

PRRAEPGDA 2020**Personal and Regulatory Resources in Achieving Educational and Professional Goals in the Digital Age****LIFE NARRATIVE REFLECTION AS A RESOURCE FOR SELF-REGULATION IN HIGHER EDUCATION STUDENTS**

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Abstract

The Article deals with life narrative reflection as a personal self-regulation resource in students' academic and professional activities. The early-career self-regulation has to do with a substantial increase in the person's hardiness and professional competence, but the basis of the reflective mechanism is still unknown. In the mainstream of cultural-historical psychology, life narrative self-reflection is seen as the basic mechanism of the biographical reflection, evolving along with the ability to manage one's life quality over time. The research hypothesis is based on an assumption that biographical reflection correlated with spontaneous self-regulation is the predictor for students' academic and professional achievements at the start of their career. The sample included 500 higher education students, aged 17 to 37, studying humanities, economics, or engineering sciences. The study focused on three aspects, which were measured: biographical reflection, spontaneous self-regulation and professional competence. We have discovered that the resource function of life narrative reflection and overall biographical reflection is mostly demanded in the situations of choice (where the field of education, academic disciplines, scientific projects or internships are chosen), while the resources of biographical reflection are mostly used by students as they develop spontaneous self-regulation in academic and professional activities. The study shows that biographical reflection in students is correlated with the stages of students' professional life: its contribution to spontaneous self-regulation and professional competence is higher at the beginning and at the end of higher professional education, when students have to decide on crucial life changes based on the life narrative reflection.

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Keywords: Self-regulation, life narrative, biographical reflection, professional competence, students.

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1. Introduction

Higher education used to be a privilege for the elite in the past. However, today, higher education has become not only generally available, but also essential for the individuals wishing to raise their competitive ability, so more and more young people aged 18 to 40 go in for higher education to ensure their personal identity formation and personal development, as well as their professional and career growth (Arnett, 2014; Swanson, 2016). It shows that a person is able to reflect on and juxtapose the desired opportunities with the actual ones when choosing higher education as a highly demanded personal resource. Strong reflection makes it possible for a person to see the boundaries of their competence and find ways to extend them, as well as track new social trends and initiate changes in various life areas.

In modern psychology (Bogomaz et al., 2018; Leontiev, 2012; Morosanova et al., 2017), reflection as part of the spontaneous regulation of academic and professional activities is seen as a resource for intellectual, personal and professional development as a life quality factor. A reflective resource of self-regulation is mostly demanded in the situations of uncertainty arising in academic and professional activities, when a person realizes the need to make a choice and take responsibility for the decision, overcoming limitations and anxiety.

One of such reflective self-regulation resources dealt with by psychological science is biographical reflection. Biographical reflection is the reflection on the life narrative, including the life purposes as revealed in the article, autobiographical knowledge, biographical questions and answers to them, as well as the formal structures, such as scenario, plot, character, etc. It is manifested in those life events that facilitate one's personal development, when the life changes are recognized as the trigger to rethink one's ego, one's life, one's relationship with the world, to gain control over the quality of one's life through time and to assert the authorship of one's life path (Klementyeva, 2016). Life narrative is essentially a "reflective life project" integrated into the person's identity structure, responsible for the "I"-formation and for the discovery of one's life purposes through life storytelling. Life narrative reflection has two forms that are interconnected: the reflection on the life narrative "from the outside" with a focus on the objective description of the life phases and milestones in terms of socio-historical opportunities and limitations ("reflection on other people's lives") and the reflection on the life narrative "from the inside", highlighting and giving an insight into the individual's life phases and milestones ("reflection on one's own life"). Both forms of biographical reflection are interconnected and establish psychosocial cohesion between the individual's life narrative and the culture-based biography concept (or culture-based life scenario), which includes a set of the standard milestones correlated with the main predicted stages of development.

According to the authors (Köber et al., 2019; McAdams, 2013; Sapogova, 2019), life narrative reflection helps not only build one's life path, but also develop spontaneous self-regulation based on identification patterns, overcome alienation and loneliness, maintain social attachments and ensure the succession and connectedness of one's life with the lives of other people.

Life narrative reflection is most helpful in the setting of life changes, when a person realizes the contradiction between what he or she wants and what he or she actually has, while the solution leads inevitably to changing the life paths (Klementyeva, 2016; Lyubomirsky et al., 2006). Being aware of their power, people correlate their life aspirations with the chances to make them real, dissect autobiographical

knowledge and assign meaning to the milestones of their lives. However, people make their life choices in terms of socio-historical opportunities and limitations, sharing their life paths with other people and correlating their life milestones with internalized cases or scenarios transformed into intrapsychic structures, thus making their autobiography comprehensible to other people.

2. Problem Statement

The beginning and the end of the higher education period are the standard milestones associated for a modern person with the potential development in the profession chosen and in life, generally. When reflecting on the life narrative, a person integrates the milestones of their early professional life, including the choice of the professional training program and professional qualifications, in the matrix of life development, identifying their individual life as the ambiguity of its readable and interpretable autobiographical facts. As an integral part of the personality development, biographical reflection and, first of all, life narrative reflection in students becomes a personal resource that shifts the daily living processes from regulation to self-regulation mode, thereby contributing to the professional growth and consistent development of professional competencies within the academic and professional activities.

These positions result in the following assessments:

- high level of biographical reflection may increase self-regulation;
- increase in professional competence in situation of educational and professional changes may be partially explained by a higher level of biographical reflection.

At the next stage of the psychological research on the reflective mechanisms of self-regulation, a closer look at the contexts of these phenomena is required.

The hypothesis of this empirical research was based on the assumption that the status of biographical reflection correlated with the status of spontaneous self-regulation was the predictor variable for students' educational and professional achievements at the initial stage of their professional life.

3. Research Questions

Our study examined the influence of biographical reflection upon self-regulation and professional competence. We conducted our empirical research, concentrating upon the following issues:

- 3.1. to what extent students' self-regulation can be explained by their biographical reflection;
- 3.2. to what extent students' professional competence is related to biographical reflection.

4. Purpose of the Study

The purpose of the research is to study the role of biographical reflection in the structure of self-regulation resources for higher education students.

5. Research Methods

Sampling. The study involved 500 individuals, including: aged 17 to 25 (Me = 21) – 260, aged 26 to 37 (Me = 30) – 240; men – 205 (41 %), women – 295 (59 %); studying humanities – 195, studying

engineering sciences – 200, studying economic sciences – 105; taking a Bachelor’s degree program – 250, taking a Specialist’s degree program – 112, taking a Master’s degree program – 138.

The methods used to assess the status of biographical reflection were biographical self-reflection assessment (Klementyeva, 2016), a questionnaire on behavioral self-regulation style (Morosanova & Kondratjuk, 2011), as well as the academic score (average score point) of higher education students as an integral indicator of the maturity of professional competencies.

Static data analysis methods. The statistical software package SPSS v.21 with the AMOS module was used. The correlation between the indicators was identified using comparative analysis (Kruskal-Wallis H test), correlation analysis (Pearson’s correlation coefficient – r) and multiple linear regression (least squares method – LSM). The quality of the regression model was estimated based on the statistics obtained from the Fisher test (F). The coefficient of determination (R^2) was used to assess the influence of the predictor variables; the proportion of the total variance described by the regression model is sufficient for a value of $R^2 \geq 0.50$, which shows the close correlation between the dependent variable and the predictor variables.

6. Findings

The correlation analysis of biographical reflection, self-regulation and professional competence, using the chronological age of students, revealed a slight decrease in the overall biographical reflection ($r = -0.09$ with $p = 0.01$) and self-regulation ($r = -0.12$ with $p = 0.01$) against more adequate self-evaluation of activities and behavior ($r = -0.17$ with $p = 0.001$) with aging. The effect of chronological age on indicators does exist, but it is negligible. Generally, the positive significant correlations presented in Table 1 indicate that the students with a high level of biographical reflection show good professional competence and strong spontaneous self-regulation of life activities.

Table 1. Correlation of biographical reflection, self-regulation and professional competence (n = 500)

Indicators	Biographical reflection indicators		
	Overall biographical reflection	Reflection on one’s own life	Reflection on other people’s lives
Self-regulation	+ 0.17**	+ 0.18**	+ 0.02
Planning	+ 0.14*	+ 0.26**	+ 0.02
Programming	+ 0.10*	+ 0.16**	- 0.07
Evaluation	+ 0.17**	+ 0.17**	+ 0.02
Patterning	+ 0.05	+ 0.10*	+ 0.03
Adjustability	+ 0.16**	+ 0.17**	+ 0.09*
Self-dependence	- 0.03	+ 0.07	- 0.10*
Professional competence (Academic score)	+ 0.27**	+ 0.39**	+ 0.21**

Legend: * — significance of the indicator at $p < 0.05$; ** — correlation at $p \leq 0.01$

The statistical data in Table 2 obtained by the linear regression method show the sufficiency of the correct predictions compared with the actual observable indicators, so the models applied have proven to be adequate for the empirical data analysis.

Table 2. Regression Model Indicators (n = 500)

Dependent variable	Predictor variables	Indicators		
		β	t	Quality of the model
Biographical reflection	Planning	0.13	1.92	F = 2.81 with p = 0.01; R ² = 0.07
	Patterning	- 0.06	- 0.86	
	Programming	- 0.02	- 0.24	
	Evaluation	0.14	2.07*	
	Adjustability	0.14	2.12*	
	Self-dependence	- 0.09	- 1.32	
Self-regulation	Reflection on one's own life	0.30	4.76**	F = 6.21 with p = 0.000; R ² = 0.54
	Reflection on other people's lives	- 0.09	- 1.42	
Professional competence	Reflection on one's own life	0.32	5.75**	F = 10.98 with p = 0.000; R ² = 0.55
	Reflection on other people's lives	- 0.08	1.33	

Legend: * – significance of the indicator at p < 0.05; ** – significance of the indicator at p < 0.01

It was found that the biographical reflection indicators contribute significantly to the style of spontaneous self-regulation and the profile of students' professional competence. Self-regulation contributes also to the variability of biographical reflection, but only to a small extent. The most significant contribution to the professional competence potential and to the individual's self-regulation is due to the awareness of one's life authorship, which increases the individual's resistance to life challenges and helps overcome difficulties when achieving an important goal. On the other hand, adequate life self-assessment and correction of the self-regulation system under the changing conditions facilitate the overall self-reflection on the life path, making it more expedient and resourceful. According to the data, it is biographical reflection that determines the person's capacity for self-regulation and the level of professional competence.

Table 3. Arithmetic mean values and findings of the comparative analysis in groups of students (n = 500)

Scales	Indicators			
	M (σ)			p-value in H test
	First year students	Graduates	Other students	
Planning	5.0 (1.4)	5.9 (1.8)	5.3 (2.0)	5.0 (1.4)
Patterning	6.0 (2.8)	4.3 (1.6)	5.2 (1.6)	6.0 (2.8)
Programming	6.0 (1.4)	5.8 (1.5)	5.4 (1.6)	6.0 (1.4)
Evaluation	6.0 (1.4)	5.3 (1.6)	5.3 (1.5)	6.0 (1.4)
Adjustability	5.8 (1.1)	5.6 (1.7)	5.6 (1.8)	5.8 (1.1)
Self-dependence	5.0 (2.3)	6.0 (2.1)	5.7 (1.9)	5.0 (2.3)
Self-regulation	28.5 (9.1)	28.5 (5.4)	28.3 (5.0)	28.5 (9.1)
Biographical reflection	6.2 (1.8)	5.6 (1.8)	5.7 (1.7)	6.2 (1.8)
Reflection on one's own life	6.4 (1.7)	5.4 (2.0)	5.3 (1.8)	6.4 (1.7)
Reflection on other people's lives	5.7 (1.7)	5.9 (1.8)	5.7 (1.8)	5.7 (1.7)

A significant decrease is only observed in some indicators. Those are autobiographical reflection and patterning as a self-regulation process during the learning period. The data of the comparative analysis (conducted using the Kruskal-Wallis H test) are presented in Table 3.

The findings of the regression analysis presented in Table 4 prove that biographical reflection as a self-regulation resource is most demanded not only at the beginning and at the end of education, but also during the educational process, in the academic and professional situations connected with the choice of the training courses, research projects and internships.

Table 4. Regression Model Indicators

Dependent variable	Predictor variables	Indicators		
		β	t	Quality of the model
First-year students (n = 100)				
Self-regulation	Reflection on one's own life	0.45	3.28**	F = 5.97 with p = 0.001; R ² = 0.43
	Reflection on other people's lives	- 0.23	0.66	
Professional competence	Reflection on one's own life	0.24	3.27**	F = 3.78 with p = 0.01; R ² = 0.27
	Reflection on other people's lives	0.14	2.12*	
Graduates (n = 100)				
Self-regulation	Reflection on one's own life	0.34	3.58**	F = 6.42 with p = 0.001; R ² = 0.50
	Reflection on other people's lives	- 0.08	-0.88	
Professional competence	Reflection on one's own life	0.32	3.37**	F = 3.49 with p = 0.01; R ² = 0.42
	Reflection on other people's lives	0.04	1.92	
Students in the choice-related academic and professional situations (n = 100)				
Self-regulation	Reflection on one's own life	0.30	3.06**	F = 7.45 with p = 0.001; R ² = 0.38
	Reflection on other people's lives	- 0.03	- 0.44	
Professional competence	Reflection on one's own life	0.11	1.75	F = 0.81 with p > 0.05
	Reflection on other people's lives	- 0.06	-1.23	

Legend: Legend: * – significance of the indicator at $p < 0.05$; ** – significance of the indicator at $p < 0.01$

According to the findings, during the higher education period, life narrative reflection becomes a psychological tool for students to develop spontaneous control of their lives, as well as academic and professional activities and changes thereto, and, to a less extent, facilitates adaptation to the changing environment. The development of biographical reflection and, first and foremost, life narrative reflection increases the potential for self-regulation in a person. Reflective mechanisms contribute more to self-regulation in the situations of its targeted use as a resource for the regulation of life and activities. Generally, strong biographical reflection makes it possible for students to understand and assess their ability to control life, and, no less important, to see the limits and scope of this control. In general, students with stronger reflection are more likely to accept professional and academic changes than students with poor biographical reflection. Using the life narrative reflection as a resource of self-

regulation, students become more self-dependent, free and proactive when shaping and correcting their professional life.

We also believe that life narrative reflection is a necessary psychological resource that stimulates or “turns on” self-regulation in a person going through life changes and making important choices, and thus relieves anxiety, boosts the person’s self-confidence in difficult situations and helps find the purpose of a professional life. According to Morosanova and Kondratjuk (2011) and Morosanova et al. (2017) and self-regulated learning (SRL) researchers (Ardasheva et al., 2017; Ivanova & Tivyaeva, 2015; Valenzuela et al., 2020; Vanslambrouck et al., 2019), the backbone role of self-regulation (including self-regulation in relation to an individual’s academic and professional activities) is the mediation between personal qualities and the expedience of the actions and deeds.

The leading role of the reflective mechanisms that trigger the regulatory process in the individual’s activity and behavior is highlighted by Russian psychologists (Bogomaz et al., 2018; Leontiev, 2012). Together with authors (Köber et al., 2019; Sapogova, 2019), we believe that a high level of life narrative reflection makes it possible for a person to shape a clear idea of the standard milestones. For students, these are the milestones connected with the higher education studies. We’d like to stress the fact that self-regulation can generally produce a positive effect coming from the stimulation of biographical reflection in difficult life situations that involve overcoming obstacles or limitations, or the need to make a choice. From this point of view, our ideas are close to the findings of research on the psychology of happiness (Lyubomirsky et al., 2006): the authors note that the life narrative reflection on happy life events reduces self-regulation significantly through boosting positive emotions, while the narrative reflection on unhappy life events makes self-regulatory mechanisms much more effective. Following the researchers, we believe that this fact proves there is a resource for biographical reflection in self-regulation. If well-developed, this resource lets students feel the freedom of choice, be critical of their own actions and adjust their strategies flexibly to a new professional life in challenging academic and professional situations.

7. Conclusion

Generally, the data we have obtained shows that using biographical reflection as a resource during the higher education period is a natural human development mechanism related to the buildup of the life narrative reflection, which means that the dependence on cultural resources becomes lower and the recourse to internal, reflective resources becomes a prerequisite for self-determination, helps find the purpose of the professional life and overcome the anxiety that follows the necessity to make choices and design the future. The minor impact of age on the indicators of biographical reflection and self-regulation proves that age is to some extent a conditional indicator, convenient if you need to describe and predict the probable paths of the individual’s development over time and demonstrating the cumulative impact of determinants on the human life.

Thus, strong biographical reflection is a prerequisite for students to develop a high potential for self-regulation in their academic and professional activities. Using life narrative reflection as a resource makes students more resolute when deciding on life changes, improves the potential for self-regulation, helps assume the development risks and stimulates professional competence. A high level of life narrative reflection helps students feel the freedom of choice, develop self-criticism for what they do, reject other

people's advice on their life choices, thus shaping the environment for them to take responsibility and act independently in their mature professional life.

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