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Reflection on our Action Research Journey

Our participation in the IBSC maker project has been a rewarding experience and one which we both feel that we have learned a great deal from. These lessons have helped in several ways to enhance student learning, both within the context of the research and in the ideas which have been implemented since the conclusion of the project.

We see the primary goal of using the cross-curricular opportunity to build perseverance as having been successful. This was evident both in our own teaching as well as in the interviews we conducted with the students. Every student was able to give examples related to the need for perseverance, and this aspect of the project was undoubtedly a success. It is also clear that the cross-curricular nature of the project fostered this attribute, as the majority of the identified problems faced and overcome arose from the maker and cross-curricular aspects of what the students were doing.

Our observation that it was mostly our brightest students who were interested in the project is one which, although salient, we did not overtly notice until quite late in the research process. We think that this relates primarily to the content we had *previously* taught the students, in the preparation courses before the project formally commenced. In future, we will need to make those courses a little easier to encourage students to have a higher level of confidence, and so prepare them for the challenges that arise from the open-ended maker project. In addition, we did not fully comprehend the high level of difficulty encountered due to the cross-curricular nature of the project and this will also need attention in the future.

We were fascinated by the fact that our students who, across the school, are known as being among the most successful students, also showed a greater tendency to describe the effect described by Syed (2010) as experiencing dissatisfaction after success. These students were in the minority, however; most students' responses were 'typical': they felt great after success, it gave them energy to go on, and so on. It was striking when one student in particular gave the immediate response, "It is inspiration but not the real thing," and did so with a tone that revealed the presence of some mildly conflicting emotions. This student is one of our highest achievers, yet what has baffled us for some time is that his measures of aptitude (i.e. reasoning scores) do not predict the extraordinary levels of success he consistently achieves. To us, it felt like this finally gave some explanation as to why. More importantly, it shows us the high value of *encouraging* this drive and curiosity in students. In future, when students achieve goals, we will move more quickly to the "what's next?" phase, encouraging students to move on quickly, with minimal fuss or attention.

Finally, we have gained greater confidence in taking risks in the classroom related to open-ended projects, particularly when we are unable to anticipate all of the issues that the students will encounter. This has motivated both of us to use similar projects in future. Further, we have created an entirely new subject focused on the maker model principle, designed to strengthen this cross-curricular experience and give more boys this opportunity.

We cannot imagine a better outcome than designing a course inspired by the research, which we hope will become a legacy of this research.

References

Syed, M. (2010). *Bounce: The myth of talent and the power of practice*. Fourth Estate, Hammersmith, London.