



Future Academy®'s Multidisciplinary Conference

## Self-Determination Approach to Understanding of Motivation in Students of Helping Professions

Karla Hrbackova<sup>a\*</sup>, & Eliska Suchankova<sup>a</sup>

<sup>a</sup> *Tomas Bata University in Zlín, Faculty of Humanities, Department of Pedagogical Sciences, Mostní 5139, Zlín, 760 01, The Czech Republic*

---

### Abstract

The paper presents research results aimed at the identification of the motivation to learn of students in the preparation of helping professions. Student motivation is an important part of the self-regulated learning process, yet not sufficient attention is paid to this issue at the tertiary level of education. The research aims to discover the extent to which students' motivation to learn is internalized, and also to determine the extent to which this motivation is domain-specific. For research purposes, we chose a questionnaire method among 286 students of helping professions. The questionnaire contained 23 items divided according to the type of motivation, ranging from amotivation to intrinsic motivation. Motivation in students ranges from introjected to the identified type of regulation. Intrinsic motivation as the predominant type of motivation occurs only sporadically in the research sample. The motivation to learn is domain-specific in three types of external regulation and in intrinsic motivation. No distinct type of motivation was detected in a large number of the respondents. The more the students perceive their discipline as important and useful, the more internalized their motivation is, and vice versa. In a large number of students, there are multiple motives encouraging their learning within a specific discipline, these are often in opposition. Motivation is the key to success in one's studies and it is reflected in the professional quality of future graduates in helping profession.

© 2016 Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of Future Academy® Cognitive Trading

**Keywords:** Motivation; self-determination theory; self-regulated learning; students in the preparation of helping professions; domain – specific; domain – general

---

\* Corresponding author. Tel.: +420-576-037-439

E-mail address: [hrbackova@fhs.utb.cz](mailto:hrbackova@fhs.utb.cz), [suchankova@fhs.utb.cz](mailto:suchankova@fhs.utb.cz)

## 1. Theoretical background

The new millennium has brought many changes in the economic, political, social and cultural fields. These changes are also reflected in the field of education. The education system should be set so that it can flexibly respond to the demands of 21st century society. Education should ensure that a person learns to learn, that they will have a positive attitude to learning and education and will educate themselves throughout their lifetime.

In order that interest in the process of lifelong learning is already sparked at school, it is necessary to focus on the quality teaching and learning of children, pupils and students and on determinants that affect this process. Learning is no longer focused solely on student performance. It is important, above all, that students be motivated to learn and for the coming changes in life, to be able to learn by themselves, to monitor themselves and evaluate how they learn and to be able to regulate their learning. Regulating their own process of learning, i.e. self-regulated learning, affects students' success both in school and out of school in their future life. We define the self-regulated learning as the process of regulating one's own learning in which learners take control over their own learning and are able to realistically evaluate and regulate this process and any behavior aimed at the achievement of the learning objectives (Hrbáčková 2011). Self-regulating individuals manage their learning alone, they are aware of what they do not know yet and what they would like to know, they set their own learning goals, realize the importance of what they should learn, motivate themselves, focus their attention on study, have a strong will, are persistent in learning, maintain real beliefs about the causes of success and failure in learning, can assess their capabilities to cope with learning aims as well as evaluate their progress in learning and maintain positive beliefs about themselves (Hrbáčková, 2011).

In line with the concept of lifelong learning we consider motivation (intrinsic and positive) as one of the key determinants of the process of self-regulated learning of students (Boekaerts, 2005; Pintrich, 1999; Schunk, & Zimmerman, 2008). "To be motivated means to be moved to do something" (Ryan, & Deci, 2000a, p. 54). Motivation is a summary of factors that stimulate, energize and manage the learning process of the individual (Hrabal, Man, & Pavelková, 1989; Pavelková, 2002), increasing or decreasing the intensity of the individual learning activity. Motivation can be considered as a manifestation of the personal relationship of the individual to learning. In most cases, effective learning cannot be achieved without motivation. If students are not internally motivated, they cannot be interested in contributing their own energy to developing their own learning or in their further development. In this context Boekaerts (2002) highlights the disparity between the concepts of self-regulation and self-control. The process of self-regulated learning is associated with positive emotions, intrinsic motivation and self-rewarding, while the process of self-control with extrinsic motives (environmental demands), and the system of punishments. Sternberg (2001) considers the ability to motivate oneself as one of the characteristics of successful intelligent people, who are discussed in relation to so-called tacit knowledge.

Motivation is not a unitary phenomenon. People not only have a different amount - level of motivation (how much motivation), but also different kinds of motivation - orientation of that motivation (what type of motivation). Orientation of motivation concerns the underlying attitudes and goals that give rise to action - that is, it concerns the why of actions. Motivation is varied from very little motivation to act to a great deal of it. In some examples the amount of motivation does not necessarily vary, but the nature and focus of the motivation certainly does. (Ryan, & Deci, 2000a)

Self-Determination Theory represents a broad framework for the study of human motivation and personality. It is an approach that uses traditional empirical methods while employing an organismic metatheory that highlights the importance of humans' evolved inner resources for personality development and behavioral self-regulation. Self-Determination Theory defines intrinsic and varied extrinsic sources of motivation as well as a description of the respective roles of intrinsic and the types of extrinsic motivation in cognitive and social development and in individual differences. (Deci, & Ryan, 1985, 2000; Ryan, & Deci, 2000a,b)

Vallerand et al. (1992) distinguish three types of motivation based on the interaction of needs and the environment: amotivation, extrinsic motivation and intrinsic motivation. According to Deci and Ryan (Deci, & Ryan, 1985; Ryan & Deci, 2000a, b) there are several varied types of extrinsic motivation. They vary according to the level of autonomy, which a person attributes their own behavior to. The levels of motivation thus differ through the efficiency of the results and the scope of possible internalization, which in Self-Determination Theory (see Fig. 1 - adjusted according to Deci, & Ryan, 1985; Ryan, & Deci, 2000; Vallerand, 1992) is considered a motivational

process by which extrinsic motivation approaches intrinsic motivation through four different ways (Mareš, Man, & Prokešová, 1996).

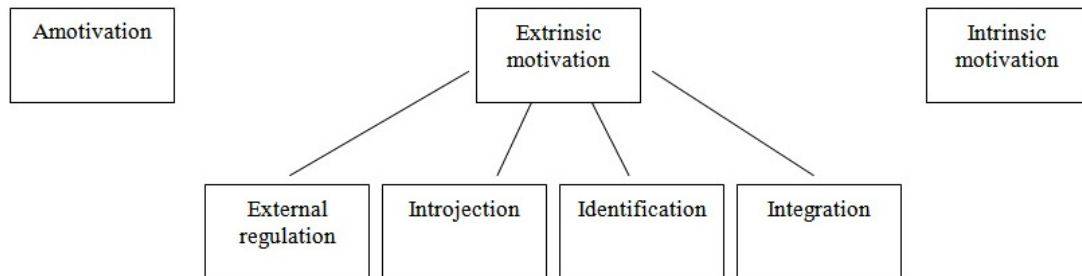


Fig. 1. The internalization of motivation according to Self-Determination Theory

We define amotivation as the absence of intent or the control of performing activities (Vallerand, 1992), whereas intrinsic motivation is a form of self-regulation, in which individuals demonstrate their own interest in the activity. Four types of extrinsic motivation stand between amotivation and intrinsic motivation in the process of internalization. External regulation leaves no room for self-determination, the impulse for the behavior of an individual is another person who offers a reward to the individual or arouses the fear of punishment in them. Introjection is passively accepted. The individual quite disregards the completion of the task internally, but carries it out e.g. due to the pressure of the extrinsic environment, to strengthen their own ego, avoid unpleasantness, anxiety, etc. The identification means that the individual identifies with the activity because it is beneficial for them personally, even if not directly resulting from their intrinsic needs and interests. During integration the individual is aware that the activity is an integral part of themselves, although not based on their intrinsic needs. It is about the integration of extrinsic demands and intrinsic needs, i.e. about agreement between the intrinsic and extrinsic motives of a person. This type of regulation is a means of achieving their own goals and is still regarded as a kind of extrinsic motivation, although autonomous. (Deci, & Ryan, 1985; Gagné, & Deci, 2005; Mareš, Man, & Prokešová, 1996)

Self-Determination Theory integrates Cognitive Evaluation Theory, Organismic Integration Theory and Attribution Theory. Cognitive Evaluation Theory and thus Self-Determination Theory emphasizes human needs such as the autonomy (the individual can choose the activities that will be implemented and regulate themselves, not under duress or in order to fulfill obligations imposed from outside), the competence (the individual can achieve various goals which are set for them) and the relatedness (the individual perceives a sense of security, confidence and satisfaction in interpersonal relationships). The level of intrinsic motivation is then linked to the level of satisfaction of the given needs in the implementation of certain activities in the social environment (Deci, & Ryan, 1985; Mareš, Man, & Prokešová, 1996).

Experiences that reinforce the individual's lack of competence, lead to a reduction in intrinsic (and extrinsic) motivation. Factors that enhance the feeling of competence and self-determination enhance intrinsic motivation. From the results of the research carried out for more than 30 years, it ensues that the quality of experience and performance can vary greatly depending on whether the individual is acting on the basis of an intrinsic or extrinsic impulse. (Deci, Ryan, & Koestner, 1999; Mareš, Man, & Prokešová, 1996; Ryan, & Deci, 2000a)

Because numerous variables are involved in the learning process, it is not easy to describe the mechanisms of the formation of the process and to what extent motivation to learn can be transferred to other areas. Domain generality / specificity of self-regulated learning and motivation to learn is still not fully understood. There are different approaches to explaining the dependency of self-regulation on the content of learning and the context in which the learning takes place. The domain-specific approach emphasizes the possibility of disorderly developments, therefore, differences in the level of self-regulation in various areas of learning (Boekaerts, Pintrich, & Zeidner,

2005; Sternberg, 2002). Domain specificity of motivational beliefs implies that a student may be failure-oriented in some domains and not in others. Students give different reasons for their success or failure in various school subjects and these reasons are consistent with their self-concept of ability in that domain. (Boekaerts, 2002)

The approach of domain generalists suggests that the self-regulated learning skill is independent of the context in which learning takes place. The principles of the development of self-regulated learning in this concept is developmentally stable. Students who can regulate their learning process in one subject, can overcome difficulties and regulate their learning in other subjects (Sternberg, 1988, Zimmerman, & Martinez-Pons, 1990).

The level of motivation varies depending on the learning content and the context in which the learning takes place (Boekaerts, 2005; Bong, 2004; Pintrich, 2004; Schunk, 1991; Wolters, & Pintrich, 1998). Some studies addressing contextual differences of self-regulated learning (Hrbáčková, & Hladik, 2011; Rotgans, & Schmidt, 2009; Virtanen & Nevgi, 2010; Wolters, & Pintrich, 1998) do not confirm the assumption that self-regulation is domain-specific, similar studies focusing on the motivation to learn (Wolters, & Pintrich 1998; Wolters, Yu, & Pintrich, 1996).

Student's beliefs about a domain may be favorable or unfavorable and can thereby positively or negatively affect learning. The created positive or negative motivational beliefs are very resistant to change. (Boekaerts, 2002)

In this paper, we monitor the motivation to learn in students of helping professions. We consider this to be important for preparation for their profession (in our case it is the social area) and in the actual exercise of the profession. We believe that helping profession workers (especially teachers) should have the skills to help them develop their own motivation (self-motivation), but also those skills that will enable them to foster intrinsic motivation of their pupils and clients.

Understanding the different types of extrinsic motivation is an important issue for educators who cannot always rely on intrinsic motivation of students to learning. Many of the tasks that educators want their students to perform are not inherently interesting and enjoyable, knowing how to promote more active and volitional (versus passive and controlling) forms of extrinsic motivation is becoming an essential strategy for successful teaching. (Ryan, & Deci, 2000a)

## 2. Methodology of research

The main objective of the research was to determine the **level of motivation** (i.e. how much motivation) and the **orientation of the motivation** (i.e., what type of motivation) in students of helping professions at the tertiary level of education. We also wanted to find out what type of motivation prevails among students of helping professions and, in particular, **to what extent students' motivation is domain-specific** (i.e. to determine whether the student has the same level and type of motivation in the two different disciplines). Finally, we evaluated how students' motivation is related to the perceived success of study, the self-efficacy in the given discipline, the perceived difficulty, the perceived significance, the perceived usefulness of the discipline, and the perceptions of the causes of success and failure.

The research sample consisted of 286 full-time students in the field of Social Pedagogy conducted at the Faculty of Humanities, Tomas Bata University in Zlín.

For the purposes of this research, we chose the method of questioning. When designing the questionnaire, we proceeded from the already proven research tools (Vallerand, 1997; Vandergrift, 2005), which were adjusted for the Czech environment. The questionnaire contained 23 items divided according to the type of motivation from amotivation to intrinsic motivation (students selected an open number of motives) and other questions aimed at identifying the perceived success of the students, their self-efficacy, the perceived difficulty, significance and usefulness of the selected disciplines, and their perceptions of the causes of success and failure (range 1-10). When determining the degree of motivation the chosen motives were assigned values according to the continuum of internalization (see Fig. 1) from amotivation (0) to intrinsic motivation (5). To determine the level of motivation, we used a percentage scale (max.100%), which expressed to what extent the particular type of motivation is represented.

The questionnaire was filled in by the same students twice, i.e. in two disciplines - the methodology of social sciences and in social work. These disciplines have been chosen due to their different nature. The methodology of social sciences for humanities students seems to be quite challenging and focused more on the so-called hard

disciplines. Social work is, however, a crucial discipline field that the students chose and belongs to the so-called soft disciplines.

Descriptive statistics, the Pearson correlation coefficient and the paired T-test were used when analyzing the data. The research results were processed in the program IBM SPSS Statistics 22.0.

Motivation is primarily an intrinsic matter for each individual person (student), therefore it is necessary to approach the results of the analysis very cautiously. The goal is not to generalize the results, but to take a look into the concept of motivation of students of selected helping profession fields. The present study is part of a larger research inquiry focused on the self-regulated learning of students in tertiary education. On the basis of determining the level and orientation of motivation of these students, we can determine what role it plays in the process of self-regulated learning and suggest ways of intervention that would develop it. We can also determine whether student motivation is domain-specific and focus on strengthening motivation (orientation of motivation) in certain disciplines and find factors that can promote the development of motivation (which are related to its development).

### 3. Data analysis

The motivation of helping profession students on a continuum from amotivation (0) to intrinsic motivation (5) most approaches identification (Table 1). The level of motivation in the soft discipline achieves the value  $M = 2.769$  ( $SD = .912$ ), in the hard discipline the same students achieved the value of  $M = 2.697$  ( $SD = 1.109$ ). There are not significant differences in the level of motivation in relation to the monitored disciplines ( $p = .668$ ), i.e. that in both disciplines student motivation remains at comparable levels.

Table 1. The motivation of helping profession students in individual subjects.

	Discipline	Mean	SD	SE Mean
Motivation	Soft discipline	2.769	.912	.128
	Hard discipline	2.697	1.109	.072

Based on the analysis of individual types of motivation, we found that with introjection, identification, integration and intrinsic motivation, the level of student motivation varies depending on the specific discipline (Table 2).

Table 2. Level of motivation for individual types of motivation.

	Soft discipline		Hard discipline	
	Mean in%	SD	Mean in%	SD
Amotivation	1.96	9.802	2.13	11.120
External regulation	46.08	33.306	54.89	33.052
Introjection	28.63	14.563	36.09 *	18.536
Identification	80.39 *	24.142	71.49	27.071
Integration	49.91 *	36.044	34.12	27.941
Intrinsic motivation	47.55 **	23.052	33.72	27.993

\*  $p < 0.05$ , \*\*  $p < 0.01$

The level of introjection in the soft discipline reaches  $M = 28.63\%$  and with the hard discipline  $M = 36.09\%$ . The hard discipline is dominated by extrinsic motives to a greater extent (students learn to fulfill credits or pass tests, for others or so as not to appear unintelligent). The level of identification in the soft discipline reaches  $M = 80.39\%$ , in the hard discipline it reaches  $M = 71.49\%$ . Identification prevailed for the soft discipline, i.e., that in this discipline, students are more motivated for reasons from which they can benefit in the future (receive a college degree, more prestigious jobs, etc.). In the soft discipline, the degree of integration achieved  $M = 49.91\%$ , in the hard discipline  $M = 34.12\%$ . In soft disciplines, students are motivated to a greater extent in order to better themselves in something that they still are not proficient in or to prove to themselves that they are able to handle the discipline. Intrinsic

motivation in the soft discipline is represented by  $M = 47.55\%$  and in the hard discipline it reaches  $M = 33.72$ . For the soft discipline a distinct tendency toward intrinsic motives are more evident (students learn, because they are interested in the discipline, it is fun for them and enriches them).

The level of identification ( $p = .004$ ), integration ( $p = .001$ ) and intrinsic motivation ( $p < .001$ ) is higher in the soft discipline than in the hard discipline. In the case of the hard discipline we record a higher level of introjection ( $p = .031$ ). The level of external regulation and amotivation reaches comparable levels in both subjects. It can be said that in the case of the soft discipline, motivation is higher for this type of motivation, which is closer to intrinsic motivation, and vice versa in the case of the hard discipline the level of motivation is higher for the type of motivation that approximates extrinsic motivation. Domain specificity is most noticeable with intrinsic motivation, but also with three types of extrinsic motivation, i.e. with introjection, identification and integration.

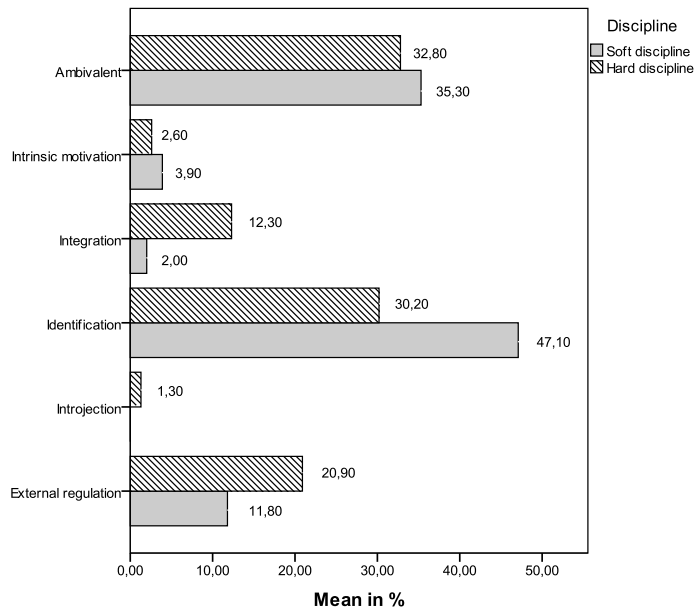


Fig. 2. The predominant type of motivation in individual disciplines, including ambivalence

The analysis showed that the predominant motivation in both disciplines is identification (Fig. 2). The students mostly study in order to get a college degree to get a prestigious job in the future, or because it could help them in the future.

Identification prevails in the soft discipline with 73% of students and with the hard discipline it is 45% of the students. Amotivation as the predominant type of motivation among helping profession students does not even occur in one case. The second most frequent predominant type of motivation is external regulation. The predominant type of external regulation in the soft discipline is represented in 18% and in the hard discipline in 31% of cases. It means that more than a quarter of students are primarily motivated externally particularly with hard disciplines (they study so that they do not have problems because it's mandatory or it is expected of them). (Table 3)

Intrinsic motivation as the predominant type of motivation occurs in the soft discipline only in 6% of cases and in the hard discipline in less than 4% of the students. Intrinsic motivation as the predominant type of motivation in students occurs rather sporadically.

We also found that 35% of students do not have a clearly defined (predominant) type of motivation. It means they do not have one particular reason why they are learning, but it is more a combination of (often conflicting) motives which dominate.

Table 3. The predominant type of motivation in individual disciplines.

	Soft discipline			Hard discipline		
	Percent	Valid Percent	Cumulative Percent	Percent	Valid Percent	Cumulative Percent
External regulation	11.8	18.2	18.2	20.9	31.0	31.0
Introjection	0.0	0.0	18.2	1.3	1.9	32.9
Identification	47.1	72.7	90.9	30.2	44.9	77.8
Integration	2.0	3.0	93.9	12.3	18.4	96.2
Intrinsic motivation	3.9	6.1	100.0	2.6	3.8	100.0
Ambivalent	35.3			32.8		

We found that student motivation significantly correlated with the perceived usefulness and value students attach to individual disciplines (Table 4). The more the students perceive a discipline as important and useful, the more their motivation is internalized. Conversely, the perceived success in the specific discipline, the self-efficacy or the difficulty of specific disciplines play a role in how students are motivated to learn.

Table 4. Interdependence of motivation on selected variables.

	Success	Self-efficacy	Difficulty	Significance	Usefulness
<b>Motivation</b>	.056	.003	.057	.204 *	.256 *

\* the correlation is significant at the .001 level of significance

If students perceive the studied discipline as significant and useful in practice, their motivation (motivation orientation) is then also greater towards the intrinsic type of motivation. The results show that student motivation is not related to the perceived difficulty of a discipline. The level of motivation will not change if the student perceives the subject as more difficult or less difficult. Motivation is also not affected by the extent to which the student considers themselves to be successful in the discipline or to what extent they feel competent in the given discipline. If the student feels successful or competent in the discipline, but does not perceive the discipline as significant or useful, it will probably be reflected in their motivation (towards the intrinsic type of motivation).

#### 4. Final summary

The realized survey shows that student motivation on the continuum of internalization moves between the introjected and the identified type of regulation and is closer to identification.

The research results confirm the domain specification of student motivation to learn in three of the four types of external regulation. Domain specificity is most evident in intrinsic motivation, in which students achieve significantly higher levels in the soft discipline than in the hard discipline. Identification and integration reaches a higher level of integration with the soft discipline. In the case of the hard discipline we record a higher level of introjection. Hard disciplines to a greater extent are dominated by extrinsic motives (students learn to fulfill credits or pass tests, for others or so as not to appear unintelligent).

The research results show that identified regulation largely predominates the surveyed sample of students (more than a third of respondents). The students mostly study in order to get a college degree to get a prestigious job in the future or because it could help them in the future. However, we also see that a relatively high frequency is represented by external regulation. It means that more than a quarter of students are primarily motivated externally particularly with the hard discipline (they study so that they do not have problems because it's mandatory or it is expected of them). We also found that a specific type of motivation was not recorded for a large portion of the respondents, which means that there are multiple motives that encourage students to their learning in a particular discipline. Interestingly, these motives are often in opposition.

Intrinsic motivation as the predominant type of motivation occurs in the soft disciplines only in 6% of cases and in hard disciplines in less than 4% of the students. Intrinsic motivation as the predominant type of motivation in students occurs rather sporadically.

The motivation to learn among students of helping professions is significantly related to the extent to which students perceive the chosen discipline as useful and significant. The more the students perceive a discipline as significant and useful, the more their motivation is internalized (and vice versa). The perceived success of study, the difficulty of the discipline or the self-efficacy is unrelated to the students' motivation to learn (does not play a role in the extent to which students are motivated to learn).

We believe that these findings may help us to ensure that we can support the development of students' motivation to learn and at the same time that the students are gradually able to motivate themselves. If we assume that the motivation of students varies depending on the selected disciplines, then we can choose the appropriate action (method), depending on the type of motivation that prevails in the specific discipline and focus on the students perceiving the issues studied as a significant and useful in practice. Their motivation is the key to success in study and it is reflected in the professional quality of future graduates in helping profession.

## References

- Boekaerts, M. (2002). Bringing about change in the classroom: strengths and weakness of the self-regulated learning approach. *Learning and Instruction*, 12 (6), 589-604.
- Boekaerts, M. (2005). Motivace k učení. (Motivation for learning.) In H. J. Walberg (ed). *Efektivní učení ve škole. (Effective learning in school.)* Prague: Portál, 55-76.
- Boekaerts, M., Pintrich, P. R., & Zeidner, M. (Eds.) (2005). *Handbook of self-regulation*. San Diego: Academic Press, 13-29.
- Bong, M. (2004). Academic motivation in self-efficacy, task value, achievement, goal orientations, and attributional beliefs. *Journal of Educational Research*, 97(6), 287-297.
- Deci, E. L., Ryan &, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E. L., Ryan &, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.
- Deci, E., L., Ryan, R. M., & Koestner, R. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125 (6), 627-668.
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26, 331-362.
- Hrabal, V., Man, F., & Pavelková, I. (1984) *Psychologické otázky motivace ve škole. (Psychological questions of motivation at school.)* Prague: SPN.
- Hrbáčková, K. (2011). *Rozvoj autoregulace učení studentů. (The development of self-regulation of learning of students.)* Prague: Hnutí R.
- Hrbáčková, K., & Hladík, J. (2011). Domain-Specific Context of Student's Self-Regulated Learning in the Preparation of Helping Professions. *Procedia - Social and Behavioral Sciences*, 29, 330-340 (2016) 000–000
- Mareš, J., Man, F., L. & Prokešová, (1996). *Autonomie žáka a rozvoj jeho osobnosti. (The autonomy of the pupil and the development of his personality.)* *Pedagogika*, 156, 5-11
- Pavelková, I. (2002). *Motivace žáků k učení: perspektivní orientace žáků a časový faktor v žákovské motivaci. (Pupils' motivation for learning: prospective orientation of students and the time factor in pupils' motivation.)* Prague: Charles University, Faculty of education.
- Pintrich, P. R. (1999). The Role of Motivation in Promoting and Sustaining Self-Regulated Learning. *International Journal of Educational Research*, 31(6), 459-470.
- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385-407.
- Rotgans, J., & Schmidt, H. (2009). Examination of the context-specific nature of self-regulated learning. *Educational Studies*, 35(3), 239-253.
- Ryan, R. M., & Deci, E. L. (2000a) Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Educational Psychology*, 25, 54–67.
- Ryan, R. M., & Deci, E. L. (2000b). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26(3), 207-231.
- Schunk, D. H., Zimmerman &, B. J. (2008). *Motivation and Self-Regulated Learning: Theory, Research, and Applications*. New York: Lawrence Erlbaum Associates.
- Sternberg, R. J. (1988). *The triarchic mind: A new theory of human intelligence*. New York: Viking.
- Sternberg, R. J. (2001). *Úspěšná inteligence: (Successful intelligence:) Jak rozvíjet praktickou a tvůrčí inteligenci. (How to develop practical and creative intelligence.)* Prague: Grada.
- Sternberg, R. J. (2002). *Kognitivní psychologie. (Cognitive psychology.)* Prague: Portál.



- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. *Advances in Experimental Social Psychology*, 29, 271-360.
- Vallerand, R. J. et al. (1992). The academic motivation scale: a measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52, 1003-1017.
- Vandergrift, L. (2005). Relationships among Motivation Orientations, Metacognitive Awareness and Proficiency in L2 Listening. *Applied Linguistics*, 26(1), 70-89.
- Virtanen, P., & Nevgi, A. (2010). Disciplinary and gender differences among higher education students in self-regulated learning strategies. *Educational Psychology*, 30(3), 323-347.
- Wolters, C. A., & Pintrich, P. R. (1998). Contextual differences in student motivation and self-regulated learning in mathematics, English, and social studies classrooms. *Instructional Science*, 26, 27-47.
- Wolters, C.A., Yu, S.L., & Pintrich, P.R. (1996). The relation between goal orientation and students' motivational beliefs and self-regulated learning. *Learning and Individual Differences*, 8(3), 211-238.
- Zimmerman, B. J., & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology*, 82(1), 51-59.