DO BUSINESS STUDENTS HAVE MORE EFFECTIVE LEARNING STRATEGIES THAN STUDENTS FROM OTHER ACADEMIC FIELDS?

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ABSTRACT

The aim of this paper is to compare the learning strategies of students in different academic fields in higher education. Previous research has limited its focus to comparing students on topics such as the degree of social responsibility, personal values, academic dishonesty/integrity, and emotional intelligence. In contrast, this study addresses the issue of whether the learning strategies of business students are better than those of students from other academic fields. To date, our knowledge and understanding of this issue are limited even though the topic of learning strategies has gained considerable attention in educational research. This research applied the Learning and Study Strategies Inventory (LASSI) to elucidate the differences in study strategies between groups of students. Findings from the statistical analysis indicate that business students have more effective learning strategies than the non-business students included in this study. Potential reasons for these findings are discussed and based on these findings theoretical and practical implications are viewed.

KEY WORDS: learning, business students, higher education, the learning and study strategies inventory (LASSI).

1. INTRODUCTION

A large body of literature has established the importance of the need for students to emphasize learning strategies and study skills (Alkhateeb & Nasser, 2014; Capenter et al., 2015; Karasakaloglu, 2012).

The original version of the Learning and Study Strategies Inventory (LASSI) was developed over 30 years ago and has its roots in cognitive psychology (Weinstein et al.; 1987). The LASSI has proven reliable in both research and as a tool for academic staff in universities and colleges around the world (Carpenter et al., 2015; Downing et al., 2009) As a tool for academic staff, it provides evidence of the impact of their courses on students' learning strategies (Schutz et al., 2011). As a tool for students (Schutz et al., 2013; West et al., 2014) it contributes to students' awareness of how learning strategies can improve their expectations of mastering and fostering better self-control of the learning process.

The original LASSI (Weinstein et al., 1987) was validated through the factor analysis of the composite scores generated from 10 predetermined subscales related to student success and outcomes, typically classified into the broad dimensions of cognitive, conative, and affective domains (Finch, Cassady, & Jones, 2016). The 10 subscales are (1) Anxiety, (2) Attitude, (3) Concentration, (4) Information Processing, (5) Motivation, (6) Selecting Main Ideas, (7) Self-Testing, (8) Study Aids, (9) Test Strategies, and (10) Time Management. The latent structures representing the LASSI subscales imply that Information Processing, Selecting Main Ideas, and Test Strategies are associated with skill, the subscales Anxiety, Attitude, and Motivation are associated with will, and Concentration, Self-Testing, Study Aids, and Time Management are linked to self-regulation.

Researchers have empirically tested the LASSI in different settings (Alkahateeb & Nasser, 2014; Bergey et al. 2019) and have evaluated its validity and reliability and the reported latent variables (Cano, 2006; Finch et al., 2016; Flowers et al., 2012). However, the question of whether a certain student group has better learning strategies than students from other academic fields has not been explored. In the present study this is addressed.

Learning strategies are behaviors that help recall knowledge, both previously acquired and newly learned knowledge (Chevalier et al., 2017). One approach to understanding learning strategies is to interpret them as the process of giving meaning to the knowledge that students acquire during the learning/teaching process or during individual preparation through the mental processes and efforts required to obtain that meaning (Zheng et al. 2020). Warr and Downing (2000) argue that learning strategies are one of the key elements of effective learning. In simple terms, a learning strategy is an individual approach used for completing a learning task. Accordingly, strategic learners develop metacognitive competence regarding their own learning approach and their power of thinking (Karasakaloglu, 2012).

Effective study skills and habits are essential when students aim to acquire knowledge quickly. Students tend to believe that it is not possible to achieve academic success simply by studying hard. Some evidence confirming this is offered by Karasakaloglu (2012), who argues that study time does not seem to be directly linked to academic success. Masui et al. (2014) offer a more balanced perspective on the importance of study time. They point out that previous studies report a mixed relationship between study time and academic performance, but conclude that more study time predicts higher grades and that student activities and effort matter (p. 637). On the other hand, it is widely accepted that there is a positive relationship between applying learning strategies and success (Bender & Garner, 2010; Carson, 2011; Laakkonen & Nevgi, 2014; Mireles et al., 2011; Schutz et al., 2011; West et al., 2014; Yip, 2013a).

Based on these mixed findings, further research on the link between learning strategies and students' different academic fields is warranted. The aim of this study was thus twofold: first, compare the learning strategies of business students with those of students from other academic fields; and second, identify whether there are differences in approaches to learning between the two groups.

2. THEORETICAL FRAMEWORK AND PREVIOUS RESEARCH

2.1. Research related to applying the LASSI

The LASSI has proven reliable in different cultural contexts (Alkhateeb & Nasser, 2014; Carpenter et al., 2014; Ning & Downing, 2012; Samuelstuen et al., 2007; Soares et. al 2009; Yip, 2013b). However, the subscale of Motivation has been reported to be somewhat vulnerable depending on the cultural context (Braten & Olaussen, 2000). Concern related to the applicability of the LASSI in different cultural environments was also raised by Alkhateeb and Nasser (2014). The LASSI has been tested on different student groups such as elementary school teachers (Karasakaloglu, 2012), college students studying mathematics (Mireles et al., 2011; Wadsworth et al., 2007), engineering students (Seabi, 2011), veterinary students (Laakkonen & Nevgi, 2014), and medical students (West et al., 2014).

2.2. Research related to the learning strategies of business students

Is there reason to believe that business students would obtain higher scores on LASSI subscales than the average student studying in other academic programs? Some evidence (Olaussen, 2000) suggests that business students generally invest a considerable number of study hours in their programs. Admission requirements for undergraduate courses limit the number of students based on grades, and admission to master's programs requires a relatively high average grade. Potential business employers value a high average grade compared with other sectors of the work environment where there is a constant lack of qualified staff.

Previous research that investigated business students compared with students in other academic fields has adopted an approach that focuses on ethical aspects, such as the degree of social responsibility (Burns et al., 2013; Kolodinsky et al., 2010) personal values and value systems (Coulter et al., 2007; Giacomino et al., 2013; Nordhaug et al., 2010) the degree of dishonesty (Brown et al., 2010; Iyer & Eastman, 2006; Klein et al., 2007), and psychopathic traits (Hassall et al., 2015) . Other topics include perceptions of a career in business (Karakaya et al., 2014) evaluation of teaching (Narayanan, 2014), beliefs and attitudes about business (Ottley et al., 2013), intention to enroll in law school (Edmonds et al., 2013), and learning styles (Ballantine et al. 2008).

Of more specific interest related is Rodriguez (2009) who looked at the choice of learning strategy among business students. His approach focused on identifying how academic self-concept and outcome expectations influenced the choice of learning strategy. It was reported that a strong sense of academic self-concept and outcome expectations encouraged critical thinking and reflective approaches to learning.

A review of the literature reveals limited research on the choice of learning strategies of business students compared with students from other academic disciplines. This paper aims to provide insight into this issue, thereby increasing knowledge and understanding of this specific group of students. Practical contributions are proposed on how to better teach, motivate and organize business students based on their learning strategies.

3. METHODOLOGY

3.1. Participants

Two samples of student groups were selected: business students and a group of students on other bachelor's programs that are referred to as non-business students. To be defined as a business student, the main part of their course was related to Business Economics. This first sample consisted of 126 undergraduates (69 % women, 30 % men) from a university in southern Norway drawn from all three years of a bachelor's business program. The age range of students was 19–57 years (M = 38.0 years; SD = 11.5 years). The second sample consisted of 265 undergraduates (74 % women, 25 % men) from the same university and was drawn from a wide range of other bachelor's programs as well as from different years of study. The age range of the non-business sample was 18–57 years (M = 26.1 years; SD = 8.5 years). Almost all respondents had completed their secondary education in Norway. Respondents were not asked about their ethnic background. Table 1 shows the distribution of bachelor's programs and the number of students participating in the non-business group.

Table 1. Bachelor's programs and the number of participating students in the non-business group

Study Program	Respondents in the sample
Bachelor's in Tourism and Leisure Management	152
Bachelor's in Organizational Management	45
Bachelor's in Social Work	19
Bachelor's in Law	49
Total number of students	265
Process	Purchaser
Physical evidence	Probing

3.2. Instrument

In this study, the LASSI questionnaire (Weinstein et al. 2002) was applied. The revised version from 2002 (Weinstein et al.), which is a norm-referenced instrument based on the scores of 1,092 US students was applied. The LASSI (Weinstein et al. 2002) is a widely used instrument for evaluating self-regulated learning by evaluating students' learning and study strategies (Schutz et al., 2011). It provides standardized scores expressed in percentile score equivalents based on the scores of a cohort of US students. The psychometric properties have been shown to be stable and were therefore chosen for our study (Cano, 2006; Samuelstuen, 2003). The 2002 version of the LASSI consists of 10 subscales and 77 items. The subscales are described as follows.

1. Anxiety is measured with respect to respondents' degree of nervousness and apprehension. A high score on this subscale indicates that a student is able to handle anxiety when performing study activities.

2. Attitude indicates a student's attitude toward education and how they establish educational goals. A high score indicates that the student possesses realistic educational goals.

3. Concentration identifies the extent to which a student is able to focus on the academic task. A high score here shows that the student is capable of organizing their effort and gaining academic knowledge.

4. Information Processing measures the use of memory aids and the extent to which a student can apply appropriate tools to organize the collection of data. A high score on this subscale indicates good information processing skills.

5. Motivation measures the ability to direct the activities that secure good academic results. High scores here indicate that the student is able to plan and work on a regular basis toward an academic goal.

6. Selecting Main Ideas assesses a student's ability to focus on the important knowledge dimensions related to the study program. A high score on this dimension shows that the student can identify the important points in the curriculum.

7. Self-Testing measures the ability to control and correctly evaluate the extent of knowledge assessed. High scores here show that the student understands the need to monitor their degree of knowledge buildup.

8. The Study Aids scale measures the extent to which a student is able to prepare for tests and exams. A high score shows that the student knows how to utilize the study aids that are available.

9. The Test Strategies scale gives feedback on a student's ability to review academic content. A high score shows that the student has the necessary skills and knowledge to ensure objective estimates of their ability to acquire the necessary competence.

10. The Time Management subscale measures the level of a student's time management qualifications, and a high score indicates a good understanding of how to organize the available time and resources.

Alpha reliability coefficients were originally estimated to range between .72 and .85 (Weinstein & Woolfolk, 1987). The reported coefficients are in the range of .68 to .86 (see Table 2). In the subscale of Study Aid, one question was removed, which improved the Cronbach's alpha coefficient. Based on Nunnally (1978), it is generally assumed that a reliability of .70 or higher is acceptable. Previous studies that applied the LASSI (Kirkby et al., 2008; Melancon, 2002; Muis et al., 2007; Prevatt et al., 2006) reported lower Cronbach's alpha values but nevertheless found it appropriate to analyze the data. In particular, the subscale of Study Aids appears to be vulnerable. Without disregarding the importance of Cronbach's alpha values, contextual factors such as collecting the data in a new setting might also have had an influence in our study. On the whole, our results indicate that the LASSI subscales demonstrate an appropriate level of reliability and internal consistency (Cano, 2006).

The instrument presupposes that students whose academic performance is sound also have certain skills, opinions, and behaviors that are the underlying foundations of the LASSI. With the exception of the subscale of Selecting Main Ideas, which comprises five statements, all the other subscales have eight statements in a Likert-type 5-point format. The scale for each item ranges from "not at all like me" to "very much like me." This version was translated into Norwegian, aimed to preserve the original meaning, while at the same time ensuring that it would fit into a natural context for domestic students.

3.3. Data collection and applying the statistical tool

Self-report questionnaires were used because of their ease and efficiency of application, but also because they reduce administration. However, self-reports presuppose that strategies are conscious, although not necessarily applied (Kirkby et al., 2008). Although self-reports have the advantage that they unequivocally provide students' interpretations of their study habits, whether they accurately portray what students actually do when they study is not necessarily the case. Students may also be inaccurate in their reporting, leading to bias (Winne, 2010). Other issues concerning the potential inaccuracy of data relate to reluctant participation, a propensity to acquiescence and choose socially accepted attitudes, and a weak association with students' performance (Veenman, 2005). Because of these factors, students may express better strategic processing abilities than they actually possess.

Results from earlier studies (Samuelstuen & Bråten, 2007; Samuelstuen et al., 2007) also indicate that self-report questionnaires presuppose perceptions of strategies outside the context of specific task performance, highlighting that findings might be inaccurate and have low predictive validity. Thus, it was recommended to use task-specific strategy scales when the aim is to reveal students' general-task abilities of strategic processing.

Nevertheless, self-report questionnaires are cost-efficient, they can be administered in the students' natural surroundings, and have been shown to predict academic performance (Duncan & McKeachie, 2005). On this basis self-report questionnaires were applied.

The inventory was administered to the two samples of students and they were informed that participation was voluntary. Using this method of data collection ensured that the response rate was high (97%). An analysis of variance (ANOVA) for each of the subscales was used to identify potential differences in learning strategies between the groups of business and non-business students.

4. RESULTS AND DISCUSSION

The aim of this study was to compare the learning strategies of a group of business students with those of students from other academic fields. We also aimed to identify whether there were differences in approaches to learning between these groups. The findings of the statistical tests are summarized in Table 2.

Table 2. Means, Standard Deviations (SD), and Cronbach's α values

LASSI subscales	Cronbach's α	Mean Business students	Mean Non-business students	Significance
Attitude	.72	23.7	23.8	.906
SD		4.4	4.4	
Concentration	.84	28.3	26.0	.000 (*)
SD		4.9	5.2	
Information Processing	.83	30.2	28.1	.000 (*)
SD		4.1	4.6	
Anxiety	.81	20.8	22.0	.156
SD		6.5	6.7	
Motivation	.81	25.8	24.9	.061 (#)
SD		3.7	4.0	
Self-Testing	.75	19.9	18.8	.044 (*)
SD		4.5	4.4	
Selecting Main Ideas	.74	20.1	20.6	.379
SD		5.0	4.7	
Time Management	.86	25.0	24.6	.680
SD		6.1	6.8	
Test Strategies	.83	18.2	18.2	.930
SD		4.3	4.5	
Study Aids	.68	27.1	26.2	.027 (*)
SD		3.5	3.5	

(*) p < .05
Close to p < .05

The findings reveal significant differences (p < .05) between business and non-business students on the following subscales: Concentration, Information Processing, Self-Testing, and Study Aids. It is also worth mentioning that business students appear to have a better approach concerning Motivation to the study process, even though the level of significance does not reach 5% (.061). We also tested for potential gender differences but found few of significance; women only showed a better degree of Information Processing skills. Previous research (Kao et al., 2017; Marland et al., 2015) has indicated that women tend to face a greater challenge in ensuring that Anxiety does not have a negative influence on their learning strategies. However, there were no differences with respect to Attitude, Anxiety, Selecting Main Ideas, Time Management, and Test Strategies between men and women. A similar lack of changes in students' approaches to learning linked to gender is also confirmed by previous research (Ballantine et. al., 2008), but not unanimously. Bender & Garner (2010) found significant differences on five subscales of the LASSI with respect to gender, female students scored higher on five subscales.

Previous research (Bråten & Olaussen, 2000; Capenter et al. 2015) has identified differences in scores linked to age. Older students tend to score higher on the subscale "Attitude" while younger students scored higher on the use of "Study Aids". No significant differences in scores based on age were found in the data that are the basis for this article.

Taking into consideration the better results that business students had on the subscales of Concentration, Information Processing, Self-Testing, and Study Aids, it is tempting to explain this by students having previously acquired better study skills. A limited number of students are admitted to study Business Economics. In contrast, the other bachelor's programs accept all students who apply. Furthermore, only a limited number of students are admitted to master's business programs, based on the grades in the bachelor's program. The assumption is therefore that the "quality" (in the sense of previously acquired study skills) is somewhat higher among business students. Furthermore, because the opportunity to enter the master's program is solely based on grades, there is a need to maintain study skills that will ensure progress onto further studies. Business studies is a general study program without a designated future profession. Applicants are therefore evaluated on their grades when applying for a job.

It was somewhat surprising that the subscale Motivation did not show a clear difference for business students relative to non-business students. However, there were differences with respect to previous academic performance, which implies that business students are more capable than non-business students. One possible explanation could be that motivation is a hygiene factor that holds for both groups of students. Once students are generally satisfied with their place in life, hygiene factors no longer actively motivate them further. Although both groups of students are motivated, they do not necessarily possess the same academic capabilities. Thus, it is understandable that the difference in the subscale of Motivation may not be large between these two groups. Another possible explanation might be related to the fact that the LASSI measures extrinsic motivation rather than intrinsic motivation.

One implication of these findings is that educators of business students might find the information gathered from the LASSI useful. For example, business students who score low on the subscales of Concentration, Information Processing, Self-Testing, and Study Aids could be targeted with specific support to improve these key learning approach dimensions.

5. CONCLUSION AND RECOMMENDATIONS FOR FURTHER RESEARCH

In this study, business students showed study skills that relate to several aspects of "better learning strategies." In particular, they performed significantly better with respect to Information Processing, Self-Testing, and the use of Study Aids, which are dimensions that are related to the latent structure of skill. Business students also performed better on Concentration, which is linked to self-regulation, and to a certain degree on Motivation, which is associated with will. Significant difference between business students as opposed to other student does to a certain extent contradict a previous research between accounting students and business students (Ballantine et. al., 2008). In their research no significant differences were found between the two student groups with respect to "deep approach study", "surface approach" and "strategic approach". Thus findings here in this research contributes to our knowledge base. In addition this tailored increase in knowledge may be useful in the education of business students.

However, the findings in this research can be utilized to further improve the teaching process when the student group are business students. The clearly better ability to handle "Information Processing" can be the basis for offering business students a broader specter of accessible knowledge centers and thus benefitting of their clear advantage in handling a larger amount of available information. Similarly giving students access to self-testing tools or automatized test opportunities in the learning management system offered to students. Lastly the fact that business students apply study aids to a larger degree than other student implies that teachers could have a larger focus on making such tools/aids available. In line with this a possible follow up research could be carried out after adjusting the teacher approach to business students given the new knowledge. It would be of interest to see if such strategic intervening act further improve the final grades.

Further possible research points in a number of directions for further research. The preliminary findings in this study should be followed up with additional testing on similar student groups. Even though few gender differences were found, it would be interesting to see if this finding holds, given that previous research has shown significantly different results with respect to the dimension of Anxiety. Another approach of interest would be to see how the results differed with groups of students aiming at a specific profession (e.g., law or nursing) compared with students on more general study programs. Future research should also aim to clarify the relationship between study strategies and the academic performance of business students. On the scales Attitude, Selecting Main Ideas, Time Management, Test Strategies and Study Aids both groups seem to score approximately the same score. These aspects are important features related to performing well as a student. It might be a need to educate both student groups to better handle the student task. Cultural dimensions clearly matter with respect to scores on the LASSI. Thus more research taken this into consideration might give valuable insight. Another aspect of interest is to see whether there are differences given if students are at a public or a private university. Cultural dimensions are to a certain degree discussed (Bråten & Olaussen, 2000), but possible differences based on the organizational financial structure of the university (public/private) appears not be covered.

LITERATURE

1. Alkhateeb, H. M., & Nasser, R. (2014). Assessment of Learning and Study Strategies of University Students in Qatar Using an Arabic Translation of the Learning and Study Strategies Inventory. *Psychological Reports, 114*(3), 947-965. doi:10.2466/11.03.PR0.114k26w3

2. Ballantine, J. A., Duff, A., & McCourt Larres, P. (2008). Accounting and business students' approaches to learning: A longitudinal study. *Journal of Accounting Education, 26*(4), 188-201. doi:10.1016/j.jaccedu.2009.03.001

3. Bender, D. S., & Garner, J. K. (2010). Using the LASSI to predict first year college achievement: Is a gender-specific approach necessary? *Paper presented at the American Research Association, Denver, CO.*

4. Bergey, B. W., Parrila, R. K., Laroche, A., & Deacon, S. H. (2019). Effects of peer-led training on academic self-efficacy, study strategies, and academic performance for first-year university students with and without reading difficulties. *Contemporary Educational Psychology, 56*, 25-39. doi:10.1016/j.cedpsych.2018.11.001

5. Braten, I., & Olaussen, B. S. (2000). Motivation in college - Understanding Norwegian college students' performance on the LASSI Motivation Subscale and their beliefs about academic motivation. *Learning and Individual Differences, 12*(2), 177-187. doi:10.1016/S1041-6080(01)00036-X

6. Brown, B. S., Weible, R. J., & Olmosk, K. E. (2010). Business School Deans on Student Academic Dishonesty: A Survey. *College Student Journal, 44*(2), 299.

7. Cano, F. (2006). An In-Depth Analysis of the Learning and Study Strategies Inventory (LASSI). *Educational and Psychological Measurement, 66*(6), 1023-1038. doi:10.1177/0013164406288167

8. Carpenter, J., Dearlove, J., & Marland, J. (2015). Student skills and the Bradley agenda in Australia. *Higher Education Research & Development, 34*(2), 284-297. doi:10.1080/07294360.2014.956698

9. Carson, A. D. (2011). Predicting Student Success from the Lassi for Learning Online (LLO). *Journal of Educational Computing Research, 45*(4), 399-414. doi:10.2190/EC.45.4.b

10. Chevalier, T. M., Parrila, R., Ritchie, K. C., & Deacon, S. H. (2017). The Role of Metacognitive Reading Strategies, Metacognitive Study and Learning Strategies, and Behavioral Study and Learning Strategies in Predicting Academic Success in Students With and Without a History of Reading Difficulties. *Journal of Learning Disabilities, 50*(1), 34-48. doi:10.1177/0022219415588850

11. Coulter, I., Wilkes, M., & Der-Martirosian, C. (2007). Altruism revisited: a comparison of medical, law and business students' altruistic attitudes. *Med. Educ., 41*(4), 341-345. doi:10.1111/j.1365-2929.2007.02716.x

12. Downing, K., Kwong, T., Chan, S.-W., Lam, T.-F., & Downing, W.-K. (2009). Problem-based learning and the development of metacognition. *The International Journal of Higher Education and Educational Planning, 57*(5), 609-621. doi:10.1007/s10734-008-9165-x

13. Duncan, T. G., & McKeachie, W. J. (2005). The Making of the Motivated Strategies for Learning Questionnaire. *Educational Psychologist, 40*(2), 117-128. doi:10.1207/s15326985ep4002_6

14. Edmonds, T., Flanagan, D. J., & Palmer, T. B. (2013). Law School Intentions of Undergraduate Business Students. *American Journal of Business Education, 6*(3), 279. doi:10.19030/ajbe.v6i3.7808

15. Finch, W. H., Cassady, J. C., & Jones, J. A. (2016). Investigation of the Latent Structure for the Learning and Study Strategies Inventory. *Journal of Psychoeducational Assessment, 34*(1), 73-84. doi:10.1177/0734282915588443

16. Flowers, L. A., Bridges, B. K., & Moore, J. L. (2012). Concurrent Validity of the Learning and Study Strategies Inventory (LASSI): A Study of African American Precollege Students. *Journal of Black Studies, 43*(2), 146-160. doi:10.1177/0021934711410881

17. Giacomino, D. E., Li, X., & Michael, D. A. (2013). An Examination of Personal Values and Value Systems of Chinese and U.S. Business Students. *American Journal of Business Education, 6*(1), 119. doi:10.19030/ajbe.v6i1.7490

18. Hassall, J., Boduszek, D., & Dhingra, K. (2015). Psychopathic traits of business and psychology students and their relationship to academic success. *Personality and Individual Differences, 82*(C), 227-231. doi:10.1016/j.paid.2015.03.017

19. Iyer, R., & Eastman, J. K. (2006). Academic Dishonesty: Are Business Students Different From Other College Students? *Journal of Education for Business, 82*(2), 101-110. doi:10.3200/JOEB.82.2.101-110

20. J. Burns, D., B. Gupta, P., & D. Burns, S. (2013). Are business students at Jesuit universities more socially responsible? *Social Responsibility Journal, 9*(3), 454-464. doi:10.1108/SRJ-03-2012-0031

21. Karakaya, F., Quigley, C., Bingham, F., Hari, J., & Nasir, A. (2014). Business Students' Perception of Sales Careers: Differences Between Students in Switzerland, Turkey, and the United States. *Journal of Education for Business, 89*(1), 13-19. doi:10.1080/08832323.2012.740520

22. Karasakaloglu, N. (2012). The Relationship between Reading Comprehension and Learning and Study Strategies of Prospective Elementary School Teachers. *Kuram Uygulamada Egit. Bilim., 12*(3), 1939-1950.

23. Kirby, J. R., Silvestri, R., Allingham, B. H., Parrila, R., & La Fave, C. B. (2008). Learning Strategies and Study Approaches of Postsecondary Students With Dyslexia. *Journal of Learning Disabilities, 41*(1), 85-96. doi:10.1177/0022219407311040

24. Klein, H., Levenburg, N., McKendall, M., & Mothersell, W. (2007). Cheating During the College Years: How do Business School Students Compare? *Journal of Business Ethics, 72*(2), 197-206. doi:10.1007/s10551-006-9165-7

25. Kolodinsky, R., Madden, T., Zisk, D., & Henkel, E. (2010). Attitudes About Corporate Social Responsibility: Business Student Predictors. *Journal of Business Ethics, 91*(2), 167-181. doi:10.1007/s10551-009-0075-3

26. Laakkonen, J., & Nevgi, A. (2014). Relationships Between Learning Strategies, Stres, and Study Success Among First-Year Veterinary Students During an Educational Transition Phase. *Journal of Veterinary Medical Education, 1*(1).

27. Marland, J., Dearlove, J., & Carpenter, J. (2015). LASSI: An Australian evaluation of an enduring study skills assessment tool. *Journal of Academic Language and Learning, 9*(2), A32-A45. Retrieved from <Go to ISI>://WOS:000372820500004

28. Masui, C., Broeckmans, J., Doumen, S., Groenen, A., & Molenberghs, G. (2014). Do diligent students perform better? Complex relations between student and course characteristics, study time, and academic performance in higher education. *Studies in Higher Education, 39*(4), 621-643. doi:10.1080/03075079.2012.721350

29. Melancon, J. G. (2002). Reliability, Structure, and Correlates of Learning and Study Strategies Inventory Scores. *Educational and Psychological Measurement, 62*(6), 1020-1027. doi:10.1177/0013164402238088

30. Mireles, S. V., Offer, J., Ward, D. P., & Dochen, C. W. (2011). Incorporating Study Strategies in Developmental Mathematics/College Algebra. *Journal of Developmental Education, 34*(3), 12.

31. Muis, K. R., Winne, P. H., & Jamieson-Noel, D. (2007). Using a multitrait-multimethod analysis to examine conceptual similarities of three self-regulated learning inventories. *British Journal of Educational Psychology, 77*(1), 177-195. doi:10.1348/000709905X90876

32. Narayanan, A., Sawaya, W. J., & Johnson, M. D. (2014). Analysis of Differences in Nonteaching Factors Influencing Student Evaluation of Teaching between Engineering and Business Classrooms. *Decision Sciences Journal of Innovative Education, 12*(3), 233-265. doi:10.1111/dsji.12035

33. Ning, H. K., & Downing, K. (2012). Influence of student learning experience on academic performance: The mediator and moderator effects of self-regulation and motivation. *British Educational Research Journal, 38*(2), 219-237. doi:10.1080/01411926.2010.538468

34. Nordhaug, O., Gooderham, P., Zhang, X., Liu, Y., & Birkelund, G. E. (2010). Elite Female Business Students in China and Norway: Job-Related Values and Preferences. *Scandinavian Journal of Educational Research, 54*(2), 109-123. doi:10.1080/00313831003637865

35. Nunnally, J. C. (1978). *Psychometric theory* (2nd. ed.): McGraw-Hill.

36. Olaussen, B. S. (2000). I dont't want to be an invisible grey mouse at the back row in class! The development of positive motivation due to personal and contextual factor. An interview-based survey of newly business graduated students. *Uniped, 31*(2), 30-43.

37. Ottley, G., Sisodia, R. S., & Buono, A. F. (2013). Student beliefs and attitudes about business: shaping the views of first-year business students--a preliminary study. *SAM Advanced Management Journal, 78*(4), 35.

38. Prevatt, F., Petscher, Y., Proctor, B. E., Hurst, A., & Adams, K. (2006). The Revised Learning and Study Strategies Inventory: An Evaluation of Competing Models. *Educational and Psychological Measurement, 66*(3), 448-458. doi:10.1177/0013164405282454

39. Rodriguez, C. M. (2009). The impact of academic self-concept, expectations and the choice of learning strategy on academic achievement: the case of business students. *Higher Education Research & Development, 28*(5), 523-539. doi:10.1080/07294360903146841

40. Samuelstuen, M. S. (2003). Psychometric Properties and Item-Keying Direction Effects for the Learning and Study Strategies Inventory-High School Version with Norwegian Students. *Educational and Psychological Measurement, 63*(3), 430-445. doi:10.1177/0013164403063003006

41. Samuelstuen, M. S., & Bråten, I. (2007). Examining the validity of self-reports on scales measuring students' strategic processing. *British Journal of Educational Psychology, 77*(2), 351-378. doi:10.1348/000709906X106147

42. Samuelstuen, M. S., Bråten, I., & Valås, H. (2007). Context Effects in Norwegian 10th-Grade Students' Reports on Learning Strategies using the Cross-Curricular Competencies Instrument. *Scandinavian Journal of Educational Research, 51*(5), 511-529. doi:10.1080/00313830701576656

43. Schunk, D. H., Meece, J. L., & Pintrich, P. R. (2013). *Motivation in Education: Pearson New International Edition: Theory, Research, and Applications*: Pearson Education M.U.A.

44. Schutz, C. M., Gallagher, B. S., & Tepe, R. E. (2011). Differences in learning and study strategies inventory scores between chiropractic students with lower and higher grade point averages. *Journal of Chiropractic Education, 25*(1), 5-10.

45. Seabi, J. (2011). Relating learning strategies, self-esteem, intellectual functioning with academic achievement among first-year engineering students. In *South Afr. J. Psychol.* (pp. 239-249).

46. Soares, A. P., Guisande, M. A., Almeida, L., & Paramo, M. (2009). Academic achievement in first-year Portuguese college students: The role of academic preparation and learning strategies. *Int. J. Psychol., 44*(3), 204-212. doi:10.1080/00207590701700545

47. Veenman, M. V. J. (2005). The assessment of metacognitive skills> What can be learned from multimethod designs? In C. Artlet & B. Moschner (Eds.), *Lernstrategien und Metakognition>implikation fur Forshung und Praxis* (pp. 77-99). Munster: NRW; Waxmann.

48. Wadsworth, L., Husman, J., Duggan, M., & Pennington, M. (2007). Online Mathematics Achievement: Effects of Learning Strategies and Self-Efficacy. *Journal of Developmental Education*, 6-8,10,12-14.

49. Warr, P., Downing, J., & Warr, P. (2000). Learning strategies, learning anxiety and knowledge acquisition. *British journal of psychology (London, England : 1953), 91 (pt 3)*, 311-333.

50. Weinstein, C. E., Palmer, D. R., & Schulte, A. C. (1987). *Learning and study strategies inventory*. Clearwater, FL: H&H Publishing.

51. Weinstein, C. E., Palmer, D. R., & Shulte, A. E. (2002). *Learning and study strategies inventory (LASSI)*. Clearwater, Florida: H&H Publishing Company.

52. Weinstein, C. E., & Woolfolk, A. E. (1987). *LASSI user's manual: for those administering the Learning and Study Strategies Inventory*. Clearwater, Florida: H&H Publishing Company.

53. West, C., Kurz, T., Smith, S., & Graham, L. (2014). Are study strategies related to medical licensing exam performance? *International Journal of Medical Education, 5*, 199. doi:10.5116/ijme.5439.6491

54. Winne, P. H. (2010). Improving Measurements of Self-Regulated Learning. *Educational Psychologist, 45*(4), 267-276. doi:10.1080/00461520.2010.517150

55. Yip, M. C. W. (2013a). Learning strategies and their relationships to academic performance of high school students in Hong Kong. *Educational Psychology, 33*(7), 817-827. doi:10.1080/01443410.2013.794493

56. Yip, M. C. W. (2013b). The Reliability and Validity of the Chinese Version of the Learning and Study Strategies Inventory (LASSI-C). *Journal of Psychoeducational Assessment, 31*(4), 396-403. doi:10.1177/0734282912452835

57. Zheng, B., Ward, A., & Stanulis, R. (2020). Self-regulated learning in a competency-based and flipped learning environment: learning strategies across achievement levels and years. *Medical Education Online, 25*(1). doi:10.1080/10872981.2019.1686949

IMAJU LI STUDENTI POSLOVNE EKONOMIJE VIŠE UČINKOVITIH STRATEGIJA UČENJA OD STUDENATA IZ OSTALIH AKADEMSKIH PODRUČJA?

SAŽETAK

Cilj je ovog rada usporediti strategije učenja studenata na različitim akademskim područjima u visokom obrazovanju. Prethodna su istraživanja ograničila fokus na usporedbu studenata na teme poput stupnja društvene odgovornosti, osobnih vrijednosti, akademskog nepoštenja / integriteta i emocionalne inteligencije. Suprotno tome, ovo istraživanje bavi se pitanjem jesu li strategije učenja studenata poslovne ekonomije bolje od onih studenata s drugih akademskih područja. Do danas je naše znanje i razumijevanje ove problematike ograničeno, iako je tema strategija učenja zadobila značajnu pozornost u istraživanjima vezanim uz obrazovanje. Ovo je istraživanje primijenilo mjernu ljestvicu LASSI (Learning and Study Strategies Inventory) kako bi se utvrdile razlike u strategijama učenja između skupina studenata. Statistička analiza pokazala je da studenti poslovne ekonomije imaju učinkovitije strategije učenja od onih koji nisu studenti poslovne ekonomije uključeni u ovu studiju. U radu se raspravlja o potencijalnim razlozima tih rezultata te se na temelju tih nalaza razmatraju teorijske i praktične implikacije.

KLJUČNE RIJEČI: učenje, studenti poslovne ekonomije, visoko obrazovanje, LASSI mjerna ljestvica.