

Lecturer-Student Collaboration in Higher Education as a Solution for Fostering Student's Creative Personality

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Lecturer-Student Collaboration in Higher Education as a Solution for Fostering Student's Creative Personality

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Abstract: Lecturer-Student Collaboration in Higher Education as a Solution for Fostering Student's Creative Personality. Objective: This study aims to elaborate on the role of lecturer-student collaboration in developing student creativity. **Methods:** This research is mix-method research. Data were obtained from 30 students and eight lecturers at three state universities in Malang, East Java. Data was collected through a creative personality scale and interviews. Quantitative data were analyzed using descriptive analysis techniques, while interview data were analyzed by thematic analysis. **Findings:** The analysis results show that lecturer-student collaboration activities have implications for the high level of student creativity. **Conclusion:** The results of this study have implications that lecturer activities have an essential role in developing student creativity. The limitation of this research lies in the data collection process, which is only done online. Further research is expected to use the method of observation and in-depth interviews to be able to reveal the data more comprehensively.

Keywords: academic atmosphere, creativity, creative personality, lecturer-student collaboration, teaching models.

Abstrak: Kolaborasi Dosen-Mahasiswa di Pendidikan Tinggi sebagai Solusi untuk Meningkatkan Kepribadian Kreatif. Tujuan: Penelitian ini bertujuan untuk mengelaborasi peran kolaborasi dosen-mahasiswa dalam mengembangkan kreativitas mahasiswa. **Metode:** Penelitian ini merupakan jenis penelitian mix-method. Data diperoleh dari 30 mahasiswa dan delapan dosen di tiga perguruan tinggi negeri di kota Malang, Jawa Timur. Pengumpulan data dilakukan melalui skala kepribadian kreatif dan wawancara. Data kuantitatif di analisis dengan teknik analisis deskriptif, sedangkan data wawancara dianalisis dengan analisis tematik. **Temuan:** Hasil analisis menunjukkan bahwa kegiatan kolaborasi dosen-mahasiswa berimplikasi pada tingginya tingkat kreativitas mahasiswa. **Kesimpulan:** Hasil penelitian ini berimplikasi bahwa aktivitas dosen mempunyai peran yang penting dalam mengembangkan kreativitas mahasiswa. Keterbatasan penelitian ini terletak pada proses pengambilan data yang hanya dilakukan secara online. Penelitian selanjutnya, diharapkan menggunakan metode observasi dan wawancara mendalam sehingga mampu mengungkap data secara lebih komprehensif.

Kata kunci: suasana akademik, kreativitas, kepribadian kreatif, kolaborasi dosen-mahasiswa, model pembelajaran.

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■ INTRODUCTION

The learning process that has been going on so far has failed to develop student creativity (Cosgrove, 2021; Richardson & Mishra, 2018). Educational practices that should aim to build creativity are the opposite. Lecturers as actors who play a central role in developing student creativity on campus have become an obstacle to the emergence of the invention. Several studies examining creativity have shown unsatisfactory results (Fan & Cai, 2020). Experts have reminded this condition (Mi-Ra, 2016; Sripongwiwat, 2016), who stated that one of the factors causing the low level of student creativity is the learning process that has not taken sides to develop student creativity.

Some of the literature that examines educational practices to develop creativity can be grouped into two groups. First, groups that develop creativity directly as part of the subject matter in learning (Gu, 2019; Sun, 2020). This model of developing creativity is carried out in various pieces of training on creative problem-solving. Second, groups that develop creativity through certain subjects. A model like this makes creativity a nurturing effect compared to the instructional impact of a learning process (Aziz, 2018; Chidayati et al., 2021). The two models of developing creativity place the teacher as the leading actor while students are positioned as objects impacted in learning practices.

Creativity as the highest potential of humankind was correlated with various other positive aspects. For example, research has found that creativity is associated with academic achievement (Hines et al., 2019; Tang, 2019). It means that the higher the creativity of students, the higher the academic achievement. Other studies have found that creativity is correlated with mental health and psychological wellbeing (Gladding & Drake Wallace, 2018; Kerr et al., 2021; Kyaga, 2015). These studies conclude that creativity has substantial potential and can predict

high and low academic achievement, psychological wellbeing, and mental health.

Research on creativity has indeed been carried out with various approaches, including in the learning process in the classroom. Each learning model has two objectives, namely direct learning objectives and accompaniment objectives. Creativity is a subject matter that can be taught through these two models. In the first model, creativity is taught as a subject whose ultimate goal is to develop cognitive, affective, and psychomotor creativity. An example of the model used is a form of training on creative problem-solving. In the second model, the development of creativity is designed through other subjects. An example of this model is thinking creatively through mathematics subjects (Velikova & Petkova, 2019)

Creativity is a multidimensional concept, so experts cannot define the vision in one definition. Experts agree that to understand several approaches understand creativity. There are four approaches to understanding the notion of creativity known as P'4 creativity (Min & Gruszka, 2017). The four P's are person, process, product, and press. This article focuses on the study of creativity as a press and person. Creativity as a press means that creativity can develop when it gets support from the surrounding environment (Almelhi, 2021), while creativity as a person means creative personality characteristics (LeBoutillier & Barry, 2018b).

Some experts define creative personality characteristics as non-cognitive personality traits. Among the experts who state and elaborate on these personality traits are Stenberg & Lubart (1999). Their study of creative people concludes that there are six characteristics: perseverance in facing problems, daring to take risks, willingness to grow, tolerance of ambiguity, openness to new experiences, and self-confidence.

Several models of creative personality development have been carried out. The first

development is carried out through the learning process in the classroom (Antonietti et al., 2020). Aziz (2018) uses the synectics learning method in developing creative personalities. The second model, creative personality, is formed by creating an academic culture in schools that supports the development of creativity (Min & Gruszka, 2017; Tang, 2019). The third model, creative personality, is developed directly through training (Fa-Chung, 2015; Sun, 2020)

This article aims to complement the shortcomings of existing studies by “elaborating on the role of lecturer-student collaboration in developing student creativity. In line with that, three questions can be formulated: what are the lecturers’ views on the factors that hinder the development of student creativity? How do lecturers make efforts in developing student creativity? And how the implications of lecturer activities on students’ creative personalities. These three questions are intended to find a development model that can make students both objects and subjects develop creativity.

This article is built on an argument that the failure of the learning process in developing students’ creativity does not lie in the teacher’s ability to carry out learning but rather in choosing a learning model that is more teacher-oriented than student-oriented. Teacher-oriented learning practices demand more lecturers who are more active in the learning process, while students are more passive and wait for instructions from the teacher. The selection of cases on the development of creativity was chosen with three critical considerations. First, creativity is an essential aspect of action, so research on this theme requires much elaboration. Second, developing creativity will fail in other parts, considering that creativity is significant potential. Third, the failure of the learning process in developing creativity requires an alternative learning model that can be used as a solution.

■ METHODS

Research design.

This research is categorized as mixed with an embedded combined method model. The process carried out is to conduct quantitative research to obtain data on student creativity while at the same time seeking data from lecturers to get data on models of creativity development (Creswell & Plano Clark, 2017). The research was conducted by following several necessary steps. The first stage begins with making a creative personality scale and making interview guidelines. After the research instrument is ready, the following process is to prepare the administration of correspondence to conduct research at three state universities. The next stage is taking research data from students and lecturers done online. The last step is in the form of analyzing data and making research reports.

Participant

The research data were obtained from students and lecturers in three state universities: the State Islamic University of Malang, Brawijaya University of Malang, and the State University of Malang. Ten students are taken from each college, so the total number of research subjects is 30. Likewise, the issue of the lecturers amounted to eight people. Each university is represented by three lecturers, except the State Islamic University of Malang, only two lecturers, because one subject cannot participate in the interview during the data collection process. The subject selection process is carried out based on the willingness of students and lecturers to become research subjects.

Instrument

Data were obtained through the creative personality scale and online interviews. The scale of a creative personality is a measuring tool in the form of a Semantic differential scale developed

by the author. This measuring tool can reveal six indicators of a creative person, which refers to the theory developed by Sternberg (Sternberg, 2018). The six indicators are perseverance, courage to take risks, willingness to grow, tolerance for ambiguity, openness to experience, and self-confidence. Testing the validity of the measuring instrument is done through expert judgment. Interviews were conducted with lecturers focusing on two questions related to problems and activities to develop student creativity in higher education

Data analysis

Data analysis was carried out in two ways: quantitative analysis with descriptive statistical techniques and qualitative research with reflective thinking techniques. The results of the quantitative analysis are in the form of categorization of students' creative personalities. The authors use two crucial stages in the data analysis process (Miles et al., 2014). The first stage involves data reduction, data display, and data verification. The second stage is interpreting the findings in the field

to understand the meaning obtained from the field data.

■ RESULT AND DISCUSSIONS

This section describes three research findings related to problems in developing creativity, learning activities in developing creativity, and a description of student creative personality. Discussion is given after each result by providing a description, explanation, comparative and reflective.

Problems of students' creativity development

In this section, the type of data analyzed is data about the problem of developing creativity from the lecturer's perspective. The questions asked focus on the difficulties for lecturers in developing student creativity. Findings indicate that two factors hinder students' creativity. The findings in the field suggest that some students have low levels of reading literacy. These results follow the opinions expressed by three research subjects. See table 1.

Table 1. Literacy on student higher education

No	Statement	Coding
1	<i>In my opinion, the power of reading references is the biggest problem of today's students. I imagine that if students have good reading skills, they will have more exciting ideas (Fln, M, 45)</i>	The problem of literacy on student
2	<i>In my opinion, some students with low literacy will have difficulty developing creative ideas. Another problem is students' familiar spirit of achievement, so they must continue to be motivated and encouraged and even be forced to seek innovative thoughts and ideas (Ims, F, 40)</i>	The importance of literacy for creativity
3	<i>The challenge for teachers in developing student creativity is to create an academic climate by literacy program. Because this claim is not yet entrenched for today's students because they are used to instant information (Yht, F, 40).</i>	Create academic climate by literacy program

Table 1 describes three problems related to students' reading literacy skills. According to the lecturer, these three problems are considered factors that hinder creativity's emergence. The results strengthen previous findings which state the importance of reading literacy in various aspects of life, even though this ability is essential in education (Aziz et al., 2021; Puglisi, 2017). Another finding states that literacy is vital for developing students' creativity (Bitz, 2016; Orr, 2015). Some of these studies require that students' reading literacy is an essential ability to grow because it is the basis for developing other aspects of knowledge and character in students. The second finding states that some students passively participate in the learning process. These results are in line with the opinions expressed by the four research subjects. See table 2.

Table 2. Student activity in the learning process

No	Statement	Coding
1	<i>One of the difficulties I experienced was that some students were passive, so the learning process was still one-way. There are still some students who think conventionally who only accept the transfer of knowledge without practically developing the knowledge and theory that has been obtained in teaching (Sni, F, 34)</i>	Passive in the learning process
2	<i>One of the difficulties I feel is to invite students to think critically, analytically, and logically in the application of theory, to capture social phenomena, and explore them based on the scientific point of view being studied. Sometimes students have narrow-minded thoughts and are less comprehensive in making observations, analyses, and conclusions (Maf, M, 32)</i>	Narrow-minded thought
3	<i>individual differences sometimes become obstacles in the teaching and learning process students have high creativity so that the process can run quickly, but on the other hand, there are characteristics of students who are slow responses (Slt, F, 39)</i>	Slow responses

Table 2 explains that the second factor inhibiting student creativity according to lecturers is the passive attitude of students in participating in learning, narrow thinking, and being slow to respond to lecturers' demands in the learning process. The results of this study corroborate previous findings, which state that active student involvement in the learning process is an indicator of the success of the learning process (Cooper, 2018; Hedden, 2017), including the development of student creativity. Several studies have found that student activity in learning is a vital aspect in developing creativity (Davies et al., 2013; Khuziakhmetov, 2016). This explanation requires the teacher's critical role in learning to provide motivation and create a learning atmosphere that allows students to be actively involved in the learning process.

According to the lecturer's perspective, the inhibiting factor for the development of student creativity necessitates the necessity to change the thinking paradigm in the learning process. The learning process emphasizing the central role of the lecturer in learning must be changed. The ideal

learning process is a learning process that places students' roles as objects and subjects in education. Lecturers only act as facilitators in achieving learning objectives (Cooper, 2018; White, 2016). Lecturers have studied these roles in developing student creativity through three activities: providing encouragement, collaborating, and using varied learning.

Learning activity in developing creativity

In this section, the data analyzed is the lecturer's learning process. The questions posed

are focused on what lecturers do in teaching to support the development of student creativity?. The analysis results found three ways lecturers developed creativity: providing development opportunities, collaborating between lecturers and students, and using various learning models. The first way lecturers develop student creativity is by allowing them to grow and develop, providing opportunities by providing insight, challenges to try something new, and giving students the freedom to explore their ideas. These results are under what was conveyed by the four research subjects. See table 3.

Table 3. Supporting lecturers to students

No	Statement	Coding
1	<i>If I could only give encouragement and insight into the importance of creativity (Ysh, F, 51)</i>	Encouragement
2	<i>Increases curiosity, sensitivity, dare to compete, dares to try and is not afraid to fail, optimistic, and able to work together (Slr, F, 39).</i>	Challenges
3	<i>Freeing the student to explore the world around them, for example, freeing them to choose the research theme that surrounds them. It is hoped that they will be more sensitive in developing up-to-date psychological science (Fln, M, 45).</i>	Exploring
4	<i>As a teacher, I should be more encouraging, giving examples attached to everyday life, and of course, supervising what they are doing (Dpp, F, 28).</i>	Encouragement

Table 3 explains that the efforts made by lecturers in developing student creativity are to provide both cognitive and affective support to students. This study corroborates previous findings, stating that lecturer support for students in cognitive and affective forms is valuable. Research has found that the role of social support is significant in educational success (Kim et al., 2018; Ruzek et al., 2016). The study confirms that in addition to delivering learning materials in the classroom, another lecturer's task is to provide psychological

encouragement and support so that students' academic potential develops optimally (Supriyanto et al., 2020). The second activity of lecturers in developing student creativity is to use innovative and varied learning models. These data are statements made by the three research subjects. The second activity of lecturers in developing student creativity is to invite students to collaborate in research activities and community service. These data are statements made by the three research subjects See table 4.

Table 4. Lecturer-student collaboration

No	Statement	Coding
1	<i>I try to involve students in my research and community service activities (Maf, M, 32)</i>	Collaboration in research
2	<i>I involve students in research and community service activities. And I invite them to create scientific content and blogs that are useful for public literacy (Sni, F, 34).</i>	Collaboration in project
3	<i>I guide the student and continues to invite discussions to make their ideas more solid and useful (Fln, M, 45)</i>	Collaboration and discussion

Table 4 explains that lecturers have tried to develop student creativity through collaborative research and community service activities. This study corroborates previous findings stating that lecturer-student collaboration activities are essential in developing student creativity. Several previous studies have shown that collaborative activities carried out by lecturers and students can increase the success of the learning process (Mora-Ruano et al., 2021; Morze et al., 2016) and acquire aspects of students' personalities (Rehatschek et al., 2019).

The results of this study justify that the lecturer's task is not only to convey lessons to students. Students are not subjects who can only be treated passively, but they can be used as friends to carry out collaborative learning activities. Research findings that cooperative learning can be an alternative to develop creativity (Rehatschek et al., 2019). The third activity of lecturers in developing student creativity is to use diverse and innovative learning models. These data are statements made by the three research subjects.

Table 5. Method of lecturer activity in teaching

No	Statement	Coding
1	<i>I apply two-way learning from lecturers, and students conduct project-based learning (Sni, F, 34)</i>	Project-based learning models
2	<i>I use learning methods, including case studies problem-based learning to support the development of student creativity (Dpp, F, 28)</i>	Case studies
3	<i>I designed a lesson that can encourage students to practice literacy and practice the knowledge that has been given, using problem-based learning (Ims, F, 46)</i>	Problem-based learning models
4	<i>We use a learning approach that stimulates students' high-order thinking skills (Yht, F, 40)</i>	High order thinking skills models

Table 5 explains that the teaching method used by lecturers to develop student creativity is to use problems based learning models, case studies, and other learning models that can

stimulate higher-order thinking skills. This study corroborates previous findings that varied learning models affect students' motivation and academic achievement (Mora-

Ruano et al., 2021; Schiefelbein & McGinn, 2017). Further research shows that problem-based learning can develop students' creativity (Bird, 2016; Chiu & Hong, 2017; Szmids & Majewska-Owczarek, 2020)

Three findings suggest that lecturers' activities in encouraging, collaborating in various academic activities, and using varied learning models are ways that can be used to develop student creativity. Expert suggests three ways to build creativity. First is the development of creativity through specific lessons. Second, the development of creativity through cognitive training in the form of training on creative problem-solving. Third, create an academic atmosphere that supports the development of creative attitudes, thoughts, and behavior (Amabile et

al., 2018). In this third way, creativity is not taught directly to students or students, but the teacher or lecturer must become a stimulator to bring out and develop motivation in students so that they develop their creative attitudes, thoughts, and behavior.

Description of student's creative personality

This section describes the findings of the creative personality of students from three universities in the city of Malang as shown in Table 6. The creative essence of students is seen from the aspect of perseverance in work, the courage to take risks, the desire to continue to grow, the ability to be tolerant of ambiguity, openness to new experiences, and self-confidence.

Table 6. Description of students' creative personality

No	The creative personality	High	%	Moderate	%	Low	%
1	Perseverance	28	93.33	2	6.67	0	-
2	Take a risk	20	66.67	7	23.33	3	10.00
3	Willingness to grow	29	96.67	0	-	1	3.33
4	Tolerance of ambiguity	7	23.33	13	43.33	10	3.33
5	Openness to experience	25	83.33	3	10.00	2	6.67
6	Self-Confidence	24	80.00	6	20.00	0	-

Table 6 explains that the creative personality characteristics of students are in the high category. Sequentially, students' creative personality level is the willingness to grow, perseverance, openness to experience, self-confidence, taking a risk, and tolerance of ambiguity. Of the six factors, only the tolerance of ambiguity character is moderate and low. These results are essential to study in more depth the reasons why these characteristics have different types from other influences. Image 1 will clarify the students' creative personality characteristics to explain these results.

The results showed that the creative personality level of students was in the high category, except for the tolerance of ambiguity characteristic, which was in the medium class. Tolerance of ambiguity is self-acceptance of the existence of something different from oneself. This characteristic is indicated by an appreciative attitude towards something ambiguous and does not perceive ambiguity as a threat to itself (Amabile et al., 1996; Min & Gruszka, 2017). This finding necessitates that the essential aspect of developing students' creative personalities is the aspect of tolerance of ambiguity.

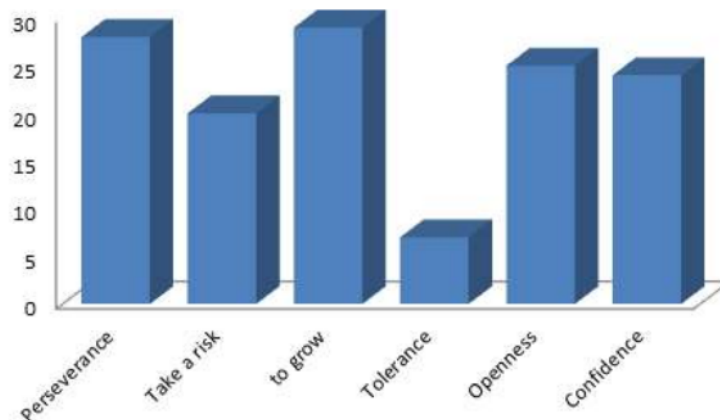


Figure 1. Description of students' creative personality

Several experts have researched this aspect. For example, the research found that tolerance of ambiguity is a characteristic that correlates with product creativity in designer students (Robinson et al., 2019). Other studies have found that tolerance of ambiguity is also associated with empathy (Bentwich, 2017). These studies show that this aspect is essential for creative personality characteristics that must be developed in educational practice.

This study reflects the importance of the academic atmosphere in developing student creativity. Higher education managers are responsible for making policies that support the creation of lecturers who have adequate competence and high professionalism. This policy causes lecturers as teaching staff who interact directly with students to have a role in designing and implementing learning according to student needs, especially in developing their creativity.

■ CONCLUSIONS

This study resulted in a conclusion about the importance of the role of lecturers in developing student creativity. The inhibiting factors for ideation in students can be overcome through lecturer activities in carrying out learning both inside and outside the classroom. The actions of lecturers who collaborate with students' have

resulted in a high level of their creative personality. The results of this study have implications that the role of lecturers as teaching staff who interact directly with students has the task of designing and implementing learning according to student needs, especially in the context of developing creativity.

Based on the research results, an awareness movement is needed to develop creativity in students. Such development can be carried out directly as parts of the subject matter being taught, such as creative problem-solving training or product, through lessons using specific teaching methods. The two development models are closely related to the role of lecturers in carrying out their functions as teaching staff.

This study has two limitations. First, the limitation on the number of student subjects is inadequate. Therefore, further research should consider increasing the number of research subjects. Second, the data collection method is online on the creative personality scale and interviews. Both techniques are still inadequate to obtain more comprehensive and in-depth data.

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■ REFERENCES

- Almelhi, A. M. (2021). Effectiveness of the ADDIE Model within an E-Learning Environment in Developing Creative Writing in EFL Students. *English Language Teaching*, 14(2).
- Amabile, T. M., Collins, M. A., Conti, R., Phillips, E., Picariello, M., Ruscio, J., & Whitney, D. (2018). Creatvty in context update to: The social psychology of creativity. In *Creativity in Context: Update to the Social Psychology of Creativity*. <https://doi.org/10.4324/9780429501234>
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39(5), 1154–1184. <http://amj.aom.org/content/39/5/1154.short>
- Antonietti, A., Pizzingrilli, P., & Valenti, C. (2020). *Enhancing Creativity Through Story-Telling: Innovative Training Programs for School Settings*. Springer International Publishing. <http://link.springer.com/10.1007/978-3-030-63013-3>
- Aziz, R. (2018). *Creative Learning: Teori, Riset, Praktik*. Edulitera.
- Aziz, R., Susanto, D., Safitri, S. I., Mazida, L. I., & Wijaya, T. (2021). Literacy learning problems/ : Developing the character of reading fondness in elementary school students during the COVID-19. *Premiere Educandum*, 11(2), 243–253.
- Bentwich, M. E. (2017). More than visual literacy: Art and the enhancement of tolerance for ambiguity and empathy. *BMC Medical Education*, 17(1). <https://doi.org/10.1186/s12909-017-1028-7>
- Bird, A. (2016). ... *the Cecchetti ballet syllabus can develop creative approaches to teaching and learning: an examination with special reference to teaching styles, educational models ...*. um.edu.mt. <https://www.um.edu.mt/library/oar/handle/123456789/13910>
- Bitz, M. (2016). Creating Comic Books in Nigeria: International Reflections on Literacy, Creativity, and Student Engagement. *Journal of Adolescent and Adult Literacy*, 59(4), 431–441. <https://doi.org/10.1002/jaal.451>
- Chidayati, N., Distrik, I. W., & Abdurrahman, A. (2021). Improving Students' Higher Order Thinking Skill with STEM-Oriented E-Module. *Indonesian Journal of Science and Mathematics Education*, 4(3), 274–286. <https://doi.org/10.24042/ijsme.v4i3.9930>
- Chiu, W. Y., & Hong, J. Y. (2017). A Study Of Creative Teaching And Technological Creativity Using Hierarchical Linear Models. *International Journal of ...*, 10(1), 60–73. <https://www.proquest.com/openview/b8800ee24deab408f2737cb8ac104919/1?pq-origsite=gscholar&cbl=55118>
- Cooper, K. (2018). The influence of active learning practices on student anxiety in large-enrollment college science classrooms. *International Journal of STEM Education*, 5(1). <https://doi.org/10.1186/s40594-018-0123-6>
- Cosgrove, S. E. (2021). Liminality and process: strategies for the creative writing classroom. *New Writing*. <https://doi.org/10.1080/14790726.2020.1855201>
- Creswell, J. W., & Plano Clark, V. L. (2017). *Designing and Conducting Mixed Methods*

- Research | SAGE Publications Ltd. In *SAGE Publications, Inc.*
- Davies, D., Jindal-Snape, D., Collier, C., Digby, R., Hay, P., & Howe, A. (2013). Creative learning environments in education-A systematic literature review. *Thinking Skills and Creativity*, 8, 80–91. <https://doi.org/10.1016/j.tsc.2012.07.004>
- Fa-Chung, C. (2015). Improving your creative potential without awareness: Overinclusive thinking training. *Thinking Skills and Creativity*, 15(Maret), 1–12. <https://doi.org/10.1016/j.tsc.2014.11.001>
- Fan, M., & Cai, W. (2020). How does a creative learning environment foster student creativity? An examination on multiple explanatory mechanisms. *Current Psychology*. <https://doi.org/10.1007/s12144-020-00974-z>
- Gladding, S. T., Drake, W., & J., M. (2018). Scriptotherapy: Eighteen Writing Exercises to Promote Insight and Wellness. *Journal of Creativity in Mental Health*, 13(4). <https://doi.org/10.1080/15401383.2018.1486259>
- Gu, X. (2019). Fostering children's creative thinking skills with the 5-I training program. *Thinking Skills and Creativity*, 32, 92–101. <https://doi.org/10.1016/j.tsc.2019.05.002>
- Hedden, M. (2017). Teaching sustainability using an active learning constructivist approach: Discipline-specific case studies in higher education. *Sustainability (Switzerland)*, 9(8). <https://doi.org/10.3390/su9081320>
- Hines, M. E., Catalana, S. M., & Anderson, B. N. (2019). When Learning Sinks In: Using the Incubation Model of Teaching to Guide Students Through the Creative Thinking Process. *Gifted Child Today*, 42(1). <https://doi.org/10.1177/1076217518804858>
- Kerr, B. A., Birdnow, M., Wright, J. D., & Fiene, S. (2021). They Saw It Coming: Rising Trends in Depression, Anxiety, and Suicidality in Creative Students and Potential Impact of the COVID-19 Crisis. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.611838>
- Khuziakhmetov, A. (2016). Creativity in joint activity of teacher and student in the learning process. *Mathematics Education*, 11(4), 735–745. https://api.elsevier.com/content/abstract/scopus_id/84979658380
- Kim, B., Jee, S., Lee, J., An, S., & Lee, S. M. (2018). Relationships between social support and student burnout: A meta-analytic approach. *Stress and Health*. <https://doi.org/10.1002/smi.2771>
- Kyaga, S. (2015). *Creativity and Mental Illness*. Palgrave Macmillan UK. <http://link.springer.com/10.1057/9781137345813>
- LeBoutillier, N., & Barry. (2018a). *Creativity, wellbeing and mental health practice*. Springer Berlin Heidelberg. LeBoutillier, N., & Barry, R. (2018b). Psychological Mindedness, Personality and Creative Cognition. *Creativity Research Journal*, 30(1). <https://doi.org/10.1080/10400419.2018.1411440>
- Mi-Ra, J. (2016). The influence of creative personality on learning flow of university students majoring in dance. *Indian Journal of Science and Technology*, 9(25). <https://doi.org/10.17485/ijst/2016/v9i25/97200>
- Miles, B. M., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis*. In Sage Publications. Min, T., & Gruszka, A. (2017). The 4P's Creativity Model and its Application in Different Fields. In *Handbook of the Management of Creativity and Innovation* (Issue May,

- pp. 51–71). https://doi.org/https://doi.org/10.1142/9789813141889_0003
- Mora-Ruano, J. G., Schurig, M., & Wittmann, E. (2021). Instructional Leadership as a Vehicle for Teacher Collaboration and Student Achievement. What the German PISA2015 Sample Tells Us. In *Frontiers in Education*. frontiersin.org. <https://doi.org/10.3389/feduc.2021.582773>
- Morze, N., Pavlova, H., Makhahchashvili, R., & ... (2016). *Teacher-student collaboration: challenges and opportunities*. rebus.us.edu.pl. <https://rebus.us.edu.pl/handle/20.500.12128/7887>
- Orr, A. M. (2015). Fostering a creativity mindset in content area pre-service teachers through their use of literacy strategies. *Thinking Skills and Creativity*, 16, 69–79.
- Puglisi, M. (2017). The Home Literacy Environment Is a Correlate, but Perhaps Not a Cause, of Variations in Children's Language and Literacy Development. *Scientific Studies of Reading*, 21(6), 498–514. <https://doi.org/10.1080/10888438.2017.1346660>
- Rehatschek, H., Matzer, F., Vajda, C., & ... (2019). Successful embedding of virtual lectures in medical psychology education in order to improve teacher-student interactivity and collaboration. ... *Conference on Interactive ...*. https://doi.org/10.1007/978-3-030-40274-7_1
- Richardson, C., & Mishra, P. (2018). Learning environments that support student creativity: Developing the SCALE. *Thinking Skills and Creativity*, 27. <https://doi.org/10.1016/j.tsc.2017.11.004>
- Robinson, J., Jane, E. W., & Winfrey, B. F. (2019). Creativity and tolerance of ambiguity in fashion design students. *International Journal of Fashion Design, Technology and Education*, 12(1), 96–104. <https://doi.org/10.1080/17543266.2018.1516807>
- Ruzek, E. A., Hafen, C. A., Allen, J. P., Gregory, A., Mikami, A. Y., & Pianta, R. C. (2016). How teacher emotional support motivates students: The mediating roles of perceived peer relatedness, autonomy support, and competence. *Learning and Instruction*. <https://doi.org/10.1016/j.learninstruc.2016.01.004>
- Schiefelbein, E., & McGinn, N. F. (2017). Models of the Process of Teaching. *Learning to Educate*. https://doi.org/10.1007/978-94-6300-947-8_4
- Sripongwiwat, S. (2016). The constructionism and neurocognitive-based teaching model for promoting science learning outcomes and creative thinking. *Asia-Pacific Forum on Science Learning and Teaching*, 17(2). https://api.elsevier.com/content/abstract/scopus_id/85020866559
- Sternberg, R. J. (2018). The Nature of Human Creativity. In *The Nature of Human Creativity*. <https://doi.org/10.1017/9781108185936>
- Sternberg, R. J., & Lubart, T. I. (1999). The concept of creativity: Prospects and paradigms. In R.J. Sternberg (Ed.), *Handbook of creativity*. In *Cambridge University Press* (Vol. 1).
- Sun, M. (2020). Effects of divergent thinking training on students' scientific creativity: The impact of individual creative potential and domain knowledge. *Thinking Skills and Creativity*, 37. <https://doi.org/10.1016/j.tsc.2020.100682>
- Supriyanto, A., Hartini, S., Irdasari, W. N., Miftahul, A., Oktapiana, S., & Mumpuni, S. D. (2020). Teacher professional quality: Counselling services with technology in

- Pandemic Covid-19. *Counsellia: Jurnal Bimbingan Dan Konseling*, 10(2). <https://doi.org/10.25273/counsellia.v10i2.7768>
- Szmidt, K. J., & Majewska-Owczarek, A. (2020). Theoretical Models of Teaching Creativity-Critical Review. *Creativity*, 7(1). <https://doi.org/10.2478/ctra-2020-0004>
- Tang, M. (2019). Fostering Creativity in Intercultural and Interdisciplinary Teams: The VICTORY Model. *Frontiers in Psychology*, 10(September). <https://doi.org/10.3389/fpsyg.2019.02020>
- Velikova, E., & Petkova, M. (2019). Analysing students' creativity in integrating geogebra applets in solving geometrical problems. *Baltic Journal of Modern Computing*, 7(3). <https://doi.org/10.22364/bjmc.2019.7.3.08>
- Veronika, C., Susilo, D. A., & Wulandari, T. C. (2016). Penerapan pendekatan ilmiah dalam pembelajaran matematika untuk meningkatkan kreativitas siswa. *Universitas Kanjuruhan Malang*, 1.
- White, M. A. (2016). Why won't it Stick? Positive Psychology and Positive Education. *Psychology of Well-Being*, 6(1). <https://doi.org/10.1186/s13612-016-0039-1>