how to improve car design whilst paying proper respect to the three main categories. Some of the answers lies with the use of plastics

4. Design with plastic:

Plastics designed for use in engineering applications, commonly called engineering plastics, are a technology world apart from the common types of cheap, low-strength 'commodity plastics' used in toys, household articles and low-quality household appliances. Engineering plastics have a wide range of very good technical properties including the important ones of strength, light weight and ease of processing. So:

- engineering plastics can be as useful as steel; and
- they are generally easier, more versatile, to work with

5. Uses of Plastics in Cars:

The use of plastics in most production cars is steadily increasing. From a total number of the 15 000 or so separate components that make up a car, about 700 are now made out of plastic, reducing its weight from approximately 1200 kg to 1000 kg. This means that nearly 100 kg of plastic is used in an average car (plastic is slightly less than half the weight of an equivalent steel section producing the same strength). Of this, about 75 kg is used for dashboard facia interior, trim and under-bonnet components, rather than load-bearing structural bodyshell parts. The figure varies between models and manufacturers but 75 kg (or 75 per cent of the total usage) is a good average figure. Structural bodyshell panels present the biggest technical challenge to the use of plastics from a design viewpoint. Perhaps for this reason, two separate methods of use have developed.

- ***True monocoque panels:*** Here, the plastic bodyshell panels alone replace the use of steel. They take the full structural and imposed loads, without any subframe reinforcement.
- ***Subframe supported***: This is a compromise solution- a metal subframe is used, supporting either the full structure of the car, or sometimes only at the front end, extending forward from the door shut-post. It is more common in two-door vehicle designs. The subframe is used to support the plastic panels, which are bonded (rather than bolted) to it, hence they are only partially load-bearing. The subframe also increases rigidity and impact resistance. This second method is a very different approach to the full structural use of plastic bodyshell panels — there is also less of an advantage in weight saving, unless the subframe is made out of a lighter material such as aluminum. Before taking a more detailed look at specific plastic components it is worth thinking once again about the implications for production. Mass-produced car manufacture suffers from the problem that plastic parts, whether injection, blow or compression- molded, take longer to produce than conventional stamped steel panels. A typical bodyshell consists of 25—30 separate panels and although this can be reduced by about half for plastic components (because moulded plastic shapes can more complex) the total production time is still longer. This is a pivotal commercial consideration, equally as important as the issue of mechanical properties. The typical use of plastic materials in a modern mass-produced car. Some further details and the main reasons for the choice of material are given below.

Thermoplastics polymer can be produced in various shapes and designs as per the requirement of electric vehicles due to the high versatility and easy moldability of plastics. The use of plastics for electric vehicles reduces the weight of these vehicles, which provides a greater range between recharges. Plastics offer excellent heat resistance that

enables the construction of battery compartments and cooling systems and do not hamper the durability and safety provided by electric vehicles. The injection-molded plastics are less costly than metal components, which attracts the attention of the manufactures of electric vehicles. Automobile manufacturing is shifting toward generating less emissions of greenhouse gases and becoming fuel-efficient with the growing emphasis on environmental sustainability. Cost-effectiveness; environment sustainability; convenience; adoption of advanced technology; and various government policies such as preferential rates, incentives toward equipment purchase, and significant rebates are among the factors propelling the demand for electric vehicles across the world.

The rising demand for electric vehicles propels the growth of other industries such as plastics, as it is one of the preferred materials used in the manufacturing of these vehicles. Plastic is alternatively used in place of metals for cooling pipes and fans, and other automotive components - such as energy recovery devices, casing materials, and others.

The stringent emission norms and regulations implemented by governments are also motivating the manufacturers to minimize the weight of passenger cars and look for environment-friendly automotive options. Further, the advancement of technologies such as hybrid, plug-in-hybrid, and battery electric vehicles would offer lucrative opportunities for the plastics for the electric vehicle market during the forecast period. All such factors are anticipated to drive the growth of the global electric vehicles plastic market.

6. Advances in use of plastic in vehicles

Demand will increase for plastics used to make connectors and housings for the many electrical and electronic components required for both electric and autonomous vehicles. The use of plastics for parts unique to internal combustion engines, such as fuel lines and air intake manifolds, will gradually decline.

Plastics makers see opportunity in the auto industry’s evolution. The changes will place a premium on high-end materials that can withstand the extreme heat and electrical conditions in electric and autonomous vehicles. The automotive industry needs partners that can help them navigate all of this change. This will mean exploiting existing materials but also, where necessary, developing new materials.