Chapter 16
Cognition and the First Year Experience: How Studying the Mind Equips Students for Learning

Ryan Korstange
Middle Tennessee State University, USA

Kevin Krahenbuhl
Middle Tennessee State University, USA

ABSTRACT

This chapter extrapolates information processing theory and advances in research in memory formation and effective learning practices on to the first-year student. The authors will lay a context for what FYE is, and why it matters, survey advances in memory research, and explore the study practices that students actually use. Finally, the authors posit a structure for organizing FYE courses around the best practices in cognitive and educational psychology so as to change student study behavior and help them increase their academic performance.

INTRODUCTION

Access to higher education has increased dramatically over the last several decades; but, during the same period, completion rates have remained relatively fixed, hovering right around 50% (Eaker & Sells, 2015). Many initiatives have been undertaken to increase student success (Demetriou & Schmitz-Sciborski, 2011). Some of these efforts are co-curricular and are aimed to help students navigate and assimilate into campus culture. Other student success efforts attempt to improve classroom instruction. According to George Kuh in “High Impact Practices,” the discussion of retention and student success should not only include co-curricular programming but examine the impact of classroom organization.
and structure (Kuh, 2008). Furthermore, Kuh identifies First Year Experience (FYE) courses as a “High Impact Practice.” FYE courses are not beneficial merely because they are offered; but, they also need to have a demonstrable benefit to learners. This chapter will propose a theoretical foundation for effective FYE courses based on cognitive and educational psychology.

In this chapter, the authors contend that FYE courses become truly effective for students and universities when they provide accurate information about cognitive function and neurobiology, as well as, opportunities to apply this knowledge to develop efficient and effective study strategies that they will use. FYE courses can become beneficial to the university when they increase student retention. However, the class becomes beneficial to students when, and only when, it provides them with essential information which enables them to more effectively and efficiently progress towards the accomplishment of their goals. It is not enough for the FYE course to merely disseminate information or to provide a path for students to develop a connection to the university, rather an effective FYE course must provide opportunities for students to understand and improve their approach to education. Since the retention of students is dependent upon their satisfaction with, and assimilation into the educational institution, the benefit or value of an FYE course is measured by retention and graduation, although satisfied students are certainly retained better (Schreiner & Nelson, 2013).

The need for new retention initiatives is especially evident in light of the academic under-preparedness that typifies incoming first-year students. Moreover, this need is exacerbated by the widening gap between the type of academic activities required in K-12 and Higher Education. A FYE course fits in a unique and influential place in the curriculum to address this gap and help students become successful (Atherton, 2014). Students enroll in FYE courses during their first semester, and the expressed aim of the course is to increase student success. An essential component of an effective FYE course then should include an explicit focus on developing student understanding of how learning occurs, and on the application of effective learning strategies in all of their courses.

This chapter will propose a theoretical foundation for FYE courses grounded in current educational and cognitive psychology and will be organized around several key questions: what is FYE; why does it matter; and, how does learning work? Finally, these questions form the outlines of a FYE curriculum organized around current understandings of cognitive function.

**WHAT IS FIRST YEAR EXPERIENCE (FYE) AND WHY DOES IT MATTER?**

The transition to college has consistently been acknowledged to be challenging for students (Astin, 1984; Terenzini et al, 1996; Goodman & Pascarella, 2006). Students often experience the challenge of increased autonomy and the unfamiliarity with collegiate instructional style and norms, and in many cases are not prepared for the academic challenge of higher education (Collier & Morgan, 2008). When faced with these challenges, many students perform poorly in their classes and are more likely to drop out of the university (Pascarella & Terenzini, 2005). This challenging transition resulting in low student retention is likely to be exacerbated because of increasing access to higher education for students who learned what success in college requires from their family or previous teachers.

Several influential theories identify reasons as to why students leave college (see Tinto’s “Student Integration Model” and Astin’s “Theory of Student Involvement”). Both theories effectively assert that students deal with their adjustment as it relates to their academic, social, and personal-emotional inte-
Related Content

The African-American Male First-Year Experience: Student Retention and Success Model
Craig Smith (2019). *Examining Student Retention and Engagement Strategies at Historically Black Colleges and Universities* (pp. 16-31).
[www.igi-global.com/chapter/the-african-american-male-first-year-experience/217647?camid=4v1a](www.igi-global.com/chapter/the-african-american-male-first-year-experience/217647?camid=4v1a)

Going Towards Adaption, Integration, and Co-Creation: A Conclusion to Developing Creative Problem Solving Skills in Higher Education
[www.igi-global.com/chapter/going-towards-adaption-integration-and-co-creation/166498?camid=4v1a](www.igi-global.com/chapter/going-towards-adaption-integration-and-co-creation/166498?camid=4v1a)

Teaching Entrepreneurship: Towards a Proposal of an Educational Program in Third Level (Tertiary) Education
[www.igi-global.com/chapter/teaching-entrepreneurship/148199?camid=4v1a](www.igi-global.com/chapter/teaching-entrepreneurship/148199?camid=4v1a)

Meaningful Individual Differences in Statistics Cognition
[www.igi-global.com/chapter/meaningful-individual-differences-in-statistics-cognition/182191?camid=4v1a](www.igi-global.com/chapter/meaningful-individual-differences-in-statistics-cognition/182191?camid=4v1a)