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Educational Article

Associations between approaches to study, the learning environment, and academic achievement

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الملخص

أهداف البحث: يهدف هذا البحث إلى الكشف عن أساليب التعلم لدى الطلبه، واستقصاء وجهات نظر الطلبة نحو بيئتهم التعليمية. كما يهدف أيضا إلى الكشف عن أي علاقة محتملة بين التحصيل الدراسي للطلاب وأساليب التعلم والبيئة التعليمية.

طرق البحث: تم إجراء دراسة وصفية مقطعية في مايو ٢٠١٢م. باستخدام النسخة المختصرة من استبانة "لانكستر" لأساليب التعلم لاستكشاف طرق التعلم لدى الطلبة. كما استخدم مقياس داندي الجاهز للبيئة التعليمية المعروف بـ"دريم" لمعرفة وجهة نظر الطلبة نحو بيئتهم التعليمية.

النتائج: تمت تعبئة ١٥٧ استبانة من أصل ١٦٦ وزعت على الطلبة الجامعيين في السنة الأولى للعلوم الطبية التطبيقية (معدل استجابة ٩٤٪). أظهرت الدراسة أن الطلبة لديهم ميل لاستخدام الأسلوب "التحصيلي"، و"الاستراتيجي"، و"إعادة الإنتاج" بشكل متكرر أكثر من الأساليب الأخرى للدراسة. كما اعتبروا بيئة التعلم لديهم بأنها أكثر إيجابية. وكانت هناك علاقة ذات دلالة إحصائية بين أساليب التعلم والبيئة التعليمية. وأيضا كانت هناك علاقة ذات دلالة إحصائية بين التحصيل الأكاديمي وتصور الطالب الذاتي لتحصيله الأكاديمي.

الاستنتاجات: أظهرت الدراسة أن الطلبة يستخدمون جميع أساليب التعلم المختلفة. ولكن استخدام الأسلوب التحصيلي، والاستراتيجي، وإعادة الإنتاج كان أكثر استخداما. كما كانت تصورات الطلبة نحو بيئتهم التعليمية أكثر إيجابية، كما أنهم كانوا راضين عن تعلمهم، وعن المعلمين، ومناخ الدراسة، والحياة الاجتماعية. تأثرت أساليب التعلم لديهم بوجهة نظرهم نحو بيئتهم التعليمية. أيضا كان تحصيل الطلاب الدراسي مرتبطا إيجابيا مع وجهة نظرهم نحو البيئة التعليمية خاصة مع تصور الطلبه الذاتي لتحصيلهم الأكاديمي.

الكلمات المفتاحية: أساليب التعلم; البيئة التعليمية; التحصيل الأكاديمي

Abstract

Objectives: This study aimed to explore students' approaches to studying, their perceptions about their learning environments, and any possible relationships between their academic achievement and the approaches to studying scales and the learning environment.

Methods: A cross-sectional descriptive study was conducted in May 2012. A modified version of the Lancaster Approaches to Study Inventory (ASI) was used to understand the students' approaches to learning, and the Dundee Ready Education Environment Measure (DREEM) was used to assess students' perceptions of their learning environment.

Results: Of 166 first-year undergraduate students from the College of Applied Medical Science, 157 completed the survey, yielding a response rate of 94%. Students showed a tendency to use achievement, versatility, and reproduction approaches more frequently than other approaches when studying for their courses. They also perceived their learning environments to be more positive than negative. There were significant relationships between approaches to study and learning environments, and there was also a significant relationship between academic achievement and student academic self-perception.

Conclusion: This study showed that while students used all of the identified approaches to learning, the most

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frequently used learning styles included achievement, versatility, and reproduction. Moreover, students' study approaches were influenced by their perception of their learning environment. At the same time, student academic achievement was positively associated with their perception of their learning environment, particularly with their academic self-perception.

Keywords: Academic achievement; Approaches to study; Learning environment; Self-perception

Introduction

The general objective for higher education is to teach, facilitate, and encourage students to learn.[1] To achieve these objectives, factors that affect student learning should be explored. According to Newble and Entwistle,[2] these factors can be classified into two categories: a) those related to students' characteristics, such as learning style and approaches to learning, and b) those related to the learning environment, such as teaching pedagogy. Because the main goal of learning in higher education is to emphasize the value of understanding and meaning rather than just focussing on recognition and reproduction in student learning[3] and because the learning approach used by students may directly influence learning outcomes,[4–8] it is important to understand student learning styles and student approaches to learning. There are several theoretical frameworks for elucidating student learning styles, though no specific theory has supremacy over another.[9] These various models are, in part, derived from various definitions of learning styles and from various research methodologies.[10] One of the initial investigations into learning styles and study approaches was a series of experiments conducted by Marton and his colleague[11,12] to investigate how students read an academic article and what their common approach to studying a textbook is. These approaches were initially portrayed as deep-level and surface-level processing, but they were subsequently renamed as approaches to learning[13] to signify that the word 'approach' entails a process as well as an intention. In general, the deep approach entails a dynamic effort to understand the overall meaning, clarify the evidence and relate it to the conclusion with the intent to comprehend. On the other hand, the surface approach entails an effort to memorize unrelated facts or information with the intent to fulfil course requirements. Several inventories have been developed to assess student learning, one of which is the Approaches to Studying Inventory (ASI).[14] This inventory has been widely used in research with respect to higher education,[13,15,16] and it has shown high reliability in a number of studies.[17,18]

Student learning is affected not only by the student's learning style but also by the environment where the learning is taking place.[7,14] Studies on learning environment have found that the environment does not only affect the student's approach to learning[16,19,20] but also the student's academic outcome,[2,21,22] level of motivation,[23] and degree of learning effectiveness.[24] In addition, an assessment of the learning environment is considered a crucial aspect in delivering high quality education.[24] Consequently, a considerable amount of research has been conducted to assess students' perceptions of their educational environment. One of the instruments used to measure student perception of the learning environment is the Dundee Ready Education Environment Measure (DREEM),[25] which has been used in various educational settings[25–30] with a high degree of proven reliability.[25,27,31–33]

The DREEM creates a profile of a specific educational institution's environmental strengths as well as its problematic areas and opportunities for enhancement. Within the context of Saudi Arabia, the DREEM was used to assess the educational environment in single medical schools[30,34–36] and was also used to compare medical schools that had adopted contrasting educational strategies.[37,38] It has also been used to reassess the perceptions of medical students to determine the change over time from a previous assessment.[39] In the findings of previous studies, the overall DREEM mean score has ranged from 89.9 to 131 out of 200.

This paper explores the approaches to study, used by first-year female students at the College of Applied Medical Sciences, University of Dammam, Saudi Arabia, as measured by the ASI, and their perceptions toward their learning environment as measured by the DREEM. It also examines the possible association between academic achievement as measured by student self-reported grade point average (GPA) and both the ASI and the DREEM.

The findings of this study will contribute to the international medical educational literature on approaches to study and on the effects of learning environment.

Material and Methods

Study setting

The study was conducted at the College of Applied Medical Sciences (CAMS) – Female Section, University of Dammam, Saudi Arabia.

Study design

The cross-sectional study was conducted in May 2012.

Target population and sample size

The target population for the study was all first year students in the academic year 2011–2012 (n = 166) at the college of Applied Medical Sciences – Female Section, University of Dammam, Saudi Arabia. The female section consists of the following seven departments: laboratory technology, respiratory care, health information management and technology, physical therapy, radiology, cardiac technology, and clinical nutrition. The academic programs span four years plus one internship year in Saudi Arabia. During the first year, all students study similar compulsory courses – general and scientific English, English study skills, two biology courses,