



# International Journal of Emerging Trends in Education

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Research Article

## Role of Teachers in Promoting Activity Based Learning among Students at Secondary Level

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Article Info.	Abstract
Received: 11-May-23 Revised: 17-Jun-23 Accepted: 5-Jul-23 Published: 9-Jul-23	The purpose of this study was to examine the influence of teachers in fostering activity-based learning among secondary-level students. In this study the researcher used quantitative approach and descriptive research methods. A survey was used for data collection. The target population for this study comprised all secondary school teachers in District Kotli AJ&K. Simple random sampling technique was used to select the sample. The research tool used in this study was a five-point Likert scale questionnaire. Frequency, percentage, mean, and standard deviation were used to analyze the data. It was found, teachers think that students can better learn through dramatic techniques in the classroom and students improve their verbal and non-verbal skills through dramatization techniques. Moreover, teachers practicing these techniques in the classroom to promote activity-based learning. It is recommended that teachers may use different techniques in the classroom. Furthermore, these techniques may improve students' communication skills.
<b>Keywords:</b>	Role of Teacher, Dramatization, Group discussion, Educational games, Brainstorming, Problem solving, Debates, Secondary level
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<b>How to Cite:</b>	Yaseen, S. & Farooq, A. (2023). Role of Teachers in Promoting Activity Based Learning among Students at Secondary Level. <i>International Journal of Emerging Trends in Education</i> , 1(1), 26-37.

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## **INTRODUCTION**

Learning is the procedure of obtaining new understandings, knowledge, behaviors, skills, standards, approaches and partialities. Some knowledge is instant, induced by a single event (such as getting burned by a hot stove), but many services and information are accrued from repeated experiences. Learning-induced changes often last a lifetime, and it can be difficult to distinguish between learning physical that appears to be 'lost' and physical that cannot be healthier (Barth, 2007). Activity-based learning (ABL) is generally defined as the activities students engage in to build knowledge and understanding. Activities vary, but require student reflection. Students reflecting on their own learning is an important link between activity and learning. In activity-based education, the focus is on the students, or we can say it is a student-centered approach (Pang, 2010). Students should be provided with the necessary data and materials for their focused thinking and interaction in the course of the information analysis process. This requires students to take the initiative to solve problems and find solutions through their own inquiry and analysis. By consistently practicing these processes, students not only learn the course content but also develop many other skills (Ali & Sebai, 2010). Activity-based education states to responsibilities given in the schoolroom. Input in the learning process and student participation are role elements of activity-based learning (Lier, 2007).

Activity-based learning, also known as interactive learning, collaborative learning, problem-based learning, or inquiry-based learning, encompasses various approaches that actively engage students in the learning process. It is widely recognized that without student motivation, even the most comprehensive resources and materials may fail to spark their interest in learning and cultivate a strong work ethic (Belland & Hannafin, 2013). Activity-based learning involves creating an environment where students actively participate in the learning process instead of passively absorbing information (Anwer, 2019). This approach allows students to express themselves, fosters their curiosity for further knowledge, and promotes teamwork and social skills development. The significance of activity-based education extends to promoting teacher-student interaction, immediate student feedback, and the exploration of individual student talents (Cranton, 2002).

Activity-based learning includes reading, writing, conversation, hands-on activities, and input in problem-solving, analysis, synthesis and evaluation (Festus, 2013). By giving learners ample opportunities to complete well, it may improve the cognitive, affective and psychomotor domains, respectively. Activity-based learning allows learners to learn through experimentation and examination. Sensory knowledge and action make schooling better and more impactful (Lo, 2012). In activity-based learning, the teacher plays a vital role in the students' real lives during and after school. The role of the teacher is to give guidance in the classroom that will help students in the future. In this role, teachers can encourage schoolboys to do their best and can be a basis of stimulus and leadership for students (Scrivener, 2005).

The main part of the teacher in facilitating activity-based scholarship is to support learners in their exploration of new knowledge on a specific set of topics. It is suitable for students of all ages, from preschool to postgraduate learners. But teachers should not limit themselves to classroom instructors in school settings, just as learners are not just empty minds waiting to be taught (Tsatsaroni, Ravanis, & Falaga, 2005). Instead, teachers have a responsibility to help shape the lives of their students and enliven the school curriculum. As students develop, good teachers can have a profound impact on their lives and career choices (Westheimer and Kahne, 2004). Numerous studies have shown that teachers have the power to motivate students to achieve

greatness in life. Outstanding teachers will always strive to encourage their students to develop a positive mindset and thrive in life (Chauca, 2021). As motivators, teachers must recognize students' motivations and interests. Depending on the interests of each student, they can hone their skills from an early age. It is very important for students to develop a genuine interest in a subject in order to excel in that subject (Siegle, 2005).

The part of instructors in facilitating activity-based scholarship in the lives of students is important and multifaceted. It can be said that teachers have a significant impact on the lives of students in all aspects. They shoulder the responsibility of shaping the next generation of society and promoting the development of all human beings. Every student needs a good teacher to guide them so that they can lay a solid foundation for a better future (Akerson & Lederman, 2000). At Tehsil Kotli Azad Jammu and Kashmir's secondary universities, teachers face many challenges in the modern classroom, including instruction multiple subjects, workload and need to cover a wide range of program content, large class sizes, and many other issues. This may drive teachers to use a address approach that allows them to cover as much content as possible; with little or no attention to individual differences, interests and needs of school boys. This means that no attention is paid to the active participation of the pupils; therefore, learning may not take place. Therefore, look for an appropriate instruction method that enhances learning through active participation and contribution. Therefore, researchers will conduct this study to find out the role of teachers in promoting activity-based learning among high school students.

### **Research objectives**

1. To find out the perception of teacher about the activity-based learning among students.
2. To identify the role of teacher in endorsing activity-based culture in students.

## **REVIEW OF THE RELATED LITERATURE**

### **Learning**

Learning is not the exclusive domain of the teaching system. Learning begins long before school, continues longer after school and occurs rapidly, in many different ways and contexts, and along with school. Education is defined functionally as a change in conduct caused by experience, or mechanistically as an organismal variation caused by experience (Pritchard, 2017).

### **Activity Based Learning**

Activity-based learning is best defined as anything that involves scholars doing things and rational about what they do (Lederman, 2000). If activity-based learning can be defined as productive knowledge. It will help scholars to master desired outcomes defined by educators themselves (Wright, 2011). Activity-based knowledge methods are based on the active participation of learners in the knowledge process to acquire services, knowledge and attitudes. The goal of activity-based teaching practices is to enable student learning. Activity-based knowledge is a highly effective strategy for helping scholars better comprehend important classroom knowledge. Considering the complexity of exercises and controlling the equal of risk is critical to selecting the most creative activity-based learning strategies in the classroom (Abd-El-Khalick, 2000).

Activity-based learning provides students with scaffolding and connects them with their classmates, thereby positively increasing effort and motivation (Belland, 2013). Unlike traditional learning, activity-based education is about changing the focus of delivering content and educators to scholars and actively interacting with them. Activity-based education has many positive aspects,

such as increasing student literacy and education appointment. Promoting relational and activity-based approaches can help scholars move from basic sympathetic and memorization to active rational styles such as assessing, examining, smearing and creating, which are at the top of Bloom's taxonomy (Peter, 2012). Activity-based teaching is an approach that relies on the educational principle of learning through activities. Certain characteristics are associated with implementing activity-based learning strategies in the classroom (Singal, 2018).

1. The focus is on improving students' skills, not imparting information.
2. Participate in higher-order thinking such as planning, synthesis, analysis, and evaluation.
3. The student is fully engaged in performing the task.
4. Guide students to explore their own values and attitudes.

“Children are active learners rather than passive recipients of information” is a common notion behind the idea of activity-based learning models (Steele & Singh, 2021). Activity-based learning shifts the focus of knowledge from the educator to the student. Education tasks are effective tools for beginners to role-play in the information environment to realize abstract concepts and effectively guide learning (Herrington, 2003). Activity-based education has been proven to be real in increasing the energy of lectures, and longer sessions are more acceptable. Schoolboy participation in the education process is designed to enhance sympathetic of course content (Felder, 2000). Therefore, it is necessary to organize activities rendering to the priority of doings, and create a scholarship environment that guides scholars to learn by experience and by doing. While boring culture environments continue to treat students as passive participants, an activity-based approach should control the classroom and classroom time as a useful element of learner appointment (Kiili, 2005).

In addition, the use of classroom activities places scholars at the center of the learning process, providing better opportunities for learning, thereby engaging students in using and loving the subject, making it an enjoyable teaching experience, providing opportunities for taking notes and discussing articles opportunities, and guide students to improve student motivation (Randi & Corno, 2000). Activity-based learning pedagogy is associated with better classroom practice and higher levels of learning. Greater teacher autonomy for learners was observed when classrooms with high teacher effort implemented map-based grouping and greater use of instructional materials (characteristic of the original ABL model in all states). The learning levels in these classes are also relatively high compared to whole class classes (Lier, 2007). Without employing structural mechanisms like map-scale-based clustering, classrooms can demonstrate high levels of student engagement with considerable effort from the teacher.

## **Types of Activity Based Learning**

### ***Dramatization***

In dramatization, children use their knowledge and experience of the real world to create an imagined world. Dramatization is at the heart of being because it is a valuable form of communication. It provides opportunities for children to cooperate in a shared life. Thus, it gives children the opportunity to express themselves more effectively in everyday life. This is their only natural way of understanding themselves and the world (Hakkarainen, 2006). Drama helps develop play, enabling children to develop creatively and constructively. Thus, children are able to express and communicate their feelings and understandings in their own way. It lets kids practice reasoning and recognition. It also provides emotional content in their social interactions (Papadopoulos, 2014). Staging inspires students to be imaginative, to create, to express their own identity, fancy and originality in problematic resolving. Thus through the direct experience of different situations

and the possibility of personality transformation, they are unable to express their creative potential (Nikolopoulou, 2018). Dramatization has an emotional and intellectual impact on participants and audience. Its influence acts like a mirror that examines us, deepens our understanding of human motivation and behavior, and broadens our horizons by painting the stories of life from different perspectives, cultures and time periods (Walmsley, 2013). Dramatization as a way that can provide a spark can be used in many disciplines, logical concepts, language concepts, mathematics, social relations, social studies, and anything that can be really successfully used as useful material (Kochoska, 2015).

### ***Quizzes***

A quiz is a speedy and educational valuation of a student's knowledge. Teachers often administer tests in education environments to assess learners' understanding of concepts. As such, it is the process of gaining insight into a student's subject. In the process, teachers can identify possible knowledge gaps (McConnell, 2006). Quiz is an application for creating interactive question-and-answer games for classroom learning. The teacher can make a quiz, and then there are 4 choices for students to answer, such as multiple-choice questions. But what makes quizzes unique is after students are given a quiz or question. Students can immediately know whether the answer is correct or incorrect. Quizzes can deliver data and statistics on student concert immediately after completing questions. In addition, Quiz can also do questions for homework. This way students can of course take the quiz anytime within the limits set by the teacher (Zainuddin, 2020).

### ***Group discussions***

A group conversation or Group Discussion (GD) is a form of discussion where individuals come together to exchange ideas and engage in collaborative activities. The participants in a group discussion share a common topic or theme, and each person presents their perspective based on that central idea. GD serves as an assessment tool to evaluate candidates' leadership abilities, communication skills, social behavior, etiquette, teamwork, active listening, general knowledge, confidence, problem-solving aptitude, and more (Hiratsuka, 2016). Group Discussion is an educational approach that encourages students to collaborate and discuss challenges and ideas. Through GD, students collaborate in small groups to solve problems and learn from one another. It fosters the development of critical thinking, problem-solving, and communication skills among students. The group dynamics in teaching are crucial as they enable teachers to support students in building their self-assurance (Moretti, 2011).

Group discussions serve as a valuable method for engaging students in meaningful classroom conversations, while also allowing them to develop their communication skills. Small group discussions are particularly effective for encouraging active participation and fostering an environment where students feel comfortable expressing their opinions and ideas (Goda, 2014). Engaging in group discussions empowers students to gain confidence in sharing their thoughts and enhances their ability to collaborate effectively. Furthermore, these discussions prompt students to think critically about various issues and challenges they may encounter in the future (Kayi, 2006). Group discussions hold significant potential as both educational and evaluative tools. When implemented successfully, they promote student engagement and critical thinking in the learning process. This guide provides helpful tips for facilitating and evaluating group discussions in the classroom (Zacharia, Pai, & Paul, 2021). Various approaches can be employed to conduct group discussions, such as having participants jot down their opinions before the session commences or allowing everyone to share their viewpoints simultaneously. Additionally, incorporating role-

playing activities relevant to students' career paths can deepen their understanding of the lesson's objectives and connect the content to real-world scenarios.

### ***Educational Games***

Educational games are designed around specific learning experiences or outcomes. Many games that children play have some type of educational content, although sometimes players do not realize that they are practicing skills or using their knowledge while playing (Godwin-Jones, 2014). Instructive sports are games that are clearly designed for educational purposes, or that have secondary or moderate educational value. All types of games can be used in instructive settings, but educational games are games designed to help people learn about certain topics, expand concepts, reinforce their development, learn about historical events or nations, or help them learn as they develop skills. Play. Types of games comprise board games, card games, and video games (Rosas & Salinas, 2003). Games are collaborating games that teach goals, rules, adaptation, problem solving, interaction, all in the form of stories. They meet the basic needs of learning by bringing fun, excited engagement, structure, motivation, self-satisfaction, adrenaline, imagination, social interaction, and feeling into play itself through the learning process (Turel and Yuan, 2012).

### ***Brainstorming***

Thinking is a method of generating ideas and allocation knowledge to solve a exact business or technical problem, cheering participants to think without interruption. Thinking is a group activity where each applicant shares ideas that come to them. At the end of the meeting, ideas are branded and filed for follow-up (Evans, 2012). Topics that are too specific limit thinking, while unwell defined topics will not produce enough directly applicable ideas. The preparation of think tanks is also important. It should comprise people who are directly related to the theme as well as people who can pay new and unexpected ideas. It may include workers inside or outside the association (Dunbar, 2017). Brainstorming is a collective method in which many people together agree on a solution after donating and discussing all their ideas.

### ***Problems solving***

The difficulties to be solved range from simple private tasks (for example, how to turn on a device) to complex problems in corporate and technical domains. The first is an example of simple tricky solving (SPS) dealing with one problem, while the second is complex problematic solving (CPS) with multiple interrelated obstacles (Jordan & Mitchell, 2015). This foreshadows that students can take some accountability for their own education, take personal action to solve problems, resolve conflicts, discuss substitutions, and make reflection a significant part of the curriculum. It provides students with openings to use their newly learnt knowledge in concrete and meaningful activities and helps them work on advanced order thinking (Foshay, 2003). Students should observe, understand, analyze, interpret, find solutions, and apply to gain a full understanding of concepts. This method develops skills in the logical process. This method helps to develop a brainstorming process to learn concepts (Hofstein, 2004).

### ***Debates***

A dispute (discussion involving an argument) between two groups in which one group defends a controversial issue or topic while the other presents an argument against that topic. A debate is the process of a formal conversation involving a specific topic, usually involving a moderator and an audience (Kuhn, 2010). In debates, arguments are often made over opposing points of view. Debate has historically taken place in public assemblies, academic institutions, debating halls, cafés, competitions and legislative bodies. Arguments are also used for educational and

entertainment purposes and are often associated with educational institutes and eloquence societies. These debates emphasize logical consistency, factual accuracy, and emotional appeal to audiences (Balme, 2014). Competitive debate in its modern form also comprises rules for participants to discuss and determine the scope of the debate (how it will be judged). Debating is a form of discussion that can propose some unique benefits, including improved systematic skills and public speaking skills. The benefit of debate as a teaching strategy does not necessarily lie in the debate itself, but in the preparation beforehand and the review and reflection afterwards (Daniel, 2006).

### ***Discovery Learning***

Learn by exploring or determining. Learn by exploring or discovering many aspects of the setting on your own. Discovery learning is an inquiry-based approach to learning that employs a constructivist approach to education in which students are fortified to construct their own knowledge through a process of self-directed learning essentially “uneducated” learning (Castronova, 2002). Discovery learning tasks can range from detecting implicit patterns to obtaining clarifications, using textbooks, and performing simulations. Discovery knowledge occurs whenever students do not accept exact answers, but rather the supplies they need to find the answers themselves. In the procedure of discovery learning, students learn to access material in the most relevant way to solve the problematic at hand, making ideas hands-on and sticky (Alfieri, Brooks, Aldrich, & Tenenbaum, 2011).

## **RESEARCH METHODOLOGY**

The study utilized a descriptive research method, employing a cross-sectional survey to collect data from secondary school teachers in Kotli AJ&K. The entire population of the study consisted of secondary school teachers, and a sample of 270 teachers was selected using a simple random sampling technique. For collecting data, a five-point Likert scale questionnaire was developed and validated by three experts from the Department of Education at the University of Kotli, Azad Jammu and Kashmir. The reliability of questionnaire was assessed by using Cronbach's alpha statistical technique in the SPSS software, yielding a reliability value of .827, indicating the suitability of the tool for the final survey. The researcher personally visited each secondary school to collect data from the sampled teachers. For data analysis and interpretation, the Statistical Package for Social Sciences (SPSS) was employed, utilizing frequency, percentage, mean, and standard deviation measures.

## **RESULTS**

Table 1: Mean analysis of dramatization

<b>Statements</b>	<b>N</b>	<b>Mean</b>
You think that students learn through dramatic techniques in the classroom.	270	4.37
You think dramatization techniques develop in students' cultural skills	270	4.11
You think dramatization techniques improves verbal and non-verbal communication skills for students.	270	4.21
You teach the students by using dramatic techniques in classroom.	270	4.01
You promote cultural skill in students during class teaching.	270	4.10
You help students improve their verbal and non-verbal skills through dramatization techniques.	270	4.22

Table 1 shows the mean scores of *dramatizations*. The table further represented that mean score of You think that students learn through dramatic techniques in the classroom.; N= 270, M=4.37, You think dramatization techniques develop in students’ cultural skills; N= 270, M= 4.11 You think dramatization techniques improves verbal and non-verbal communication skills for students.; N=270, M=4.21, You teach the students by using dramatic techniques in classroom; N=270, M=4.01, You promote cultural skill in students during class teaching; N=270, M=4.10 and You help students improve their verbal and non-verbal skills through dramatization techniques ; N=270, M=4.22. Furthermore, the results directed that You think that students learn through dramatic techniques in the classroom has the highest mean score in dramatizations.

Table 2: Mean analysis of group discussion

<b>Statements</b>	<b>N</b>	<b>Mean</b>
You think Group discussion is an excellent technique enhancing the learning of students.	270	4.35
You think small groups of students are better for discussion.	270	4.19
You think group discussion provides opportunities for students to improve their communication skills.	270	4.28
You make the groups for better learning of students	270	4.23
You make small groups of students for discussion.	270	4.20
You provide opportunities to students for the improvement of communication skills.	270	4.25

Table 2 shows the mean scores of group discussion. The table further represented that mean score of You think Group discussion is an excellent technique enhancing the learning of students.; N= 270, M=4.35, You think small groups of students are better for discussion.; N= 270, M= 4.19, You think group discussion provides opportunities for students to improve their communication skills.; N=270, M=4.28, You make the groups for better learning of students; N=270, M=4.23, You make small groups of students for discussion; N=270, M=4.20 and You provide opportunities to students for the improvement of communication skills; N=270, M=4.25. Furthermore, the results directed that You think Group discussion is an excellent technique enhancing the learning of students has the highest mean score in group discussion.

Table 3: Mean analysis of educational games

<b>Statements</b>	<b>N</b>	<b>Mean</b>
You think games are necessary for physical and mental health.	270	4.38
You think games develop patient in the students.	270	4.16
You think games improve the motivation level of students.	270	4.15
You teach the students through play-way method.	270	4.05
You motivate the students to take part in education games.	270	4.15
You provide opportunities to students in the classroom in which they can play educational games.	270	4.13

Table 3 shows the mean scores of games. The table further represented that mean score of You think games are necessary for physical and mental health; N= 270, M=4.38, You think games



develop patient in the students; N= 270, M= 4.16, You think games improve the motivation level of students ; N= 270, M= 4.15, You teach the students through play-way method; N=270, M=4.05, You motivate the students to take part in education games; N=270, M=4.15 and You provide opportunities to students in the classroom in which they can play educational games.; N=270, M=4.13. Furthermore, the results directed that You think games are necessary for physical and mental health has the highest mean score in games.

Table 4: Mean analysis of brainstorming

<b>Statements</b>	<b>N</b>	<b>Mean</b>
You think brainstorming is a technique that helps in learning.	270	4.35
You think brainstorming encourages the students to share their ideas.	270	4.29
You think brainstorming increase the learning of students.	270	4.31
You teach the students through brainstorming technique.	270	4.31
You provide opportunities to students in the classroom to share their ideas.	270	4.40
You use brainstorming questions in the classroom to increase students learning.	270	4.28

Table 4 shows the mean scores of brainstorming. The table further represented that mean score of You think brainstorming is a technique that helps in learning.; N= 270, M=4.35, You think brainstorming encourages the students to share their ideas.; N= 270, M= 4.29, You think brainstorming increase the learning of students.; N=270, M=4.31, You teach the students through brainstorming technique; N=270, M=4.31 You provide opportunities to students in the classroom to share their ideas; N=270, M=4.40 and You use brainstorming questions in the classroom to increase students learning ; N=270, M=4.28. Furthermore, the results directed that You provide opportunities to students in the classroom to share their ideas has the highest mean score in brainstorming.

Table 5: Mean analysis of problem solving

<b>Statements</b>	<b>N</b>	<b>Mean</b>
You think student's problems create hurdles in learning.	270	4.20
You think students can find a solution of any problem by themselves.	270	3.98
You think that problems effect the academic activities of students	270	4.24
You solve the student's problems in the classroom.	270	4.19
You guide the students to find solution of problems by themselves.	270	4.22
You solve the problems of students so that they perform better in academics.	270	4.24

Table 5 shows the mean scores of problem-solving. The table further represented that mean score of You think student's problems create hurdles in learning.; N= 270, M=4.20, You think students can find a solution of any problem by themselves; N= 270, M= 3.98, You think that problems effect the academic activities of students; N=270, M=4.24, You solve the student's problems in the classroom; N=270, M=4.19, You guide the students to find solution of problems by themselves; N=270, M=4.22 and You solve the problems of students so that they perform better in academics; N=270, M=4.24. Furthermore, the results directed that You solve the problems of students so that they perform better in academics has the highest mean score in problem solving.

## **CONCLUSIONS**

It is concluded that students can better learn through dramatic techniques in the classroom and students improve their verbal and non-verbal skills through dramatization techniques. Moreover, teachers practicing these techniques in the classroom to promote activity-based learning. It is also concluded that teachers perceived that group discussion is an excellent technique in enhancing the learning of students and group discussion provide equally opportunities to participate. Furthermore, teachers guide students for small group discussions that help students to improve their communication skills. It is further concluded that teachers think that games are necessary for physical and mental health of students and games develop patient and motivate the students. Moreover, teachers use play-way method/ educational games to improve students' learning. Furthermore, teachers perceived that brainstorming is a technique that helps students in learning and encourages them to share their ideas and teachers use brainstorming method/questions in the classroom to increase students learning.

## **RECOMMENDATIONS**

It is recommended that teachers may use different techniques in the classroom. Students learn more with different techniques. Furthermore, these techniques improve their student's communication skills. It is also recommended that teacher may use more dramatization techniques in the classroom for the betterment and enhancement of student learning. It is further recommended that head/teachers of secondary school may organize the co-curricular and extra-curricular activities in school as extra course. These activities are good for physical and mental health of students. Teachers may also use demonstration techniques in their teaching because it is helpful in recalling student's previous knowledge. They check how much students understand and learn. It is also recommended that teachers may motivate/encourage and guide the students to participate in classroom activities and furthermore, they may also encourage the students to take part in class discussions.

## **REFERENCES**

- Ali, W. G. M., & El Sebai, N. A. M. (2010). Effect of problem-based learning on nursing students' approaches to learning and their self-directed learning abilities. *International Journal of Academic Research*, 2(4), 188-195.
- Alfieri, L., Brooks, P. J., Aldrich, N. J., & Tenenbaum, H. R. (2011). Does discovery-based instruction enhance learning? *Journal of educational psychology*, 103(1), 1-12.
- Akerson, V. L., Abd-El-Khalick, F., & Lederman, N. G. (2000). Influence of a reflective explicit activity-based approach on elementary teachers' conceptions of nature of science. *Journal of Research in Science Teaching: The Official Journal of the National Association for Research in Science Teaching*, 37(4), 295-317.
- Anwer, F. (2019). Activity-Based Teaching, Student Motivation and Academic Achievement. *Journal of Education and Educational Development*, 6(1), 154-170.
- Barth, M., Godemann, J., Rieckmann, M., & Stoltenberg, U. (2007). Developing key competencies for sustainable development in higher education. *International Journal of sustainability in higher education*.
- Balme, C. B. (2014). *The theatrical public sphere*. Cambridge University Press.
- Belland, B. R., Kim, C., & Hannafin, M. J. (2013). A framework for designing scaffolds that improve motivation and cognition. *Educational psychologist*, 48(4), 243-270.
- Castronova, J. A. (2002). Discovery learning for the 21st century: What is it and how does it

- compare to traditional learning in effectiveness in the 21st century. *Action research exchange*, 1(1), 1-12.
- Chauca, M., Phun, Y., Curro, O., Chauca, C., Yallico, R., & Quispe, V. (2021). Disruptive innovation in active activity-based learning methodologies through digital transformation. *International Journal of Information and Education Technology*, 11(4), 200-204.
- Cranton, P. (2002). Teaching for transformation. *New directions for adult and continuing education*, 93(3), 63-72.
- Evans, N. (2012). Destroying collaboration and knowledge sharing in the workplace: a reverse brainstorming approach. *Knowledge Management Research & Practice*, 10(2), 175-187.
- Dunbar, K. (2017). Problem solving. *A companion to cognitive science*, 23(2)289-298.
- Festus, A. B. (2013). Activity-based learning strategies in the mathematics classrooms. *Journal of Education and Practice*, 4(13), 8-14.
- Felder, R. M., Woods, D. R., Stice, J. E., & Rugarcia, A. (2000). The future of engineering education: Part 2. Teaching methods that work. *Chemical engineering education*, 34(1), 26-39.
- Foshay, R., & Kirkley, J. (2003). Principles for teaching problem solving. *Technical paper*, 4(1), 1-16.
- Goda, Yoshiko, Masanori Yamada, Hideya Matsukawa, Kojiro Hata, and Seisuke Yasunami. "Conversation with a chatbot before an online EFL group discussion and the effects on critical thinking." *The Journal of Information and Systems in Education* 13(1), 1-7.
- Godwin-Jones, R. (2014). *Games in language learning: Opportunities and challenges*. London: Routledge.
- Hakkarainen, P. (2006). Learning and development in play. *Nordic childhoods and early education*, 34(4)183-222.
- Herrington, J., Oliver, R., & Reeves, T. C. (2003). Patterns of engagement in authentic online learning environments. *Australasian Journal of Educational Technology*, 19(1), 234-241.
- Hiratsuka, T. (2016). Actualizing Exploratory Practice (EP) principles with team teachers in Japan. *System*, 57(5), 109-119.
- Hofstein, A., & Lunetta, V. N. (2004). The laboratory in science education: Foundations for the twenty-first century. *Science education*, 88(1), 28-54.
- Jordan, M. I., & Mitchell, T. M. (2015). Machine learning: Trends, perspectives, and prospects. *Science*, 349(6245), 255-260.
- Kayi, H. (2006). Teaching speaking: Activities to promote speaking in a second language. *The internet TESL journal*, 12(11), 1-6.
- Kiili, K. (2005). Digital game-based learning: Towards an experiential gaming model. *The Internet and higher education*, 8(1), 13-24.
- Kochoska, J. (2015). The Role of Dramatization in Acquiring Life Skills Among Students. *Horizons, International Scientific Journal/Series A, Social Sciences and Humanities*, 17(3), 344-358.
- Kuhn, D. (2010). Teaching and learning science as argument. *Science Education*, 94(5), 810-824.
- Lier, L. V. (2007). Action-based teaching, autonomy and identity. *International Journal of Innovation in Language Learning and Teaching*, 1(1), 46-65.
- Lo, J. T. Y. (2012). Curriculum changes and their implications for the development of citizenship: A comparative study of the primary social education curricula in Hong Kong and Shanghai. *Chinese Education & Society*, 45(2), 75-95.
- Nikolopoulou, K. (2018). Creativity and ICT: Theoretical approaches and perspectives in school

- education. Research on e-Learning and ICT in Education: Technological, Pedagogical and Instructional Perspectives, 23(2), 87-100.
- Papadopoulos, I. (2014). The dramatization of children literature books for the development of the second/foreign language: An implementation of a drama-based project to students of primary school. *Study in English Language Teaching*.
- Pang, K. (2010). Creating stimulating learning and thinking using new models of activity-based learning and metacognitive-based activities. *Journal of College Teaching & Learning (TLC)*, 7(4), 21-35.
- Peter, E. E. (2012). Critical thinking: Essence for teaching mathematics and mathematics problem solving skills. *African Journal of Mathematics and Computer Science Research*, 5(3), 39-43.
- Pritchard, A. (2017). *Ways of learning: Learning theories for the classroom*. Routledge.
- Randi, J., & Corno, L. (2000). *Teacher innovations in self-regulated learning. Handbook of self regulation*, 25(4), 651-685.
- Rosas, R., Nussbaum, M., Cumsille, P., Marianov, V., Correa, M., Flores, P., ...& Salinas, M. (2003). Beyond Nintendo: design and assessment of educational video games for first and second grade students. *Computers & Education*, 40(1), 71-94.
- Scrivener, J. (2005). *Learning teaching (Vol. 2)*. Oxford: Macmillan.
- Siegle, D., & McCoach, D. B. (2005). Making a difference: Motivating gifted students who are not achieving. *Teaching exceptional children*, 38(1), 22-27.
- Singal, N., Pedder, D., Malathy, D., Shanmugam, M., Manickavasagam, S., & Govindarasan, M. (2018). Insights from within activity-based learning (ABL) classrooms in Tamil Nadu, India: Teacher's perspectives and practices. *International Journal of Educational Development*, 60(4), 165-171.
- Singh, J., Steele, K., & Singh, L. (2021). Combining the best of online and face-to-face learning: Hybrid and blended learning approach for COVID-19, post vaccine, & post-pandemic world. *Journal of Educational Technology Systems*, 50(2), 140-171.
- Tsatsaroni, A., Ravanis, K., & Falaga, A. (2005). Studying the recontextualization of science in pre-school classrooms: Drawing on Bernstein's insights into teaching and learning practices. *International Journal of Science and Mathematics Education*, 1(3), 385-417.
- Walmsley, B. (2013). "A big part of my life": a qualitative study of the impact of theatre. *Arts marketing: an international journal*, 3(1), 73-87.
- Westheimer, J., & Kahne, J. (2004). What kind of citizen? The politics of educating for democracy. *American educational research journal*, 41(2), 237-269.
- Wright, G. B. (2011). Student-centered learning in higher education. *International journal of teaching and learning in higher education*, 23(1), 92-97.
- Zacharia, B., Pai, P. K., & Paul, M. (2021). Focus group discussion as a tool to assess patient based outcomes, practical tips for conducting focus group discussion for medical students learning with an example. *Journal of Patient Experience*, 8, (2), 374-37388.
- Zainuddin, Z., Shujahat, M., Haruna, H., & Chu, S. K. W. (2020). The role of gamified e-quizzes on student learning and engagement: An interactive gamification solution for a formative assessment system. *Computers & Education*, 145(5), 103-129.