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Physical Education Experimental Program to Test the Effect on Perceived Competence

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A B S T R A C T

The first purpose of this study was to test effect of multidisciplinary and holistic experimental program (EP) in physical education program effect on the soul need perceived competence. The second purpose of this study was to analyse the relationship between attitudes of perceived competence in the experimental group before and after the application of program, mostly due the theoretical reason that perceived competence is predictor of Flow. The data was collected from 74 students of the 8th grade of elementary schools randomly divided in two groups (experimental: 53; control: 21). The system of variables consisted of perceived competence scale items. The t-test analysis was applied to test perceived competence attitudes before and after the EP. The experimental group attitudes of perceived competence after the EP were significantly more positive than before participation in it, while control group attitudes of perceived competence decreased after participation in the regular school program. The current findings support the authors' hypothesis that the holistic program has significant effect on the soul need perceived competence which is closest predictor of Flow. This study applied multidisciplinary EP which was designed on growth-mind set practices and sparks findings–both connected to flow experience and intrinsic motivation–to suggest future comprehensive program that could be potentially used as a regular tool for achieving both, Flow and intrinsic motivation. Findings with certainty provide a basis for future necessary qualitative research of the program effects on the intrinsic motivation.

Key words: *perceived competence, experimental program, intrinsic motivation, flow experience*

Introduction

Motivation is one of the most attractive problems for researches in the field of Physical Education (PE). Self-determination theory (SDT) (Deci & Ryan, 1985) ranges motivation from extrinsic to intrinsic. The theory suggests that motivation is a result of interaction between events in the environment and events in the person that effect levels of motivation. Intrinsic is ideal motivation (Ryan & Deci, 2000), but it is not explained clearly enough which means that we have not found yet a way to define intrinsic motivation and means to achieve it on a regular basis because the more we explore it, the more we find how personal and subjective it actually is. One attempt to define means to achieve intrinsic motivation and Flow experience–as its prototype-is trough the multidisciplinary and holistic Experimental program (EP) in PE that teaches not only sport skills and healthy lifestyle but that also teaches students how sport concepts, philosophy of win, loose, effort can be embraced in daily life (Elliot & Dweck, 2005; Adler, 1982).

Before we explain design and implementation of the EP it is necessary to define measure of the success in this study. Knowing that SDT has proposed the most comprehensive framework for measuring motivation we choose to use soul need of perceived competence as success measure. The reason is clear, competence is closest quantitative measure in SDT to Flow experience. In a short SDT scale is-from extrinsic motivation to the intrinsic motivation-is on the one hand regulated by extrinsic, introjected, identified, integrated, and intrinsic regulations, while on the other hand the impact of these regulatory types is manifested on the soul needs which must be balanced in order to have intrinsic motivation. The more soul needs for competence, autonomy and relatedness are in balance, the more regulation is intrinsic and integrated. The prototype of the intrinsic motivation–with competence as predictor-is the state of flow known as Flow Theory. The essence of the flow state is an autotelic activity (volitional activity) for which the reason for doing a certain activity is known internally (Nakamura & Csikszentmihalyi, 2002). The manifestations of the autotelic activity can be viewed and noted over a long period of time. It is primarily manifested as a will to continue doing activity in a long term and secondly, as an inclusion in a social activity (Csikszentmihalyi, 2014).

Study of Lonsdale, Taylor, Sabiston and Ntoumanis (2011) shows that it is not easy to define regulatory types of motivation for youth (14-18 years), but autotelic actions can be noticed as interest in a certain physical activity, as an overwhelming engagement in that activity and perceived competence (Benson & Scales, 2011). Studies (Benson & Scales, 2011) show that regular Flow experience (autotelic actions) is not recognized by the modern educational system. They have also shown that students are not encouraged enough to continue in that physical activity after they show interest and focus in. Those findings encouraged us to design EP and to test it effects intrinsic motivation and flow but first we had to test its effects on the perceived competence because it is closest predictor of both of them which are in the essence one, autotelic activity lately named "sparks" too (Benson & Scales, 2011).

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gram, mostly due the theoretical reason that if perceived competence proves significant than we can use experimental program as a tool for studying and testing Flow and intrinsic motivation.

Perceived competence and Experimental program in theory

The verb "motivate" has been referred to verb "to ignite" (Benson, 2008) too. Benson and his colleagues found that sport is one of the most applicable forms through which youth can be motivated (ignited) to feel and express their deep motivational interests so called "sparks". Perceived competence, regulated through the "optimal challenge" (Csikszentmihalyi, 2014; Deci & Ryan, 2000), is the closest (González-Cutre, Sicilia, Moreno & Fernández-Balboa, 2009) soul need to the Flow. It is closer predictor to intrinsic motivation and flow than the other two soul needs of relatedness and autonomy (Deci & Ryan, 2000). Competence reflects the need to achieve desired outcomes and to feel effective in one's efforts (White, 1959). It is a tendency of humans, to whom a curious assimilative nature is a defining feature (Deci & Ryan, 2000; Fahlberg, Fahlberg & Gates, 1992) which is connected more to Learning Goals than to Performance goals (Elliot & Dweck, 2005).

With this study we examined the impact of the EP in the PE on competence scale, and afterwards we analyzed data that we got from the scale. If significant effects of the EP would exist on the competence then deeper insights in perceived competence and means to achieve intrinsic motivation could be done in further studies. Ideally, in the future, if further EP shows significant in Flow theory, Sparks and Sport Motivation Scale too we could use EP design for making Flow climate regularly on the lessons. Also through those lessons we could find clearer understanding of autotelic activity (Nakamura & Csikszentmihalyi, 2002) which is at the same time clearer understanding of the intrinsic motivation and "sparks".

Design of the EP was named holistic and multidisciplinary approach (Adler, 1988) to the student because it includes rational, emotional, spiritual and physical development in education process according to three intelligences: rational, emotional (Goleman, 1998) and spiritual (Zohar & Marshal, 2000) which are practically-in education and teaching process-described through "Growth Mindset" or "Learning goals" (Elliot & Dweck, 2005). Learning goals or Growth mindset behavior of the individual is not only to demonstrate own competence and sport, exercise achievement or to avoid it–which is characteristic of Performance goal or Fixed mindset–but to develop one's competence and mastery trough the exercise and achievement or setback which is Learning goal or Growth mindset (Elliot & Dweck, 2005).

Through the Growth mindset teaching techniques students are taught in the EP to embrace challenges, to persist in the face of setbacks, to see effort as the path to mastery, to learn from criticism which eventually brings them in higher perceived competence and to a desire to learn and tendency to continuously grow in their life experience (Yeager & Dweck, 2012). In those teaching techniques the learning process is emphasized over performance outcome, for example: "OK, so you didn't do as well as you wanted to. Let's look at this as an opportunity to learn; Congratulations–you really used great strategies for studying, managing your time; We need to raise the bar for you now; Let's think about how to improve (the accuracy of) this exercise/part/movement/word/choice/logic/description/problem ; You did hard work in it, and you can see achievement. In the Growth mindset teaching technique the person and result are not set in the first plan of a feedback because emphasizing on process in success or setback has a tendency to keep intrinsic motivation and perceived competence in students while emphasizing person or result has tendency to lead to low perceived competence and further lack in intrinsic motivation manifested through Performance goals and static intelligence which are Fixed mindset markers - opposite from Learning goals and strong perception of competence. At the same time during the lessons students were taught how to recognize Performance goals through its appearance signs such as avoiding challenges, early give up, seeing effort as fruitless or wasted, ignoring useful feedbacks. Educating students in Growth mindset manner is akin to Flow experience and Sparks because in all three–Growth Mindset, Flow Experience (Intrinsic Motivation), Sparks-students witness purpose of action and in all three perceiving competence is root of motivation. Practically Growth mindset teaching technique was applied in the EP through the innovative part of this study which included time for dialogue and discussions with students, reading meaningful stories for homework and exercising with music and songs that had a meaningful lyrics which were commented after the exercise with students. Studies name such innovative techniques as holistic techniques and they place them in the area of spiritual intelligence (Suzić, 2012; Zohar & Marshall, 2000), spiritual learning (Benson & Scales, 2011; Fahlberg & Fahlberg, 1991) or religious experience (Smith, 1976) which help students to find purpose in activity and strive to questioning "Why" in life (Adler, 1982). Finding meaning, purpose of exercise, Growth mindset characteristics such as to embrace challenges, to persist in the face of setbacks, to see effort as the path to mastery, to learn from critiscism and their transfer in a daily life were mainly discussed through the conversation after reading the short meaningful stories "Mathnawi for kids" (Uysal, 2012) which students would get for reading homework after the lesson.

EP took into consideration recent studies of emotional (Goleman, 1998) and spiritual development (Zohar & Marshall, 2000) of youth. It considered usual motivational problems (Rutten, Boen, Visser & Seghers, 2015; Tenenbaum, Gershon & Eklund, 2007) in youth and it used techniques for increasing motivation for understanding the purpose suggested by the same authors, Adler (1988) and Smith (1976). Noticing usual motivational problems and using technique for increasing motivation were implemented together with the innovative part of the program application which included mentioned EP approach through dialogue, discussions, reading and exercising with music (Adler, 1988). The main goal of the EP was to ignite perceiving self competence (ignite creative thinking, self-potentials and interests) in students through the EP using free time on the lessons and to show that on the perceived competence scale. Organization of the EP is described below.

Methods

Participants

The sample consisted of 8th grade primary school students aged from 13 to 15 years, attending a primary school in the spring semester of 2015. The sample consisted of 74 students (male: 40; female: 34), randomly divided in two groups. The first group was the experimental one with 53 (male: 25, female: 28) students, while the second group was the control group with 21 students (male: 15, female: 6).

EP design

The EP of PE consisted of ten lessons, two per week, each lasting for 45 minutes. The first goal of the EP was to motivate students through the EP to the volitional activity which means increase in perceived competence. At the same time, the control group participated in the activities of the traditional PE lesson

organization and program. When planned, the EP did not make any special and separate curriculums from the one that is used by Ministry of Education and Science of Bosnia and Herzegovina. Two things were new and innovative in the EP. The first was Lesson organization, the second was feedback and conversation time with students.

The lesson organization (Figure 1.) was designed in a way that students are actively involved in the execution of the task, or, they are passively active while analysing and supporting their colleagues, or, they participate in the feedback time with professor during, before or after the lesson.

Teaching unit: EUROFIT Battery Test Day	
Type and main part of the lesson	Test (Test Zone 1); Preparation - warm up for test (Zone 2), conditioning (Zone 3) and fun (Zone 4).
Teaching instruments	Cones, pads, volleyball, basketball, mats for gymnastics
Goal	Measure and mark final state of students
Anthropological task	Motor abilities (coordination, endurance, precision); Morphological (Musculature development); Functional (cardio respiratory stimulation, stimulation of digestion system)
Education of skills	Complete TEST with Task Goal Approach (Growth mindset); Ignite responsibility for tracking personal level of condition
Education of behaviour	Lead to an individual development and feeling of responsibility , Motivate self and the others

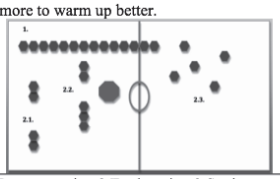
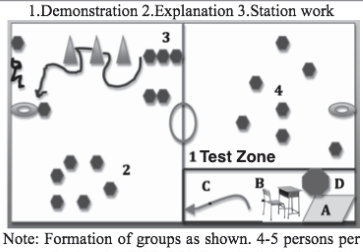
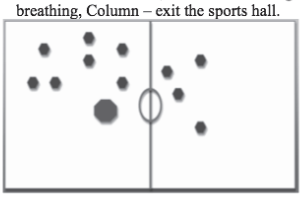
PART OF THE LESSON	CONTENT	ORGANIZATIONAL AND METHODOLOGICAL NOTES	EDUCATION OF BEHAVIOR NOTES
INTRODUCTION & PREPARATION 25-30 % (11-13 min)	• Check equipment before entrance in the hall • Present to students today's Objectives, remind on the Task Goal, Growth mindset technique. • Arrange students in formation to warm up (Intensity low-medium: regulated with space of working area) **Boys**: "Football ball is passed in a circle of players; two players are in the middle». Players standing in a circle pass ball to each other in various directions. Those in the middle try to catch the ball. The one whose pass is caught goes inside the circle instead of the one who catches the ball. **Girls**: Volleyball passes with tasks (overhead pass, bump pass, combined pass) Stretching exercises: shoulders, abdomen, back, hamstrings, quadriceps, calf, breathing exercises and "listen the silence" and present the Zones of the lesson "Main Part".	From the frontal work organization (1.) transfer in formation in 3 groups Groups 2.1. & 2.2. Volleyball warm up task (pass game; students stand in the groups (2-3 persons) looking opposite to each other (total 4-6 persons per ball), 2-2.5 m distanced. A player passes a ball to the opposite one then moves in the back of the of person who was behind him/her when (s)he passed the ball. Spontaneously, intensity increases and students warm up. Group 2.3. Students are in free formation, forming approximately round shape. They play warm up soccer game. Teacher encourages both groups to move more to warm up better.  	In the introduction part of the lesson slow work intensity increases. While exercising, keep talking to students about EUROFIT battery test: - Greet students, encourage them that they have done great work in the previous lessons. - Remind them that we are learning and growing with challenges - Remind them on Growth mindset technique - Explain briefly testing for today (explain stations) - Praise the process not person/outcome - Remind them to giving the best and to enjoy the tasks.
MAIN PART 60% (30 min)	EUROFIT Battery Test: TEST 1. lesson: **A. Flamingo balance** **B. Plate tapping** **C. Sit and reach** **D. Standing broad jump** Station 1: Test Zone Station 2: Volleyball in a circle Station 3: Basketball - dribble ball slalom + layup + shoot + pass the ball + hold against wall in sitting position + walk back for rest Station 4: Regular basket game	1.Demonstration 2.Explanation 3.Station work  Note: Formation of groups as shown. 4-5 persons per group. Station 1. TEST ZONE: A-D 2. Volleyball 3. Basketball with tasks 4. basketball. Teacher is in the TEST zone. Students who express will to track/note results are welcomed to do so. Each student goes from A to D then joins students in Zone 4, then 3, then 2.	*Goal no. 10:* **Responsibility and embracing the challenge with Growth mindset** -Teacher explains tasks and zones. Call students and divide in groups. - Remind them to motivate each other and give their best Other activities need to relax students. Once approaching test zone teacher reminds students that student worked well and to give his/her best. On Station 2: focus and relax On Station 3: focus on the task On Station 4: relax and enjoy
END 10 (5 min)	- Teacher and students feedback time shortly in a free formation about results, teacher praise process of all, students sit on the floor. - Afterwards, teacher gives direction for stretching (teacher leads) and breathing exercise on the sign - Students stand up and teacher starts applause for all, and students do the same. - Students are invited to help and remove the equipment from the field - Teacher gives new "homework" to students and they together, on 123, say "Bye" with smiles.	Free formation – feedback, Circle – stretching & breathing, Column – exit the sports hall. 	**Feedback time:** - Dialogue about challenges, success, setbacks on the lesson during stretching exercises. - Emphasize process to achievement not results and persons. -Give "homework to read": «*Three fish*» (Uysal, 2012) -Together, with smiles, say «Bye» in the end.

Figure 1. Experimental Program Example

The feedback and conversation time with students was mainly done short before the lesson where teacher welcomed students, asked about activities they had earlier, and, briefly introduced coming lesson, during the lesson with shorter feedbacks in Growth mindset method and in the cool down time or after the lesson. Students would have a stretching and breathing exercises and afterwards they had a conversation with the teacher about the lesson achievements and challenges. During this time students were encouraged to listen and talk with teacher and colleagues about purpose of embracing challenges, persistance in setbacks, seeing effort as the path to mastery, learning from criticism, reasons and purposes (Yeager & Dweck, 2012; Adler, 1982) through the short and meaning full story that they had for homework to read after the previous lesson. Stories were taken from the book Jalaluddin Rumi "Mathnawi for kids" (Uysal, 2012) and teacher helped students

to make an interpretation of their meanings. Feedback and conversation time was also used to discuss students opinions about exercises they like/don't like to do. During this time students received announcement for testing day and they were encouraged to approach it with attitude of Learning goal which is attitude of Growth mindset and in the end effects perceived competence.

Measure

The system of variables consisted of 4 items, modeled by five-point Likert scale (1-fully disagree, 5-fully agree), of perceived competence scale items (Williams & Deci, 1996) due to the reason that perceived competence soul need is predictor of intrinsic motivation and Flow (Ryan & Deci, 2000): "I have participated in Physical activity because": 1) I feel confident in my ability to exercise regularly, 2) I now feel capable of exercising regularly, 3) I am able to exercise regularly over the long term, 4) I am able to meet the challenges of exercising regularly. All answers on the main statement were measured with the "five scaled Likert scale", with the level of agreement: Fully Agree to Fully Disagree.

Quantitative measurements of perceived competence were performed twice. The first measurement was completed before the EP application, while the second was completed after applying the EP. The t-test analysis was used to test perceived competence attitudes before and after the EP and to find if there is a significant change in perceived competence between initial and final measurement in the experimental group after participation in the EP.

Results

Review of Table 1. with t-test shows that EP with multidisciplinary and holistic approach had positive effects in experimental group between initial and final measure (sig. 0.03).

Table 1. Comparison of T-test Between Both Group Initial and Final Measures and Between Control and Experimental Group in Initial and Final Measures

	T-test	
ICG : IEG	0.04	*P<0.05
FEG : FCG	0.08	
EFG : IEG	0.03	*P<0.05
ICG : FCG	0.1	

Legend: IEG: Initial Measure Experimental Group; ICG: Initial Measure Control Group; FEG: Final Measure Experimental Group; FCG: Final Measure Control Group

This result shows more valuable result if we take into consideration that grouping was done randomly and that in the initial measure difference between control and experimental group was significantly different (sig. 0.04). Control group showed statistically higher perceived competence than experimental group in initial measure. In the final measure control group did not change significantly in comparison to its initial measure because the control group did same program before initial period and during experiment period. Overall results confirm the study hypothesis that EP with a multidisciplinary approach has positive and significant effects on increasing soul need of perceived competence.

By comparing the experimental group M (Table 2.) results of all statements in the final measurement with the mean result of all answers of the controlled group in the final measurement it can be seen that experimental group increased in ability " to meet the challenge of exercising regularly" while control group dropped (4.6-4.1), also experimental group "had more confidence in ability to exercise regularly" (3.87-4.24), and it was "able to exercise regularly over the long term", (4.05-4.22) while the control group stayed on quite the same level of confidence as in the initial measurement (4.13-4.15).

Table 2. Comparison of Descriptive Statistical Indicators of Initial and Final Measurement of Perceived Competence

	IEG (N=39)		ICG (N=15)		FEG (N=50)		FCG (N=20)	
I have participated in Physical activity because:	M	SD	M	SD	M	SD	M	SD
1.I feel confident in my ability to exercise regularly	3.87	1.18	4.4	0.8	4.24	0.95	4.2	1.03
2.I now feel capable of exercising regularly	4.18	0.87	4.33	0.7	4.24	1.12	4.25	0.77
3.I am able to exercise regularly over the long term	4.05	0.93	4.13	1.09	4.22	0.94	4.15	1.11
4.I am able to meet the challenge of exercising regularly	4.13	0.94	4.61	0.71	4.32	0.9	4.1	1.14
M	4.06	0.98	4.37	0.83	4.26	0.97	4.18	1.01

Legend: M: Mean; SD: Standard deviation; N: Number of students; IEG: Initial Measure Experimental Group; ICG: Initial Measure Control Group; FEG: Final Measure Experimental Group; FCG: Final Measure Control Group.

Discussion

The goal of this study was to examine the effects of multidisciplinary EP on the perceived competence through the subject of the PE. With this research we wanted to see if EP-based on the holistic and multidisciplinary approach which included Growth mindset teaching techniques-has positive effects on perceived competence in students. If yes than the same program could be used to test Flow experience, sparks and autotelic activity which are essentially synonyms for intrinsic motivation. The study confirmed hypothesis that EP has significant effect on the perceived competence which can be used as a predictor of Flow experience, autotelic activity and sparks.

Considerable changes in T-test (Table 1.) confirmed that EP has effect on perceived competence which means that it allows unique talents of individuals in a group to become maximized in niche-relevant ways which can produce benefit for all group (White, 1959). Significance of the t-test confirms the study of Cox, Smith & Williams (2008) that claims that increase in perceiving competence is related to continuing sport activities in students' spare time-which is also characteristic of the intrinsic motivation. Also, the EP consisted of tasks with oriented Learning goals (Elliot & Dweck, 2005) and as such it fulfils the criteria for potential use as a intrinsic motivation predictor and implicitly, this study confirmed importance of competence for building learning climate (Ferrer-Caja & Weiss, 2000). With

highest mean of 4.32 on the statement 4. "I am able to meet the challenge of exercising regularly" students were motivated to learn with understanding in the way of Learning goals where challenges are accepted and embraced and not denied such as in Fixed mindset-Performance goals. In this case, the activity is not compulsion but it is behaving with reason and understanding (Suzić, 2012; Adler, 1982).

Reviewing the other studies we can confim that we may be faced with the fact that motives are not clearly recognizable in youth (Lonsdale et al., 2011; Standage, Duda & Ntoumanis, 2005; Chatzisarantis, Hagger, Smith & Wang, 2003) but that the intrinsic motivation is manifested and predicted through the perceived competence (Elliot & Dweck 2005; Deci & Ryan, 2000). Analysis of perceived competence results of the EP give us a solid base for further qualitative research of flow, autotelic activity and their managing through the EP as Hassandra, Goudas and Chroni (2003) suggested.

Potential limitation of the study is that motivation atmosphere depends not only on the program but also on teacher and students. In order to over come those challenges teachers should be well trained (Cheon & Reeve, 2015) because program itself does not make difference if there is no adequate teacher to implement it (Hassandra et al. 2003). For example, in our study students showed interest for combat sports - karate. Their interest was accepted with presence of a professional karate instructor on the next lesson. The karate lesson was used to promote the essential meaning of combat sport philosophy with emphasis on the kind and decent behaviour, attitudes, righteous reasoning and forming righteous ideals, because these are characteristics of the spiritual learning (Adler, 1982) which is fundamental part of holistic approach in education (Adler, 1988; Smith, 1976).

REFERENCES

Adler, M.J. (1982). *The Paideia Proposal: An Educational Manifesto*. New York: Collier Books.

Adler, M.J. (1988). *Reforming Education* (rev. ed.). New York: Collier Books.

Benson, P. (2008). *Sparks: How parents can ignite the hidden strengths of teenagers*. Wiley, John & Sons.

Benson, P.L., & Scales, P.C. (2011). Thriving and sparks. In R. J. R. Levesque (Ed.), *Encyclopedia of adolescence*, 2963–2976.

Chatzisarantis, N.L., Hagger, M.S., Smith, B., & Wang, C.K. (2003). A meta-analysis of perceived locus on causality in exercise, sport, and physical education contexts. *Journal of Sport and Exercise Psychology*, *25*, 284-306.

Cheon, S.H., & Reeve, J. (2015). A classroom-based intervention to help teachers decrease students' amotivation. *Contemporray Educational Psychology*, *40*, 99-111.

Cox, A.E., Smith, A.L., & Williams, L. (2008). Change in physical education motivation and physical activity behavior during middle school. *Journal of Adolescent Health, 43,* 506-513.

Csikszentmihalyi, M. (2014). *Applications of Flow in Human Development and Education: The Collected Works of Mihaly Csikszentmihalyi*. Dordrecht: Springer.

Deci, E., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior.* New York: Plenum Press.

Deci, E., & Ryan, R. (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry*, *11*, 227-268.

Elliot, A.J, & Dweck, C.S. (2005). Chapter 1-Competence and Motivation: Competence as the Core of Achievement Motivation*:* Chapter taken from *Handbook of Competence and Motivation*. The Guilford Press.

Fahlberg, L.L, Fahlberg, L.A., & Gates, W. (1992). Exercise and existence: Exercise behavior form an existential-phenomenological perspective. *The Sport Psychologist, 6*, 172-191.

Fahlberg, L.L., & Fahlberg, L.A. (1991). Exploring spirituality and consciousness with expanded science: Beyond ego with empiricism, phenomenology, and contemplation. *American Journal of Health Promotion*, *5*(4), 273-281.

Ferrer-Caja, E., & Weiss, M.R. (2000). Predictors of intrinsic motivation among adolescent students in physical education. *Research Quarterly for Exercise and Sport*, *71*, 267–279.

Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam Books.

González-Cutre, D., Sicilia, A., Moreno, J. & Fernández-Balboa, J. (2009). Dispositional Flow in Physical Education: Relationships With Motivational Climate, Social Goals, and Perceived Competence. *Journal of Teaching in Physical Education*, *28*, 422-440.

Hassandra, M., Goudas, M., & Chroni, S. (2003). Examining factors associated with intrinsic motivation in physical education: a qualitative approach. *Psychology of Sport and Exercise, 4*(3), 211-223.

Lonsdale, C., Taylor, I., Sabiston, C., & Ntoumanis, N. (2011). Measuring student motivation for physical education: Examining the psychometric properties of the perceived locus of causality questionnaire and the situational motivation scale. *Psychology of Sport and Exercise, 12,* 284-292.

Nakamura J, & Csikszentmihalyi, M. (2002). Chapter 7-The concept of flow: Chapter taken from *Handbook of positive psychology*, *1*, 89-105.

Rutten, C., Boen, F., Visser, N., Seghers, J. (2015). Changes in children's autonomous motivation toward physical education during transition from elementary school: A self-determination perspective. *Journal of Teaching in Physical Education*, *34*, 442-460.

Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78.

Smith, H. (1976). *The Purpose of Higher Education*. Harper & Brothers, New York.

Standage, M., Duda, J.L., & Ntoumanis, N. (2005). A test of self-determination theory in school physical education. *The British Journal of Educational Psychology*, *75*, 411–433.

Suzić, N. (2012*). Futurology in the science of pedagogy and social sciences-Futurologija u pedagoškim i socijalnim naukama*. Banja Luka: EKTOS.

Tenenbaum, Gershon & Eklund, Robert C. (2007). *Handbook of Sport Psychology*, *3rd Edition*. John Wiley & Sons, Inc., Hoboken, New Jersey.

Uysal, M. (2012). *Mevlana Jalaluddin Rumi Mathnewi for kids – Mesnevija za djecu*. Libris, Sarajevo.

White, R. (1959). Motivation reconsidered: The concept of competence. *Psychological review*, *66*, 297–333.

Williams, G.C., & Deci, E.L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology, 70,* 767-779.

Yeager, D.S, & Dweck, C.S. (2012). Mindsets that promote resilience: When students believe that personal characteristics can be developed. *Educational Psychology*, *47*, 302-314.

Zohar, D. & Marshall, I. (2000). *Spiritual Intelligence and Why It Matters*. Bellaire TX.: Conscious Pursuitt Inc.

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