

CONNECTION BETWEEN PERSONAL PERFECTIONISM AND EFFICIENCY OF STUDENTS' LEARNING ACTIVITIES

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ABSTRACT

Aim. The primary objective of this study was to analyse the connection between students' learning efficiency and different indicators of personal perfectionism. The secondary objective was to study the characteristics of students' learning effectiveness depending on the level of perfectionism.



Methods. The participants of the study were 110 students from the National Technical University “Kharkiv Polytechnic Institute”. The level of personal perfectionism was measured with use of a perfectionism questionnaire created by Nasledov and Kiseleva. The level of learning activity efficiency was measured by means of expert evaluation with participation of 26 lecturers-experts. Descriptive statistics were used to report means and standard deviations of perfectionism scales and learning efficiency levels. A t-test was used for finding differences in the level of personal perfectionism among students with different levels of learning efficiency. The Pearson correlation coefficient was used for establishing correlations between the level of learning efficiency and different scales of personal perfectionism.

Results. The level of learning efficiency of students depends on the pace of learning, the quality of learning, and the ability to generalise and synthesise new information. Positive statistically significant correlations were found between perfectionism and student learning efficiency.

Conclusions. The study revealed that the group of students who demonstrate the highest achievement is most vulnerable to manifestations of perfectionism. Due to the excessive (real or fictional) expectations of others, they set unrealistic goals, do not feel satisfied with their achievements, and do not adequately assess their capabilities.

Key words: perfectionism, learning efficiency, learning activities, students, professional development, adequate goal setting.

INTRODUCTION

Studying at university is one of the first and greatest challenges for young adults. During this period of study, they first encounter the need for independent planning of both daily activities and trajectories of their own professional development. Not only academic achievement but also the psychological health of future professionals depends on the ability to set high but adequate goals. Researchers note that in the last decade, there has been an increase in the number of individuals who exhibit a tendency towards excessively high and even unattainable goals, most often associated with manifestations of personal perfectionism. Researchers have linked the boom in perfectionism to the popularity of social media (Hellman, 2016; Pidbutska et al., 2019), which support teenagers’ misconceptions about role models. This is due to the fact that young people do not compare themselves with real life models (parents, teachers, relatives, acquaintances), but with blank idealised images from social networks. As a result, a person develops the need to set themselves only the highest (often unattainable goals), which are not consistent with individual capabilities, and their failure leads to deep frustration and negative psychological states.

Recent studies show that the excessive levels of perfectionism in young adults are accompanied by problems such as excessive concern for one’s own appearance (Ventura et al., 2017), eating disorders (Wade et al., 2015), excessive levels of anxiety and social fears (Segrin et al., 2019), depression (Levine et al., 2019), and suicide (Muyan&Chang, 2015). In view of this, it is important to examine how perfectionism is related to students’ learning efficiency and which

groups of students are most vulnerable to perfectionism. Identifying such groups of students will allow the development of psychological programs of adaptation to learning and the adoption of their own capabilities, which will allow students to avoid psychological problems both in the learning process and in their future career building.

AIM OF THE RESEARCH

The aim of the research is to analyse the connection between students' learning efficiency and different indicators of personal perfectionism. The objectives of the research are:

1. To determine the levels of perfectionism in students.
2. To analyse the characteristics of students' learning effectiveness depending on the level of perfectionism.
3. To investigate the connection between perfectionism and students' learning efficiency.

METHODS

The study involved 110 students from the National Technical University "Kharkiv Polytechnic Institute." The sample of respondents was selected using a randomisation mechanism based on the total number of students of all years of study and faculties of the university, which allowed reaching respondents aged 17 to 22. The total number of respondents included 57 women (average age of 19.1 ± 2.41) and 53 men (average age of 19.6 ± 2.53).

To determine the level of perfectionism in students, we used the perfectionism questionnaire by Nasledov and Kiseleva (2016), which includes six scales, and more specifically: 1 - perception of other people as delegating high expectations, 2 - standards of activity and goals overstated in comparison to individual capacities, 3 - high standards of activity with a focus on the "most successful," 4 - sorting information about own failures and mistakes, 5 - polarised thinking ("all or nothing") - "black and white" evaluation of the result of their own activity, 6 - control over feelings. The test stimulus material consists of 29 questions and four answer options (definitely yes, probably yes, probably no and definitely no).

The following results were used to determine the level of students' learning efficiency: 1) academic success; 2) learning success. 26 lecturers-experts took part in the process of evaluation of different aspects of students learning efficiency.

Academic success was determined using a numerical pedagogical assessment, marked as:

1. High level of academic achievement, (A: 90-100 points).
A: deep knowledge of the educational material contained in the main and additional literary sources; the ability to analyse the phenomena under study in their relationship and development; the ability to perform the-

oretical calculations; clear, concise, and logically consistent answers to the questions; the ability to solve complex practical problems).

2. Average level of academic achievement, (B: 82-89; C: 75-81 points).
B: a deep level of knowledge of the amount of compulsory material required by the program; the ability to provide reasoned answers to questions and to make theoretical calculations; the ability to solve complex practical problems;
C: strong knowledge of the studied material and its practical application; the ability to provide reasoned answers to questions and make theoretical calculations; ability to solve practical problems.
3. Low academic performance of students (D: 64-74; E: 60-63 points).
D: knowledge of the basic fundamental provisions of the studied material and of their practical application; the ability to solve simple practical tasks;
E: knowledge of the basic fundamental provisions of the material of the module, the ability to solve the simplest practical tasks.

In calculating the total grade point of each student, the following requirements were met:

- 1) the rating contained the grades of all types of educational activity of the student, which he/she received as a result of attestations of various kinds: control work, independent work, tests, projects, laboratory practicum, research work, etc.
- 2) points of each student received for each activity were summed up, and the rating score was defined as the "weight" of this amount in relation to the sum of maximum points.

Learning achievements were determined by the evaluations of lecturers-experts and were defined as an integral characteristic of such qualities as: pace, tension, individual style of work, the degree of diligence and effort that a student made to arrive at certain achievements. According to the expert assessments of the lecturers, an integral indicator of the learning effectiveness was calculated, which established: high, average and low level of learning effectiveness.

The results of the analysis of academic and learning achievement were used to calculate the average of the effectiveness of learning, which was evaluated on a 100-point scale. Based on the expert assessments, all respondents were divided into three subgroups: high (90-100 points), average (75-89 points) and low (60-74 points) level of learning effectiveness.

In analysing the results of the study, we used descriptive statistics (mean, standard deviation), t-tests, and Pearson's correlation coefficient.

RESEARCH RESULTS

According to the results of the expert evaluation and the evaluation of the academic performance of students, individual indicators of students' learning efficiency were determined, which allowed dividing the respondents into three groups: high ($n=46$), average ($n=31$) and low ($n=33$) academic achievement (Table 1).

Table 1. Average scores of student learning efficiency of study groups

Scale	Learning efficiency level			Results of <i>T-test</i>		
	High (<i>n</i> =46)	Average (<i>n</i> =31)	Low (<i>n</i> =33)	<i>t</i> (High- Average)	<i>t</i> (High- Low)	<i>t</i> (Average- Low)
Learning efficiency	93.4±2.44	82.3±6.71	69.2±5.94	-13.49***	-18.38***	-9.88***

Note: * - $p \leq 0.05$; ** - $p \leq 0.01$; *** - $p \leq 0.001$ - a measure of statistical significance.

Source: Own research

A group of students with a high level of learning efficiency demonstrates a deep knowledge of the educational material (basic and additional literature sources); the ability to analyse the phenomena being studied; the ability to perform theoretical analysis and generalisation of material; the ability to solve complex practical problems. They are able to withstand a high rate of learning. They demonstrate a high degree of diligence and effort that they make for certain achievements. A group with average learning efficiency demonstrates a deep level of knowledge in the amount of required material; the ability to give reasoned answers to questions, and the ability to solve practical problems. A group of students with low levels of learning efficiency demonstrates the knowledge of the basic foundations of the material being studied and the ability to solve simple practical tasks. They demonstrate a low pace of academic work, a low level of diligence and effort to complete the necessary tasks. Statistically significant differences were identified which indicated the presence of deep differences in the level of knowledge, abilities, skills, and peculiarities of students' learning, assigned to different groups.

The results of the questionnaire "Perfectionism" by Haranian and Kholmohorova are presented in the Table 2: the perception of other people as delegating high expectations (1); the standards of activity and goals overstated in comparison to individual capacities (2); the high standards of activity with a focus on the "most successful" (3); sorting information about own failures and mistakes (4); polarised thinking ("all or nothing") - "black and white" assessment of the result of one's own activity (5); control over feelings (6); integral indicator of perfectionism (7).

A group of students with a high level of learning efficiency according to the results of this test received the following points: perception of other people as delegating high expectations - 19.21 points (above the average level); standards of activity and goals overstated in comparison to individual capacities - 17.36 points (above the average level); high standards of activity with a focus on the "most successful" - 16.25 points (above the average level); sorting information about own failures and mistakes - 10.57 points (above the average level); polarized thinking - 9.16 points (average level); control over feelings - 9.57 points (below the average level); integral indicator of perfectionism - 73 points (high level).

Table 2. Average points of characteristics of perfectionism in students with different levels of learning efficiency

Scales	Learning efficiency level			Results of <i>T-test</i>		
	High (<i>n</i> =46)	Average (<i>n</i> =31)	Low (<i>n</i> =33)	<i>t</i> (High - Average)	<i>t</i> (High- Low)	<i>t</i> (Average- Low)
1	19.21±4.51	9.52±3.36	3.25±1.78	-5.93***	-6.26***	-0.93
2	17.36±1.92	13.11±0.95	10.61±2.06	-4.84***	-15.45***	-12.78***
3	16.25±2.85	12.34±2.63	9.17±2.53	-0.38	-2.07*	-1.61
4	10.57±1.91	7.52±2.92	5.64±1.06	-4.80***	-3.14**	1.94
5	9.16±2.54	8.14±2.22	5.43±1.75	-2.10*	-2.85**	-0.55
6	9.57±2.21	7.62±2.09	5.31±1.86	-6.23***	-4.09***	1.96
7	73±8.26	52±4.31	35±7.18	-9.23***	-10.10***	-2.66**

Note: * - $p \leq 0.05$; ** - $p \leq 0.01$; *** - $p \leq 0.001$ – a measure of statistical significance.

Source: Own research

The obtained data indicates that students in this group show dissatisfaction with themselves, if they have not achieved the maximum result possible in this type of activity. They never stop when achieving something, and they immediately set new goals. In their life goals and objectives, they focus on gifted people who have achieved a great deal. In their work, they focus on the highest standards. They often punish themselves by thoughts of their own imperfection. They think that true professionalism does not allow for mistakes or failures. They are convinced that true friendship implies complete understanding in everything. They make every effort to win the respect of people they value. They are guided only by very high expectations of themselves. This overly demanding perspective does not promote a healthy attitude to study, as these students are constantly frustrated with themselves.

A group of students with an average level of learning efficiency on the results of this test received the following points: perception of other people as delegating high expectations – 9.52 points (average level); standards of activity and goals overstated in comparison to individual capacities – 13.11 points (average level); high standards of activity with a focus on the “most successful” – 12.34 points (average level); sorting information about own failures and mistakes – 7.52 points (average level); polarized thinking – 8.14 points (average level); control over feelings – 7.6 points (below the average); the integral index of perfectionism – 52 points (above the average level). The obtained data indicates that students in this group demonstrate satisfaction with themselves, if they have achieved a particular result. They are able to experience deep satisfaction with the activities they engage in and increase self-esteem based on achievement. When performing, they are inclined to take into account their own resources and limitations. They focus on their own resources and thoughts on how to do the right thing. They are satisfied with the average result in the work. In the midst of failures, they are comforted by the thought of the people with average capacities, many of whom succeeded. They are driven by the hope of success.

A group of low-level learning efficiency students in this test received the following points: perception of other people as delegating high expectations – 3.25 points (below the average level); standards of activity and goals overstated in comparison to individual capacities – 10.6 points (below the average level); high standards of activity with a focus on the “most successful” – 9.7 points (below the average level); sorting information about own failures and mistakes – 5.6 points (below the average level); polarized thinking – 5.6 points (below the average level); control over feelings – 5.3 points (low level); the integral index of perfectionism – 35 points (average level). The obtained data indicates that students in this group prefer only certain aspects of their activities and do not seek “excellence in everything.” They rarely compare themselves with others or their abilities with those of others. In their work, they do not focus on the highest standards. They are satisfied with themselves, even if they have not achieved the best possible result. They do not make much effort to win the favour of others. Using the t-test, we found that:

- as per scale of perception of other people as delegating high expectations, statistically significant differences were determined between the results of students with the high and average levels of learning efficiency ($t=-5.93, p\leq 0.001$) and the high and low levels ($t=-6.26, p\leq 0.001$). This indicates that students with high levels of learning efficiency perceive others as constantly evaluating and imposing excessively high demands;
- as per scale of standards of activity and goals overstated in comparison to individual capacities, statistically significant differences were determined between the results of students with high and average ($t=-4.84, p\leq 0.001$), high and low ($t=-15.45, p\leq 0.001$), and average and low levels of learning efficiency ($t=-12.78, p\leq 0.001$). The identified differences indicate that students with average and high learning efficiency place on themselves excessively high demands, which leads to constant dissatisfaction with their own results and the desire for the best;
- as per scale of high standards of activity with a focus on the “most successful,” statistically significant differences were determined only when comparing students with high and low levels of learning efficiency ($t=-2.07, p\leq 0.05$). This indicates that students with the average and low levels are not inclined to focus on the most successful samples in their activities and are more likely to aim for a “golden mean;”
- as per scale of sorting information about own failures and mistakes, statistically significant differences were determined between the results of students with high and average ($t=-4.80, p\leq 0.001$) and high and low level of learning efficiency ($t=-3.14, p\leq 0.001$). This indicates that students with high levels of academic efficiency are more likely than others to analyse their own mistakes and make the most of them, with a view to further avoiding them;
- as per scale of polarised thinking, statistically significant differences were determined between the results of students with high and average ($t=-2.10, p\leq 0.05$) and high and low ($t=-2.85, p\leq 0.01$) levels of learning effi-

ciency. This indicates that, in their pursuit of excellence, students with high levels of academic performance do not recognise any justifications for weakening their own standards of activity, which leads to a constant feeling of emotional pressure for their own performance;

- as per scale of control over feelings, statistically significant differences were determined between the results of students with high and average ($t=-6.23, p\leq 0.001$) and high and low ($t=-4.09, p\leq 0.001$) levels of learning efficiency. This indicates that students with high levels of learning efficiency tend to want more control over emotions than others. This may be due to their idealised notion of the over-rationality of an adult and a successful person;
- as per the integral index of perfectionism, statistically significant differences were determined between the results of students with high and average ($t=-9.23, p\leq 0.001$), high and low ($t=-10.10, p\leq 0.001$), average and low levels of learning efficiency ($t=-2.66, p\leq 0.001$). This indicates an increase in the level of perfectionism as students' learning efficiency increases.

To identify the nature and direction of the relationship between perfectionism (based on the results of the perfectionism questionnaire by Haranian and Kholmohorova) and the learning efficiency (based on lecturers-experts' evaluation), we used correlation analysis – the Pearson correlation coefficient. Table 3 presents the results of finding a correlation between the characteristics of perfectionism and student learning efficiency.

Table 3. Correlation between the characteristics of perfectionism and learning efficiency of students

Perfectionism indicator	Correlation coefficient
Perception of other people as delegating high expectations	0.58**
Standards of activity and goals overstated in comparison to individual capacities	0.68**
High standards of activity with a focus on the "most successful"	0.17
Sorting information about own failures and mistakes	0.15
Polarized thinking	0.46**
Control over feelings	0.47**
Integral index	0.76**

Note: * – $p\leq 0.05$; ** – $p\leq 0.01$ – a measure of statistical significance of correlation.

Source: Own research

Statistically significant correlations were established between the level of learning efficiency and the perception of other people as delegating high expectations ($r=0.58, p\leq 0.01$), standards of activity and goals overstated in comparison to individual capacities ($r=0.68, p\leq 0.01$), polarised thinking ($r=0.46, p\leq 0.01$), and control over feelings ($r=0.47, p\leq 0.01$). At the same time, learning efficiency does not correlate with high standards of activity with a focus on the "most successful" ($r=0.17$) and sorting information about own failures and mistakes

($r=0.15$). The obtained results indicate that the improvement of learning efficiency is accompanied, first of all, by an unconditional orientation towards high standards, rather than a reflexive attitude towards one's own activity and orientation towards real models of success.

CONCLUSIONS AND DISCUSSION

In the course of the empirical study, the levels of students' learning efficiency (high, average, low) were determined. The level of learning efficiency of students depends on the pace of learning, the quality of learning, and the ability to generalise and synthesise new information. Students with high levels of learning efficiency are guided by the highest standards in their work and demonstrate dissatisfaction with themselves, if they do not achieve the most desirable result possible in this type of activity. They never stop there. These students are characterised by the highest level of perfectionism in all its manifestations. Similar results were obtained in a study by Hassan et al. (2012), which demonstrated a link between academic achievement and socially-oriented and personality-oriented perfectionism. Students with the average levels of academic performance demonstrate satisfaction with themselves, if they achieve a particular result from the activity they engage in. When performing work, they are able to take into account both their own resources and limitations. Students with low learning efficiency are not guided by the highest standards in their work. They rarely compare their abilities with those of others. They do not make much effort to win the favour of others.

Positive statistically significant correlations were found between perfectionism and student learning efficiency. In particular, it has been found that learning efficiency is positively correlated with the perception of other people as delegating high expectations, standards of activity and goals overstated in comparison to individual capacities, polarised thinking, and control over feelings. This research group includes students who demonstrate excellent results in all areas of study, despite their interests and personal aspirations. The findings are consistent with findings of Madigan et al. (2018a), which demonstrated that the most vulnerable to perfectionism are those students who seek to perform at the highest levels of the highest number of tasks. This group of researchers has also demonstrated that a moderate level of perfectionism contributes to the achievement of adequate goals and their successful achievement (2018b). According to Miller et al. (2017), such socially oriented perfectionism is a predictor of neuroticism for students, and if they are unable to work out adequate guidelines and goals, they will face psychological problems before graduation.

Thus, the results of the current study indicate that a group of students who demonstrate the highest achievement in learning is at the same time the most vulnerable to manifestations of perfectionism. Due to the excessive expectations of others (real or fictional), they set unrealistic goals, do not feel satisfied with their achievements, do not adequately assess their capabilities. Prospects

for further research in this direction are to create and test programs of psychological support for students inclined to perfectionism.

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