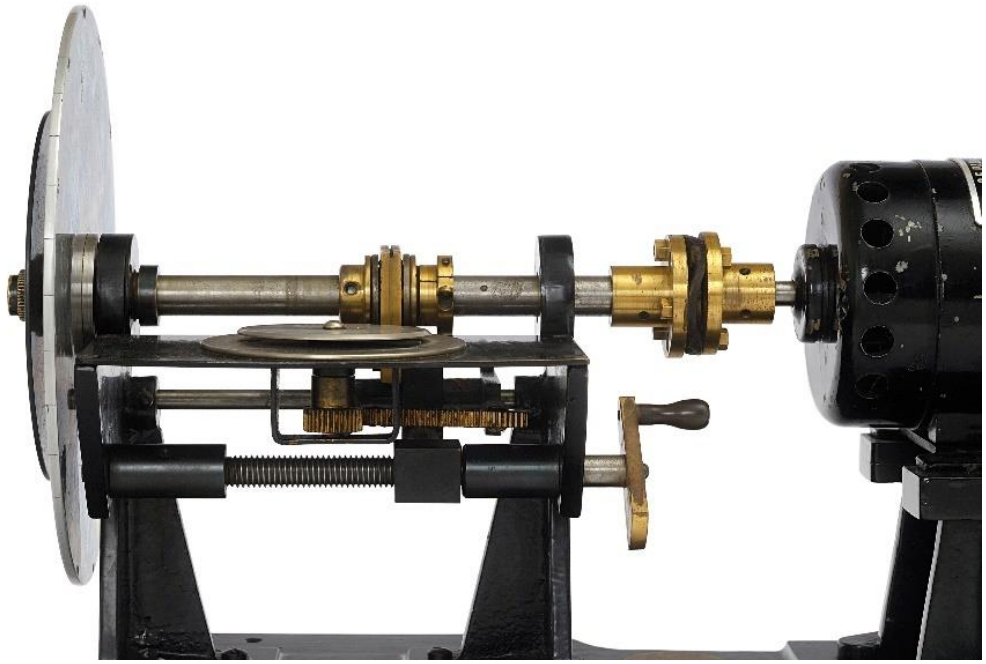
PROCEEDINGS OF THE
XXVI SCIENTIFIC
CONFERENCE

EMPIRICAL STUDIES IN PSYCHOLOGY

OCTOBER 15TH – 18TH, 2020
FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE



INSTITUTE OF PSYCHOLOGY
LABORATORY FOR EXPERIMENTAL PSYCHOLOGY
FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE

EMPIRICAL STUDIES IN PSYCHOLOGY

OCTOBER 15TH – 18TH, 2020
FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE

Institute of Psychology, Faculty of Philosophy, University of Belgrade

Laboratory for Experimental Psychology, Faculty of Philosophy, University of Belgrade

Belgrade, 2020

Cover photo:
Color variator (detail), /C. F. Palmer, London/
Mechanism for varying the relation between the sectors of Maxwell's discs in the course of their rotation.
Maxwell's discs Maxwell's discs with fixed relations of the sectors can be installed onto the inner disc of the apparatus while discs with sectors of diferent size are installed onto the outer of the two discs of the apparatus. The size of a sectors that can be read on a circular 3600-scale may be regulated in the course of the operation by means of a lever till colors in both discs are equalized. Rotation speed can be regulated with a rheostat.
From the collection of the old scientific instruments curated by Laboratory for experimental psychology, Faculty of Philosophy, University of Belgrade

PROGRAMME COMMITTEE

prof. dr Orlando M. Lourenço
dr Kai Ruggeri
prof. dr Claus-Christian Carbon
prof. dr Agostini Tiziano
prof. dr Gonida Sofia-Eleftheria
doc. dr Milica Vukelić
doc. dr Ivana Stepanović Ilić
prof. dr Dejan Todorović
prof. dr Sunčica Zdravković
prof. dr Iris Žeželj
prof. dr Zvonimir Galić
dr ir. Kirsten E. Bevelander
prof. dr Dušica Filipović Đurđević
prof. dr Slobodan Marković
dr Jérémy Lemoine
prof. Dr Ksenija Krstić
prof. dr Dražen Domijan
doc. dr Oliver Tošković
prof. dr Pavle Valerjev
prof. dr Denis Bratko
prof. dr Petar Čolović
doc. dr Jelena Matanović
dr Janko Međedović
dr Marija Branković
dr Anja Wertag
doc. dr Dragana Stanojević
doc. dr Maja Savić
dr Darinka Anđelković
dr Maša Popović
dr Nataša Simić
prof. dr Goran Opačić
prof. dr Aleksandar Kostić
prof. dr Nenad Havelka
prof. dr Tamara Džamonja Ignjatović
dr Marko Živanović
dr Zora Krnjaić
doc. dr Danka Purić
doc. dr Kaja Damnjanović
dr Marina Videnović (chairwoman)

ORGANIZING COMMITTEE

dr Marina Videnović
prof. dr Dušica Filipović Đurđević
prof. dr Slobodan Marković
Olga Marković Rosić
doc. dr Ivana Stepanović Ilić
dr Nataša Simić
dr Marko Živanović
Predrag Nedimović
Ksenija Mišić
Milana Rajić

EDITORS

dr Marina Videnović
doc.dr Ivana Stepanović Ilić
dr Nataša Simić
Milana Rajić

Proofreading and layout: Milana Rajić

Educators' Beliefs about Creativity Development in Educational Setting

Jelena Pavlović (jelena.pavlovic@f.bg.ac.rs)
Faculty of Philosophy, University of Belgrade

Slavica Maksić (smaksic@ipisr.org.rs)
Institute of Educational Research, Belgrade

Abstract

The goal of the study was to identify educators' beliefs about creativity development of children and youth in educational setting by applying the Expert Model of Supporting Creativity. Research participants included educators from preschools, primary schools, secondary schools and universities. Implicit theories of creativity questionnaire was administered, while answers to one question regarding the potential for creativity development in educational settings were analyzed. Data were analyzed using thematic analysis with a predefined coding scheme. Statistically significant differences were identified in educators' beliefs about the contribution of educational institutions in students' creativity development. Preschool educators pointed to the contribution of the free activities, educational climate, managing creativity and partnership more frequently, while university educators pointed to the teaching activities, teachers and the study program. We discuss how educators' beliefs can be transformed to provide the focus on developmental needs of children and youth during their schooling.

Keywords: creativity; creativity development; educators; beliefs; Expert Model of Supporting Creativity.

Beliefs about Creativity Development

Beliefs about creativity and creativity development refer to constructions about what creativity is, how it manifests itself and what are the ways to develop it (Maksić & Pavlović, 2011). These beliefs are a cornerstone of perceiveing and evaluating creative behavior and creative products (Chan & Chan, 1999; Runco & Johnson, 2002). Importance of study into beliefs about creativity development is grounded in the impact these beliefs may have on what will be perceived as creative and in what ways it will be supported.

Educators' beliefs about creativity and creativity development are especially important because of the nurturing role of their work. Study into educators' beliefs about creativity may facilitate understanding of educators' behaviors, decision making and teaching practices in educational settings (Andiliou & Murphy, 2010).

Previous research into educators' beliefs about creativity pointed to a general positive attitude (Aljughaiman & Mowrer-Reynolds, 2005; Runco, Johnson & Bear, 1993). As some studies have shown, educators generally believe that creativity can be developed (Fryer & Collings, 1991; Kampylis, Berki & Saariluoma, 2009). However, inconsistencies in educators' beliefs about creativity development have also been noted. For example, some studies found that although educators believe that creativity can be developed, they do not perceive themselves accountable for creativity development (Aljughaiman & Mowrer-Reynolds, 2005). Other studies have also pointed that educators may not perceive themselves as trained to design creative activities and support creativity (Mullet, Willerson, Lamb & Kettler, 2016). Educators' workload and standardized assessment were experienced as some of the disabling factors in supporting creativity (Andiliou & Murphy, 2010).

Goals of the Study

In our previous studies the Expert Model of Supporting Creativity was developed by means of inductive qualitative analysis (Maksić & Pavlović, 2009; 2011). The model included the following components: teaching/compulsory activities, extracurricular/free activities, educational climate, study program, teachers, managing creativity, and partnership for creativity. The goal of this study was to identify educators' beliefs about creativity development of children and youth in educational setting by applying the Model.

Method

Participants

Research participants included educators from preschools (N=116), primary schools (N=244), secondary schools (N=262) and universities (N=46). In case of preschools, primary schools and secondary schools over 90% of participants were teachers, while the rest of the participants were school administration and management. All participants from universities were teachers.

Instrument

Implicit theories of creativity questionnaire (ITC-Q) with multiple open-ended and closed questions was administered (Maksić & Pavlović, 2009; 2011; Pavlović & Maksić, 2019). Questions referred to the nature and manifestations of creativity, and the possibility for the development of creativity during formal education. In this paper we analyzed answers to one open-ended question regarding the potential for creativity development in educational settings at the level of formal education at which the educator is engaged (*How can educational institution contribute to the development of creativity?*).

Data analysis

Data were analyzed using thematic analysis with a predefined coding scheme based on the Expert Model of Supporting Creativity (Maksić & Pavlović, 2009; 2011). The unit of analysis was a unit of meaning corresponding to any of the categories from the Model. After the coding process, frequency analysis was carried out for all categories from the Model. Rao-Scott $\chi 2$ was used to analyze differences in beliefs about creativity development (Decady & Thomas, 2000).

Results

Support of teaching/compulsory activities, stimulating educational climate and managing creativity dominated teachers' beliefs about nurturing creativity in all types of the educational settings. Teaching/compulsory activities were related to the implementation of the prescribed or intended study programs. The educational climate included aspects of relationships among teachers and students that appeared in teaching/compulsory and extracurricular/free activities and had an impact on them. Managing creativity was the type of support related to the recognition, direction, and monitoring of creativity.

Supportive teaching and compulsory activities included learning through research, problem solving, work on tasks that demand creative answers, independent and teamwork, etc. Extracurricular and free activities related to students' interests and to offer them opportunities to learn more about their area of interest as well as to get to know other areas where they can develop new interests. The stimulating educational climate allowed students to express their opinions and make their own choices while learning. Encouraging teachers valued creativity and served as models who inspire their students to be creative. Supportive study programs were related to real life issues, and relevant for students. The partnership for creativity was related to social consensus on the importance of creativity and the provision of systemic public support.

However, statistically significant differences were identified in educators' beliefs about the contribution of educational institutions in creativity development (Rao-Scott $\chi 2(N = 605, df = 21) = 62{,}64, p<0{,}001$). Preschool educators pointed to the free activities, educational climate, managing creativity and partnership more frequently, while university educators pointed to teaching activities, teachers and the study program (Table 1).

Table 1[1]
Educators' beliefs about supporting creativity

Level of education	Types of supporting creativity (f)							Total participants
	Teaching	Climate	Extra-curricular	Program	Teacher	Managing	Partnership	
Pre-School	49	43	50	5	22	36	31	110
PrimarySchool	85	60	45	13	28	61	23	219
Secondary School	106	75	55	19	31	65	22	235
University	23	10	1	7	12	9	3	41
Total responses	263	188	151	44	93	171	79	605 / 989

[1] Types of supporting creativity: Teaching/compulsory activities, Educational climate, Extra-curricular/free activities, Teacher, Creativity management, Partnership for creativity.

The table does not provide data on the number of responses that were not classified (f= 20).

Discussion

The analysis points to a shift in focus from the child and the systemic support, in the beginning of the formal education, to the focus to the teacher's role at the end of formal education. This finding may be to some extent surprising as all levels of formal education would require a focus on partnership and systemic support in creativity development. It may indicate the real situation in the treatment of creativity in educational institutions at different levels.

In comparison to previous studies (Aljughaiman & Mowrer-Reynolds, 2005), we found that educators tended to perceive themselves as accountable for creativity development of learners, which is a promising piece of information. However, the lack of the systemic perspective in supporting creativity through partnering with all relevant stakeholders stands out as a potential disabling factor in our study.

The findings further point to a need for raising awareness about educators' beliefs and their implications for learners' creativity. Moreover, we may point to a need for transforming educators' beliefs towards a more balanced and learner centric views at all levels of education. For future research and policy making remains the challenge of transforming educators' beliefs so that the necessary focus on developmental needs of children and youth is provided, as well as the systemics perspective of creativity development in society.

Conclusion

In this study we identified educators' beliefs about creativity development of children and youth in educational setting by applying the Expert Model of Supporting Creativity. Identification of different types of beliefs can be the first step in the process of changing these beliefs at the individual, institutional and societal level. Recommended interventions for changing educators' beliefs include different types of professional and organizational development activities.

Acknowledgments

This work was supported by the Ministry of Education, Science, and Technological Development of the Republic of Serbia (grant no. 451-03-68/2020-14/200018).

References

Aljughaiman, A., & Mowrer-Reynolds, E. (2005). Teachers' conceptions of creativity and creative students. *The Journal of Creative Behavior, 39*, 17–34.

Andiliou, A., & Murphy, K. P. (2010). Examining variations among researchers' and teachers' conceptualizations of creativity: A review and synthesis of contemporary research. *Educational Research Review, 5*, 201-219.

Chan, D. W., & Chan, L. K. (1999). Implicit theories of creativity: Teachers' perceptions of students' characteristics in Hong Kong. *Creativity Research Journal, 12*(3), 185–195.

Decady, Y., & Thomas, D. (2000). A Simple Test of Association for Contingency Tables with Multiple Column Responses. *Biometrics, 56*(3), 893-896.

Fryer, M. & Collings, J. (1991). Teachers' views about creativity. *British Journal of Educational Psychology 61*(2), 207-219.

Kampylis, P., Berki, E., & Saariluama, P. (2009). In-service and prospective teachers' conceptions of creativity. *Thinking Skills and Creativity, 4*(1), 15–29.

Maksić, S., & Pavlović, J. (2009). Ekspertski model za podsticanje kreativnosti u školi. In Đ. Komlenović, D. Malinić, & S. Gašić Pavišić (Eds.), Kvalitet i efikasnost nastave (pp. 281–293). Beograd: Institut za pedagoška istraživanja & Volgogradski državni pedagoška univerzitet.

Maksić, S. & Pavlović, J. (2011) Educational researchers' personal explicit theories on creativity and its development: a qualitative study, *High Ability Studies, 22*(2), 219-231.

Mullet, D. R., Willerson, A., Lamb, K. N., & Kettler, T. (2016). Examining teacher perceptions of creativity: A systematic review of the literature. *Thinking Skills and Creativity, 21*, 9–30.

Pavlović, J. & Maksić, S. (2019) Implicit Theories of Creativity in Higher Education: A Constructivist Study. *Journal of Constructivist Psychology, 32*(3), 254-273.

Runco, M. A., & Johnson, D. (2002). Parents' and teachers' implicit theories of children's creativity: A cross-cultural perspective. *Creativity Research Journal, 14*, 427–438.

Runco, M. A., Johnson, D., & Bear, P. K. (1993). Parents' and teachers' implicit theories of children's creativity. *Child Study Journal, 23*(2), 91–113.

CIP – Katalogizacija u publikaciji

Narodna biblioteka Srbije, Beograd

PROCEEDINGS OF THE XXVI SCIENTIFIC CONFERENCE EMPIRICAL STUDIES IN PSYCHOLOGY (26; 2020, Beograd)

[Zbornik radova] / XXVI naučni skup Empirijska istraživanja u psihologiji

15-18. oktobar 2020; Filozofski fakultet, Univerzitet u Beogradu; [organizatori]

Institut za psihologiju i Laboratorija za eksperimentalnu psihologiju – 1. Izd –

Beograd: Filozofski fakultet, 2020 –147 str.

Kor. Nasl. – Zbornik radova na srp. i engl. jeziku – elektronsko izdanje

ISBN 978-86-6427-165-3

1. Institut za psihologiju (Beograd)
2. Laboratorija za eksperimentalnu psihologiju (Beograd)

a) Psihologija – Empirijska istraživanja – Zbornik radova