

Understanding Approaches to Learning

Paul Ginns (University of Sydney), Andrew Martin (University of Sydney), and Brad Papworth (ABSA)

In a previous Lights Out article, “Powerful Answers To Important Educational Questions” (Vol 3 Issue 2 June 2010), we discussed one of the key challenges of educational research: making a strong argument that differences in one variable cause differences in another variable. We used the example of Personal Bests (PBs), an approach to learning where a student adopts goals which are (1) specific, (2) challenging, (3) competitively self-referenced, and (4) self-improvement based. Using longitudinal research methods, Martin and Liem (2010) argued that the more a student adopted a PB approach to learning at Time 1, the higher would be his/her mathematics and literacy achievement at Time 2 (one year later), holding Time 1 achievement constant.

Although widely adopted by many sports people, PBs are an approach to learning which are only just beginning to be investigated by educational researchers. However, decades of educational research have given us a firm understanding of a range of other key approaches to learning, and their relationships with educational achievement. Marsh, Hau, Artelt, Baumert, and Peschar (2006; p.313) define approaches to learning as “the way students address and handle learning tasks in school and the extent to which they are able to achieve their learning goals by applying strategies, motivating themselves, and by controlling and regulating their own learning processes.”

Recently, Marsh et al. (2006) reviewed the approaches to learning literature to develop short, self-report measures of the 14 most widely investigated self-regulated learning strategies, self-beliefs, motivational constructs, and learning preferences, using nationally representative samples of roughly 4000 15-year-old students from each of 25 OECD countries. Psychometric analyses of students’ responses found the 14 approaches to learning could be measured accurately in

all 25 countries, indicating these educational constructs are generalisable across cultures. These measures can therefore be used by educators and educational researchers to gain important insights into the dynamics of student learning. In this Lights Out article, we briefly review some of these approaches.

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SELF-REGULATED LEARNING STRATEGIES: MEMORIZATION AND ELABORATION

It is widely accepted by educators and educational researchers that more effective students are able to regulate their own learning, using a variety of learning activities as appropriate. Memorization refers to a group of learning strategies (e.g. learning key terms; reading material aloud multiple times; learning

to the point that material can be recited) which aim to create exact representations of to-be-learned information in long-term memory. While such strategies are sometimes derided as “drill-and-kill”, they may be useful for overlearning basic facts and terms, freeing up cognitive resources which may then be used for processing and understanding more complex topics. Students using such strategies will be likely to agree with statements such as “When I study, I try to memorize everything that might be covered” and “When I study, I practise by saying the material to myself over and over”.

While memorization strategies may be useful in achieving some learning goals, they are unlikely to generate a deeper understanding of a topic, or the ability to transfer that understanding to new situations. Deep understanding and a capacity for transfer and application are more likely to result when students use Elaboration strategies. When a student uses such strategies, he/she will attempt to relate what is to be learned to what he/she already knows, and explain to herself the real-world implications of the topic. Students using such strategies will be likely to agree with statements such as “When I study, I try to relate new material to things that I have learned in other subjects” and “When I study, I figure out how the material fits in with what I have already learned”.

COOPERATIVE & COMPETITIVE LEARNING PREFERENCES

Another facet of being a self-regulated learner is the capacity to learn effectively as both an individual and as part of a team. Some students may frame the process of learning in competitive terms; for instance, they will be likely to agree with statements such as “I like to try to be better than other students”, or “I learn faster if I’m trying to do better than the others”. While a competitive approach to learning may energise some students, it may be associated



with a range of undesirable outcomes, such as reduced intrinsic motivation for learning and failure avoidance. In contrast, students taking a cooperative approach to learning will be likely to agree with statements such as, "I learn most when I work with other students" and "It is helpful to put together everyone's ideas when working on a project"; this approach is often associated with a broad orientation towards mastery learning rather than ego fulfilment.

Increasingly, learners will learn (and work) interdependently, so an understanding of students' preferences will be important to schools in planning curriculum changes. For instance, if the majority of students at a school expect to learn independently, introducing cooperative learning activities and assessment tasks into the curriculum may challenge many students. If such changes are to improve learning, they may need to be accompanied by substantial explanations of their purpose and worth.

In previous Lights Out articles, we have introduced elements of a collaborative research project between ABSA and the University of Sydney. This project seeks to understand the effects of boarding school on academic and non-academic outcomes and includes the above measures of key approaches to learning; in concert with other demographic, motivation/engagement, and school-based variables. This study has vital scope for understanding approaches to learning of day and boarding students and the potential to provide powerful answers to important educational questions

For further information about this study, contact Brad Papworth:

b.papworth@edfac.usyd.edu.au
or (02) 9683 8490.

References

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