

The Embedded Constructivist Approach in Teaching

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This study was conducted to determine the effective application of constructivism in learning the Philippine Politics and Governance concept. To achieve the purpose of the study, the quasi-experimental method of research was used. Ninety eleventh grade student-respondents were used in the study, of which 45 were the controlled group, and another 45 were members of the experimental group of Senior High School in Magalang Stand Alone 2 Division of Pampanga-Philippines in the School Year 2019-2020. Results revealed that there is a highly significant difference in the performance of the learners in the experimental group before and after the application of the constructivism approach and the performance of the learners in the experimental group on the topics discussed in Philippine Politics and Governance; the constructivism approach in teaching was deemed highly effective by the respondents, particularly in the improvement of their attitude towards performance, actual performance, and evaluation of performance. Based on the findings, it is suggested that the inventory of students' prior knowledge, and another form of substitute appraisals such as a performance task should be used aside from traditional paper and pencil test; the educator is still encouraged to enhance the use of constructivism in teaching to expand the learners' performance; Educators must develop the use of concrete and virtual application in teaching to promote active learning that can enhance learners' performance; application of the constructivism approach to other facets of Philippine Politics and Governance and other allied subjects should be explored to validate the effectiveness of its inclusion in instruction.

Key words: *Eleventh Graders, Constructivism, Philippine Politics and Governance, Teaching.*

Introduction

There are various education concepts and methods which work through worth of method for the instruction and help educators in classroom teaching. In the shared period system of education, the school offers the best substantial concept of knowledge permitting to which learning is a change in the social character entity. This assessment of learning included the mental process which was only focused on the tangibly evident facet of education.

It seats the educator as a framework of information and learners as a receptacle to be occupied. It provides the entire control of the classroom in his hands. However, historically we find a pattern change taking place in the arena of education, particularly in the zone of the teaching-learning process. New student-centred learning theories and approaches have emerged and constructivism by way of knowledge model as a methodology has been highly accepted.

Constructivism is certainly one of the best significant viewpoints in teaching in the shared era. However, it has become one of the best misunderstood, with varied implications credited to it and is regularly pre-owned by the promoters to skit other methods incorrectly (Krahenbuhl, 2016). Constructivism is a theory, centred on reflection and systematic learning, about how everyone acquires knowledge.

It declares that the individual concept, their understanding and information of the realm, go through things and imitating them. When an individual comes upon something new, an individual resolves it with the prior concepts and experiences, perhaps shifting what one believes, or possibly neglect the fresh figures as immaterial. In some instance, the learner is the dynamic designer of data.

To do this, one must ask, explore, and assess what one knows (Educational Broadcasting Corporation, 2004). Jia (2010) suggests that a constructivism knowledge concept is the advance growth of behaviourism attainment at the cognitive level. Furthermore, the author cited that, knowledge is uncertain; the knowledge procedure is also the construction process of knowledge; students are the mainframe of knowledge activity, and they build understanding on their ingenuities; educators stand as the partners and the teamsters for learners' fabricating information.

Constructivism, when applied in the classroom, makes students maximise their potentialities. The Educational Broadcasting Corporation (2004) considered students as not blank sheets upon which information is etched. They have risen to knowledge circumstances with already expressed information, notions, and identifications.



This former information is the raw factual for the fresh figures they will generate. The learner is the individual who generates original understanding. The educator trains, controls, and recommends, nonetheless permitting the students' area to investigate, inquire, and attempt things that do not work. Erudition activities involve the learners' complete involvement in hands-on experiments.

An essential portion of the knowledge progression is that learners imitate, and discourse about their actions. Learners likewise set their specific aims and resources of assessment. When used by the teachers, the constructivist instruction viewpoint is completely about accepting learner independence wherever the learner's thinking pushes the instructions, which leads to discussion, investigation, and puzzlement, and measuring learning is in the setting of instruction.

It benefits educators to enticement of original thoughts as they mark results about which instructional practices are supremely suitable for entire learners to absorb (Akpan and Beard, 2016). Many studies had affirmed the effective utilisation of constructivism in various facets of learning. Yilmaz (2008) delivers an indication of constructivism and its uses for classroom practices; Jia (2010) probes into the effect of the constructivism instruction model on fundamental education; Bastürk (2016) determines teachers' perspectives on constructivism and its implementation in schools; Uzuntiryaki, Boz, Kirbulut & Bektas (2010) explore teachers' opinions about constructivism and their influence in teaching practice; Krahenbuhl (2016) features how instructors in the current era are increasingly compelled to accept constructivist pedagogy. Furthermore, there are also studies attesting the efficacy of using constructivism in teaching.

Thompson (2015) touches on the current systems of constructivism that compete through other designed instructional styles in schools and endorses guidelines and procedures that might preserve the potential of constructivist instruction in paintings in an age of controlled opportunities for educational modernisation. In the Philippine curricula, constructivism always constitutes the curricular framework.

It is an essential theory that makes up the totality of students' learning formation. Since the facet of 21st-century learning demands learners to become constructive to everything they are learning and make a meaningful connection to them to gauge a higher form of understanding, teachers and learners probably develop as on-the-go contributors in the teaching-learning process.

Undeniably, constructivism is an instrument guaranteeing that learners can transcend to a higher formula of knowledge by finding good linking to their prior and current learning, even if it is in a regular class or a real-life situation, making it one of the acquired theories in the



school. Particular educators can misunderstand its application; it is essential to originate with an instrument that this approach will assist as a helpful strategy for students to comprehend the highest procedure of knowledge via their particular metacognitive and cognitive abilities.

For this reason, the researcher pushed to conduct the study to attempt to prove the effective application of constructivism in learning the Philippine Politics and Governance concept. In this study, the emphasis stays on the constructivism learning through the “Role laying” application. Whether reasoning or bodily activities, learners need to progress knowledge with a significant method that will apply to their lives.

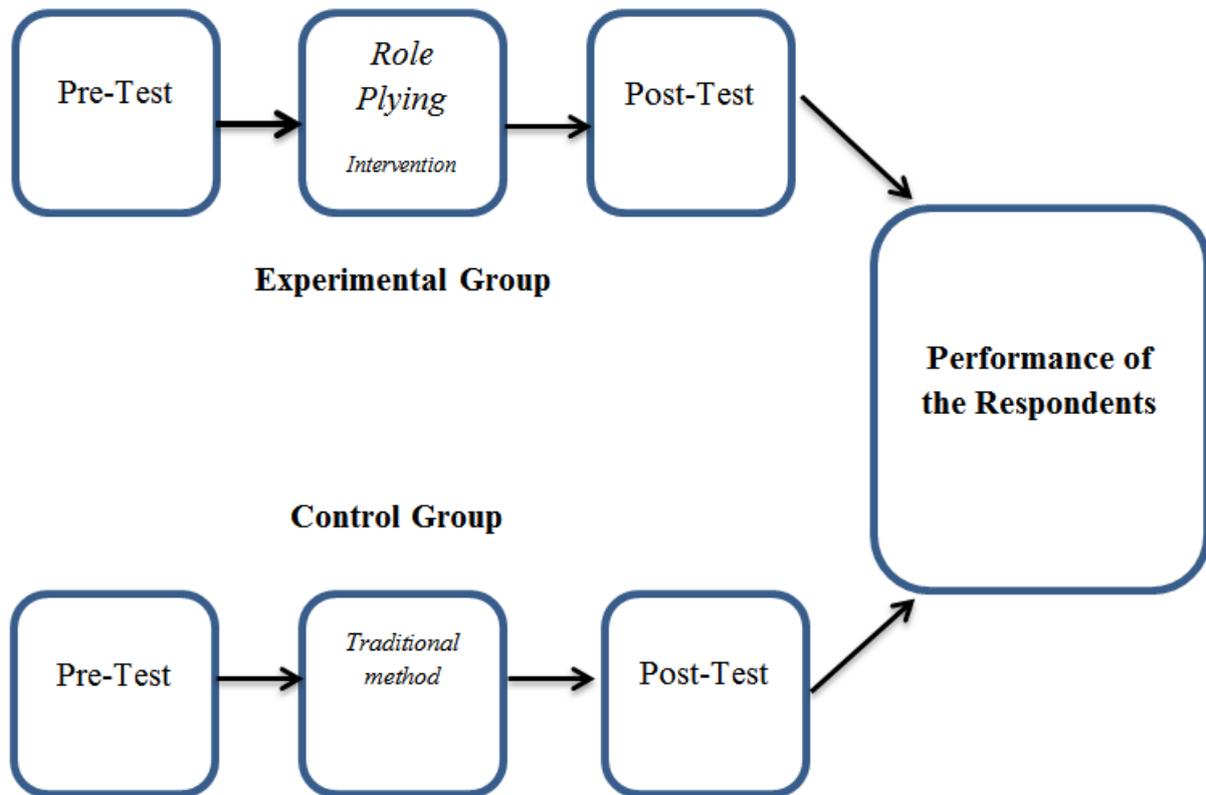
Conceptual Framework

To have a constructive outcome in teaching Philippine Politics and Governance, the teacher must develop technique in teaching the topic. The friendly personality of the teacher and simple, fun, exciting and experimental approaches to teaching Philippine politics and governance are keys to make students interested in learning the topic.

In this study, there will be two groups of respondents; the control group and the experimental group. The experimental group will expose to “role playing” while the control group will be taught using the traditional method through memorisation and recitation techniques.

Both groups will be required to take the pre-test and post-test to evaluate their understanding of the basic concept of Philippine Politics and Governance. The test result of each group will be analysed and compared to determine which would perform better.

Figure 1. Paradigm of the Study



Research Question

This study aimed to use the constructivism approach in teaching Philippine Politics and governance to eleventh graders of Senior High School in Magalang Stand Alone II, Division of Pampanga during the School Year 2019-2020.

Specifically, this study sought answers to the following questions:

1. How may the scores of the respondents in the pre-test and post-test be described in the following groups:
 - 1.1. control group; and
 - 1.2. experimental group?
2. Is there a significant difference between the pre-test and post-test results of the respondents in the following groups:
 - 2.1. control group; and
 - 2.2. experimental group?
3. How may the effectiveness of constructivism as rated by the students before and after exposure to the constructivism approach of an experimental group, be described regarding;
 - 3.1. attitudes toward the performance;

- 3.2 actual performance; and
- 3.3 evaluations of performance?

Hypotheses

This study will be guided by the following hypotheses:

1. There is no significant difference between the pre-test and post-test results of the respondents in the following groups:
 - 1.1. control group; and
 - 1.2. experimental group.

Significance of the Study

The result of this study is hoped to be of great help to the following:

DepEd Officials. The results of the research undertaking will be of importance to maintaining the quality of education in the country using the spearheading programs, activities, and initiatives that could maximise the utilisation of various learning theories that could serve as bases in the implementation of curricula and the realisation of the Department's vision and mission.

School Administrators. The findings of the study will benefit the monitoring and evaluating the performances of teachers in utilizing constructivism in their respective classrooms. Moreover, this could lead to initiating school activities that may promote and intensify the application of constructivism in various activities and not only the academic ones.

Teachers. The outcomes of the study can enlighten various ways of how to apply constructivism in teaching and learning. Moreover, they will be guided in assessing and evaluating their performance as to the extent to which they incorporate constructivism in teaching the concepts students needed to comprehend. Such initiatives could make teachers responsive to the needs of the learners and in improve their delivery of quality instruction.

Students. The outcome of the study will help further develop how to improve the use of constructivism in creating a new form of knowledge. Through the results of the research endeavour, it will enlighten various ways on how to apply constructivism in physical activities instead of the cognitive aspect only. Moreover, this study could serve as their parameter in measuring their level of construction of knowledge in learning.



Scope and Delimitation of the Study

The study focused on the implication of using “role-playing” in teaching Philippine politics and governance.

The study will be delimited to analysing the test scores obtained by the two groups of respondents, the control group and experimental group, in teaching Philippine Politics and Governance. The test results would determine if the use of “Role Playing” is an effective approach to teaching Philippine Politics and Governance. The respondents of the study will be the eleventh graders of Senior High School in Magalang Stand Alone II, Division of Pampanga during the School Year 2019-2020.

Methods

Type of Research

The quasi-experimental method of research is an empirical study aimed to estimate the causal impact of an intervention on its target population.

This method will be used in this study to determine the implication of using the constructivism approach in teaching Philippine Politics and Governance among eleventh graders. Navarro & Santos (2011) pointed out that in the quasi-experimental design, a group is studying under two or more different conditions, but no controls are set up. Hence, the quasi-experimental method of research is very fitting for the study as it used two groups of respondents – the controlled and experimental groups.

To gather the needed data in this study, the researcher constructed a pre-test and post-test, had these evaluated by experts, and administered to the eleventh graders. Results will be analysed and interpreted to determine the performance of the respondents on Philippine Politics and Governance.

Respondents of the Study

As reflected in Table 1, there are 90 eleventh grader student-respondents in the study, of which 45 are the controlled group, and another 45 are members of the experimental group.

The table shows the total population of the respondents according to their respective groups.

Table 1: Population and Respondents According to Groups

Group	Number of Students	
	Respondents	Percentage
Controlled	45	50%
Experimental	45	50%
Total	90	100%

Sampling Method

The purposive sampling technique will be used in selecting the respondents of the study. Purposive or judgmental sampling enables the researcher to use his judgment to select cases that will best give him answers to the research questions and meet the objectives. This form of sampling is used often when working with very few samples such as in case study research and when the researcher wishes to select something that is particularly informative (Saunders, et al., 2010).

Therefore, as implied by the sampling technique, the researcher purposively selected eleventh graders in Philippine Politics and Governance in which constructivism is applied in teaching the concepts and principles of the subjects. The groupings will be selected based on their accumulated points in the pre-test wherein all the students who have failing scores considered in the selection of the final respondents for the creation of two groups.

Source of Data

The respondents of this study will be the students of the Senior High School Department of Humanities of Social Sciences. The student-respondents will be the eleventh graders who are currently enrolled for the school year 2019-2020.

Instruments

The pre-test, post-test, and survey-questionnaire are essential tools which will be used in collecting all the data needed to substantiate the study.

The pre-test and post-test used was adopted from the module in Philippine Politics and Governance of the DepEd. The questionnaire of effectiveness of the constructivism approach in teaching Philippine Politics and Governance was adopted from Roque, CJ. 2016.

Data Collection Procedure

Before collecting all the data needed for the study, the researcher sought permission from the proper authorities. A letter was addressed by the researcher, to the principal of Senior High School in Magalang Stand Alone II and advisers of the respondents for the conduct of pre-test, post-test and the actual floating of the survey-questionnaire to eleventh graders in Philippine Politics and Governance. After the approval, the researcher personally administered and retrieved the survey-questionnaires. In applying the constructivism approach in the classroom, the researcher will use “Role Playing” techniques. The said measures will be applied for one quarter. The data will be collected, tabulated, and analysed before comparing the results of their performance in Philippine Politics and Governance.

Ethical Considerations

The following ethical guidelines will be put into place for the research period:

1. The dignity and well-being of the respondents will be protected at all times.
2. The research data is not to be disclosed all through the study and the researcher obtained the respondents’ permission to use their real names in the research report.

Data Analysis

The gathered data on this study will be analysed using the Statistical Package for Social Sciences (SPSS). Mean, frequency and t-test will be used to calculate the results gathered in this study, and for the effectiveness of the constructivism approach in Philippine Politics and Governance. Descriptive ratings and numerical ratings will be used.

Table 2

Weighted Mean	Point Scale	Descriptive Rating	Interpretation
4.21 – 5.00	5	Always	Highly Effective
3.41 – 4.20	4	Often	Effective
2.61 – 3.40	3	Sometimes	Moderately Effective
1.81 – 2.60	2	Seldom	Less Effective
1.00 – 1.80	1	Never	Not Effective

Pre-test Results of the Respondents

The performance of the respondents - control group and experimental group were assessed through pre-test and post-test results.

Pre-test of Control and Experimental Group

Table 3 shows the mean pre-test scores of the respondents in the control group and the experimental group before the utilisation of the constructivism approach.

Table 3: Pre-test Scores of the Control and Experimental Group

Group	Mean Pre-test	Mean Pre-test	t-value	p-value	Result
Control	10.2		-0.37	.709	<i>No significant</i>
Experimental		10.36			

As shown in this table, the computed mean pre-test score of **10.2** was recorded in the control group. However, the experimental group mean score was **10.36**.

Difference Between the Pre-test Results of Each Group

The difference between the mean pre-test scores of the respondents from the control group and the experimental group: As indicated by the *t-value* of **-0.373** significantly at a computed *p-value* of **.709** levels which are higher than the **0.05** level of significance, it can be established that there is *No Significant* difference between the mean pre-test scores of the respondents in the control group and the experimental group. An implication was that the pre-test was usually given beforehand of the rating period, where the learners have no background about the content of their topic in the said rating period. The traditional teaching approach does not apply activity-based learning to encourage students to learn real-life problems based on applied knowledge. Since the teacher governed the program and input of knowledge, the teacher may attempt to maximise the delivery of information while minimising time and effort. As a result, both interest and understanding of students may get lost as pointed out by Ganyaufu (2013).

Post-test Scores of the Control and Experimental Group

Table 4 reflects the mean post-test score of the respondents from the control group and the experimental group.

Table 4: Post-test Scores of the Control Group and Experimental Group

Group	Mean Post-test	Mean Post-test	t-value	p-value	Result
Control	10.78		-14.14	.00001	<i>Highly Significant</i>
Experimental		27.22			

Comparably, learners in the experimental group outperformed the control group with a mean of **10.78** after the application of the constructivism approach in Philippine politics and Governance. On the other hand, the experimental group registered a mean score of 27.22. This implies that the use of constructivism approach instruction was able to help the learners to improve more significantly in curricular performance than with the use of the traditional

instruction in teaching Philippine Politics and Governance. Supported by the study of Khurshid and Ansari (2012), they admitted that learners who are instructed using modern teaching approach achieved significantly greater scores on the assessment than did the students whose instructions done with the traditional method.

As pointed out by the **t-value** of **-14.14** significantly at **.00001** level which is lower than **0.05** level of significance, it can be established that there is a **Highly Significant** difference in the performance of the learners in the experimental group in their Philippine Politics and Governance subject before and after the application of the constructivism approach. As supported by the study of Ngussa and Makewa (2014), they stated that the experiences of constructivism principles in the teaching–learning process reveal that high performing learners tend to engage in active participation more frequently.

Pre-test and Post-test Mean Scores of the Control Group

Table 5: Pre-Test and Post-Test of Control Group.

Pre-test	Post-Test	t-value is	p-value	Result
10.2	10.78	-1.36	.177	No significant

The difference between the mean pre-test and post-test scores of the respondents from the control group: As indicated by the **t-value** of **-1.36** significantly at a computed **p-value** of **.177** levels which are higher than the **0.05** level of significance, it can be established that there is **No Significant** difference between the mean pre-test scores of the respondents in the control group.

Pre-test and Post-test Mean Scores of the Experimental Group

The difference between the mean pre-test and the mean post-test scores of the respondents from the control group are shown in Table 6.

Table 6: Pre-Test and Post-Test of Experimental Group

Pre-test	Post-Test	t-value is	p-value	Result
10.36	27.22	-14.54	.00001	Highly Significant

As shown by the *t-value* of **-14.54** significantly at **.00001** levels, which is lower than **0.05** level of significance, it can be established that there is a **Highly Significant** difference in the performance of the learners in the experimental group on the topics discussed - the political ideologies. This proves that the use of the constructivism approach in teaching Philippine Politics and governance can improve a learner's curricular performance. This is similar to Quiambao C.J. (2017) findings that the constructivism approach in teaching was believed highly significant in the improvement of the learners' performance inside the classroom.

Respondents Assessment of the Effectiveness of the Constructivism Approach in Teaching Philippine Politics and Governance

Table 7: Effectiveness of Constructivism Approach in the Experimental Group

Performance	Mean Before utilization	Descriptive Rating	Interpretation	Mean After utilization	Descriptive Rating	Interpretation
Attitude	2.03	Seldom	<i>Less Effective</i>	4.80	<i>Always</i>	<i>Highly Effective</i>
Actual	2.00	Seldom	<i>Less Effective</i>	4.98	<i>Always</i>	<i>Highly Effective</i>
Evaluation	1.93	Seldom	<i>Less Effective</i>	3.96	Often	<i>Effective</i>

As shown in Table 7, the respondents believed that the constructivism approach in teaching Philippine politics and Governance is **Highly Effective** in improving their attitude towards performance with a mean of **4.80**; a mean of **4.98** was posted by the respondents as a **Highly Effective** in improving their actual performance; and a mean of **3.96** was recorded as **Effective** in improving their evaluation performance. This simply shows that the inclusion of the constructivism approach in the teaching-learning process improves learners' attitude towards performance, actual performance, and evaluation performance. The said outcome supported by the study conducted by Ngussa and Makewa (2014) figure out that learners established that their teachers always employ a constructivism approach and that the learners' curricular performance was influenced by teaching modalities, active engagement and classroom setup.

Summary

This study generally aimed to assess the effectiveness of using the constructivism approach in teaching Philippine Politics and Governance.

The experimental method of research was used in this study. The respondents of this study were the eleventh graders of Rodolfo V. Feliciano Memorial High School divided into two- the control group and the experimental group. Both groups were given a pre-test before the start of the study. After the discussion using the two methods - traditional method and the role constructivism approach (role playing), both were given a post-test. The data gathered were then statistically evaluated and analysed to test the effectiveness of the use of constructivism in teaching.

The findings of the study were as follows:

1. The mean pre-test score of 10.2 was recorded in the control group, and 10.36 was the experimental group. As indicated by the *t-value* of **-0.373** significantly in a computed **p-value** of **.709** levels which are higher than the 0.05 level of significance, it can be established that there is **Not Significant** difference between the mean pre-test scores of the respondents in the control group and the experimental group.
2. After the application of the constructivism approach in teaching Philippine Politics and Governance: Learners in the experimental group outperformed the control group with a mean of 10.78; experimental group registered a mean score of 27.22. With a computed **t-value** of **-14.14** significantly at a **.00001** level which is lower than 0.05 level of significance, it can be established that there was a **Highly Significant** difference in the performance of the learners in the experimental group in their Philippine Politics and Governance subject before and after the application of the constructivism approach.
3. With a computed *t-value* of **-1.36** significantly of the computed *p-value* of **.177** levels which are higher than the 0.05 level of significance, it can be established that there is **No Significant** difference between the mean pre-test scores of the respondents in the control group.
4. With a computed *t-value* of **-14.54** significantly at **.00001** levels which are lower than **0.05** level of significance, it can be established that there is a **Highly Significant** difference in the performance of the learners in the experimental group on the topics discussed political ideologies. This proves that the use of the constructivism approach in teaching Philippine Politics and governance can improve learner's curricular performance.
5. The constructivism approach in teaching is **Highly Effective** in improving their attitude towards performance with a mean of **4.80**; a mean of **4.98** was posted by the respondents

as **Highly Effective** in improving their actual performance; and a mean of **3.96** was recorded as **Effective** in improving their evaluation performance.

Conclusion

From the results of the study, the following conclusions were drawn.

1. The mean pre-test score of the respondents establishes that there is **No Significant** difference between the mean pre-test scores of the respondents in the control group and the experimental group.
2. The post-test score of the experimental group is higher than the control group. Also, it establishes that there is a **Highly Significant** difference in the performance of the learners in the experimental group in their Philippine Politics and Governance subject before and after the application of the constructivism approach.
3. There is **No Significant difference** between the mean pre-test scores of the respondents in the control group.
4. There is a **Highly Significant** difference in the performance of the learners in the experimental group on the topics discussed in Philippine Politics and Governance.
5. The inclusion of the constructivism approach in teaching Philippine politics and Governance was deemed **highly effective** by the respondents, particularly in the improvement of their attitude towards performance, actual performance, and **effective** evaluation towards performance in the Philippine Politics and Governance subject.

Recommendations

In light of the findings and conclusions of the study, the following are hereby recommended:

1. In the inventory of students' prior knowledge, another form of substitute appraisals such as performance task should be used aside from the traditional paper and pencil test, in Philippine Politics and Governance.
2. Although both the traditional and constructivism approaches showed improvement in the post-test results in teaching Philippine Politics and Governance, the educator is still encouraged to enhance the use of constructivism in teaching Philippine Politics and Governance to expand learners' performance. Educators should provide their learners with several opportunities to play the actual situation of subjects in order to grasp the concept of the topic easily.
3. Educators must develop the use of concrete and virtual application in teaching to promote active learning that can enhance learners' performance in Philippine Politics and Governance. This may also make the learners realise that Philippine Politics and Governance can be enjoyable especially through role playing.



Application of the constructivism approach to other facets of Philippine Politics and Governance and other allied subjects should be explored to validate the effectiveness of its inclusion in instruction.

REFERENCES

- Akpan, J. P. & Beard, L. A. (2016). Using constructivist teaching strategies to enhance academic outcomes of students with special needs. *Universal Journal of Educational Research*, 4(2), 392-398.
- Bastürk, S. (2016). Primary pre-service teachers' perspectives on constructivism and its implementation in the schools. *Universal Journal of Educational Research*, 4(4), 904-912.
- Ganyaupfu, E. M. (2013). Factors Influencing Academic Achievement in Quantitative Courses among Business Students of Private Higher Education Institutions. *Journal of Education and Practice*, 4(15), 57-65.
- Jia, Q. (2010). A brief study on the implication of constructivism teaching theory on classroom teaching reform in basic education. *International Education Studies*, 3(2), 197-199, May.
- Khurshid, F., & Ansari, U. (2012). Effects of innovative teaching strategies on students' performance. *Global Journal of Human Social Science Linguistics & Education*, 12(10), 46-53.
- Krahenbuhl, K. S. (2016). Student-centered education and constructivism: Challenges, concerns, and clarity for teachers. *Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 89(3), 97-105.
- Navarro, R. L., & Santos, R. G. (2011). *Research-Based Teaching and Learning*.
- Ngussa, B. M., & Makewa, L. N. (2014). Constructivism experiences in teaching-learning transaction among adventist secondary schools in South Nyanza, Tanzania. *American Journal of Educational Research*, 2(11A), 1-7.
- Quiambao, C.J. (2017). Effectiveness of Embedded Constructivism Approach in Teaching Physical Education.
- Roque, C.J. (2016). Effectiveness of embedded constructivism approach in teaching physical education.
- Saunders, Mark et al. (2010). *Research methods for business students*. [5th ed.]. Jurong, Singapore: Pearson Education South Asia Pte Ltd.
- Thompson, C. M. (2015). Constructivism in the art classroom: Praxis and policy. *Arts Education Policy Review*, 116(3), 118-127.



Uzuntiryaki, E., Boz, Y., Kirbulut, D. & Bektas, O. (2010). Do pre-service chemistry teachers reflect their beliefs about constructivism in their teaching practices? *Research in Science Education*, 40(3), 403-424, May.

Yilmaz, K. (2008). Constructivism: Its theoretical underpinnings, variations, and implications for classroom instruction. *Educational Horizons*, 86(3), 161-172 Spring.