

STUDENTS' INDEPENDENT STUDY AS THE PRECONDITION FOR BECOMING A COMPETENT SPECIALIST

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Abstract

Student's independent study is equally important in seeking for the study outcomes: if because of different reasons a student is not able to use it effectively, he/she does not achieve expected study outcomes. Studying independently, a student develops his/her core skills. The research results allowed comparing actual independent study time with the time planned for independent study in the study programmes.

Key words: independent study, learning, independent study time planning, abilities

The key aim of the Bologna process documents until 2020 is to make higher education the essential player of developing creative and innovative Europe. These documents pay attention to the fact that for the ageing European society it is very important to use all human talents and skills involving citizens into lifelong learning activities and encouraging their participation in higher education. Study programmes, as it is foreseen in the Yerevan Communicate (2015), should provide possibilities for the development of the competences meeting personal and social needs. Higher education institutions are informed about the necessity to execute reforms of the study programmes, which will lead to the assurance of the study quality. It is also emphasized that it is very important to formulate very clear aims of the study programmes and very clear job descriptions, apply flexible and appropriate study and assessment methods. This is the way of putting emphasis on the importance of the independent study. It is necessary to note that when implementing the student centred learning model, the student's ability to study independently and his/her responsibility for the study outcomes is the one of the most important study preconditions.

The aim of the article is to assess students' ability to learn independently as a significant precondition for the quality of studies.

Objectives:

- To discuss specifics of the student's independent study within the context of higher education;
- Applying empirical research, to identify peculiarities of the metacognitive competence as the expression of learning among the students of technological specialities;
- Based on survey of the best practice, to introduce possible methods of independent study.

When carrying out the research, experience of the different higher education institutions related to the specifics of the independent study has been discussed. The research was conducted in the period 2011-2015. Because of the four-year time the research was carried out, it was possible to compare the initial and final results of the different entry year study groups. Survey of potential employers to identify the most important competences of future employees was also conducted in March 2016. 168 representatives from the professional world took part in it. The main research methods have been the analysis of scientific literature and quantitative research (questionnaire). Lime Survey and Microsoft Excel 2013 have been used for the generalization of the results. The research is based on pragmatic philosophy and on the theories of humanism and constructivism.

The research was based on experience and publications of Tinto (1975), Kennedy et al. (2009, 2012), Henard et al. (2012) which prove the key role of the independent study for the study outcomes and study time. The research was focused on the evaluation of the interdependence between the independent study time and study outcomes as well as the study time.

1. SPECIFICS OF THE INDEPENDENT STUDY WITHIN THE CONTEXT OF HIGHER EDUCATION

Independent learning, as the background of higher studies, is emphasised by different researchers and in different international documents because such studying mode is directly related to the student's responsibility for the study results and identifies the key participant and client of the education process – a student (Olsen, Codd et al., 2010). It is highlighted that a person himself/herself is responsible for own education and adaptation in life. When emphasising the importance of independent learning, attention is drawn to the fact that this is the way to change reproductive knowledge transfer model and to create conditions for development of the students' independent study skills which is very important for lifelong learning and improvement of professional competences. Researchers emphasised that independent learning supports development of the ability to act independently but is the process that requires a lot of time and sometimes even special trainings and specific teaching skills (Sinclair et al., 2000, Warring, 2010; Kennedy et al., 2009, 2012). Researchers also paid attention to the problems that arise when organising students' independent learning process which are productivity of the independent study time, the level of the achievement of the study outcomes, adequate assessment of the study outcomes, preparation level for further professional activity and etc. It is important to note the tension between the set achievement level of the study outcomes and how much and what the students are able to do during the foreseen time. Researchers also emphasize different students' preparation level in particular study programmes (Kennedy et al., 2009, 2012; Henard et al., 2012; Pocevičienė, 2014). This is the reason why academic support focused on planning of the workload foreseen in the study programmes is very important for students. When planning this time, researchers suggest paying attention to the students' evaluations, reflections and the study outcomes achievement level (Teresevičienė, 2010).

Lemos, Sandars, Alves and Costa (2014) state, that the importance of the student-centred paradigm is emphasised in the documents of the Bologna process. They note that this teaching and learning approach introduces students with the idea of taking responsibility for one's learning, improves memorization of information, makes students more active and improves their status. The researchers applied paradigm of mixed learning methods to assess a student's orientation towards teaching and learning. The research results revealed that teachers exceptionally appreciate such aspects as students' involvement into learning process, transforming a classroom into a place for discussions and a tool for supporting students' ability to act independently, and making a learner the key player in a teacher – student relation. The aims of the study subject and assessment are the teacher's responsibility. A lot of attention in the study process is paid to students' independent learning. Within this process teachers play the role of supporters, students have more responsibility during lecture time and, what is the most important, teachers provide timely feedback. It is necessary to note that such prevailing methods applied for training future professional in higher education institutions as discussions and cooperation with teachers and colleagues, encouragement to study and act independently are the main tools that could be effective both for the success during the study time and for the involvement into the labour market (Rutkienė, Tanzegolskienė, 2014). Žydzūnaitė, Teresevičienė (2016) suppose that when learning independently, students themselves gain knowledge, develop cognitive skills, assess personal strengths and weaknesses at the same time understanding the need for teachers and colleagues support, consultations and discussion with them as well as feedback from them. But the authors highlight the lack of objective and trustworthy evidence for approving discussed above statements.

Lithuanian researchers also analyse specificity of independent learning. Gedvilienė et al. (2012) discussed the essence of the concept and identified partial and absolute independence. The authors note that absolute independence is possible only when the learner *plans, chooses* learning strategies and *implements* them, whilst partial independence is expressed only in the *implementation* of the independent learning strategies. It is necessary to mention obstacles hindering independent learning identified by these authors: *too active or insufficient participation of teachers; the lack of the students' independence or self-confidence; inadequate resources*. Negative impact is also made by such aspects that describe *the quality of teaching as immoderate workload, inappropriate teaching pace* and others.

When discussing specificity of the students' independent learning, it is possible to notice the lack of the student – teacher dialogue about related difficulties. Professional advice about effective study of specific study subjects is needed and timely teachers' feedback is one of the most important prerequisites empowering learners for meaningful independent learning.

Transition to ECTS credit system encouraged rethinking a student's independent study workload and looking for new study methods. Workload consists of the time needed for participation in and completion of such learning activities as lectures, seminars, projects, self-study assignments and examinations (Rutkienė, Tandzegolskienė, 2014). The authors noted that the most difficult task is to estimate independent study time which depends on the complexity of the subject and topic as well as the problem being analysed. A student's independent activities, participation in practical trainings, preparation of the most valuable study assignments are discussed in this article. It is necessary to state that success of each activity is determined by the student's abilities, individual approach to learning and individual level of understanding independency when performing particular assignments. Such concepts as *self-directed learning* and *independent study* are found in different scientific publications. Teresevičienė et al. (2009) introduced definitions of these concepts which identify their main components:

- Self-directed learning is described by the learner's autonomy and motivation, ability to use individual learning rhythm, management and control of own learning process and taking responsibility for own learning.
- Independent study is described by ability to assess, reflect upon and analyse own learning process.

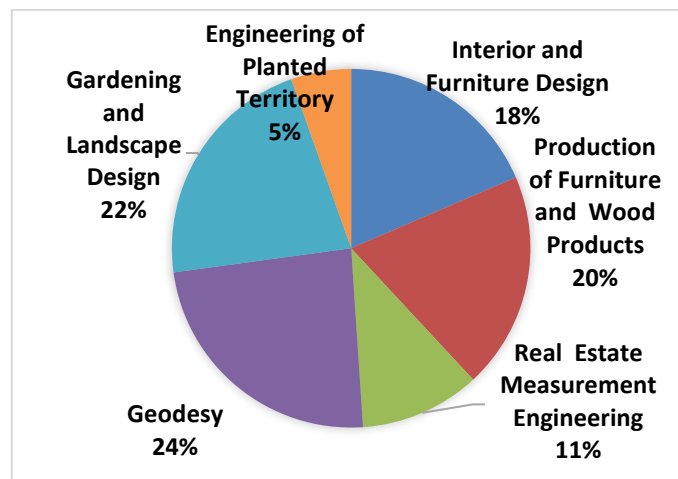
Rutkienė, Tanzegolskienė (2014) note that introduction of the ECTS system is related to estimation of the teachers and students' workload, but the principles and methods for clear independent work planning which encourage students to study and develop their planning as well as independent action skills are missing. Self-control, motivation and responsibility initiated by teachers through freedom, responsibility for decision making and sharing own opinions are those factors that encourage students' independent activities in the study process. Authors paid attention to the problems that students face:

- assignments that are not focused enough on the students' individual needs and abilities as well as competence foreseen in the study programme;
- students' understanding of the *independent work* concept is not precise and they do not know what is the difference and relation between teachers and students' activities when performing a particular task.

In summary, it is possible to state that organization and assessment of independent work as well as division of the student – teacher roles are problematic areas of the organization of the study process.

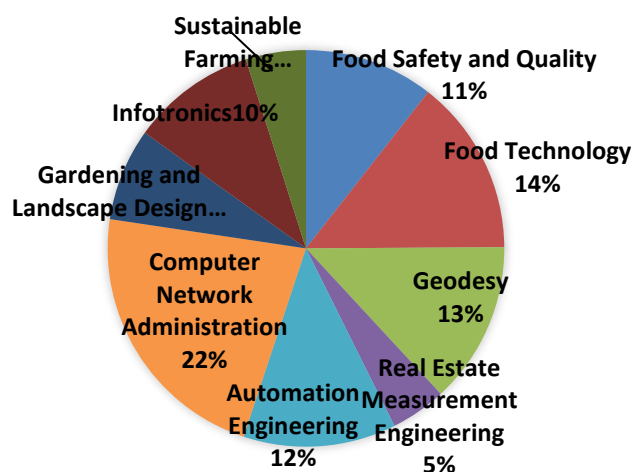
2. RESEARCH RESULTS AND DISCUSSION

The first stage of the quantitative research was carried out in 2011 and the second in 2014. Comparative analysis of the results from these two stages the respondents of which were students from the Faculty of Technologies and Landscaping at Kauno kolegija/University of Applied Sciences is presented in this article. 252 respondents participated in the first and 265 first year students in the second stage of this research. Students from the following study programmes participated in the first stage (see Picture 1): Engineering of Planted Territory (5 %); Interior and Furniture Design (18 %); Production of Furniture and Wood Products (20%); Real Estate Measurement Engineering (11%); Geodesy (24%); Gardening and Landscape Design (22%). The most active respondents in the first stage were students from Gardening and Landscape Design study programme, and less motivated those who study Engineering of Planted Territory.



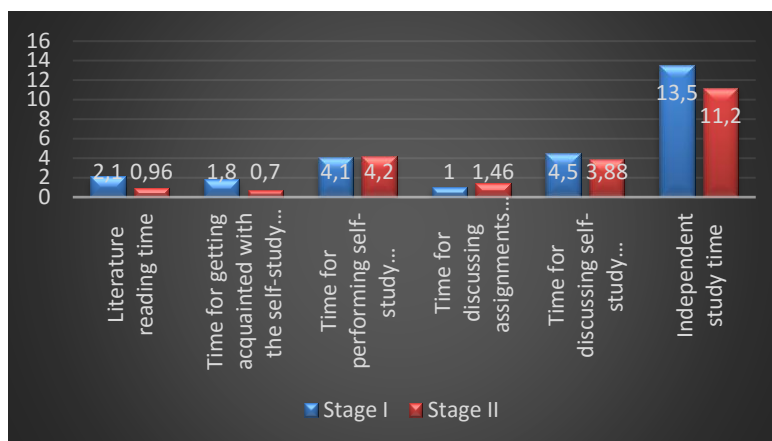
Picture 1. Split of the Stage I respondents according to study programmes

The split of the second stage respondents according to study programmes (see Picture 2) is as follows: Food Safety and Quality (11%); Food Technology (14%); Geodesy (13%); Engineering of Real Estate Measurement (5%); Automation Engineering (12%); Computer Network Administration (22%); Gardening and Landscape Design (8%); Infotronics (10%); Sustainable Farming (5%). Having estimated the split of the respondents according to study programmes, it was observed that the most active participants were students from Computer Network Administration study programme (22%), whilst the study programmes of Sustainable Farming and Engineering of Real Estate Measurement were represented by the lowest number of participants (5% per each of the programmes).



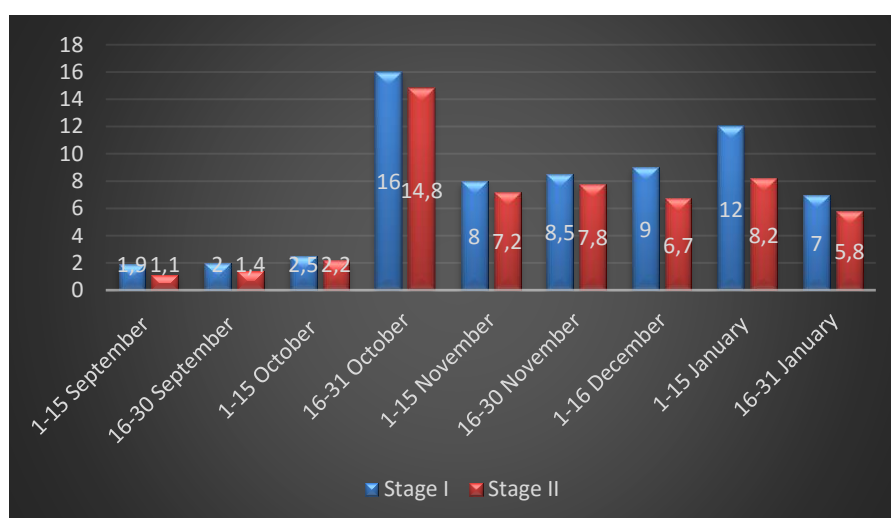
Picture 2. Split of the Stage II respondents according to study programmes

By comparing the results of Stage I and Stage II, it was observed that the average time spent for independent study among the respondents from the first group was 13,5 hours and from the second group 11,2 hours per week. The biggest proportion of the independent study time among the respondents of both groups is spent for computer work when preparing assignments (4,2 hours).



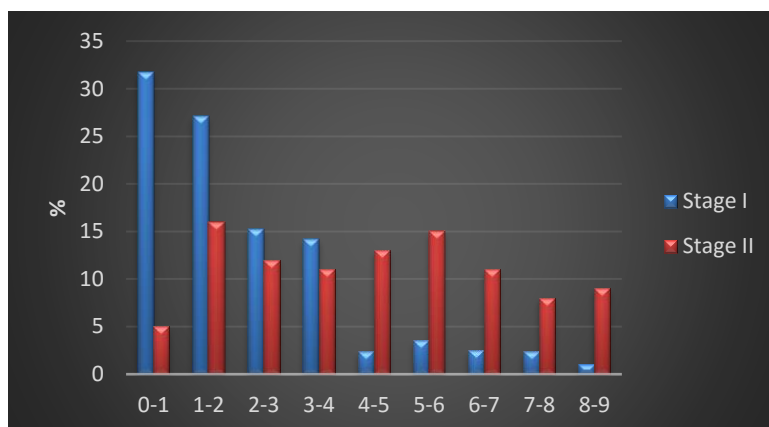
Picture 3. Split of the average estimates of the students' weekly independent study time (in hours)

The research results revealed the most active periods of the study time among the students of both stages (see Picture 4) which are the second week of October and December and January. October and December are the periods of midterm assessment events and the exam session takes place in January. It is necessary to pay attention to the fact that students seeking better study results spent more time for independent study (<...I am planning to continue my studies at the university...>; <...I am interested because study subjects are related to my future profession...>).



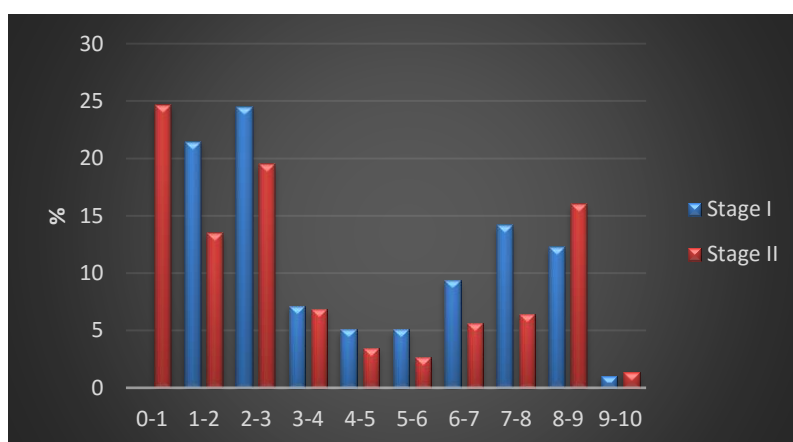
Picture 4. Intensity of the students' independent study during the first term (in hours)

Analysis of the research results revealed the most intensive periods of the students' independent study. Comparing respondents from the first and second research groups, these periods are very similar till the mid of October and cover the interval [1,1; 2,5]. Independent study reaches its peak in the middle of October, and the time indicated by the respondents from both groups is very similar: 16 hours a week in the first group and 14,8 hours a week in the second group. Since 1 November till 15 December independent study time is stable among the respondents of both groups, but it is necessary to state that the respondents from the first group studied more actively. The bigger difference in independent study time between both research groups is observed in the period 1 – 15 January. Intensity of the independent study goes down after the 15 of January. It can be explained by the fact that from the middle of October midterm and in January final examination of students' knowledge and abilities take place.



Picture 5. Intensity of the independent study time for studying speciality related subjects

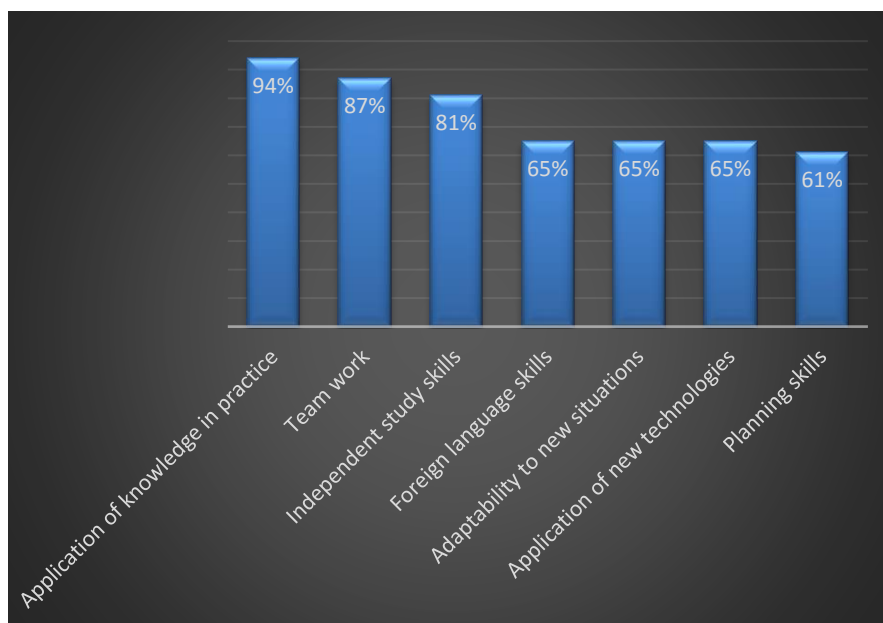
By comparing weekly amount of time the respondents from the first and second research stages spent for independent study of speciality related subjects (see Picture 5), it came to light that before 32% of students used to spend approximately 1 hour per week and 26% 2 hours per week. The time for independent study of speciality related subjects among the respondents of the second group differs: 5% of them spent about 1 and 15 % about 6 hours per week. It can be explained by the fact of changes made in the study programme which encouraged students to pay more attention to the study of the speciality related subjects. Such students' responses to open questions as *<...I see connection with profession...>*; *<... practical situations are given in assignments...>* etc., also support this prediction.



Picture 6. Intensity of independent study when learning foreign languages (time periods in hours)

The research results revealed the fact. The respondents from both stages split into two groups (see Picture 6): members of the first group from both research stages spent one hour (25% from the first research stage and 21 % from the second one) and those from the second group up to 3 hours (correspondingly 25 % from the first stage and 19 % from the second research stage). There was a group of respondents, who spent 9 hours for studying foreign languages (correspondingly 15 % from the first stage and 16 % from the second research stage).

Summarisation of the results of potential employers' survey helped identify abilities and skills they value most of all (see Picture 7).



Picture 7. Skills and abilities employers value most of all

94 % of survey participants identified practical knowledge application as one of the most important abilities. Teamwork (87 %) and independent study skills (81 %.) were also highlighted as very important abilities. Foreign language skills, adaptability to new situations, application of IT and planning skills were emphasised by 65 % of respondents.

It can be summarised that the development of the independency during study time is very important for the abilities needed in future professional activities because it preconditions formation of such aptitudes as adaptability to new situations and learning how to plan own time. Independent study skills are also one of the lifelong learning preconditions. Because of that, special attention must be paid to the development of general skills, personal motivation and construction of the situations fostering creation of new knowledge and experiences.

CONCLUSIONS

Analysis of the scientific literature has drawn to the conclusion that students' independent learning is the student's ability to make right decisions when choosing the right nature of activity, formulate learning aims as well as choose appropriate methods and action modes. However, because of the different students' motivation and preparation level, teachers face difficulties when choosing appropriate methods for study organisation.

By comparing independent study time, it became clear that the students from technological study programmes, who participated in the second research stage (year 2014), spent less time on independent study compared to the respondents from the first stage (year 2011). It is necessary to pay attention to the fact that students seeking better study results spent more time for independent study.

The research results revealed that independent study can be fostered by practical assignments and real profession-related examples provided by teachers. The survey of the professional world representatives revealed the importance of such general skills as planning, teamwork and independent study.

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