

## **Relationship between student thinking styles and social skills**

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### **Summary**

The objects of the study are social skills and life orientation styles as well as thinking styles as patterns of socio-cognitive profiles within the target group of students of library sciences. Thinking style – defined as a preferred way of thinking – is a combination of global, local, internal, external, liberal and conservative thinking styles. In this research, the Sternberg-Wagner Self-Assessment Inventory (1997) was applied to detect the predominant student thinking styles. Since developed social skills are an important characteristic for successful interpersonal relationships, the Social Skills Inventory (Riggio, 1986), which distinguishes between 7 different social skills was adopted. As a general characteristic of life orientation styles, optimism was measured (Scheier, Carver, 1985). Questionnaires were administered to 49 students. Both, cluster analysis and one-way ANOVA were carried out. The results divide the students in two main groups. In general, one group is more socially and optimistically oriented and prefers working under well-structured and organized conditions, while the other one is more introverted and likes working in new and challenging situations. It is supposed that these students could become well equipped for their future jobs as information specialists if during their educational process already, special attention is focused on their socio-cognitive profile.

Key words: Thinking styles, social skills, life orientation style

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## Introduction

Many studies (Augoustinos, Walker, 1995) have shown that the contents of cognition originate in social life, human interaction and interpersonal communication. The dominant tendency in contemporary psychology is to explain adequately the totality of socio-cognitive experiences of human beings. In this research, the integration of individual and social components is studied from a perspective of thinking styles and social skills. Hopefully, this will lead to a more reflexive and dynamic understanding of human experience. The particular emphasis of this study is placed on the notion that the comprehension of thinking styles can help people prevent misunderstandings in both, intra- and inter-personal communication, improving understanding of themselves and of each other at the same time.

## Thinking style

Thinking style is a preferred way of thinking (Sternberg, 1997). Sternberg agreed that we do not have only one style, but a profile of styles. Understanding styles can help people not only perceive why certain activities fit them and others do not, but also why some people suit them and others do not. According to Sternberg (1997), thinking styles have different functions, forms, levels, scopes and leanings. Each style has three functions: legislative, executive and a judicial one. Legislative people like doing things their own way. They like creating, formulating and planning things. In general, they tend to make their own rules. People with an executive style generally prefer being given guidance as to what or how to do what needs to be done. In short: they like following rules. Judicial people prefer evaluating rules and procedures and judging situations. They also favour problems which can be analysed and evaluated.

Sternberg distinguishes four different types of thinking styles: monarchic, hierarchic, oligarchic and anarchic one. People who exhibit a predominantly monarchic style tend to be motivated by a single goal or need at a time. They are likely to be single-minded and therefore assess the situation strictly from their vantage point. People with a hierarchic form of thinking style are motivated by a hierarchy of goals, with the recognition that not all of the goals can be fulfilled equally well and that some are more important than others. Whereas monarchic people prefer concentrating on one issue, hierarchic people like to divide up their resources. They also tend to be systematic and organized when forming their solutions to problems and in their decision-making. People with an oligarchic thinking style incline towards being motivated by several goals and occasionally have difficulties deciding which goals to give priority to. Sometimes, they might have problems with allocating resources. People with an anarchic style show a tendency to be motivated by a variety of needs and goals that often are difficult for others, as well as for themselves, to sort out. They are rather unsystematic.

There are two levels of thinking styles: global and local ones. People with global thinking styles prefer dealing with broad concepts as well as with relatively large and often abstract issues. To put it metaphorically: they tend to focus on the forest, sometimes at the expense of the trees. People who manifest local thinking styles prefer dealing with details, sometimes minute ones, which often surround concrete issues. In other words, they tend to focus on the trees, sometimes at the expense of the forest. Their constant challenge however is to see the whole forest and not just its individual elements.

The scopes of thinking styles are internal and external styles. People with an internal thinking style are likely to be introverted, task-oriented, sometimes aloof, and socially less

sensitive than other people. At times, they lack interpersonal awareness, favouring individual work. People with an external thinking style tend to be more extroverted, people-oriented, outgoing, socially more sensitive, and interpersonally more aware. In general, they prefer working in groups.

Furthermore, there are two leanings of thinking styles: liberal and conservative ones. Liberal people like surpassing existing rules and procedures and attempt to maximise changes. In addition, they also seek or are at least comfortable with ambiguous situations, and accept to a certain degree unfamiliarity in life and work. On the other hand, people with a conservative thinking style like adhering to existing rules and procedures, minimise changes, avoid ambiguous situations as far as possible, and prefer familiarity in life and work.

Sternberg's (1997) conceptions of thinking styles are based on the following hypotheses:

1. Thinking styles are preferences in the use of abilities, and not the abilities themselves.
2. A match between styles and abilities creates a synergy which is more than a mere sum of its parts.
3. Life choices should fit styles as well as abilities.
4. People have profiles of styles, not just a single style.
5. Styles vary across tasks, situations as well as across the life span.
6. People differ in the strength of their preferences and in their stylistic flexibility.
7. Styles are socialised, measurable and teachable.
8. Styles valued at one time or in one place may not be valued at another.
9. Styles are not, on average, good or bad – it's a question of suitability.

He argues that styles are as important to the quality of people's work, and to their enjoyment of it, as abilities are. However, the more flexible people are, the better they can adjust to a variety of situations. On average, people acquire their styles through socialisation. Nevertheless, it is also possible to teach styles. The applications of the study presented in this paper are directed exactly towards the possibilities of enhancing the variability and flexibility of thinking styles during the educational process.

## **Social skills**

Social skills are an important component for successful interpersonal relationships. They are manifested by human emotional as well as their social behaviour and are divided in the following subcategories (Riggio, 1986): emotional expression, emotional sensibility, emotional control, social expression, social sensibility, social control and social manipulation.

Emotional expression is the skill of non-verbal communication and non-verbal expression of attitudes as well as the person's ability of spontaneous and precise expressions of experienced emotional states. People who have developed high emotional expression are able to increase the emotional feedback in other people as well.

Emotional sensibility is the skill of receiving and decoding non-verbal and emotional messages received from others. An emotionally sensible person is focused on emotional signs from other people and he or she can quickly and precisely identify different emotional expressions. He or she tends to develop a high quality of empathy and he or she strongly reacts to other people's emotional states.

Emotional control is the skill of controlling the person's own emotional and other non-verbal expressions. It includes the ability of masking the experienced emotions. People with strong emotional control are likely to exert strict command on their feelings.

Social expression is the skill of verbal communication. A socially expressed person is verbally fluent and he or she easily starts a conversation. If there is a lack of social control, the person loses the thread of the conversation and he or she does not know anymore what the exact topic of the conversation was.

Social sensibility is the skill of receiving verbal messages as well as understanding of and the sensibility towards social norms. Socially sensible people are focused on their own social behaviour and their social adequacy. Extremely high expression of social sensibility on the one side and low expression of social expression and social control on the other could result in exaggerated self-consciousness, which leads to inhibited co-operation in social patterns.

Social control is the skill of role-playing, of social self-presentation as well as self-confidence in social situations. It is the ability of influencing the direction and content of social interactions. Socially controlled people are more outgoing and skilful in social contacts.

Social manipulation is the readiness of influencing others with the goal of obtaining the aimed results.

All mentioned social skills together (except social manipulation) express the global level of self-competence. Trockmorton (1986) argues that a relationship between particular dimensions of social skills and social efficacy is not necessary linear. Moreover, strong domination of one social skill over another may result non-functional.

## **Optimism**

Optimism could be seen as an emotion, a life orientation style as well as an acquired thinking style.

It is defined as a generalised expectancy that good, as opposed to bad, outcomes will generally occur when being confronted with problems across important life domains (Scheier, Carver, 1985). As an emotion, optimism belongs to a group of goal congruent emotions (Franken, 1998). Goal congruent emotions are those which facilitate and sustain the attainment of personal goals (Lazarus, 1991).

It has long been suggested that optimism is on the opposite of pessimism, but recent research indicates that they are not two ends of the same continuum (Marshall, Wortman, Kusulas, Hervig, & Vickers, 1992). Pessimism seems to be principally associated with neuroticism and negative affect, whereas optimism is principally linked with extraversion and positive affect. This also seems to indicate that, while optimists are likely to be open to new experiences or react to new stimuli, pessimists tend to be more withdrawn and inhibited in their interactions with the world.

The personality trait of optimism appears to foster resilience in the face of stress and it can be measured by the Life Orientation Test (LOT; Scheier, Carver, 1985). Scheier and Carver (1985) found a positive correlation between a measure of optimism and relatively good physical health in a sample of college students. Another study (Segerstrom, 1998) found that optimism was associated with a more effective functioning of the immune system.

As an acquired thinking style, optimism grows out of people's explanatory style (Seligman, 1990). Optimists regard setbacks, failures and adversities as temporary, as situation-specific, and as externally provoked. In a recent study, Peterson, Seligman and Valiant (1998) identified

two types of explanatory styles: pessimistic and optimistic ones. They argue that people with the pessimistic explanatory style are liable to blame setbacks on their own personal shortcomings. The research also showed a link between a pessimistic explanatory style and a relatively poor health and an increased mortality rate. Therefore, it may be speculated that pessimism might lead to passive coping efforts, poor health care practices, and risky lifestyles. On the contrary, people who develop the optimistic explanatory style tend to see life's difficulties in a less threatening light and are inclined to attribute setbacks to external circumstances rather than to their personal flaws and inadequacies (Seligman, 1990).

According to Seligman (1990), people can change their characteristic way of thinking. Namely, he developed a well structured and useful thinking program that is based on the following premise: if optimism and pessimism are merely ways in which people have learned to think about the world and themselves and do not reflect deep underlying personality attributes, it should be relatively easy to change such thinking styles. This is also the premise upon which the present research is based.

### **The problem of the current study**

The particular interest of the study has been to figure out appropriate relations among the variables. Second, it has been aimed to identify the groups of students as related to selected variables and to determine the characteristics of students on the basis of selected variables which could help us conduct the educational process. Finally, the study has attempted to integrate psychological findings in a particular future-oriented working process.

### **Method**

#### *Participants*

A total of 49 (40 females, 9 males) students of library sciences participated in the study. They attended the 3<sup>rd</sup> and the 4<sup>th</sup> grade of their studies.

#### *Measuring instruments*

Sternberg-Wagner *Self-Assessment Inventory* (1997) was applied to measure 6 different thinking styles.

*The Social Skills Inventory* (Riggio, 1986) was applied to measure 7 different social skills dimensions.

*The Life Orientation Test* (Scheier, Carver, 1985) was applied to measure the personality trait of optimism.

*Statistical Analysis*

Descriptive statistics for all measured variables, correlation analysis to determine the relations between variables, and K-means cluster method in order to define groups of students related to defined variables were used in the study.

**Results and discussion**

In any dimensions of social skills the achieved minimum is 15 while maximum is extended to 135. The results in Table 1 and Figure 1 show that participants belonging to the first cluster group express higher social sensibility skills. Correlation analysis confirmed that these students have lower optimism ( $r = -.447$ ;  $p = .001$ ). This means that these students possess highly developed skills for receiving verbal messages as well as the sensibility and the understanding of social norms. They are focused on their own social behaviour and its adequacy. But, at the same time they are not open to new experiences or new stimuli. Their rather low optimism explains their thinking, namely, that life's difficulties are not very threatening. The main characteristic of this group of students is that they are not socially oriented.

Table 1:  
Differences between final clusters as related to social skills (ANOVA)

Social skills	Cluster Mean Square	Cluster df	Error Mean Square	Error df	F	Significance
<b>Emotional expression</b>	<b>1289,947</b>	<b>1</b>	<b>202,319</b>	<b>48</b>	<b>6,376</b>	<b>,015**</b>
Emotional sensibility	517,962	1	176,386	48	2,937	,093
Emotional control	694,818	1	243,437	48	2,854	,098
<b>Social expression</b>	<b>5917,748</b>	<b>1</b>	<b>215,737</b>	<b>48</b>	<b>27,430</b>	<b>,000***</b>
<b>Social sensibility</b>	<b>2797,210</b>	<b>1</b>	<b>174,292</b>	<b>48</b>	<b>16,049</b>	<b>,000***</b>
<b>Social control</b>	<b>9341,448</b>	<b>1</b>	<b>189,820</b>	<b>48</b>	<b>49,212</b>	<b>,000***</b>
Social manipulation	69,826	1	292,066	48	,239	,627

\* difference between clusters is statistically significant ( $p < .05$ )

\*\* difference between clusters is statistically significant ( $p < .01$ )

\*\*\* difference between clusters is statistically significant ( $p < .001$ )

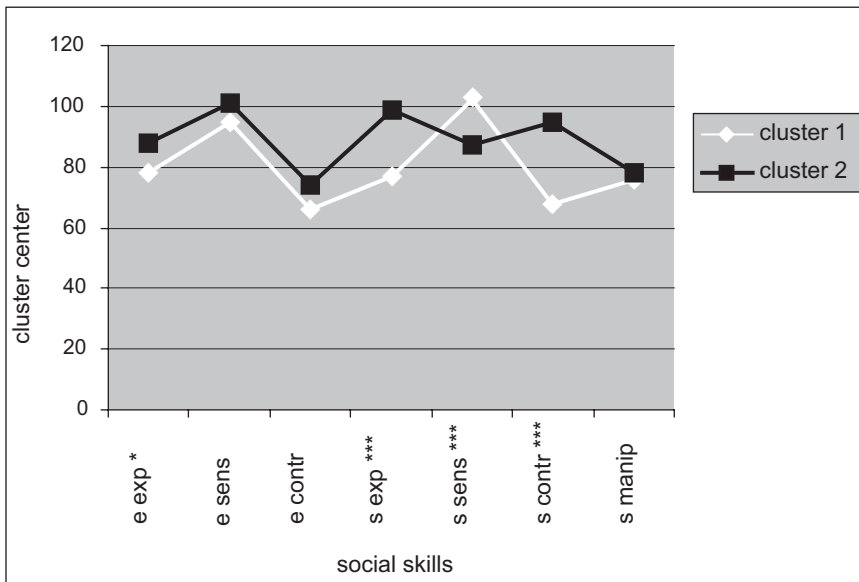


Figure 1:  
Cluster centers for two students' groups – social skills

Participants in the second cluster group express higher emotional and social expression as well as social control skills. It seems that these students are more inclined towards non-verbal communication. Moreover, their ability of spontaneous and precise expression of experiences and emotional states is greater than that of their peers from the first group. They tend to be more verbally fluent as well as skilled in self-presentation. In addition, they exert self-confidence in social situations. Correlation analysis confirmed that these students have higher optimism (SE:  $r = ,398$ ;  $p = ,005$ ; SC:  $r = ,539$ ;  $p = ,000$ ). They do not evaluate their difficult life experiences as negative, but they believe that failures depend on the situation and are temporary. They are also familiar with different social situations due to their ability of influencing the direction and content of social interactions.

In all dimensions of thinking styles, the minimum is 8 while maximum is extended to 56. The results in Table 4 show that the majority of the students tend to be grouped in the first cluster. That means that their main thinking style profile is to be globally, externally and conservatively oriented (Table 2, Figure 2). It seems that these students prefer dealing with general notions as well as with relatively large and often abstract issues. In addition, they tend to be more extroverted, people-oriented, outgoing, socially more sensitive, and interpersonally more aware. They favour group work in comparison to individual one. However, they are inclined to adhere to existing rules and procedures, minimise changes, avoid ambiguous situations as far as possible, and feel comfortable with familiarity in life and study. There is only one statistically significant correlation between social skills and thinking styles: liberal thinking style is correlated with emotional sensibility ( $r = ,519$ ;  $p = ,000$ ). Students with liberal thinking styles do not like the existing rules and procedures. In problem-solving situations, they accept some degree of uncertainty. At the same time they are emotionally sensitive. They tend to develop a high quality of empathy and react strongly to the emotional states of others.

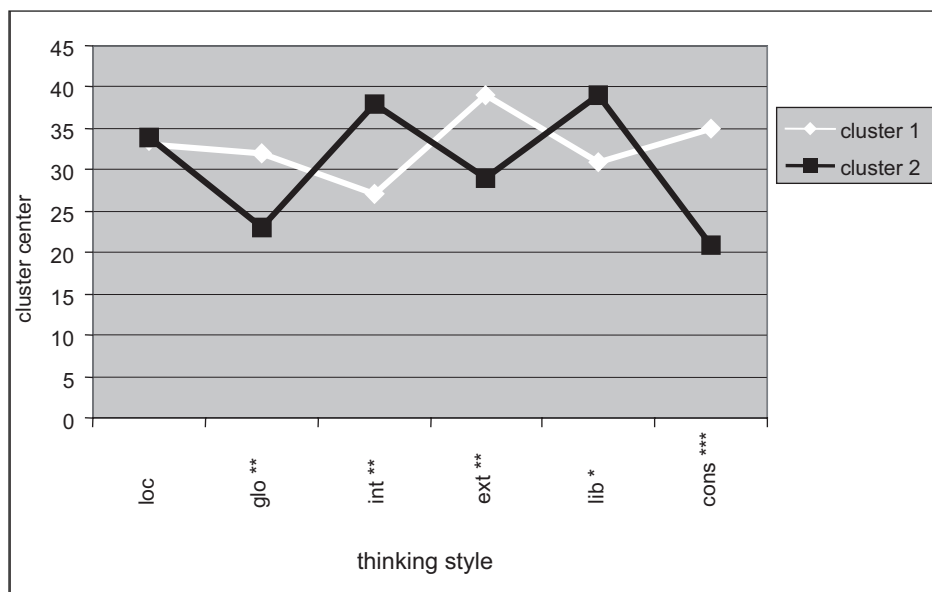
Students in the second group have higher internal as well as liberal thinking styles. In problem-solving processes, they tend to be more introverted, task-oriented and less sensitive than others. On the other hand, they can surpass the existing rules and procedures and seek to maximise changes.

Table 2:  
Differences between final clusters as related to thinking styles (ANOVA)

Thinking Styles	Cluster Mean Square	Cluster df	Error Mean Square	Error df	F	Significance
Local	9,470	1	76,218	48	,124	,726
<b>Global</b>	<b>553,280</b>	<b>1</b>	<b>71,859</b>	<b>48</b>	<b>7,700</b>	<b>,008**</b>
<b>Internal</b>	<b>923,598</b>	<b>1</b>	<b>97,773</b>	<b>48</b>	<b>9,446</b>	<b>,003**</b>
<b>External</b>	<b>669,279</b>	<b>1</b>	<b>77,342</b>	<b>48</b>	<b>8,654</b>	<b>,005**</b>
<b>Liberal</b>	<b>509,504</b>	<b>1</b>	<b>77,687</b>	<b>48</b>	<b>6,558</b>	<b>,014*</b>
<b>Conservative</b>	<b>1380,608</b>	<b>1</b>	<b>91,179</b>	<b>48</b>	<b>15,142</b>	<b>,000***</b>

- \* difference between clusters is statistically significant (p<,05)
- \*\* difference between clusters is statistically significant (p<,01)
- \*\*\* difference between clusters is statistically significant (p<,001)

Figure 2:  
Cluster centers for two students' groups – thinking styles





Concerning life orientation styles, the minimum is 0 and the maximum is 48. The first cluster consists of a small number of participants (representing one third of the whole; Table 4). Their life orientation style is less optimistic. In addition, qualitative analysis shows that they are only females possessing greater social sensitivity. It seems that these students are likely to be more self-conscious, which could lead to inhibitions in social interaction if that skill is expressed to an extreme extent.

Participants in the second cluster have developed a more optimistic way of thinking than their peers (Table 3, Figure 3). It seems that they expect more than others that good, as opposed to bad, outcomes will generally occur when being confronted with problems across important life domains (Scheier, Carver, 1985). They also often regard setbacks, failures and adversities as temporary, as situation-specific, and as provoked by external causes (Seligman, 1990).

Table 3:  
Differences between final clusters as related to life orientation style (ANOVA)

Life Orientation Style	Cluster Mean Square	Cluster df	Error Mean Square	Error df	F	Significance
Optimism	633,361	1	9,838	46	64,378	,000***

\*\*\* difference between clusters is statistically significant ( $p < .001$ )

Figure 3:  
Cluster centers for two students' groups – optimism

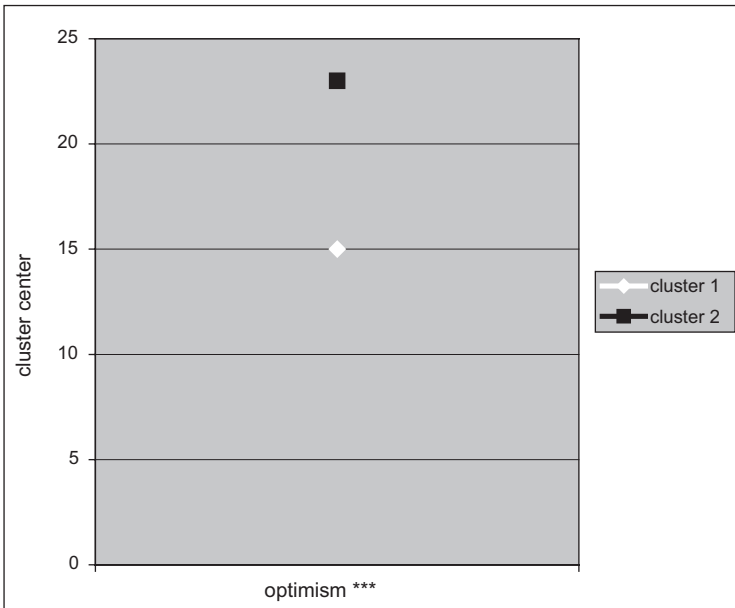


Table 4:  
Numbers of cases in each cluster

Cluster	Social Skills	Thinking Styles	Optimism
1	26	41	15
2	24	9	23

## Conclusions

In general, it could be confirmed that there exist two groups of students with different characteristics. One group contains those with a higher level of optimism and with a higher emotional and social expression and social control. Students in the other group have more developed thinking styles, especially global, external and conservative ones. They also express higher social sensibility and lower optimism. It must be noted, however, that some students possessing exclusive characteristics belong to both groups.

The first group opts for social skills and for group work. That means that they could probably be more successful working with librarian users. They could, therefore, organize different types of social interaction, for example: reading hours, discussion meetings, reading clubs etc. They treat difficulties and failures at work as temporary and dependent on the situation. Their optimistic view helps them to solve problems in social situations effectively.

Students in the second group have less developed social skills but their social sensibility is highly expressed. These students are more self-oriented and favour social adaptability. They are not very optimistic, nevertheless, having more developed external, global and conservative thinking styles, they would be more successful as information specialists.

It may be speculated, however, that students belonging to both groups would be successful as information specialists and in their work with users.

In conclusion, it could be claimed that during the educational process, emphasis should be put on the development of social skills, which would help future librarians to deal with users successfully. In particular, highly developed social skills should be strengthened. In addition, actual experiences of librarian situations should be integrated in the educational context. In this view, role-plays and simulations seem very appropriate.

Furthermore, it could be recommended to improve the educational process with strategies for enhancement of different thinking styles, which could lead to a more flexible problem-solving. Various tasks and simulations of real problems are demanded. Sternberg claims that some thinking styles are more familiar for us than others, therefore a highly structured educational process should develop flexible behaviour in problem-solving situations. In Slovenia, there already exist some educational programs for the enhancement of the self-concept which could be improved with our research findings and they could also include the factors like thinking styles, social skills and life orientation (Kobal, 2000).

Last but not least, according to Seligman's findings, it is highly recommended to use different stimulative strategies in order to teach optimistic life orientation.

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### Expectancy Effects in Performance Situations

The present analysis addresses a question with a rich tradition in social psychology: the effects of expectancies on behavior. More specifically, the current research is devoted to the analysis of critical boundary conditions that determine the impact of positive and negative performance expectancies on the cognitive test performance in performance situations. The central hypothesis of the present research claims that the mode of self-regulation, that is, whether a person is in a state of eagerness and directed at approaching positive outcomes or in a state of vigilance and directed at avoiding negative outcomes, is a crucial moderating factor that determines the impact of positive and negative expectancies on performance. The analysis presented in this contribution tries to accomplish three main goals: (1) to develop a general theoretical framework that is designed to explain differential effects of positive and negative performance expectations on test performance and emphasizes the role of strategic motivational mechanisms of self-regulation; (2) to challenge the unidirectional perspective proposed by stereo-type threat theory (Steele, 1997) with respect to the consequences of negative stereotypic performance expectations by specifying conditions under which "classic" stereotype threat effects emerge and constellations that eliminate or even reverse this pattern; and (3) to test whether specific motivational mechanisms are affected by performance expectancies. The findings of six experimental studies support the basic assumptions as proposed in the new theoretical framework. Implications of the theoretical model as well as possible applications in everyday settings are discussed.

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