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Learning habits in higher education

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Abstract

We are constantly learning every day and in every area of our life. Doing this we use different learning styles, methods, techniques and are having different learning habits. Also students in higher education differ in their learning approaches and are having different learning habits. In the paper this approaches are described and some of the research findings among high school students in Slovenia are presented. We tried to find out if there are any correlations between students' learning habits and the average grade; if there are differences in gender and age regarding learning habits; does social status like working or having scholarship, living at home or in dorms, income rate, parents education influence learning habits.

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1. Introduction

A number of changes are happening in all areas of life requiring new knowledge and skills. Lifelong learning is becoming a necessity for the successful operation in an increasingly complex environment. Emergence of lifelong learning and the need for continuing education is also changing the role and importance of education (Urh, Jereb, 2011). The ability to navigate the complex life and work environments in the globally competitive information age requires students to pay rigorous attention to developing adequate life and career skills (Partnership for 21st Century Skills, 2011). Employers' feedback highlights the need to produce graduates who have the skills expected and required (e.g. self-directed, autonomous learning) (Luke, Hogarth, 2011). Knowing the proper selection and implementation of learning habits can result in more effective and efficient mastery of new knowledge that will allow students to work easier and better and improve adaptation to changes. Habits are routines of mostly subconscious regular repetition behaviour (Butler, Hope, 1995). Old habits are hard to break and new habits are hard to form. That's because the behavioural patterns we repeat most often are literally etched in our neural pathways. The good news is that through repetition it's possible to form new habits (Psychology Today, 2011). Learning habits can be described as methods and means of obtaining information. This is taking place at the conscious or unconscious level. It helps students organize their efforts to solve problems, develop skills, acquire knowledge and completion of school obligations (Carter, Bishop, Kravits, 2011). In the literature there is currently no clear

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demarcation between learning styles or styles, strategies and practices that are used by students in learning. There are certain definitions of the aforementioned concepts, but there is no clear divide between them. Confusion has crept in with additional terms being used to describe overlapping concepts. The idea of students having clear preferences in the way they learn led Pask (1976) to introduce the terms learning strategy and learning style. 'Strategy' was used to refer to the preferences shown in tackling an individual task, while 'style' related to general preferences more akin to the psychological term cognitive style with its implications of relatively stable behaviour patterns rooted in personality differences or cerebral dominance. Unfortunately, the term learning style is also used in an even more general way to apply to any fairly consistent set of study behaviours, including approaches to learning (Schmeck, 1988). The notion of learning style, which encompasses mental, physiological and affective elements, refers to 'an individual's natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills' (Reid, 1995). In contrast to learning style, learning strategies are 'those processes which are consciously selected by learners and which may result in action taken to enhance the learning of a second or foreign language, through the storage, retention, recall, and application of information about that language' (Cohen, 1998). Distinct as they are, these two terms still bear a close relationship to each other (Jie, Xiaoqing, 2006). Using a variety of styles, habits and learning strategies significantly affect a person's knowledge base which is different in every individual. Irrespective of the different epistemological positions most researchers in this field agree that we acquire knowledge primarily through three channels: senses (perception), intellect (mind) and intuition (insight). These three modes correspond mainly with three basic modes of cognition: empirical, rational and metaphorical (Jereb, 1999). According to their orientation Entwistle (2000) divides students in three main groups: those with focus on personal meaning and importance of the profession, those with focus on reproduction and restoration of the materials and those with focus on productivity (achievements). While in the educational literature there are many different styles of learning mentioned (Hawk, Shah, 2007), there was relatively little research done on these styles (Riding, Cheema, 1991). The analysis of the Myers Briggs (Myers, 1962) mentions different learning styles that differ from extroverted to introverted, from sensory to intuition, from thinking to feeling and from judging to persuasion. According to the learning styles of the students Honey and Mumford (1992) classified them into: activists, reflectors, theorists and pragmatists. Fleming (2001) distinguishes different learning styles and divides them into visual, auditory, read/written and kinaesthetic. Entwistle (2000) points out that students learn in two ways, namely: deep strategic approach and surface, apathetic approach. In the surface approach, in contrast to strategic, the intention is just to cope with the task, which is in student's eyes seen as unrelated collection of information, what leads to limited learning processes, above all to routine memorisation (Entwistle, 2000).

In addition to the aforementioned features, which are related to students, there are also other problems and requirements. Growing numbers of students are entering college without the necessary skills to be successful in post-secondary education. Habits of learning and dispositions of knowledge may not be at the level needed for success in college (Tracy, 2009). Differences in complexity and unsuitability are reflected in the failure of performance which the student achieves during study. These issues and findings show the need for a working understanding of learning habits, ways of acquiring knowledge, perception of personality types and other matters related to learning, both on a personal and institutional level.

Next the methodology and results of the research on learning habits of Slovenian students are presented. Learning habits were divided into various areas such as learning time, learning space, the way of learning, learning during lectures and social factors relating to the individual student.

2. Methodology

2.1. Research questions and hypothesis

With this research we wanted to find out which are the learning habits of Slovenian students regarding learning time, learning space, learning way or mode, learning during lectures and their social position. To this end, we set up the following hypothesis:

H1: There are statistically important correlations between the elements of time regarding learning and average grade.

H2: There are statistically important correlations between the students' social elements and average grade.

H3: There is no statistically important difference between men and women in the elements of time regarding learning.

H4: There is no statistically important difference between regular and part time students in the elements of time regarding learning.

H5: There is no statistically important difference between men and women in the elements of space regarding learning.

H6: There is no statistically important difference between regular and part time students regarding associating theory with practice.

2.2. Instrument

Data were collected through a survey questionnaire. The questionnaire consisted of eight general questions that were related to age, gender, level of study, type of study, year of study, student's average grade, the university and faculty they are studying at; 101 statements that are related to the learning habits and 10 questions about social status. In the case of statements the students answered by the following scale: 1=never, 2=rarely, 3=sometimes, 4=often, 5=always. The survey was anonymous and carried out in spring 2012.

2.3. Sample

The study included 329 Slovenian students from all Slovenian universities. Of these, 134 (40.7%) were men and 194 (59.0%) were women, 1 (0.3%) didn't answer the gender question. They were 18 to 45 years old. The average age was 22 years and 9 months. 280 were regular students (85.1%) and 49 were part time students (14.9%). 288 (87.5%) were first level and 41 (12.5 %) second level students.

3. Results

We made a new variable as the average of 18 elements that relate to learning time (see Table 1 - Time of learning 1-18). Based on the correlation test ($R=0.038$; $p=0.567$) we rejected the hypothesis which says 'There are statistically important correlations between the elements of time regarding learning and average grade'. Statistically significant correlations at 1 or 5 per cent risk were found only between the average grade and the statements presented in Table 2.

Table 1. Statements regarding learning time and learning space

Time of learning	Space of learning
1. I carefully prepare myself for learning.	19. I am learning in a library.
2. I prepare a time plan for learning.	20. I am learning at home.
3. I spontaneously decide when I am going to learn.	21. I am learning outside (example: in nature, etc.).
4. I am learning every time.	22. I am learning seating at a table.
5. I am mostly learning a few days before the exam.	23. I am learning lying.
6. I am learning only the day before the exam.	24. I am walking during learning.
7. I am learning a few hours a day.	25. I often change my position during learning.
8. I am learning the whole day.	26. The presence of other people does not disturb me.
9. I start to learn at least one month before the exam.	27. I can only learn in a fresh and aired room.
10. I generally spend a lot of time on learning.	28. I can learn only in a specific place.
11. I am the most productive when time is running out.	29. I can learn everywhere.
12. I am learning in the morning.	
13. I am learning during the day.	
14. I am learning in the evening.	
15. I am learning at night.	
16. I am learning in intervals (example: 1 hour learning, 15 min break).	
17. I must take a break when something distracts me.	
18. I take a break when finishing a chapter or defined matter.	

Table 2. Statements regarding learning time for which a significant correlation was detected with the average grade

Statement	R	p
I carefully prepare myself for learning	0.286**	0.000
I prepare a time plan for learning	0.180**	0.007
I am learning every time.	0.170*	0.010
I am mostly learning a few days before the exam	-0.286*	0.038
I am learning only the day before the exam.	-0.236**	0.000

*Correlation is significant at the 0.01 level (2-tailed) **Correlation is significant at the 0.05 level (2-tailed)

There are statistically important correlations between the students' social elements and average grade. We found out that:

- There is a significant difference in the average grade of students who have scholarships and those that do not ($t=2.013$; $df=223$; $p=0.045$) (t-test).
- There is a significant difference in the average grade of students who live at home and those who study away from home ($t=-3.192$; $df=223$; $p=0.002$) (t-test).
- There is no statistically significant difference in the average grade of students who live alone and those who do not live alone ($t=0.813$; $df=223$; $p=0.417$) (t-test).
- There is a significant difference in the average grade of students who live in a dorm or rented apartment and those who at the time of the study do not live in a dorm or rented apartment ($t=2.047$; $df=223$; $p=0.042$) (t-test)
- There is no statistically significant difference in the average grade between different groups of students according to mother's education ($F=0.430$; $p=0.651$) (ANOVA).
- There is no statistically significant difference in the average grade between different groups of students according to father's education ($F=1.835$; $p=0.165$) (ANOVA).

Further we found statistically significant differences ($t=-2.441$; $df=251$; $p=0.015$) at 5 per cent risk between men and women according to the above mentioned new variable presenting the elements of time regarding learning (see Table 1 - Time of learning 1-18), so we rejected the hypothesis that says 'There is no statistically important difference between men and women in the elements of time regarding learning'. We found that there are statistically significant differences between men and women with a mean agreeing with the statements listed in Table 3.

Table 3. Statements regarding learning time for which a significant difference was detected between men and women

Statement	t	df	p
I carefully prepare myself for learning	-3.976	326	0.000
I prepare a time plan for learning	-3.669	326	0.000
I am learning only the day before the exam	1.997	326	0.047
I generally spend a lot of time on learning	-2.857	326	0.006

Next we found that there is no statistically significant difference ($t=0.960$; $df=327$; $p=0.338$) at 5 per cent risk between regular and part time students according to the above mentioned new variable presenting the elements of time regarding learning (see Table 1 - Time of learning 1-18), so we accepted the hypothesis that says 'There is no statistically important difference between regular and part time students in the elements of time regarding learning'. We found that there are statistically significant differences between regular and part time students in the average agreeing with the statements in Table 4.

Table 4: Statements regarding learning time for which a significant difference was detected between regular and part time students

Statement	t	df	p
I am mostly learning a few days before the exam	2.615	327	0.009
I am learning during the day	2.217	327	0.027

We made a new variable as the average of 11 elements that relate to learning space (see Table 1 - Space of learning 19-29). We found that there is no statistically significant difference ($t=-0.815$; $df=326$; $p=0.415$) at 5 per cent risk between men and women in the elements that relate to learning space, therefore we accepted hypothesis that says 'There is no statistically important difference between men and women in the elements of space regarding learning'. We found that there is statistically significant difference between men and women with a mean agreeing only with the statement 'I can learn everywhere' ($t=2.761$; $df=326$; $p=0.006$).

Based on the t-test ($t=-4.163$; $df=79.227$; $p=0.000$) we rejected the last hypothesis, which states 'There is no statistically important difference between regular and part time students regarding associating theory with practice'.

4. Discussion

In this paper we analysed the study habits of Slovenian students in terms of learning time, learning space, learning mode, learning during lectures and social situation. For testing first, third and fourth hypotheses we made a new variable as the average of 18 elements that relate to learning time. On this basis we tested and rejected the first hypothesis, which says 'There are statistically important correlations between the elements of time regarding learning and average grade' ($R=0.038$; $p=0.567$). When we compared the average grade of Slovenian students who participated in the survey and individual statements in the context of time regarding learning we found that there is statistically significant correlation between average grade and the careful preparation for learning ($R=0.286$; $p=0.000$). Similar positive correlation was found between the average grade and preparation of learning time plan ($R=0.180$; $p=0.007$) and the average grade and regular learning ($R=0.170$; $p=0.010$). From these findings we can conclude that students with serious learning approach and who consciously or unconsciously take into account the recommendations of basic time management achieve on average a better grade. Significant negative correlation at 5 per cent risk was observed between the average grade of student and learning just a few days before the exam ($R=-0.286$; $p=0.038$) and between learning one day before the exam ($R=-0.0236$; $p=0.000$). Students who learn only a day or a few days before the exam have a lower average grade. This conclusion confirms that it is necessary to carefully prepare for the study, taking into account the basic rules of time planning and self-discipline.

Furthermore we found that students who receive scholarship have higher average grade (8.03) than students who do not have it (7.78) ($t=2.013$; $df=223$; $p=0.045$). Students who receive scholarship have in many cases obligations to the organization which provides scholarship. Obligations are increasing the level of student awareness and responsibility which is reflected in higher average grade. We found that students who live in a student dorm or rented apartment have higher average grade (8.07) than those who don't (7.79) ($t=-3.192$; $df=223$; $p=0.002$). Another interesting finding is that students who are during their studies away from home achieve a higher average grade (8.12) than those who live at home (7.74) ($t=-3.192$; $df=223$; $p=0.002$). Living away from home requires a certain degree of autonomy and responsibility, which is clearly reflected in the average grade. It is interesting that there is no statistically significant difference in the average grade between students who live alone (at home, in the dorm or rented apartment) and the students who do not live alone ($t=0.813$; $df=223$; $p=0.417$). Furthermore, we found that mothers education does not statistically significant affect ($F=0.430$; $p=0.651$) the average grade (average grade=7.85) of the student, nor does ($F=1.835$; $p=0.165$) fathers education (average grade 7.84). The hypothesis 'There is no statistically important difference between men and women in the elements of time regarding learning' was rejected ($t=-2.441$; $df=251$; $p=0.015$) at 5 per cent risk. We found that there are some differences among gender in learning time. There are statistically significant differences in some of the statements between men and women in careful preparation on study ($t=-3.976$; $df=326$; $p=0.000$). Women (3.37) prepare better for the study than men (2.96). In addition to careful preparation women make learning plan and spend more time learning than men. Given answers to the statement 'I learn only on the last day before the exam' show that there is a statistically significant

difference between men and women regarding learning the day before the exam ($t=1.997$; $df=326$; $p=0.047$). Men learn significantly less regularly and just before the exam compared to the female population.

In Slovenia the students are divided into regular and part time students. For the hypothesis 'There is no statistically important difference between regular and part time students and the elements of time regarding learning', we found that there are statistically significant differences ($t=0.960$; $df=327$; $p=0.338$) at 5 per cent risk so we accepted the hypothesis. We found that there were some differences which are reflected in the learning time. We have observed significant statistical differences ($t=2.615$; $df=327$; $p=0.009$) that regular students (3.56) learn much more just a few days before the exam than part time students (3.10). Regular students (3.30) learn mostly during the day while part time students (2.96) have less time to learn through the day because of work and other obligations.

For the purpose of testing the fifth hypothesis we made a new variable as the average of 11 elements that relate to space of learning. On this basis we tested the hypothesis that says 'There is no statistically important difference between men and women in the elements of space regarding learning' and based on a 5 per cent risk found that there was no statistically significant difference ($t=0.960$; $df=326$; $p=0.415$) so we accepted the hypothesis. We found that there are significant differences between men and women in the statement 'I can learn anywhere' ($t=2.761$; $df=326$; $p=0.006$).

We have also found that there is a statistically significant difference ($t=-4.163$; $df=79.227$; $p=0.000$) between regular and part time students at integrating subject matter with practical examples. Part time students (3.96) are more likely to integrate subject matter with practical examples than regular students (3.43). This observation is not surprising since part time students often come from practice and are employed.

Differences in study performance reflect a number of factors that affect the individual. Study habits of the individual are very important as is ability to change behaviour in relation to the needs of the study.

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