



## DIFFERENCES AMONG UNIVERSITY STUDENTS IN MOTIVATION TO LEARN: A CROSS-CULTURAL STUDY

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*Abstract.* This study attempts to reject the stereotype that competition is not a desired personal characteristic and a specific motivational factor. We have investigated and revealed positive dimensions and statistically significant correlations between the self-concept and motivation to learn. The new model of self-concept, based on different kinds of competition and motivation to learn, has been postulated. Some arguments have been provided to assume that this model differs from culture to culture. For this reason, the participants from three countries took part in the study. Countries were chosen on the basis of political and cultural indicators in Eastern/Southern versus Western/Southern European characteristics: Slovenia, Serbia and Spain. The study comprised of 225 Slovenian, 99 Serbian and 140 Spanish participants. There are two particular goals of the research. The first is to find out whether there are any differences in self-concept, motivation to learn and competition among participants from different countries. According to the second goal, the investigation of the correlations between self-concept, motivation to learn and competition within each national group is underlined. Some quantitative methods of social sciences have been used to achieve these goals. We found out that the cultural indicator has a significant impact on self-concept, motivation to learn and competition. Further to this, we argue that the “Southern” disposition predominates over Eastern as well as Western dimensions, which means that Slovenians are among the more competitive participants.

*Key words:* self-concept, motivation to learn, competition, cross-cultural research.

### Theoretical framework

This paper deals with motivation dimensions (Self-Concept, Competitiveness, and Motivation to Learn) of students who study at the Faculty of Social Sciences, Faculty of Arts and Faculty of Humanities in Slovenia, Faculty of Arts in Serbia (Novi Sad) and Social y Organizacional Universidad de La Laguna from Tenerife in Spain. The goal was to find out if there are any differences in motivation dimensions that can be explained with self-concept, and competitiveness among university students. Do we deal with the

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same type of students from three countries (Slovenia, Serbia and Spain) or not? So, we have on the one side dimensions of self-concept (Marsh & O'Neill, 1984) and competitiveness (Ryckman *et al.*, 1997) and on the other side a dimension of motivation to learn (McInerney *et al.*, 1997). We are actually interested in, if the self-concept and competitiveness influence the motivation to learn and if we can treat the self-concept and competitiveness as factors of motivation? Which theory of motivation explains the empirical results we have got, the best?

The issue of whether people stand behind a behaviour out of their interests and values, or do it for reasons external to the self, is a matter of significance in every culture (e.g., Johnson, 1993) and represents a basic dimension by which people make sense of their own and others behaviour (Heider, 1958; deCharms, 1968; Ryan & Connell, 1989). Comparisons between people whose motivation is authentic (literally, self-authored or endorsed) and those who are merely externally controlled for an action typically reveal that the former, relative to the latter, have more interest, excitement, and confidence, which in turn is manifested both as enhanced performance, persistence, and creativity (Deci & Ryan, 1991; Sheldon *et al.*, 1997). At the same time, their motivation manifests itself also as heightened vitality (Nix *et al.*, 1999), self-esteem (Deci & Ryan, 1995), and general well-being (Ryan *et al.*, 1995). For that reason we have designed an empirical study to find out what are relations between particular dimensions of students personality (self-concept, competitiveness) comparing it with their motivation to learn. Which are internal and which are external factors that influenced motivation to learn, when we observe particular dimension separately and/or when we ask ourselves about the nature of their relationships used a discriminant function analysis? We are especially interested, if there are any culturally dependent differences or similarities, which could explain this problem.

In a recent series of studies McInerney and colleagues (e.g. Barker *et al.*, 2003) specifically examined the multidimensional and hierarchical structure of motivational goals (mastery, performance, and social) and domain specific self-concepts (English and Maths self-concepts) for over 2.000 students in Australia and the United States. In doing so, they demonstrated that students' multiple motivational goals display a similar hierarchical structure to their domain specific self-concepts. McInerney and colleagues also investigated (across three waves of data collection) the causal ordering of goals and self-concept with respect to achievement. This finding suggests that students' goals and self-concept interact in specific ways to influence their academic achievement. For these reason we took the

theoretical framework of *goal theory of motivation* (Covington, 2000) as an explanatory instrument for interpreting the empirical findings in our study. Although researchers continue to debate whether task orientation or ego orientation is more desirable, the majority of the literature tends to support that a task orientation is more conducive to positive behaviors in achievement settings. Moreover, researchers have now begun to develop pedagogical practices that seem to influence the achievement goal orientation of individuals.

Field studies have further shown that teachers who support autonomy (in contrast to those who are controlling) catalyze in their students greater intrinsic motivation, curiosity, and desire for challenge (e.g., Deci *et al.*, 1981; Ryan & Grolnick, 1986; Flink *et al.*, 1990). Students taught with a more controlling approach not only lose initiative but also learn less effectively, especially when learning requires conceptual, creative processing (Grolnick & Ryan, 1987; Amabile, 1996; Utman, 1997). Are our students more extrinsically (more controlling approach) or are they more intrinsically (more conceptual and creative approach) motivated? Which are internal and which are external factors that influenced motivation to learn, when we observe particular dimension separately and/or when we ask ourselves about the nature of their relationships used a discriminant function analysis? We are especially interested, if there are any culturally dependent differences or similarities, which could explain this problem. Although the issue of reward effects, which is one of the external factors of motivation to learn, has been hotly debated, a recent, comprehensive meta-analysis (Deci *et al.*, 1999) confirmed, in spite of claims to the contrary by Eisenberger and Cameron (1996), that all expected tangible rewards made contingent on task performance do reliably undermine intrinsic motivation. Do the results of our study confirm this assertion?

## **Method**

### *Sample Structure*

*Participants.* Participants were recruited and selected randomly, where university students in the first grade from two Eastern European and one Western European country were selected. The three countries groups were closely equivalent by age and gender. The questionnaires were filled out by participants as self-rating scales. The complete questionnaires were administered in the respective mother tongues and translated from English. The participants were 484 first grade university students from five faculties

(Faculty of Social Sciences, Faculty of Arts and Faculty of Humanities in Slovenia, Faculty of Arts in Serbia (Novi Sad) and Social y Organizacional Universidad de La Laguna from Tenerife in Spain). Students between 19 and 21 years old were selected because the main goal of our study was to examine the problem of motivation in the period of adolescence. In this period of life, the self-concept of students would have developed and they have a clear idea about their future learning orientations. After data screening, 464 valid cases consisting of students from faculties situated in varied socio-economic suburbs in Slovenia, Spain and Serbia were recorded. Invalid cases were excluded from analysis because of missing data. Among the valid cases, 48.5% (N=225) were students from Slovenia, 30.2 % (N=140) were from Spain and 21.3 % (N=99) were students from Serbia. The sample was composed of students of varying achievement levels.

*Instruments.* An international expert group headed by Darja Kobal prepared the questionnaires used. It included the following series of items:

*Self-concept.* Two psychological instruments were applied to measure general self-concept and specific domains of self-concept. The first instrument was the Self-Description-Questionnaire III (SDQ III), based upon the Shavelson model of self-concept (Shavelson & Bolus, 1982), and constructed by Marsh and O' Neill (1984). SDQ III is specially designed for adolescents aged 15 and over (Marsh, 1989), and consists of the 13 self-concept areas described below (Marsh & O' Neill, 1984): mathematics, verbal, academic, problem solving/creativity, physical abilities/sports, physical appearance, relations with same sex peers, relations with opposite sex peers, relations with parents, religion, honesty/reliability, emotional stability/security, general self-concept. Marsh and O' Neill (1984) SDQ III. Scale rated items from *strongly disagree* (1) to *strongly agree* (6).

*Motivation to learn.* For gathering data in the field of motivation, we have applied the Inventory of School Motivation (ISM) by the authors Mc Inerney *et al.* (1997), which measures 12 fields of motivation to learn: task, effort, sense of purpose, social power, affiliation, social concern, praise, token, general motivation, mastery general, performance general, social general. Students rated items measuring these variables on a 5-point Likert scale, ranging from *strongly disagree* (1) to *strongly agree* (5).

*Competitiveness.* Two measures of competitiveness by Ryckman *et al.* were used: hyper-competitiveness and personal development competitiveness (Ryckman *et al.*, 1997). Many authors have tried to define competitiveness in different fields or even find out the index or rate of competitiveness of an individual. Smither and Houston (1992) state that competitiveness is frequently a latent characteristic that is manifested in a social situation, in

which interactions between people take place for a longer period of time, when an individual becomes motivated to achieve a result better than others, beats the opponent or achieves a defined goal.

For our study is of high interest the Ryckman postulation of competitiveness (Ryckman *et al.*, 1994; Ryckman *et al.*, 1997). The author differentiates two types: hyper-competitiveness and personal development competitiveness. Hyper-competitiveness is a motive, for which it is typical that the individual tries to achieve a goal irrespective of the means used. It aims towards competition and winning, by avoiding failure, of course. In doing this, the individual primarily takes care of his/herself and uses various techniques from manipulation, aggressiveness to exploitation, etc. The author believes that a hyper-competitive individual values highly achievements, hedonism, power, stimulation, and that he/she is egocentrically oriented. The individual or a group aim to beat or eliminate the other persons and thus feel superior to them, and usually compete also in situations that are not of competitive nature, or exhibit competitiveness in relation to their nearest who do not have the role of a co-competitor.

Competitiveness as a personality trait on the other hand is a motive, in which main emphasis is not on winning, but on one's own personal development, which is the result of the experience that the individual has gained in competitive situations. The individual is focused on self-development, self-discovery and discovery of his/her potentials, and on constant critical relation to self-improvement. In doing this, the individual follows the standards of excellence, the achievement of defined goals and thus wants to make progress and do something as good as (s)he can. Students rated items measuring these variables on a 5-point Likert scale, ranging from *strongly disagree* (1) to *strongly agree* (5).

Table 1: Reliability statistics

Reliability Statistics				
	Cronbach's Alpha	N of Items	Guttman Split-Half Coefficient	N of Items
Self-concept	.773	135	.836	135
Personal competitiveness	.690	15	.685	15
Hyper-competitiveness	.675	26	.654	26
Motivation to learn	.918	67	.823	67

All questionnaires were translated from English and administered in the relevant language (i.e. Slovenian, Serbian and Spanish). We made a description of the questionnaire items of the major constructs of the study and

provided details of sample items and the corresponding reliability statistics for each construct. Reliability statistics show that measures were of high relevance.

*Additional data.* General information (e.g. age, gender, study) were collected by a supplementary questionnaire.

#### *Method of statistical analysis*

We used classical cross-sectional survey method to achieve our research goals. Standardized instruments for measuring comparative cross-cultural data have been taken to apply some quantitative statistical methods. We applied discriminant analysis and stepwise method to examine differences in motivation to learn between three samples. In stepwise discriminant function analysis, a model of discrimination was built step by step. Specifically, at each step all 31 variables are reviewed and evaluated to determine which one will contribute most to the discrimination between groups. From dimension of self-concept we took the following set of variables: mathematics, verbal, academic, problem solving/creativity, physical abilities/sports, physical appearance, relations with same sex peers, relations with opposite sex peers, relations with parents, religion, honesty/reliability, emotional stability/security, general self-concept. From dimension of motivation to learn we took the next set of variables: task, effort, sense of purpose, social power, affiliation, social concern, praise, token, general motivation, mastery general, performance general, social general. From dimension of competitiveness we took the next set of variables: hyper-competitiveness and personal development competitiveness.

That variable has been then included in the model, and the process has started again. Twelve motivational variables were included in the model, where F to Remove and F to Enter values were computed to determine their statistical significance in the discrimination between groups. Therefore, we measured the extent to which a variable makes a unique contribution to the prediction of group membership. Wilks' Lambda was used as well, as a direct measure of the proportion of variance in the combination of dependent motivational variables that was unaccounted for by the independent variable (the grouping variable or factor), which were represented by three countries. On this basis two discriminant functions have been extracted, where the first one explained 92.1 % of variance and the second one 7.9 % of variance.

## Results

### *Descriptive analysis of motivational dimensions*

For comparing all three populations on the descriptive level of analysis, we calculated statistical means (M) and standard deviations (SD). By doing this, we used the procedure Frequencies of statistical package SPSS.

*Self-concept.* When we observe comparative data it is not difficult to find out that there exist cross-cultural differences but also similarities among university students in self-concept and its sub-domains.

*Table 2: Differences among university students regarding on self-concept*

Culture	Slovenes		Spaniards		Serbs	
	M	SD	M	SD	M	SD
Sub-domains						
Mathematics	37.12	11.892	32.01	11.105	34.09	11.397
Verbal self-concept	39.10	12.138	42.99	6.697	39.33	9.157
Academic self-concept	38.17	11.132	44.05	6.173	38.13	9.223
Problem solving/ creativity	38.20	9.882	38.84	5.137	38.23	9.537
Physical abilities/ sports	35.64	13.037	38.56	10.727	37.75	11.755
Physical appearance	36.53	11.401	38.55	7.775	37.91	10.273
Relations with same sex-peers	37.25	12.131	43.83	6.181	38.77	9.899
Relations with opposite sex peers	36.15	12.308	42.32	9.166	36.71	10.481
Relations with parents	37.24	12.835	44.43	7.100	36.85	10.993
Religion	39.29	15.747	35.35	10.660	39.52	11.564
Honesty/reliability	46.24	14.396	56.57	5.651	46.31	13.000
Emotional stability/safety	35.30	11.269	37.63	7.794	35.24	11.409
General self-concept	44.10	13.449	53.78	8.494	43.63	11.163

It appears from Table 1 that students of the Slovene sample achieved the following most important average values on 13 sub-domains self-concept scale: the most exposed sub-domain was Honesty/Reliability (M=46.24), the second one was General Self-Concept (M=44.10) and the third one was Religion/Spirituality (M=39.29). The three most important sub-domains of the Spanish sample were: Honesty/Reliability (M=56.57) following by General-Self-Concept (M=53.78) and Relations with Parents (M=44.43). Meanwhile the Serbian sample characterised the following sub-domains the most: Honesty/Reliability (M=46.31), General Self-Concept (M=43.63) and Religion/Spirituality (M=39.52).

In this context we have to underline that sub-domain honesty/reliability ( $M=48.97$ ) achieved on average the highest position in the hierarchy of self-concept sub-domains across student population of three countries. This means that honesty represents a special value, which is not culturally or nationally determined; it is more likely a general human value especially important for young people. Its function in a multidimensional and hierarchical model of self-concept is to strengthen internal factors of students' motivation more than external ones and in the same time represents the driving force for motivation to learn.

On the second position the general self-concept ( $M=46.67$ ) could be found, what means that students even more look on themselves as on self-determined, already adult and mature personalities. While the high valued general self-concept characterises students of three countries almost on the same level, it could be asserted that this sub-domain reflects the fact they are all in the period of adolescence and at the same time, they are students by social status. It is also obvious there are differences among three countries, where the leading role have Spanish students again ( $M=53.79$ ), followed by Slovene ( $M=43.60$ ) and Serbian students ( $M=43.59$ ) with the almost same values regarding on their general self-concept. We could claim already at this point of analysis that Spanish students are more mature and independent and for this reason more internally motivated to learn and study.

Other sub-domains of the self-concept distribute from the lowest, mathematical abilities ( $M=34.78$ ) to the highest, academic self-concept ( $M=39.79$ ). It is reasonable that students' evaluation of academic self-concept is high, where on the first place we can find Spanish students again ( $M=44.16$ ) and we have to underline that a well developed academic self-concept strengthens the internal factors of motivation to learn.

On the basis of these results we can conclude that the self-concept of students of all three countries is not stable yet, moreover their self concept is in the process of development. These is because they are still in the adolescent period of personal development. At the same time it could be noticed that self-concept of Spanish students is more developed, while they have achieved the highest values on 11 of 13 sub-domain of self-concept. This is the reason to state, even more while they are achieving higher values in the internal and academic areas of self-concept such as emotional stability, verbal self-concept, problem solving and creativity, that their self-concept is not only more developed but also they are more mature and independent. From this perspective the self-concept of Spanish students is more individualised and independent, which is closer to the cultural and historical experience of western Europe, meanwhile the self-concept of Slovene and Serb

students is more dependent on social and cultural circumstances, what is more characteristic for the type of Eastern Europe society.

*Motivation to learn.* Motivation is a phenomenon with no uniform definition, although different authors agree that motivation can well explain causes of behavior (Lamovec, 1986; Pintrich & Schunk, 1996). In the present article the working hypothesis shall be applied which states that motivation is a process that encourages and directs the behavior of an individual to a certain goal.

*Table 3: Differences among university students regarding on motivation to learn*

Motivation to learn	Slovenes		Spaniards		Serbs	
	M	SD	M	SD	M	SD
Task	17.67	2.036	15.60	1.704	18.01	1.902
Effort	26.19	4.652	25.16	3.550	26.45	4.645
Sense of purpose	22.52	4.411	16.31	3.488	21.43	4.571
Social power	12.64	5.710	21.94	3.678	11.82	4.865
Affiliation	9.62	2.628	10.25	1.957	9.18	2.088
Social concern	20.20	2.950	21.96	2.404	20.72	2.844
Praise	17.00	3.950	16.83	2.488	17.51	5.169
Token	17.78	4.298	20.90	2.850	16.70	4.235
General motivation	30.12	4.927	26.61	3.613	31.13	5.167
Mastery general	17.21	2.458	13.91	2.309	16.72	2.790
Performance general	21.15	6.278	23.18	4.151	18.63	5.245
Social general	16.30	3.783	19.25	2.900	16.90	3.376

When we observe data for motivation to learn they show (see Table 2), that Spanish students have emphasised the motive how to achieve, as high as possible, the social power (M=21.99). Besides that they have emphasised more social motives than individual motives, what is different from their Slovene and Serbian colleagues. Besides the fact, that they are motivated to learn because they wish to achieve the highest possible position on the social scale, Spanish students are motivated with the desire of affiliation (M=10.19), with their social concern (M=21.98) and with their general social motivation (M=19.24). In this respect we can confirm the results of some already mentioned cross-cultural studies, which factors of self-concept and factors of motivation display a similar hierarchical structure – they overlap to some extent (compare it with Barker *et al.*, 2003). Namely, Spanish students achieve better results on those areas of self-concept, which concern the relations with family and peer groups and in the same time their motivation to learn and study is more socially conditioned. For this reason a more stable, independent “western” self-concept of Spanish student's means also

more socially conditioned motivation to learn, where individualisation and sociability are in a complementary relationship.

Because Slovene and Serbian students have a weaker developed self-concept it is difficult for them to find motivation to learn in their social environment. For this reason results of our study are similar to those in already mentioned cross-cultural studies, which show that family and friends (see Table 1; variables: relations with same sex-peers, relations with opposite sex peers, relations with parents for Spaniard population) influence motivation of students to learn more than anything else (compare it with McInerney *et al.*, 1997;1998).

*Competitiveness.* From data (see Table 4) it is evident that personal development competitiveness is one of motivational factors which divided a population of three countries more than hyper-competitiveness. For this reason we think, that students have already surpassed particular stages of ego-centrism, where they have not competed with each other for the reason to beat another as an opponent, moreover they have competed to complete the task or to achieve the goal in the most excellent way as possible.

*Table 4: Differences among university students regarding on competitiveness*

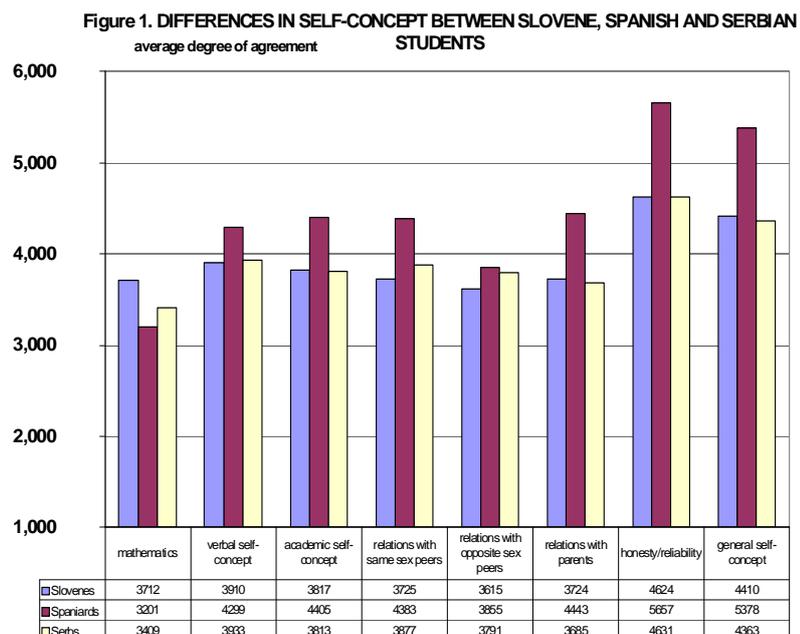
Competitiveness		N	M	SD
Hypercompetitiveness	Slovenes	215	62.59	14.067
	Spaniards	136	60.82	12.069
	Serbs	89	59.88	12.029
	Total	440	61.50	13.097
	Model			13.078
Personal development competitiveness	Slovenes	221	43.85	12.100
	Spaniards	140	43.46	12.469
	Serbs	93	50.96	12.520
	Total	454	45.19	12.620
	Model			12.301

Personal development competitiveness can be a motive namely with help of which the best results in learning and studying could be achieved. It is interesting that students from Serbia are the most personal competitive (M=50.96) and the least hyper-competitive students, what could be interpreted in the way that they like playing games, whatever they are, in sports or in theatre. For students from Serbia it is important that the motive of competitiveness as such and the motive of winning is not so important. On the contrary the motive to beat a competitor is the most exposed by Slovene students (M=62.59), where the motive of hyper-competitiveness characterises Spanish students (M=60.82) as well. Here it is not so important the game

(read = learning) itself but playing a game to win. A winning motive is connected with the logic of profit, which restrains the model of development characteristic for the market economy of Western Europe. Such a logic is still not characteristic for Serbian society. Besides that, we deal with personal development competitiveness which is constructive in relations to others. When the motive of personal competitiveness is more emphasized than the motive of hyper-competitiveness, we are dealing with the motivation to learn where the learning itself is more important than learning for the reason, that we would beat others.

### Similarities and differences

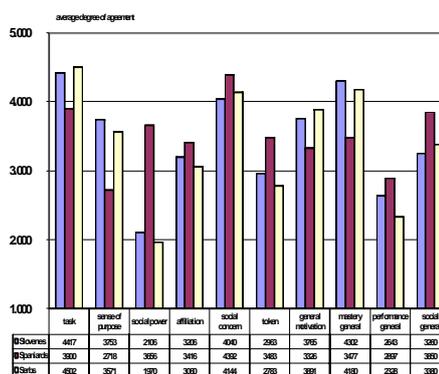
*Differences on average.* Figure 1 shows the significant differences in self-concept between Slovene, Spanish and Serbian students. To investigate the average differences between three populations, we calculated, how many points were achieved the students on the six point (1-6) scale, we measured the particular item.



The results show that the groups differ in almost eight fields of self-concept. The differences in the following fields are statistically significant: academic self-concept, relations with same sex peers and opposite sex peers, relations with parents, and in the field of honesty, reliability and general self-concept. We have discovered that the groups also show significant differences in the field of mathematical abilities and verbal self-concept to the following rate of significance ( $p < .001$ ). We have also found out that the group of Slovene students, in comparison with Spanish and Serbian students, has only the self-concept relating to the field of mathematical abilities higher manifested.

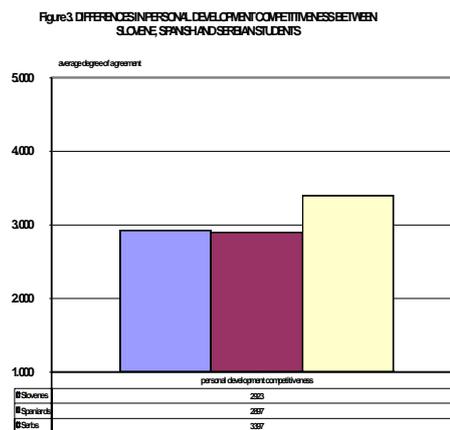
It can be concluded from the results that the stereotype about “Southern” countries characterized by loquacity, sociability, openness, in short extroverted countries, could be confirmed for the Spanish participants in our research. Their verbal self-concept as well as the fields of social self-concept, honesty and reliability exhibit the highest manifestation. It may be expected that Serbs fit into this stereotype, as well, but our sample has not confirmed the same. At the same time we can confirm the stereotype about Slovenes being less sociable and introverted countries (Musek, 1994): verbal self-concept, fields of social self-concept, sincerity and reliability show the lowest manifestation in the Slovene participants.

Figure 2 DIFFERENCES IN MOTIVATION TO LEARN BETWEEN SLOVENE, SPANISH AND SERBIAN STUDENTS



By means of variance analysis we have established differences between the three countries in the area of motivation to learn. The participants differ in all the fields of motivation to learn that have been analyzed. Statistically significant differences have been revealed in the following fields: accomplishing study tasks and obligations, target motivation, efforts to achieve social power, social concern, expected rewards for accomplished study obligations, general motivation, general progress, getting attention and general social motivation. The slightest differences between the participants have been established in the field of expecting rewards for the accomplished task and efforts in studies, which is very important in view of target motivation (McInnerney, 2000). Slovene students, in comparison with the Serbian and Spanish ones, exhibit a higher degree of target motivation, general motivation and general progress, and the lowest degree of social aspects such as social concern and general social motivation. The mentioned aspects are typical for Spanish students, which on the other hand do not care so much about the results, goals, general progress, accomplishment of tasks and praise.

We were interested in the fact whether there are differences in personal competitiveness and hyper-competitiveness between the participants in view of their nationality. For this purpose a variance analysis has been performed, which detected differences in both fields between the groups, as shown by Figure 3.



It has been established that a statistically significant difference exists between the three countries in the field of personal development competitiveness, or competitiveness with positive consequences, for which competition to achieve the defined goals and progress is characteristic, competition to develop own abilities, competitiveness the aim of which is to do something as good as you can and thus follow the excellency criteria.

It could be seen that competitiveness as a personal trait is highest manifested in Serbian students, whereas hyper-competitiveness, that is the struggle to achieve the goal by applying all possible means, is most characterized for the Slovene participants, although the difference is not statistically significant.

*Multivariate differences between countries.* Variables which contribute the most to the prediction of group membership and thus discriminate three groups of students the most are in the same time internal - specific motivational - as those, which are proceeding from student's self-concept, also but those, which are proceeding from student's competitiveness (see Table 5) The variable which contributes the most to the differences among groups of students regarding motivation to learn is a desire to be promoted on the social scale, desire for social power, which is the most exposed among Spanish students. This is followed by sense of purpose, which is stronger expressed by Slovene and Serbian students, where groups are strongly divided also by personal development competitiveness, which has the highest values among Serbian students. All these variables are followed by four typical internal motivational variables: performance general, general motivation, praise and token. These variables have not been conditioned so strongly by cultural and national background because they do not contribute a lot to the general pattern of differences, which divide population of students of three countries. These differences can be more or less dependent from the environment and because of that students can have more or less individualised self-concept and motivation to learn.

It could be noticed however that the motivational pattern of students from three countries is very complex, while the motivation to learn is composed from intrinsic as well as from extrinsic elements of motivation. The motivational factors are interdependently connected one with another and are based on the one hand on the self-concept (relations with same sex peers, general self-concept) while on the other hand they are typically motivational (motivation to solve tasks, social concern and mastery general). Nevertheless also the factor of competitiveness contributes relevantly to differences in motivation to learn. Motivation to learn is not completely nationally and culturally determined phenomena, although there exist significant

differences among Spanish pattern of motivation to learn on the one hand and Slovene and Serb pattern on the other hand.

*Table 5: Variables Entered/Removed*

Step	Entered	Residual Variance
1	Social power	2.021
2	Sense of purpose	1.700
3	Personal competitiveness	1.563
4	Performance general	1.495
5	General motivation	1.455
6	Token	1.419
7	Praise	1.370
8	Relations with same sex peers	1.350
9	Task	1.331
10	Social concern	1.308
11	General self-concept	1.287
12	Mastery general	1.271

At each step, the variable that minimizes the sum of the unexplained variation for all pairs of groups is entered: (a) Maximum number of steps is 56; (b) Minimum partial F to enter is 3.84; (c) Maximum partial F to remove is 2.71. This is already evident when we observed calculations for Wilks'  $\Lambda$  and Chi-square. On this basis two discriminant functions have been extracted, where the first one explained 92.1 % of variance and the second one 7.9 % of variance. Calculations show, that both functions are highly significant ( $p=0.000$ ), where especially first function explain the most differences which are appearing. This is evident also if we check the canonical correlation coefficients which is  $R^2=0.834$  for the first function and  $R^2=0.405$  for the second one.

The most of information which could be given from discriminant function analysis, and which explain relations among particular areas of self-concept, motivation and competitiveness, could be found from the structure matrix of factor coefficients, which indicate the amount of information which is comprised by a particular motivational variable in the structure of the first and the second discriminant function. In the structure of the first discriminant function the most important variables, which explain the biggest portion of differences are: social power ( $r=0.588$ ), sense of purpose ( $r=-0.430$ ), mastery general ( $r=-0.388$ ), task ( $r=-0.350$ ), token ( $r=0.273$ ), general self-concept ( $r=0.258$ ), general motivation ( $r=-0.255$ ) honesty/reliability ( $r=0.217$ ), social general ( $r=0.211$ ) and academic self-concept ( $r=0.201$ ).

In the structure of the second discriminant function are important variables, which explain the rest of differences. These variables are the

following: personal development competitiveness ( $r=0.527$ ), performance general ( $r= -0.375$ ), sense of purpose ( $r= -0,276$ ), mastery general ( $r= -0.213$ ), hyper-competitiveness ( $r= -0.207$ ) and token ( $r= -0.205$ ).

From these results we can conclude, that students from three countries differ a lot regarding the variables which comprise the first discriminant function as well as the second one. For the purpose of our research the first discriminant function is more important, because the most of differences which appear in the multivariate space are explained with it.

We can also conclude that factors of motivation, which define the first function, explain more differences between Spanish pattern on the one hand and Slovene-Serbian pattern of motivation on the other hand. Spanish students are highly motivated to learn because they, on the first place, wish to be promoted on the social hierarchical scale and because they expect a token for their effort in learning, while they are more self-confident and self-aware (they have highly expressed general self-concept), they are honest and reliable and they are also in general more socially motivated, where the influence of family and peer groups are especially important for their pattern of motivation to learn. Slovene and Serbian pattern of motivation to learn is closer to the second discriminant function, where the motive of personal development competitiveness is prevailing. This is especially significant for Serbian students.

Main differences among students are embraced in eight motivational areas, where six of them are specifically motivational, one is referring to the self-concept and one is referring the area of competitiveness. We can conclude on this basis, that students are not essentially differentiated regarding their self-concept, although the fact is that Spanish students have a higher self-concept than other two countries, but they are more divided on the basis of specific areas of motivation. The biggest differences could be found on the ground of the motive of social power ( $r= 0.823$ ), what is already a well known fact, which is the most important predictive variable for the group of Spanish students. It could be asserted once more, that the desire to be promoted on the hierarchical social scale is a nationally and culturally caused and conditioned motive to learn.

Although the majority of differences arises on the basis of the first discriminant function (social power, token) by which populations of Spanish and Slovene and Serbian students are essentially divided, thus differences arise first of all on the basis of specific motivational areas while the second discriminant function explains some differences, which arise between Slovene and Serbian students (e.g. personal development competitiveness,  $r=0.625$ , praise,  $r=0.570$ ), where important differences among three coun-

tries are arising also in relations to peer groups (e.g. relations with same sex peers,  $r=0.406$ ).

We have found out differences which arise according to the fact, that students are members of particular countries, on the basis of values and positions of group centroids. From the values of group centroids (see Table 5.) for the first discriminant function it could be found out, that there exist among students of three countries substantial differences. Centroids show the average values of discriminant function, which indicate the amount of differences, which are appearing among selected groups. The average differences among Spanish (Centroid<sub>1</sub> = 2.245), Slovene (Centroid<sub>1</sub> = -0.972) and Serb (Centroid<sub>1</sub> = -1.110) students show, that we are dealing with two different patterns of motivational factors, the first one, where the centroid of discriminant function for Spanish is positive, what indicates that Spanish students are on average higher motivated and more self-aware and self-confident than Slovene and Serb students are. Centroids of the second discriminant function indicate however, that differences among three countries are arising also regarding on specific sub-domains of self-concept, specific factors of motivation to learn and there exist also differences in competitiveness, which have been treated as one of motivational factors. Regarding on the values of centroids for the second discriminant function, there are appearing the biggest differences between Slovenes (Centroid<sub>2</sub> = 0.815) and Serbs (Centroid<sub>2</sub> = -0.352) then but also between the former one and Spaniards (Centroid<sub>2</sub> = 0.087). The position of centroids for the second discriminant function show that this function is divided Serbian and Slovene population of students the most. For that reason, differences which specifically separate Slovene and Serbian population, could be satisfactory explained with factors which comprises the second discriminant function, these are then (see Table 4): performance general ( $r = -0.891$ ) which characterise more Slovenes than Serbs; personal development competitiveness ( $r = 0.625$ ) which is characteristically Serbian motive to learn; praise ( $r = 0.570$ ) which is also more Serbian motive; social power ( $r = 0.384$ ) which is more Slovene characteristic; and mastery general ( $r = -0.348$ ) which is also more Slovene motive to learn.

Table 6: Functions at Group Centroids

Nationality	Function	
	1	2
Slovenes	-.972	-.352
Spanish	2,245	,087
Serbs	-1,110	,815

Legend. Unstandardized canonical discriminant functions evaluated at group means.

However but nationally and culturally caused and conditioned differences between Slovene and Serb students are personal development competitiveness, praise and social power, thus, factors of motivation to learn which are influencing this motivation more externally than internally. Typically educational factors of motivation to learn, such as task, effort, sense of purpose, affiliation and mastery general are, are but distributed equally through the population of Serb and Slovene students. The difference which substantially divides Slovene from Serb population of students is, that are Serb students more personally competitive oriented than Slovenes are. Competitive oriented motivation to learn is thus substantial motivational factor for learning and studying, which is defining Slovene and Serbian pattern of motivation to learn the most, what have been discussed already.

### *Conclusions*

We know from the descriptive analysis that Spanish students are more mature and they have generally a more individualised, independent self-concept than Slovene and Serbian students. That is why we can conclude from the discriminant analysis, that Spanish students are more motivated just because they have a better developed self-concept. If we can say so, Slovene and Serbian students are still captured within a motive of competitiveness, which represents for them the main impulse for learning. Motivation to learn proceeds among Serbian and Slovene students more from egoistic inclinations, while the motivation to learn of Spanish students is more socially conditioned – it is dependent from internalised impulses coming from their relations with family and peer groups (compare with e.g. McInnerney *et al.*, 1998; McInnerney *et al.*, 1997).

Our study show that the most predictive variables, which could explain differences between Slovenian, Spanish and Serbian samples, are: social power, token, sense of purpose, performance general, praise and personal development competitiveness. These factors for motivation to learn made the big portion of differences between students from Spain on the one side and Slovenian and Serbian students on the other side. Students of all three countries are motivated to learn because of intrinsically as well as extrinsically motives on the approximately the same level. Thus, we cannot confirm thesis (compare with Deci *et al.*, 1999) that rewards, which are coming from outside, made contingent on task performance which reliably undermine intrinsic motivation.

Here could be useful to introduce the goal theory of motivation to learn, where the following findings could be underlined:

(1) In the context of our cross-cultural study it is the most important to find out that Spanish students are follow the combination of mastery goals and social goals, what leads to more individualistic and independent self concept, where their personal development correlate with motivation to learn in the way, they feel themselves more competent than their Slovene and Serbian peers do.

(2) In the same time but, Serbs and Slovenes outperform Spaniards students, where they follow performance goals, what means they are more competitve and captured in the learning situation which is more collectivistic one and dependent from social climate in schools, community, family, peer groups and so on. They feel themselves less competent and for this reason they are less motivated to learn as their Spanish counterparts are.

(3) From the goal theory point of view the school learning, which involves operating in a relatively structured environment, students with mastery goals outperform students with either performance or social goals. One aspect of this theory is that individuals are motivated to either avoid failure (more often associated with performance goals) or achieve success (more often associated with mastery goals). In our situation, the individuals in Spain is more likely to select difficult tasks which will provide an interesting challenge, but still keep the high expectations for success, meanwhile but individuals in Slovenia and Serbia more likely select easier tasks thereby either achieving success or having a good excuse for why failure occurred. These further means that Slovenian and Serbian students are more ego-oriented, meanwhile Spaniards are more task-oriented and for that reason more succesfull in their studies.

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Јанез Коленц  
РАЗЛИКЕ У МОТИВАЦИЈИ ЗА УЧЕЊЕ КОД СТУДЕНАТА:  
КРОС-КУЛТУРНА СТУДИЈА  
*Апстракт*

У овом раду покушавамо да одбацимо стереотип да конкуритивност није пожељна лична особина и специфичан мотивациони фактор. Истраживали смо и открили позитивне димензије и статистички значајне корелације између појма о себи и мотивације за учење. Постулира се нови модел појма о себи, заснован на различитим врстама конкуритивности и мотивације за учење. Наводе се аргументи у прилог чињеници да се овај модел разликује од културе до културе. То је разлог што су у истраживању учествовали студенти из три државе. Државе су одабране на основу политичких и културних индикатора у источним/јужним наспрам западним/јужним европским карактеристикама: Словенија, Србија и Шпанија. Истраживање је обухватило 225 учесника из Словеније, 99 из Србије и 140 из Шпаније. Постоје два циља истраживања. Први циљ је да се открије да ли постоје разлике у појму о себи, мотивацији за учење и конкуритивности међу учесницима из различитих земаља. У складу са другим циљем, наглашава се истраживање корелација између појма о себи, мотивације за учење и конкуритивности у оквиру сваке националне групе. За постизање ових циљева, коришћене су квантитативне методе из друштвених наука. Установили смо да културни индикатор има важан утицај на појам о себи, мотивацију за учење и конкуритивност. Додатно, тврди се да „јужњачка“ диспозиција преовлађује над источном као и западном димензијом, што значи да су Словенци међу конкуритивнијим учесницима.

*Кључне речи:* појам о себи, мотивација за учење, конкуритивност, крос-културно истраживање.

Янез Коленц  
РАЗЛИЧИЯ В МОТИВАЦИИ К ОБУЧЕНИЮ У СТУДЕНТОВ:  
КРОСС-КУЛЬТУРНОЕ ИССЛЕДОВАНИЕ

*Резюме*

В предлагаемой работе автор пытается опровергнуть стереотип, согласно которому конкурентоспособность не является желательным личным свойством и специфическим мотивационным фактором. Исследуются и выявляются положительные аспекты и статистически значимые корреляции между пониманием о себе и мотивацией к обучению. Постулируется новая модель понятия о себе, основывающаяся на разных видах конкурентоспособности и мотивации к обучению. Приводятся аргументы в пользу предположения, что данная модель различается от одной культуры до другой. Это и обусловило такой подход, при котором в исследовании участвовали студенты из трех государств. Государства были отобраны на основании политических и культурных индикаторов в восточных/южных, в отличие от западных/южных европейских характеристик: Словения, Сербия и Испания. Исследованием были охвачены 225 участников из Словении, 99 из Сербии и 140 из Испании. Исследование было проведено в двух целях. Первая цель – выявить, существуют ли различия в понимании о себе, мотивации к обучению и конкурентоспособности между испытуемыми из разных стран. В соответствии со второй целью, подчеркивается исследование корреляций между пониманием о себе, мотивацией к обучению и конкурентоспособностью в рамках каждой из национальных групп. Для достижения данных целей использовались количественные методы исследований, характерные для общественных наук. Выявлен факт, что культурный индикатор имеет немаловажное влияние на понимание о себе, мотивацию к обучению и конкурентоспособность. Дополнительно констатируется, что «южная» диспозиция превалирует над восточной и западной, а это, в частности, значит, что словенцам присуща довольно высокая конкурентоспособность по сравнению с другими участниками исследования.

*Ключевые слова:* понимание о себе, мотивация к обучению, конкурентоспособность, кросс-культурное исследование.