

A Transition Strategy for Ensuring Student Success in First Year Physics



Flinders
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inspiring achievement

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Background/context

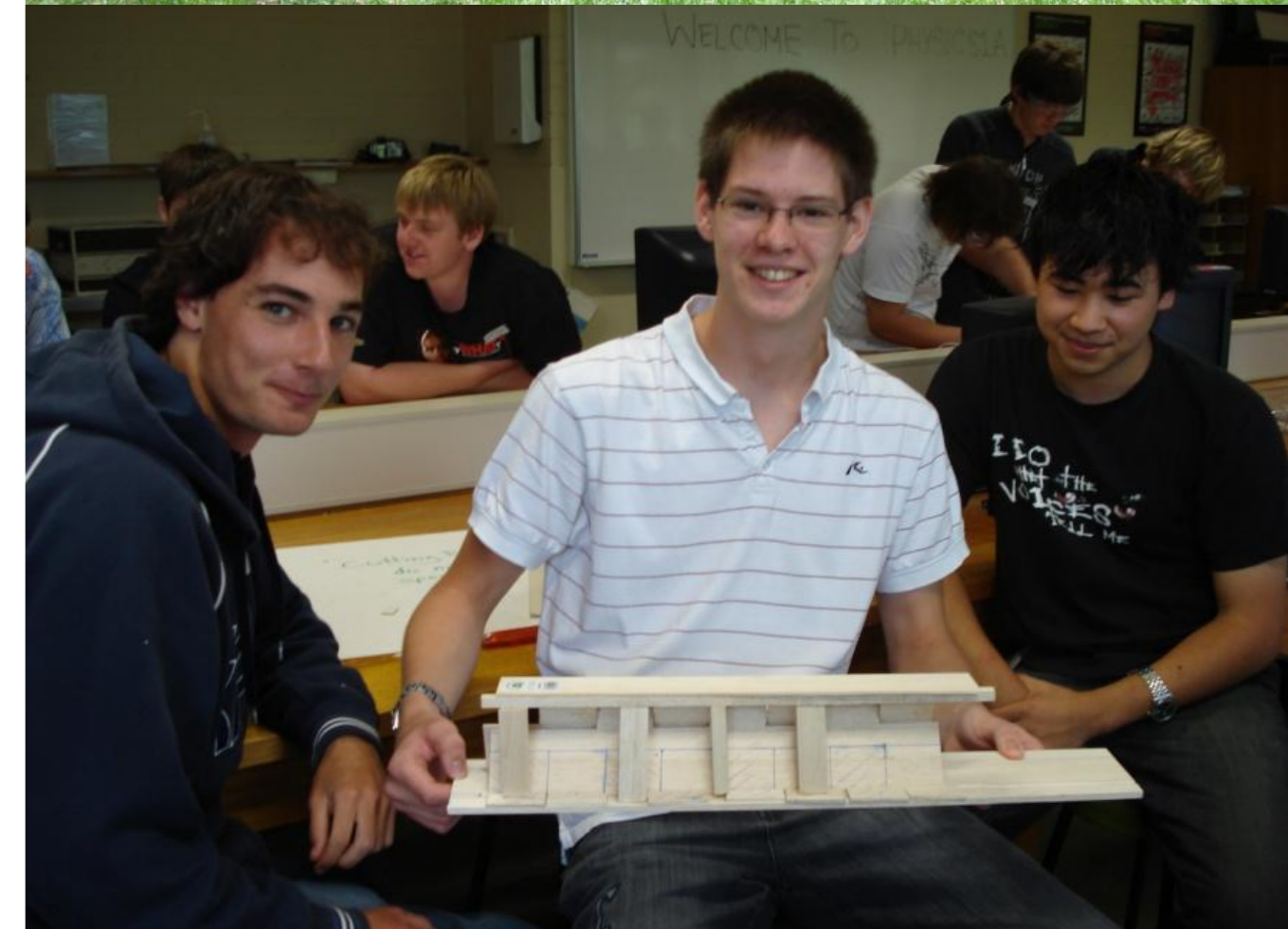
- ❖ Students noticeably struggle in their first year
- They isolate themselves from the student cohort
- Have a distinct lack of social interaction
- ❖ Students will be more successful, if they feel that they are part of their discipline¹

Research Evaluation/Method

- ❖ A transition day has been included in the schedule for University's O' Week.
- ❖ Aimed at introducing Physics students to each other and the academic staff they will encounter during semester.
 - To take the anxiety out of their first day of classes.
 - To have fun with physics and maximise their engagement with the topic.
- ❖ Conducted through three group based activities involving competitions-building bridges, gliders, and a Physics (trivia) General Knowledge Quiz.
- ❖ The day affords an opportunity for all to network, socialise and share learning experiences.

Outcomes

- ❖ The extent of student engagement and formation of study groups has substantially increased.
- ❖ It boosts the overall student experience and is reflected in the end of semester grade distribution, demonstrates an improvement in student performance.
- ❖ In 2011, we administered surveys to gauge both student experiences and confidence in achieving a successful completion of Physics 1A and any dependence against attendance at the Transition Day activity elucidated.
- ❖ Our data indicate that participation in the transition day activity results in students who are more confident with approaching teaching staff, their peers, if they have perceived need for assistance. In addition, their own perception of how well they are coping is enhanced.



Student Evaluation Questions– On the Transition Day

- Q1 The transition day was enjoyable
 Q2 The transition day stimulated my interest in physics
 Q3 enjoyed meeting with other students who will be in my class this semester
 Q4 After attending the transition day I am feeling less anxious about my first class
 Q5 My confidence in having successful transition to university life has improved after attending Physics Transition day.
 Q6. My confidence that I will successfully complete Physics 1A has increased after attending Physics Transition day.

Week 4—Survey Results

The first column of Table shows the statements from the survey, its second column shows the response distribution of the students who attended the transition day on the scale 6 and 7. The next column shows the response distribution of the students who did not attend the transition day on the scale 6 and 7.

Statement	Students attended the Transition day	Students not attended the transition day
	Ranking 6 to 7	Ranking 6 to 7
1. I am coping well with Physics 1A	63%	42%
2. I feel that I have support from lecturers/tutors if I need it	95%	69%
3. If I need help, I am comfortable approaching lecturers/tutors for assistance	69%	63%
4. I feel that I have support from peers/classmates if I need it	74%	54%
5. If I need help, I am comfortable approaching peers/classmates for assistance	79%	54%
6. I am confident that I will successfully complete Physics 1A	58%	57%

Table 1. Responses to Week 4 survey and comparison

¹Krause, K., Hartley, R., James, R., & McInnis, C. (2005). The First Year Experience in Australian Universities: Findings from a Decade of National Studies: Canberra: Australian Department of Education, Science and Training (pp. 31-48).

²Entwistle N.J., McCune, V., & Walker, P. (2001). Conceptions, styles, and approaches within higher education: Analytical abstractions and everyday experience. In Sternberg, R.J & L.Zhang (toim.). Perspectives on thinking, learning and cognitive styles. London: Lawrence Erlbaum Associates, 103–136.

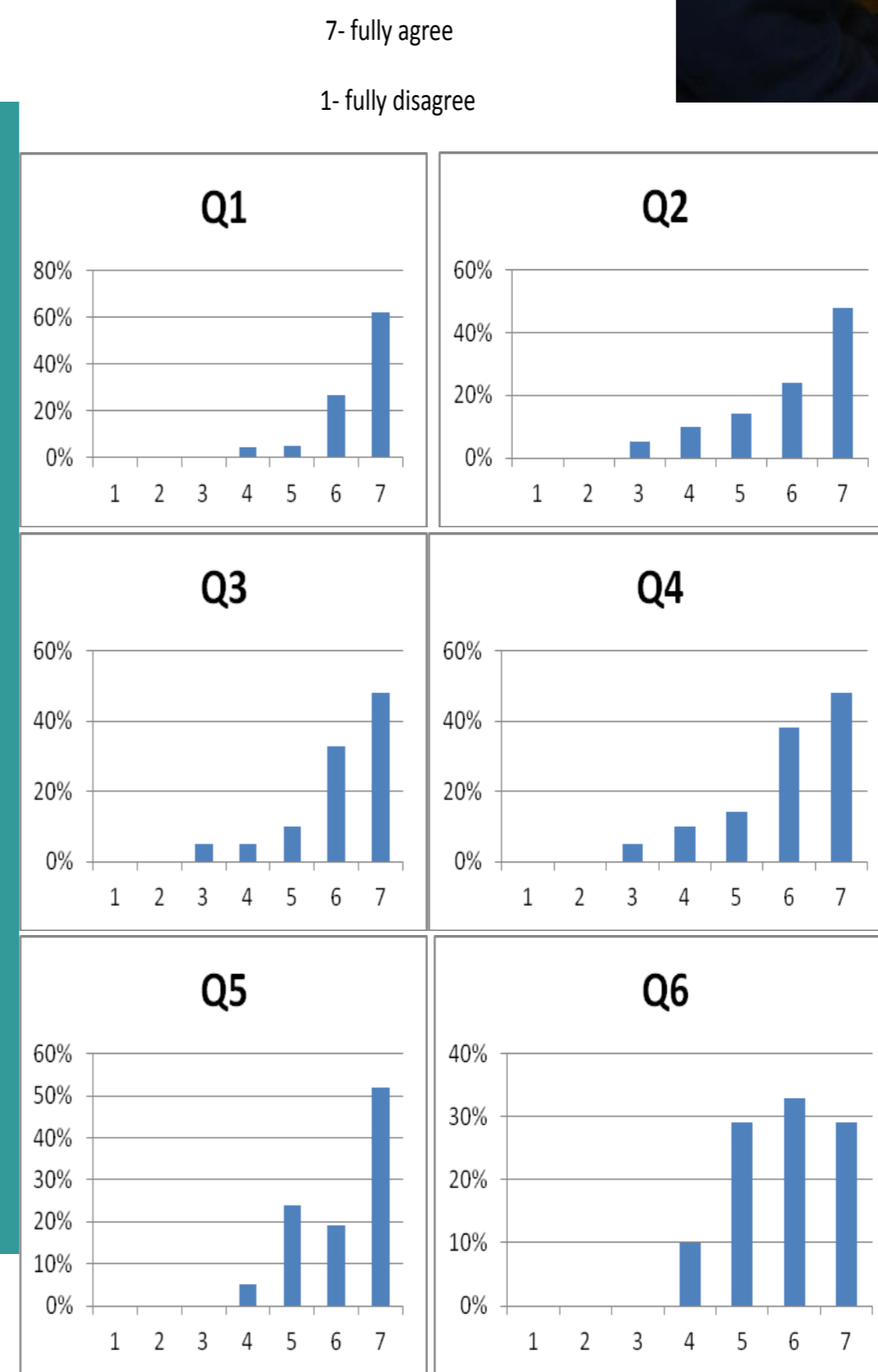
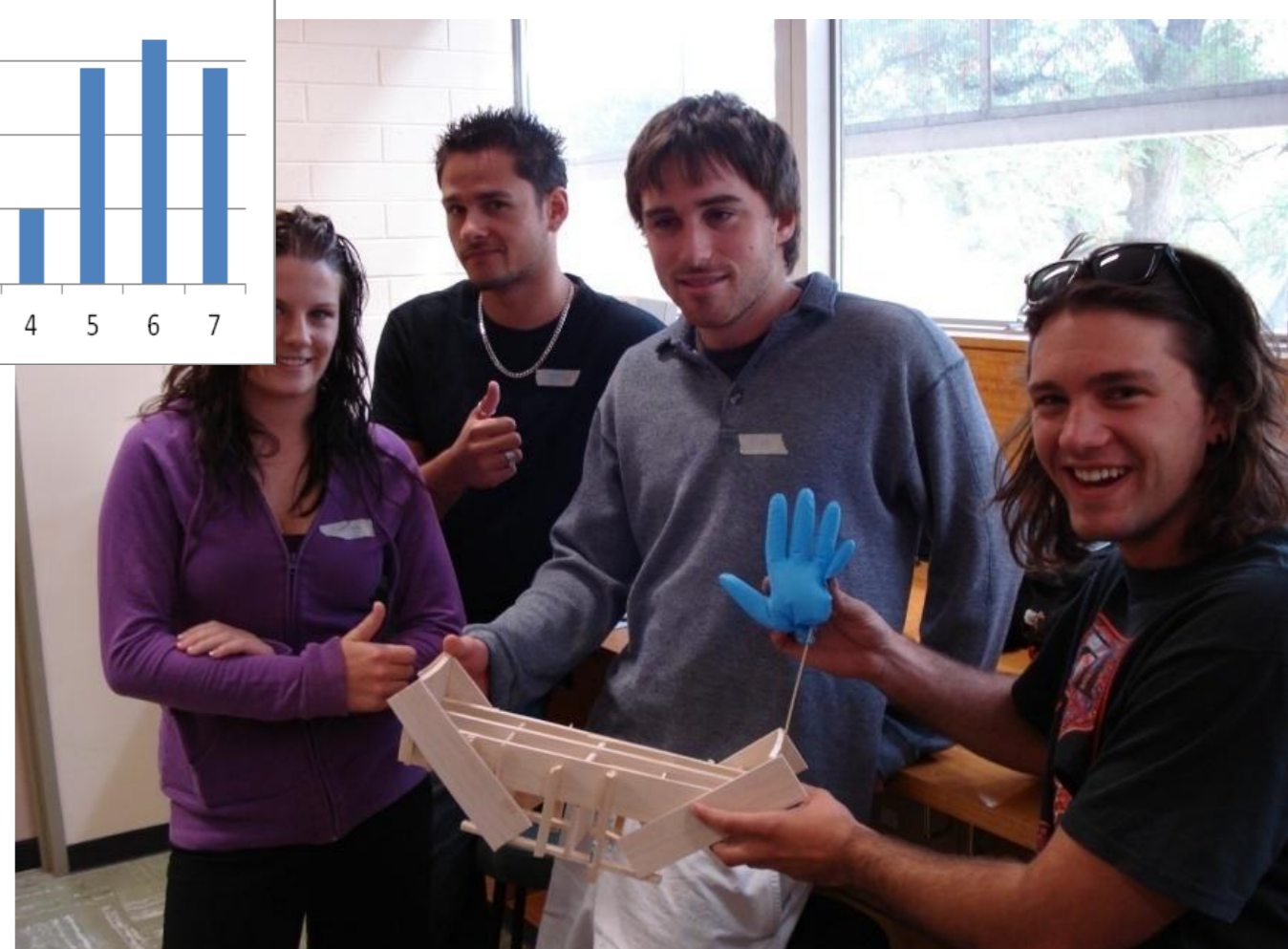


Figure 3: Survey response to questions 1 to 6.



Conclusions

- ❖ The transition day was successful for providing an effective initial first year Physics student experience.
 - It allowed an opportunity for all involved to network, socialise and learn.
- The 2008/2010 exam results also support the perception that the transition day activity provided strong benefits to the overall student experience, as it demonstrated an improvement in performance.
- We have no doubt that activities aimed at enhancing the transition of commencing first year students are highly beneficial.
- Overall our work supports the concepts of “establishing prior experience”².
- We believe that the transition program played an important role in terms of successful engagement, progression, achievement and a positive first year experience.

