****Expo 2016 — Student reflections (Tajwar)****

**I’m in my second year of university doing high-performance computational physics. But what’s different about this? Well not really that much. I’m still getting swamped with assignments, tests, quizzes, exams you know the usual.**

**After 13 years, in Year 12 you get to do this subject like no other. The Research Project: this is where you get to utilise everything that you’ve learnt, all the skills that you’ve developed in your schooling life. But the best part about the Research Project is that it’s open field. This is where you call the shots. Right. This is where you get to do something that you love, something that you’re passionate about. Now ever since I was a kid, I was always interested in the universe, it was because of this that I chose a topic “How do the laws of physics get broken by black holes, right, and how can we solve them?” That was my main question, but this question sort of exploded in my face, right. Because at first, I was like ‘ok black holes, it’s mostly about astronomy, mostly about space, but it turns out that to understand black holes you need every single field of physics especially the two main branches of physics.**

**One is called quantum mechanics; the other is called general relativity. Now quantum mechanics is the study of the very small things like atoms and it’s responsible for all the electronics that you see right now. General relativity on the other hand is about gravity and all the big things in the universe; it deals with satellites and all of that. Now, these two things they don’t play nice, right. You can’t join them together. One of them is about randomness and one is about perfect predictions. But black holes are what can provide physicists with the motivation necessary to unite these two things together and to create a sort of ‘theory of everything’ is what they call it. It’s more like ‘theory of everything so far’ but it doesn’t sound as cool, right? Now obviously I’ve learnt a lot of theory while doing this Research Project but I’ve also gotten a lot of contacts: a lot of contacts at the University at Adelaide, a lot of contacts at the CSIRO. What the Research Project has done has allowed me to develop my social skills because I am, in reality, quite shy you see. The Research Project what it does is it forces people to go out there and actively search for information, right and although at the time I hated it but now I think about it, it was actually quite helpful.**

**And of course the theory that I learnt in the Research Project was very very helpful when I was doing my Year 12 subjects especially you know science subjects: Physics, Chemistry, Biology. Now the main area where the Research Project helped was in issues investigations. The issues investigations is probably the most sophisticated piece of writing that you do in those science subjects. And because of all the things I learnt doing the Research Project like academic writing, you know, making things succinct, all the referencing systems, I absolutely killed those issues investigations, right. They’re actually really good.**

**Someone truly understands something when they can explain it to someone else. So what you should do is explain it to your parents about it, explain to them about what you’re doing. And if they actually understand it, then you understand it. And if your parents share with you their experiences, what they think about it, then you could get a sort of inspiration, some sort of amazing idea that you could never have thought of. And that’s completely possible. Now in the long run, all of the skills that you develop in your Research Project are fundamental right to any academic workplace right. Whether it be physics, whether you’re a physicist or a historian, they will always come back, as Luke said, they are life skills. It’s because of this that the Research Project is like the symbol of Year 12 right and it is - and should always be - the symbol of Year 12. It’s not just a subject about learning knowledge; it’s a subject about getting the skills, something that will always be there with you.**

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