Study of Aspects Facilitating «Lifelong Learning» Competence Development in High School Students

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Abstract: The «lifelong learning» competence is considered in the article as an integrated ability of an individual, incorporating knowledge, skills and habits that students acquire during schooling, as well as certain qualities that ensure their readiness for further learning, socialization and personal growth. Success-oriented motivation and success in learning are determined as the essential prerequisites for the «lifelong learning» competence development in high school learners. The article presents the results of an empirical study of the correlation between success-oriented motivation, high school students’ academic self-regulation and their success in learning. The experimental assessment was carried out in two different types of institutions of secondary education (the general secondary school, the lyceum). To carry out the diagnostic assessment of 9th grade students (n = 134, age 13–15 years) the adaptation of the method of motivating students to achieve success, the method of «Academic self-regulation» and the technique of hubristic motivation diagnostic assessment were used. It has been determined that high level indicators of internalization and exteriorization are more evident in lyceum students, confirming their desire for self-development, self-improvement and self-education. The existence of direct correlation between the external regulation of learning activity and the motivation oriented to preventing failure, and between the internal motivation and success-oriented motivation has been proved. The peculiarities of the success-oriented motivation and academic self-regulation of high school students of different types of schools (general secondary school, lyceum) have been specified. The study has confirmed that the motives of the internal success-oriented motivation of high school students have a greater impact on their achievements in learning than the motives of external motivation and are more valuable for «lifelong learning» competence development.

Keywords: «lifelong learning» competence; high school students; success-oriented motivation; academic self-regulation; hubristic motivation.

1. Introduction

Success in learning is characterized by full concentration of attention, thoughts and feelings in the classroom; knowledge and understanding of what should be done at a certain time; clear awareness of the purpose of the activity, etc. These elements are necessary for continuing learning, and, consequently, for the development of «lifelong learning» competence. According to the state standard of basic and full secondary education (2005) the curriculum for the 9th grade students provides for the development of strong motivation for and interest in learning; realization of the need for lifelong learning; forming confidence in students’ success in learning as a means for ensuring their well-being, etc. Thus, success in learning is one of the elements essential for «lifelong learning» competence development and the results of success-oriented motivation diagnostic assessment as a factor of high school students academic self-regulation should contribute to its development.


Our study confirms the data of T. Gordeeva (2006), Ya. Kozub (2016), T. Levchenko (2011) dealing with the results of diagnostic assessment of psychological characteristics of people with a high level of motivation for achievement. According to the results of experiments and expert observations, such students demonstrate more effective learning revealing sensitivity to the signals indicating the level of success of their activities. Those who have a higher level of motivation for achievement prefer to do everything in a new way and are eager to find more effective modes to achieve their goals. High school students with a higher level of motivation for achievement are more active and get higher grades. These data are ascertained in the works of A. Derbenova (2012), N. Ruda (2004), V. Sundukova (2015).

Our research has proved that lyceum high school students are more independent and have a higher level of academic self-regulation. The
indicators of a high level of internalization and exteriorization are more significant in lyceum students, testifying that lyceum students have aspirations for self-development, self-improvement, self-education, while in general secondary school pupils the motives of primacy and superiority in the relationships with peers prevail. However, the data obtained by F. Podshyvailov (2014) contradict the results of the research of the motivation for achievement and the level of development of intellectual abilities of high school students. The author insists that «in a competing consumer environment a gifted child cannot experience success without changing his/her moral principles. He argues that «the development of success-oriented motivation in gifted children is possible only if they function as members of a team on the basis of the principles of cooperation and humanism and not on the principles of competition and effectiveness» (F. Podshyvailov, 2014).

The term «competence» has different interpretations in the scientific studies. It was researched by M. Golovan (2008), V. Grineva (2015, 2016), I. Zimnyaya (2005), V. Kozireva & P. Radionova (2004), L. Spenser & S. Spenser (2005). Most scholars consider “competence” as an integrated ability. Accordingly, the studies of V. Avanesov (2002), J. Atkinson (1966), N. Garashkina (2003), O. Matvieieva (2011, 2015), T. Sadova (2010), S. Uidett & S. Holliford, (2003), S. Yakimenko (2011) prove that diagnostic assessment of a competence is a complicated process. We define the «lifelong learning» competence as an integrated ability of an individual, incorporating knowledge, skills and habits that students acquire during schooling, as well as certain qualities that ensure their readiness for further learning, socialization and personal growth. Success in learning we refer to such qualities.

The purpose of the research is to determine the correlation between high school students’ success-oriented motivation, academic self-regulation and their results in learning as the aspects facilitating the «lifelong learning» competence development.

2. Materials and methods

134 high school students took part in the study: 83 pupils of Kharkiv physical and mathematical lyceum № 27 (grades: 9-1, 9-2, 9-3) and 51 high school students of Kharkiv general secondary school № 13 (grades: 9-A and 9-B). The lyceum students were tested anonymously. The high school students of Kharkiv general secondary school № 13 decided to take part in
the survey under their own surnames, insisting on the importance of the results for each of them.

In accordance with the purpose of the research the method of «Academic self-regulation» developed by P. Ryan and D. Connell and adapted by M. Yatsiuk (2008) was used for the diagnostic assessment of high school students’ academic self-regulation. The chosen method in accordance with the motivation locus theory of E. Deci and R. Ryan provides the basis for the definition and study of academic self-regulation. It provides for determining the mechanisms of a subject’s activity manifestation. E. Deci and R. Ryan define four levels of motivation: 1) extrinsic or external (behavior and activity are regulated by awards and punishments); 2) introspective (behavior is governed by partially assimilated rules and requirements); 3) identified (behavior is governed by one’s own choice of activity, being previously regulated from the outside); 4) intrinsic or internal (interest in activities). Success in learning is determined by the intrinsic (internal) motivation based on one’s innate need for competence (the choice of tasks of optimal difficulty, existence of positive feedback) and self-determination (one’s autonomy and internalization).

In order to carry out the diagnostic assessment of success-oriented motivation the adapted variant of the method of motivating students to achieve success suggested by O. Pakulina (2008) was used. Within the framework of the diagnostic procedure the students were asked to evaluate 36 definitions of the statement «success for me is ...» (a variety of life aspects were discussed). The method allowed us to analyze various forms of objective (exteriorized) and subjective (internalized) success, manifested in students’ learning activities as the motives for achievement. External success-oriented motivation (exteriorized success) is represented by four key types of success: success based on «good luck», success measured by material standard of living, success manifested in recognition by others and in gaining certain power. Success based on «good luck» is an extra-situational characteristic of success achievement. Success measured by material standard of living represents the values of some material products of activity, of some external achievements. Success manifested in recognition by others reflects social support, which determines how popular an individual is in his/her social environment. Success manifested in gaining certain power reflects the need to dominate others, the desire to control one’s social environment. The internal motivation for success (internalized success) includes five types of success: success as a mental state, personal success, success as the result of one’s own activities, success as the result of overcoming obstacles, success as vocational calling. Subjective evaluation of success, reflecting an individual’s
realization of his/her «I», manifests itself in a high level of personal aspirations, self-respect, marks one’s personal success achieved in the process of activity.

To study the phenomenon of success-oriented motivation more carefully the diagnostic assessment of hubristic motivation was carried out using the author’s technique of K. Fomenko (2015). On the basis of hubristic motivation manifestations 28 initial statements that reflect its parameters were formulated. Some of them are direct, some of them are reversed. The questionnaire focuses on two factors – the pursuit of excellence (10 statements) and the desire to prevail (18 statements). High school students had to choose one of five variants of answers for each statement: «I disagree completely», «I rather disagree, than agree», «I can not decide», «I rather agree, than disagree», «I agree completely». This technique meets the modern requirements for psychometric justification of questionnaires.

The results of the diagnostic assessment were determined according to the questionnaire key, transferred into the assessment scale and converted into percentage. On the basis of the test scores, the correlation between the academic self-regulation and the success-oriented motivation of high school students was determined. Pearson’s coefficient $x^2$ was used to determine the given correlation. The data were processed using the Statistics-6 programme.

To determine the correlation between the success-oriented motivation and the results of students’ achievements in learning the high school students were divided into three groups according to their school rating: the high school students with the high level of achievements in learning and the high school students with the sufficient and low levels of achievements in learning. The group of high school students with the high level of achievements in learning included the high school students who, apart from having excellent and good grades, were winners of All-Ukrainian Olympiads and Malaya Academy of Science contests (only 1st and 2nd prize winners). The group of high school students with the sufficient level of achievements in learning included the pupils having good and excellent grades and winners of regional and district Olympiads and Malaya Academy of Science contests (3rd prize winners). The group of high school students with low level of achievements in learning consisted of pupils having good and low grades at school.
3. Results

The use of the method of «Academic self-regulation» developed by P. Ryan and D. Cornnell and adapted by M. Yatsiuk (Figure 1) showed that introspective level of academic self-regulation prevailed both in the lyceum students (29.51%) and in the secondary school students (40%), indicating their perception of learning as a necessity.

![Figure 1. Distribution of high school students according to their levels of academic self-regulation](image)

<table>
<thead>
<tr>
<th>Regulation Level</th>
<th>Lyceum Students (61)</th>
<th>General Secondary School Pupils (30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Regulation</td>
<td>26.23%</td>
<td>36.67%</td>
</tr>
<tr>
<td>Introspective Regulation</td>
<td>29.51%</td>
<td>29.51%</td>
</tr>
<tr>
<td>Identified Regulation</td>
<td>22.95%</td>
<td>23.33%</td>
</tr>
<tr>
<td>Internal Motivation</td>
<td>21.31%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

The level of external regulation in the students of general secondary school (36.67%) is higher in comparison with that in the lyceum students (26.23%), which indicates their greater dependence on the guidance from adults and characterizes their passive personal attitude to life and learning. The dominance of external motivation leads to unsustainable behavior that strongly depends on reinforcement. Such high school students choose simple tasks to be praised, they experience negative emotions and they lack creativity and spontaneity. They are guided by the commands given to them by adults, they are emotionally dependent on them and have excessive demands on themselves and others.

The identified regulation level based on assimilated patterns of behavior is determined in significantly fewer high school students (lyceum students – 22.95%, general secondary school pupils – 23.33%). Although such students show initiative and self-confidence performing the learning tasks, they are sensitive to the approval that comes from adults, especially those who they consider an authority.
The obtained data prove the fact that the lyceum students have a rather significant level of introspective self-regulation (21.31%), which is not observed in the general secondary school pupils and indicates a significant degree of lyceum students’ independence in their attitude both to learning and their own lives. Such high school students are responsible and self-organized, they are proactive, able to make important decisions and creative. The internally motivated students are more successful in the assimilation of the school programme, their level of assimilation of theoretical material is higher, they are more effective in learning concepts. They give preference to more difficult tasks. Internally motivated behaviour can last a rather long period of time in the absence of awards and allows pupils to get satisfaction from what they do, causes emotions of interest and joyful excitement.

The results of the study of the level of success-oriented motivation of high school students using the adaptation of the method of success achievement motivation developed by O. Pakulina have shown that according to the scale of «internalization» the low level is not identified in the lyceum students, the high level is prevalent – 53.85%, the average level is revealed in 46.15% of the lyceum students. In the general secondary school students the average level of success-oriented motivation prevails (50%), 36.67% of these schoolchildren reveal the high level of success-oriented motivation, 13.33% of pupils reveal the low level of success-oriented motivation (Figure 2).

**Figure 2.** Distribution of high school students according to the scale of «internalization»
According to the «exteriorization» scale, none of the lyceum students belongs to the low level, the majority of them have the high level (67.31%) and 32.69% of lyceum students show the average level. As for the general secondary school students approximately similar numbers of them have the low and average levels. The high level of success-oriented motivation prevails in them (43.33%), 30% of the general secondary school students show the average level and 26.67% of them show the low level (Figure 3).

Figure 3. Distribution of high school students according to the scale of «exteriorization»

The data indicate that the exteriorized motives for success in the lyceum students are less evident than in the general secondary school pupils. The lyceum students are not that worried about the impression their achievements and results make on teachers and others. They are significantly less likely than the general secondary school students to correlate their achievements with the opportunity to acquire certain authority and opportunity to control others. The external result in the form of material living standard is not dominant in their motivational profile. However, the lyceum students have a strong tendency to link their achievements with internal reflections («realization of my vocational calling», «overcoming obstacles in my life», «raising self-esteem and level of aspirations», «sense of one’s level of well-being» etc.).

The results of the study of the correlation between the high school students’ levels of academic self-regulation and success-oriented motivation were calculated by means of the correlation analysis (Table 1). It showed a
positive interconnection between the indicators of students’ internal motivation and success-oriented motivation.

**Table 1.** Correlation data between high school students’ academic self-regulation and success-oriented motivation

<table>
<thead>
<tr>
<th>Academic self-regulation data</th>
<th>Success-oriented motivation data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>exteriorization</td>
</tr>
<tr>
<td>external regulation</td>
<td>-0.05</td>
</tr>
<tr>
<td>introspective regulation</td>
<td>-0.06</td>
</tr>
<tr>
<td>identified regulation</td>
<td>0.16</td>
</tr>
<tr>
<td>internal motivation</td>
<td>0.26*</td>
</tr>
</tbody>
</table>

Note:* – the correlation coefficient is significant at r = 0.41, at the level p < 0.05, **-p < 0.01 (n = 94 persons)

The positive correlation between high school students’ internal motivation for performing learning activities and the indicators of their success-oriented motivation according to the scale of exteriorization suggests that high school students’ interest in the content of learning is interconnected with the success-oriented motivation. Consequently, those high school students, who strive for success in life, are more likely to show interest in learning, they learn not only in order to achieve professional success in future and get a prestigious profession, but because they are interested in learning.

The negative correlation between the indicators of external regulation and the indicators of success-oriented motivation according to the scale of internalization is more significant and suggests that high school students who are guided in learning by the system of encouragements and punishments show fear of failure. Their achievement-oriented motivation is low, they avoid doing hard learning tasks in order to evade failure (poor grade, teacher’s dissatisfaction) (Figure 4).
Figure 4. The interconnection of the indicators of academic self-regulation and success-oriented motivation of high school students

To gain a better insight into the indicators of success-oriented motivation K. Fomenko’s (2015) technique of «Hubistic motivation» was used. This concept was first used by the Polish psychologist Juzef Kozeletskey, who understands it as a persistent desire of a person to reinforce and raise his/her self-esteem and self-importance. The scholar determines two forms of hubristic motivation. The first one is the desire to prevail, manifested in raising one’s own self-esteem and securing one’s own position among others. The second form is represented by the pursuit of excellence, which allows a person to strengthen his/her self-esteem through constant improvement and acquisition of skills.

The results of the study of the levels of development of hubristic motivation in high school students are presented in Figure 5 and Figure 6. The implementation of the technique has shown that according to the assessment results of «the pursuit of excellence» form of hubristic motivation (Figure 5), the average level (53.85%) prevails in the lyceum students, the data as for the high and low levels of the given form of hubristic motivation in the lyceum students are almost similar (low – 24.62%, high – 21.54 %). The results of testing the general secondary school students show that most of them have a low level of «the pursuit of excellence» form of hubristic motivation (93.10%), only 6.9% of them have an average level and none of them has a high level.
According to the scale focusing on «the desire to prevail» (Figure 6) the average level prevails in the lyceum students (58, 46%), 27,69% of students belong to the low level of the scale and 13,85% of students belong to the high level group. As for the general secondary school pupils, there are no students with the low level of this form of motivation, the high level prevails in 55,17% of students, 44,83% of students have the average level of the given form of motivation. Such indicators testify to the aspiration of lyceum students for self-development, self-improvement, self-education, while general secondary school pupils are more oriented towards primacy and superiority in their relationships with the peers.
Table 2. Correlation data between high school students’ academic self-regulation and their hubristic motivation

<table>
<thead>
<tr>
<th>Indicators of academic self-regulation</th>
<th>Indicators of hubristic motivation</th>
<th>the general indicator of hubristic motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>the pursuit of excellenc e</td>
<td>the desire to prevail</td>
</tr>
<tr>
<td>external regulation</td>
<td>-0.44**</td>
<td>-0.58**</td>
</tr>
<tr>
<td>introspective regulation</td>
<td>-0.33*</td>
<td>-0.38*</td>
</tr>
<tr>
<td>identified regulation</td>
<td>0.15</td>
<td>-0.16*</td>
</tr>
<tr>
<td>internal motivation</td>
<td>0.34*</td>
<td>-0.05</td>
</tr>
<tr>
<td>Index of autonomy</td>
<td></td>
<td>0.96***</td>
</tr>
</tbody>
</table>

Note:* - at the level p<0,05, **-p<0,01, ***-p<0,005

Table 2 shows that the indicators of hubristic motivation correlate negatively with the indicators of external and introspective regulation. It proves that high school students’ striving for self-affirmation is realized through their desire to prevail over others and is associated with the external level of academic regulation. In learning they seek to avoid punishment (negative grades, parents and peer disapproval) and get benefits (a scholarship, some praise), that function as the main motivation aspects in their learning activities and as a condition of achieving superiority over others. Motivation for learning in this group of high school learners is determined by their desire to prevail over others and is realized at the simplest external level of self-regulation. Learning activity of students with this type of motivational peculiarities is aimed at punishment prevention, which manifests itself in failure to achieve the goals set and take higher ranks in the educational rating, testifying to their inability to overcome classmates.

The correlation between the indicators of introspective regulation and hubristic motivation suggests that those high school students, who are guided in the organization of their own learning activities by the acquired introspective norms and requirements from adults and are emotionally dependent on them, place excessive demands on themselves and others,
realizing their own desire to prevail. They carry out the acquired modes of learning (regular attendance of classes, selective attitude to the subjects because of their difficulty or demands on the side of the teacher, observance of discipline, obedience, etc.) and seek to overcome their classmates without putting «extra» efforts.

It is established that the correlation between the indicators of the identified regulation and the desire to prevail over others is insignificant. High school students with an identified level of self-regulation are guided by the assimilated models of behaviour of the adults and peers they respect and value. They are sensitive to the assessment of their achievements by others (teachers, successful in learning peers), they show initiative and self-confidence in the process of learning activity. It is important for them to obtain approval from the authorities, which assures them of the fact that they are going the right way and their learning efforts are not wasted.

The correlation between the indicators of internal motivation and the pursuit of excellence motivation aspect is revealed, representing the nature of the internal motivation in learning that provides for the close connection between interest in learning and the desire for excellence, self-development and self-education.

The study has also allowed us to determine the significant correlation (0.96) between the autonomy index and the general indicator of hubristic motivation (Fig. 7).

![Figure 7. Correlation data between success-oriented motivation indicators and hubristic motivation](image-url)
To study the interrelation between success-oriented motivation and the results of high school students learning activity, the learners were divided into high, sufficient and low level groups (in %) (Figure 8).

**Figure 8.** Distribution of high school learners by levels according to their results in learning

The results of the study of the correlation between the results of high school students in learning and their success-oriented motivation were calculated by means of correlation analysis method, which showed a significant (at the level of the correlation coefficient more than 0.5 at p < 0.005) positive correlation between them.

Interiorized success has more significant influence on the results of high school students’ learning than exteriorized success (0.86 to 0.56), which suggests that the motives of internal success-oriented motivation have a greater impact on the high school students’ results in learning than the motives of external motivation (Figure 9).

**Figure 9.** Interconnection of high school students’ results in learning and their success-oriented motivation
Therefore, it can be asserted that stimulating success in learning and
development of internal motivation for learning promote and facilitate the
development of the «lifelong learning» competence.

4. Discussion

Our results confirm the data of other studies on the psychological
characteristics of people with high level of motivation for achievement and
prove their striving for learning.

The results of diagnosing the correlation of success-oriented
motivation and academic self-regulation of high school students directed at
«life-long learning» competence forming in 9th grade students proved a
positive role of success-oriented motivation internalization within the
internal academic self-regulation of high school students. The results of the
study proved the existence of a direct correlation between the external
regulation of learning activities and the motivation based on the desire to
prevent failure, and between the internal motivation and success-oriented
motivation. The lyceum students have a rather significant level of self-
regulation in contrast to general secondary school pupils, which indicates
their evident degree of independence both in their attitude to learning and
their everyday life. The peculiarities of the success-oriented motivation and
academic self-regulation of high school students depending on the
conditions of learning (general secondary school, lyceum) are specified,
namely: higher level of academic self-regulation has been revealed in the
lyceum students. The indicators of high level of internalization and
exteriorization are more significant in the lyceum students, testifying that
lyceum students have aspirations for self-development, self-improvement,
self-education, while in the general secondary school students the motives of
primacy and superiority in the relationships with peers prevail.

The obtained data indicate the state of mental and psychic health of
those high school students who have a more stable motivation and interest
in learning, who are confident of the success of their learning activities,
which implies the ability to set and achieve goals, overcome obstacles and
solve complex tasks. For such high school students learning is work that
requires conscious efforts that will certainly contribute to success and
satisfaction with learning. The generalization of the results of the study
suggests that such characteristic of a high school student as success in
learning, that is one of the components of pupils’ mental and psychic health,
is a necessary prerequisite for continuing learning and forming «life-long
learning» competence.
5. Conclusions

The analysis of the levels of academic self-regulation of high school students suggests that introspective regulation prevails in them. The lyceum students have a rather evident level of self-regulation that is not observed in general secondary school students and indicates a significant degree of lyceum students’ independence in their attitude to learning and life in general.

The study has determined that high school students’ motivation for learning and their aspirations for self-affirmation in learning and life are interrelated.

The results of the study have empirically proved the existence of a direct correlation between the external regulation of learning activities and the motivation based on the desire to avoid failure, and between one’s internal motivation and success-oriented motivation. The peculiarities of success-oriented motivation and academic self-regulation of high school students depend on the type of the institution of secondary education (the general secondary school, the lyceum): a higher level of academic self-regulation has been revealed in the lyceum students.

The analysis of the research findings, based on the diagnostic assessment of success-oriented motivation and its interrelation with students’ academic self-regulation and achievements in learning, allowed us to work out certain pedagogical corrective activities at the pedagogical communication level (engaging high school students in direct dialogue; establishing the system of «subject-subject» relations). The recommendations for teachers were formulated, diagnostic cards for determining the interests prevailing in high school students were worked out, the plan of pedagogical correctional procedures was developed.

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