



“Analyze the Competencies of Teachers about Classroom Teaching Methodologies for Creative Teaching in Universities of Azad Jammu and Kashmir”

Rabia Khurshid: *Institute of Education, University of Azad Jammu and Kashmir*

Asma Zia: *Institute of Education, University of Azad Jammu and Kashmir*

Sadia Suleman: *Sardar Bahadur Khan Wommen University Quetta*

Saud Ul Taj: *Glasgow Caledonian University London*

Received: May 12, 2024

Accepted: June 22, 2024

Published: June 30, 2024

KEY WORDS

Teaching methodologies, Competencies, Creative teaching, Innovative, Creativity

ABSTRACT

In recent years, there has been a great deal of emphasis and inspiration to shift from the usual “chalk and talk” to a more creative and innovative teaching methodologies. Without creativity, we have no art, no literature, no innovation, no problem solving, and no development. And it may be, less understandable that creativity has an equally vital position in teaching. That’s why it is of utmost importance to enhance creativeness in teaching methodologies in order to support learners’ learning abilities particularly, with the use of actual teaching activities, for accepting pleasure and attracting learners in a flexible and inventive way. The rationale of this study was to analyze the competencies of faculty about classroom teaching methodologies for creative teaching in universities of Azad Jammu & Kashmir. The nature of the study was quantitative. To test the research questions the survey research methodology was adopted. The sample of the study consisted of 541 university teachers. The findings of the study were based upon data analysis of questionnaires collected from university teachers. Findings of the study showed that teachers were not fully competent in all aspects of creative teaching methodologies. In some areas teachers were on high level of competency while on other hand they were on low and moderate level of competency in use of creative teaching methodologies. The study concluded on the basis of the result of the study that there is a need to improve the competencies in some areas regarding the use of teaching methodologies for promoting creativity in teaching.

Introduction

The excellence of higher education largely depends upon the quality of teaching in institutes of higher education (Tang, 2011). Teaching is an art (Johnson, 2015). It depends not only on knowledge and understanding of the core areas of learning, but also depends upon the ability to teach these creatively. According to Tharp (2000), the importance of teaching cannot be ignored, and in order to meet global trends, innovative changes to the teaching process are required. For the achievement of these innovative changes in the teaching procedure, the role of the teacher is pivotal. Highly qualified and well-trained university teachers are essential in building excellence in teaching (Murtaza, 2011).

The innovative role of teachers demands us to keep modernized in the substances of education. Similarly, we are concerned in technological progress and how to familiarize you with innovative results for learning. To improve the competencies it is essential to enrich our work and help our students, collaborating with other teachers and sharing ideas and experiences. It is obligatory for teachers to impact the lives of students optimistically and train them so that they recognize how to do something in diverse circumstances, value their development, and recognize how to make choices in diverse situations. Nowadays, education forms competencies for life.

In the process of learning and achievement of learners teachers are the ones who make students learn effectively and efficiently. The teacher can do a variety of activities both inside and outside the classroom, such as organizing, giving instructions, and evaluating what you are learning using appropriate teaching skills

and techniques. The teacher's efficiency and effectiveness depend to a large extent on the teacher's ability to teach. Indeed, we have all seen the power of teacher change in our lives. To make student learning more effective, teachers need to be knowledgeable in various fields to allow students to make the important decisions needed each day.

Creativity has become one of the basic capabilities to be put into practice in classrooms. According to Stein (2012) creativity is “an innovation that is valuable in the creation of innovative and realistic thoughts through an entity or little group functioning willingly”. According to Lubart, Mouchiroud, Tordjman & Zenasni (2015) creativity is the aptitude to create new and modified resolutions in a particular condition. Creativity is a bunch of skills that are required to create thoughts that are unique and valuable (Sternberg, 2006), and teaching imaginatively has been defined while ‘instructors using imaginative approaches to create knowledge further motivating, stimulating as well as effectual (Fautley, 2007). Coaching creatively needs both the right set of abilities and dispositions. One way to educate more innovatively is to look at teaching as a problem solving activity and to accept a growth mindset (Dweck, 2007).

Torrance (1980) states that one of the ‘architects’ in the study of the creative method, recommended that creativeness is the act of teaching in a new as well as the practical way that encouraged student development related to the development of innovative thought and action. Creative teaching focuses equally on the techniques a teacher employs to deliver learning and those techniques have effects on students and the outcomes produced. In the method of creative teaching, the teacher motivates learners’ interest in learning objects, and then guides’ learners to discover the

problem by themselves creatively, or present exact problems and inquires learners to use all kinds of accessible resources to discover the most excellent satisfying clarifications creatively.

Teachers are an important element of the instructive procedure and their places are at the center of the improvement of education. In AJK, the development in higher education is a new process because most universities have been established in recent years. Therefore there is a need for research about the fact that how the instructors in higher education integrate creativity in the coaching as well as learning settings through which they work.

Literature Review

Competency

Competency is a word applied comprehensively by diverse people in diverse circumstances; therefore, it is defined in diverse methods. This term is mostly used in two context teacher education and job performance. For successful completion of teacher education, competencies are the basic requirements. Competencies are the abilities that enable a teacher to be successful. To improve student learning, teachers must have proficiency in a extensive collection of competencies particularly in multifaceted surroundings where hundreds of serious decisions are necessary each day (Swank, Lambie, & Witta, 2012).

Competencies of Teacher

Being a teacher at any level requires a significant amount of knowledge and skill. Paying attention to the core competencies for educators helps to ensure that all teachers and others who work in education are prepared to make school a positive experience for students .Some of the basic competencies of teachers which are necessary for creative teaching are

following : interacting well with students, good at lesson plan design, creating a conducive learning environment, able to use varied teaching strategies, able to identify students need, good at communication, demonstrating a commitment to the profession and maintaining a professional appearance (Preckel, 2017).

Creative Teaching

Creative teaching is an essential component of fostering creativeness (Sternberg, 2015). Creative teaching is defined as instructive interactions assisted through the instructors that are “distinctive, modified as well as significant” (Rinkevich, 2011).

The act of instruction in a new and constructive method that supports learner’s development is associated with the improvement of unique thinking with an achievement. Creative teaching spotlights equally on the teaching use an instructor employs to convey knowledge along with the overall consequence those techniques have on learners and the result shaped (Zhou, 2016).

Creativity is a distinctive as well as imaginative technique of using an individual's thoughts and taking those thoughts to the next stage of consideration by transporting about new and stimulating techniques in demonstrating substance of knowledge. Teaching is a skill and a creative teacher is one who can use accessible information as well as who can deliver it to the learners in an innovative and distinctive manner by launching a procedure so, as to create constructive consequences from the learners (Waugh, 2010).

Torrance (1980) states that one of the ‘architects’ in the study of the imaginative method, recommended that creativeness is the act of teaching in a new as well as the practical way that encouraged

student development related to the development of innovative thought and action. Creative teaching focuses equally on the techniques a teacher employs to deliver learning and those techniques have effects on students and the outcomes produced. In the method of creative teaching, the teacher motivates learners' interest in learning objects, and then guides' learners to discover the problem by themselves creatively, or present exact problems and inquires learners to use all kinds of accessible resources to discover the most excellent satisfying clarifications creatively.

Facilitating Factors to Promote Creativity in Teaching

In order to develop the art of teaching in higher education it is important to simplify the promotion of institutional culture which gives great importance to its establishment and development, not limited to traditional forms of educational development. There is a need for educational transformation in higher education. In this transition there is a need for teachers to recognize and develop their skills as an integral part of their expertise. A climate center is needed that will give teachers and students the confidence to express themselves and improve themselves. Because of the important role of teachers in developing learners' creative skills, the arts should be a common theme in teacher development, to enable teachers to become familiar with and develop students' creative skills. Developing students' creativity is also important so that teachers can gain knowledge of teaching methods that can be used in the classroom and a variety of things that can contribute to the presentation of fairy tales (Wisdom, 2007).

Methods of Creative Teaching

Creative teaching is deliberated by the phase of creativity the teachers use in the classroom. Aschenbrener, Terry, & Torres (2010) confirmed that by the use corresponding information scholars rate their teachers at the stage of creativeness. This area is essential for the reason that it highlights main methods in which students can be forced to encourage in the learning situation. According to Lee (2013) students do better work according to their desires with motivation. There are different teaching methods through which creativity can be enhanced in classroom. Some of them are following.

The first and most successful mode to teach is a student focused approach to learning. Horng, Hong, ChanLin, Chang, & Chu (2005) argue that student focused approaches to learning propose that the instructors need changing position: from teacher to students. It is a very effectual teaching method because it makes sure that students are concerned in research through deliberation, group discussions, as well as conversation. It gives possibility to students to show attentiveness to the knowledge progression, as they should be concerned in the continuing conversation in the classroom. By using this method, instructors ask questions to students and permit them to provide any suitable answers to the deliberations between them. Similarly, Daniels (2010) recognizes that it is a very effectual and intellectual teaching method for the reason that it offers facilitators with the prospect to support their scholars by working as knowledge associates, facilitators, as well as contributor. Since it changes scholars into energetic spectators and aggravated people who are prepared to embrace novel ideas in order to do well in the knowledge procedure. Each learner will

be inclined to give awareness to the instructions specified by the teacher if he or she believes that they will have the prospect to converse without restraint that hurt somebody's feelings during the lesson. In addition, Wilhelm (2008) insists that a student focused approach to learning is the most proficient as well as successful teaching method for the reason that it expands a participatory learning feature while rising autonomous thoughts, creativity, and thoughts between scholars. Through adequate collaborative knowledge in the region, students' requirements will be meeting successfully, leading to alter of needs between them. They will always want to renovate the self-assurance of their instructors in the learning situation.

The next most effectual teaching technique is to employ a diversity of instruction assists in the class. Teaching methodologies are altering with a great speed. Bramwell, Reilly, Lilly, Kronish, and Chennabathni (2011) highlight so as to successful educators must stay awake with latest technologies make sure that they relate them to the learning process. For the teacher, the most excellent method to modify a learner's point of view is by using technology resources in the classroom. Teachers can employ the most significant teaching aids include PowerPoint, CD, computers etc.

According to Sousa (2011) the employ of coaching aids is one of the most effectual teaching tactics for inspiring students' opinion, and stimulates conversation between students. Improve student reminiscence due to enhanced capacity to unite the similar teaching with substance utilized by the instructor. Classroom meetings 'which comprise of the use of videos, slideshows, and visuals are forever amusing and improve students' concentration. Mostly, learners will seem

onward to program that comprise the employ of image support. Also, this approach is effectual as well as attractive for the reason that it removes the thought that teachers should employ the board and chalk to express their communication and demonstrate that this approach has the obligatory stage of multiplicity in the learning atmosphere which is why it increases students' want to achieve something in the area of education. Teachers who desire to innovate and make modification in their teaching sessions should be prepared to familiarize with accessible equipment in teaching.

A third strategy that shows effective as well as intellectual instruction is the instructor's capability to generate an association relating classroom content and real life. Certainly, most students take pleasure in reading when a teacher is intelligent to make realistic expressions. According to Lambert and Velez (2011), this tactic is effectual as well as imaginative for the reason that it improves students' capability to distribute personal information by means of others in the teaching technique. In fact, reminiscence keeps the majority of the thoughts contributed to special knowledge matched to those that highlight classroom learning material. Learners discover it easier to do their tests with such learning actions because of their ability.

According to Lee (2013) unite learning tricks with actual condition is an effectual instruction approach for the reason that it provides learners the chance to present as well as appreciate the genuine problems they are at present or may be bearing in the future. This forms their prospect which is why it makes sure that they produce as well as appreciate the kind of information that is passed on to them. However, the teacher wants to be

sympathetic in presenting the message so as to keep away from unfairness that may get in the way with the student's desire to learn.

The fourth effective and smart coaching tactic that involves the exercise of simple classroom management techniques are create friendly teacher-student communication, and operate students with high admiration. According to Wilhelm (2008) skilled teachers are familiar with require to resolve problems in their classrooms by structuring friendly relations with their students. In addition to set up friendly relations with qualified students, experienced teachers often admire learners for their accomplishment. In addition, teachers develop confidence in students to work hard in friendship and to concern for their requirements. This tactic is effectual and imaginative because it stirs up a wish for achievement in all learners.

METHODOLOGY

Research methodology is an organized way to investigate and resolve problems in social settings. It is the process of illustrating, explaining, and predicting a precise fact. It is a type of work sketch for the investigators. The nature of the study was descriptive. To collect the data a survey was conducted. For data analysis quantitative methods were used.

Sample

With the help of stratified random sampling participants of the study were selected from different departments of social sciences in 5 universities of AJK. 541 university teachers were the sample of the study.

Research Instrument

A questionnaire was used as a research instrument for data collection. It consisted of 16 questions associated with

different aspects of teaching methodologies for creative teaching.

Data Collection

Questionnaires were distributed among teachers through personal contact as well as via e-mail and Whatsapp. The total number of teachers contacted was 700, but 541 teachers responded positively out of 700.

Data Analysis

The entire collected data was put into a table form with the help of Microsoft Excel sheets in terms of frequencies. The data were analyzed through frequencies and percentages of responses

Teacher's Views about Different Practices used in the Classroom for Creative Teaching

S.No.	Statement	Always	Often	Sometime	Rarely	Never	Mean Value
1	Allow an open conference style of interaction	139 25%	256 46%	83 15%	8 4%	55 10%	3.8
2	Inform the learners with performance standards by which their work is to be evaluated	105 19%	276 50%	111 20%	10 3%	39 8%	3.7
3	Observe the learners while they are having self-learning in the classroom	169 30%	279 50%	55 11%	23 5%	15 4%	4.0
4	Use instructional strategies suitable for creative teaching	172 31%	276 50%	81 16%	2 1%	10 2%	4.1
5	Incorporate and integrate different forms of audio visual aids during instruction	154 28%	242 43%	85 15%	39 9%	21 5%	3.9

Analysis of statement No 1 represents that 25% university teachers

always, 46% often allowed an open conference style of interaction while 15% university teachers sometime, 4% rarely, 10% never allowed an open conference style of interaction. Mean score (M=3.8) represented that university teachers were highly competent to allow an open conference style of interaction.

Analysis of statement No 2 indicates that 19% university teachers always, 50% often informed learners about the standards of performance by which their work is to be evaluated while 20% sometime, 3% rarely 8% never informed learners about the standards of performance by which their work is to be evaluated. Mean score (M= 3.7) indicated that university teachers were highly competent to inform learners about the standards of performance by which their work is to be evaluated.

Analysis of statement No 3 shows that 30% university teachers always, 50% often observed the learners while they are having the self-learning in the classroom while 11% sometime, 5% rarely, 4% never observed the learners while they are having the self-learning in the classroom. Mean score (M= 4) showed that university teachers were highly competent to observe the learners while they are having the self-learning in the classroom.

Analysis of statement No 4 represents that 31% university teachers always, 50% often used instructional strategies suitable for creative teaching while only 16% sometime, 1% rarely, 2% never used instructional strategies suitable for creative teaching. Mean score (M= 4.1) represented that university teachers were highly competent to use instructional strategies according to the need of learning styles.

Analysis of statement No 5 shows that 28% university teachers always, 43% often Incorporated and integrated different

forms of audio visual aids during instruction while only 15% sometime, 9% rarely, 5% never Incorporated and integrated different forms of audio visual aids during instruction. Mean score (M=3.9) showed that university teachers were highly competent to Incorporate and integrate different forms of audio visual aids during instruction.

S.No.	Statement	Always	Often	Sometime	Rarely	Never	Mean Value
1	Involve students in group work to get the couple of ideas	163 29%	263 48%	74 13%	16 4%	25 6%	4
2	Use think pair and share activities for ideas generating	191 34%	181 33%	112 20%	22 5%	35 8%	3.10
3	Practice cooperative learning tasks	127 25%	304 55%	62 11%	25 5%	23 4%	3.9
4	Generate group discussion to connect different concepts presented in lecture	140 26%	241 44%	93 17%	27 5%	40 8%	3.9
5	Create collaborative work to encourage participation in academic activities	182 33%	203 37%	101 19%	30 6%	25 5%	3.9
6	Facilitate and guide students in evaluating set of ideas	208 38%	158 29%	82 15%	52 10%	41 8%	3.8
7	Use videos for visual learning of students	71 14%	138 25%	131 24%	157 28%	44 9%	3.1
8	Use flipped board for interactive instruction	9 2%	16 3%	147 27%	269 48%	100 20%	2.2
9	Use video conference to connect with students from remote areas	62 12%	69 12%	121 24%	149 27%	140 25%	2.6
10	Use of technology to enhance presentation skills	88 16%	108 20%	98 18%	165 30%	82 16%	2.9
11	Use post-its pad activity in group work	21 4%	51 9%	120 22%	286 52%	63 12%	2.4

Teachers' Views about Different Practices used in the Classroom for Creative Teaching

Analysis of statement No 1 represents that 29% university teachers always, 48% often involved students in group work to get the couple of ideas while 13% sometime, 4% rarely, 6% never involved students in group work to get the couple of ideas. Mean score (M = 4) represented that university teachers were highly competent to involve students in group work to get the couple of ideas.

Analysis of statement No 2 indicates that 34% university teachers always, 33% often used think pair and share activities for ideas generating while 20% sometime, 5% rarely, 8% never used think pair and share activities for ideas generating. Mean score (M= 3.10) indicated that university teachers were highly competent in use of think pair and share activities for ideas generating.

Analysis of statement No 3 elaborates that 25% university teachers always, 55% often practiced cooperative learning tasks whereas 11% sometime, 5% rarely, 4% never practiced cooperative learning tasks. Mean score (M= 3.9) showed that university teachers were highly competent in practice cooperative learning tasks.

Analysis of statement No 4 shows 26% university teachers always, 44% often generated group discussion to connect different concepts presented in lecture while 17% sometime 5% rarely 8% never generated group discussion to connect different concepts presented in lecture. Mean score (M= 3.9) showed that university teachers were highly competent to generate

group discussion to connect different concepts presented in lecture.

Analysis of statement No 5 indicates that 33% university teachers always, 37% often created collaborative work to encourage participation in academic activities while 19% sometime, 6% rarely, 5% never created collaborative work to encourage participation in academic activities. Mean score (M= 3.9) indicated that university teachers were highly competent to create collaborative work to encourage participation in academic activities.

Analysis of statement No 6 reveals that 38% university teachers always, 29% often facilitated and guide students in evaluating set of ideas where as 15% sometime, 10% rarely, 8% never facilitated and guide students in evaluating set of ideas. Mean score (M=3.8) revealed that university teachers were highly competent to facilitate and guide students in evaluating set of ideas.

Analysis of statement No 7 explains that 14% university teachers always, 25% often used videos for visual learning of students while 24% sometime, 28% rarely, 9% never used videos for visual learning of students. Mean score (M= 3.1) explained that university teachers were moderately competent in use of videos for visual learning of students.

Analysis of statement No 8 illustrates that 2% university teachers always, 3% often used flipped board for interactive instruction whereas 27% sometime, 48% rarely, 20% never used flipped board for interactive instruction. Mean score (M =2.2) showed that university teachers were on low level of competency in use of flipped board for interactive instruction.

Analysis of statement No 9 points out that 11% university teachers always, 13% often used video conference to

connect with students from remote areas while 22% sometime 27% rarely, 25% never used video conference to connect with students from remote areas. Mean score (M=2.6) pointed out that university teachers were moderately competent in use video conference to connect with students from remote areas.

Analysis of statement No 10 shows that 16% university teachers always, 20% often used of technology to enhance presentation skills while 18% sometime, 30% often, 16% never used of technology to enhance presentation skills. Mean score (M= 2.9) showed that university teachers were moderately competent in use of technology to enhance presentation skills.

Analysis of statement No 11 represents that 4% university teachers always, 9% often used post-its pad activity in group work whereas 22% sometime, 52% rarely, 12% never used post-its pad activity in group work. Mean score (M=2.4) represented that university teachers were less competent in use of post-its pad activity in group work.

Discussion

The rationale for conducting this research study was to analyze the competencies of faculty about classroom teaching methodologies for creative teaching in universities of AJ&K.

Findings from this study revealed the competency of university teachers about the key features of classroom teaching methodologies for creative teaching. They were asked to provide their answers on the main mechanisms of classroom teaching methodologies used for creative teaching. The mean score and frequencies showed significance in terms of the statistical values of their responses. The results of the study showed that university teachers were highly competent in use of old teaching methods

such as Discussion, Use of A.V.aids and Group work while on the other hand results of the study also revealed that university teachers were on low level of competency in use of innovative teaching techniques. e.g. use of flipped board for interactive session, use videos for visual learning of students, use video conference to connect with students from remote areas, use of technology to enhance presentation skills and use post-its pad activity in group work.

Results of the study showed that there was still a lack of competency in some areas of teaching methodologies and a need for training in different components of teaching methodologies, as these components were described in the findings of the study.

Findings of the previous researches also support the current research.

Findings of the research study by Cachia et al. (2010) on teachers' perceptions of creativity and the teaching practices that enhance creativity and innovation in the classroom also support the study. Results indicate that even if teaching for creativity can be mentioned in school curricula in many countries, it does not mean that schools are developing creative practices. They highlight the fact that teachers do not have a clear understanding of how creativity should be defined or how it should be introduced in classrooms (as learning or assessment) even though teachers.

According to Horng (2005), developing creativity. Instructors should begin with their training. These instructors should be equipped with the knowledge and skills of giving creative instructions. Schools, colleges and institutions of higher learning should hold workshops of creative instructions, by inviting creative instructors

and professionals to share their experiences in developing creativity and improving teaching strategies.

Conclusion

It was concluded from the result of the study that teachers are not fully competent in all aspects of creative teaching methodologies. There is a need to improve the competency in some areas regarding the use of innovative teaching methodologies for promoting creativity in teaching learning process. There is still lack of competency in university teachers in use of different innovative resources for promoting creativity in teaching. There is a need for training related to the use of different innovative teaching resources for improving teaching and promoting creativity in teaching.

Recommendations

For the improvement in teaching at higher education following measures may be taken.

- There may be a proper system of training related to the use of innovative teaching - learning resources in institutes of higher education in AJ&K.
- There may be an arrangement in institutes of higher education for teachers to bring up to date their knowledge according to the need of era after every 6 months.
- Use of the latest technology in teaching should be encouraged.

Journal of Consumer Studies, 29(4), 352-358

References

- Aschenbrener, M.A., Terry, R., Torres, R.M., & Smith, A.R. (2010). *Effective Teaching Methods*. Retrived from <https://cheap-papers.com/essays/education/effectiv-e-teaching-methods.php>
- Bramwell, G., Reilly, R. C., Lilly, F. R., Kronish, N., & Chennabathni, R., (2011). *Creative Teacher. Roper Review*, 33, 228-238. <http://dx.doi.org/10.1080/02783193.2011.603111>
- Daniels, H. (2010). *Effective Teaching Methods*. Retrived from <https://cheap-papers.com/essays/education/effectiv-e-teaching-methods.php>
- Dweck, C. S. (2007). Boosting Achievement with Messages that Motivate. *Canadian Education Association*, 47(2), 6-10. <http://www.cea-ace.ca/home.cfm>
- Fautley, J. S. (2007). *Creativity in Secondary Education*. Learning Matters Ltd.
- Horng, J. S. (2005). Creative teachers and creative teaching strategies. *International Journal of Consumer Studies*, 29, 352-358. <https://doi.org/10.1111/j.1470-6431.2005.00445.x>
- Horng, J. S., Hong, J. C., ChanLin, L. J., Chang, S. H., & Chu, H. C. (2005). Creativeteachers and creative teaching strategies. *International Journal of Consumer Studies*, 29(4), 352-358
- Lambert, M. D, Velez, J. J. (2011). Technology diffusion in the soft disciplines: Using social technology to support information technology. *Computers in the Schools*, 9(1), 81-105.
- Lee. (2013). *Effective Teaching Methods*. Retrived from <https://cheap-papers.com/essays/education/effectiv-e-teaching-methods.php>
- Lee. (2013). *Effective Teaching Methods*. Retrived from <https://cheap-papers.com/essays/education/effectiv-e-teaching-methods.php>
- Lubart, T. L., Mouchiroud, C., Tordjman, S., & Zenasni, F. (2015). *Psychology of Creativity*. Paris: Armand Collin.
- Murtaza, M. H. (2011). *Staff Development Needs in Pakistan Higher Education. College Teaching and Learning*, 8(1), 5-6. <https://doi.org/10.19030/tlc.v8i1.982>
- Preckel, F. (2017). Variables associated with achievement in higher education: A systematic review of meta-analyses. *Psychological bulletin*, 143(6), 565.
- Rinkevich, J. L. (2011). Creative teaching: Why it matters and where to begin. The clearing House. *A Journal of Educational Strategies, Issues and Ideas*, 84(3), 219-223. <https://doi.org/10.1080/00098655.2011.575416>
- Sousa, D. (2011). *How the brain learns*. Thousand Oaks, CA. Corwin Press.
- Stein, M. I. (2012). *Stimulating Creativity*. New York: Academic Press
- Sternberg, R. J. (2006). The Nature of Creativity. *Creativity Research*

- Journal*, 18(1), 87–98.
https://doi.org/10.1207/s15326934crj1801_10
- Sternberg, R. J. (2015). Teaching for creativity: The sounds of silence. *Psychology of Aesthetics, Creativity and the Arts*, 9(2), 115–117.
<https://doi.org/10.1037/aca0000007>.
- Swank, J. M., & Lambie, G. W. (2016). Development of the research competencies scale. *Measurement and Evaluation in Counseling and Development*, 49(2), 91-108.
- Tang, J. B. (2017). *Teaching for Quality Learning*. England: Open University Press.
- Tharp, R. G. (2000). *Teaching transformed: Achieving, excellence, fairness, inclusion, and harmony*. Boulder, CO: West view Press.
- Torrance, E. P. (1980). Assessing the further reaches of creative potential. *Journal of Creative Behavior*, 14(1), 1-19.
<https://eric.ed.gov/?id=EJ230504>.
- Torrance, E. P. (1980). Assessing the further reaches of creative potential. *Journal of Creative Behavior*, 14(1), 1-19.
<https://eric.ed.gov/?id=EJ230504>.
- Waugh, R. F. (2010). A measure of fostering creativity. *Creativity Research Journal*, 22 (2), 206-218.
<https://doi.org/10.1080/10400419.2010.481534>
- Wilhelm, J. D. (2008). *Engaging readers and writers with inquiry: Promoting deep understandings in language arts and the content areas with guiding questions*. New York: Scholastic Inc.
- Wisdom, J. (2007). Creativity in Higher Education: Challenges and Facilitating Factors. *Temas em Psicologia*, 25(2), 553-561. DOI: 10.9788/TP2017.2-09.
- Zhou, C. (2016). *Research on Creative Problem-Solving Skill Development in Higher Education*. Denmark: IGI Global Publisher of Timely Knowledge.