Educational Research and Reviews

ACADEMIC JOURNALS
expand your knowledge

About ERR

Educational Research and Reviews (ISSN 1990-3839) is published bi-monthly (one volume per year) by Academic Journals.

Educational Research and Reviews (ERR) is an open access journal that publishes high-quality solicited and unsolicited articles, in English, in all areas of education including education policies and management such as Educational experiences and mental health, the effect of land tenure system on resource management, Visualization skills and their incorporation into school curriculum, Gender, education and child labour etc. All articles published in ERR are peer-reviewed.

Contact Us

Table of Content

ACADEMIC JOURNALS
expand your knowledge

Educational Research and Reviews

Full Length Research Paper

A study on the effects of self-regulation skills education program on self-regulation skills of six-year-old children

Belgin Liman* and Kezban Tepeli

[1]Department of Child Development, Faculty of Zübeyde Hanım School of Health, Niğde Ömer Halisdemir University, Niğde, Turkey.
[2]Department of Child Development, Faculty of Health Sciences, Selcuk University, Konya, Turkey.

This study was conducted to investigate the effect of a Self-Regulation Skills Education Program on self-regulation skills of six-year-old children. The nonequivalent control group was used in the study. The study group consists of 40 children. "General Information Form" and "Preschool Self-Regulation Assessment (PSRA)"were used as data collection tools. It was determined as a result of the study that the self-regulation skills posttest mean scores of the children in the experimental group differed significantly from their pretest mean scores. It was also found that the self-regulation posttest mean scores of the children in the experimental group were higher than the posttest mean scores of the children in the control group. The results of the study indicated that the Self-Regulation Skills Education Program promoted the development of self-regulation skills of children.

Key Words: Preschool, self-regulation skills education program, preschool self-regulation assessment (PSRA), self-regulation.

INTRODUCTION

Human beings, as social entities, are in constant interaction and communication with their environment. The concept of self-regulation is a phenomenon that has gained in importance at every stage of individual life and develops and expands when individuals are born into their environment. It is a social process that develops when individuals get to know themselves and their environment and determine their methods of interaction with their environment to attain their objectives (Campbell, 2002). Although self-regulation is a social phenomenon,

studies conducted in this regard have revealed that not only social processes but also cognitive processes are effective in self-regulation (Blair, 2002). Before the implementation of the objectives determined in the cognitive processes dimension, skills are also needed such as thinking on the action, making plans, focusing and maintaining attention on the goal, ignoring irrelevant stimuli and having the ability to wait for a reward. According to Rothbart and Bates (1998), self-regulation skills comprise concepts like adaptation, stopping

*Corresponding author. E-mail: yliman@mynet.com.tr.

inappropriate behaviors, having control over attention and emotions and regulation of behaviors to this end, and delaying impulsiveness and are significantly influenced by innate differences (cited in Campbell, 2002). While Posner and Rothbart (2000) define self-regulation as regulation of behaviors according to social, cognitive and emotional situations, Derryberry and Reed (1996), (cited in Calkins and Fox, 2002), define it as a process that controls other systemic activities (attention, emotion and behavior), whereas Zimmerman (2000); Baumeister and Vohs (2007) define it as individuals' regulation of their behaviors by controlling their attention, thoughts, emotions, impulses and behaviors. Different views have been expressed with regard to subdimensions of self-regulation, which stems from a difference in conceptual backgrounds. McCabe et al. (2004) specified subdimensions of self-regulation as "inhibition of automatic reactions, motor control, delay of gratification, and maintaining attention". Zimmerman (2000), on the other hand, defined "goal-directed behavior" as a sub-dimension of self-regulation. While some researchers handle subdimensions of self-regulation in the behavioral, cognitive and emotional domains (Calkins and Fox, 2002; Smith-Donald et al., 2007), Grolnick and Farkas (2002) add motivation to these subdimensions (cited in Polnariev, 2006). These subdimensions constitute a whole consisting of systems intertwined with each other. In the present study, the concept of self-regulation was dealt with in three subdimensions, namely attention, emotion and behavioral regulation within the theoretical framework of the Preschool Self-Regulation Assessment (Fındık, 2012). Regulation of attention is part of cognitive functions (Bronson, 2000). Attention is a functional mechanism that has some features such as determining the priority target, deciding, planning and problem solving and is influential in all dimensions of self-regulation. Attention is active and selective. Attention that has focused on a stimulus may ignore other stimuli, or turn to another stimulus by ignoring the goal-directed stimulus on which it has focused (Friedenberg and Silverman, 2012). For attention to focus on a goal-oriented stimulus and shift direction when needed require, to a large extent, higher order cognitive attention skills. These skills are associated with effortful control. Effortful control forms part of the executive attention and involves an awareness of planned behaviours. Emotion regulation is a tool in organizing attention and behaviours, displaying determination and courage in coping with obstacles, solving problems, planning, establishing cause and effect relationships and making the process easier for individuals in interpersonal communication (Cole et al., 2004). Emotion regulation is a dynamic process that arises at every stage of the relationship between individual and environment. It emerges in social relationships in the early childhood period and differs as it develops (Calkins, 2010). Calkins (2010) regards emotion regulation as a process that helps individuals control their

complex and stressful environment. Emotion regulation processes are skills and strategies used to manage, change and develop emotional reactions. It encompasses internal strategies and external aids (Thompson, 1991; cited in Thompson and Calkins, 1996). It has been emphasized that successful emotion regulation affects children's behavioral, academic and social skills (Bronson, 2000; Carlson and Wang, 2007; Denham and Burton, 2003; Gulay and Akman, 2009). Behavior regulation, on the other hand, involves situations such as children's thinking before performing a behavior, planning their behaviors, not acting impulsively, overcoming frustrations, controlling reactions and being patient and ability to wait for a reward (Smith-Donald et al., 2007). Behavior regulation contains cognitive processes like attention, working memory and impulse control. Behavior regulation skills gain in importance when children begin school. Poor behavioral regulation skills in social relationships with peers and teachers may lead to negative results. It has been stated that behavior control processes in childhood years prevent failures in social environments (Eisenberg et al., 2011).

Self-regulation is substantially shaped up in the early period through environmental and biological effects (Torres, 2011). In this context, when the relevant literature is reviewed, one may encounter numerous early intervention programs (Domitrovich and Greenberg, 2000; Sezgin, 2016; Shure, 2001; Torres, 2011; Webster-Stratton et al., 2001). Tominey and McCelland (2011) planned games (circle time) that are simple but become gradually more difficult in order to allow children to put into practice their theoretical self-regulation skills and increase their cognitive capacity. Sezgin (2016) revealed in her study the effect of game-based behavioral self-regulation education program on children's behavioral self-regulation skills. There are also studies proving that Cookie Monster's efforts to control itself had a positive impact on children. The development of children's self-regulation skills need to be supported by additional programs and further education. There is a need for programs combined with activities that will promote children's self-regulation skills and carry preschool teachers beyond the traditional. In this study, The Self-Regulation Skills Education Program focused on supporting children's development of self-regulation skills in early period. The research hypotheses were established with the expectation that the Self-Regulation Skills Education Program affect self-regulation skills of children aged six. Thus, the following hypotheses were tested for accuracy.

(1) The self-regulation skills posttest mean scores of the children in the experimental group are significantly higher than the self-regulation skills posttest mean scores of the children in the control group.
(2) The self-regulation skills posttest mean scores of the children who participated in the Self-Regulation Skills

Table 1. Symbolic representation of the model used.

Group	Pretest	Intervention	Posttest
G1	O1.1	X	O1.2
G2	O2.1		O2.2

G1: Experimental group, G2: Control group, X: Intervention, O1.1, O1.2: Experimental grouppretest and posttest, O2.1, O2.2:Control grouppretest and posttest.

Education Program are significantly higher than their pretest mean scores.

(3) There is not a significant difference between the self-regulation pretest mean scores and posttest mean scores of the children in the control group.

MATERIALS AND METHODS

Present research was carried out based on quasi-experimental design. Quasi-experimental designs are a model of high validity used in educational research studies where it is not probable to control all variables (Cohen et al., 2007). In the present research, non-equivalent pretest - posttest control group design was used. The table below shows the symbolic representation of the model used (Table 1).

Participants

In the study, a quasi-experimental model with non-equivalent control group was used. The study samplewas made up of 40 children from two independent kindergartens selected according to biased sampling method from independent kindergartens of Nigde Provincial Directorate of National Education. Children from these kindergartens were assigned to two groups:experimental group and control group. There were 21 students (10 girls, 11 boys) in the experimental group and 19 students (9 girls and 10 boys) in the control group. In the first stage, children with low self-regulation scores were identified in both schools. Then, using random assignment it was determined which of the groups would be experimental and which would be the control group. During the program, the experimental group children received the Self-Regulation SkillsEducation Program and the traditional preschool education program (Preschool Education Program developed byMinistry of National Education). No intervention was implemented in the control group; their daily education program (Traditional Preschool Education Program) was administered by their teachers.

Data collection instruments

General ınformation form

General Information Form included questions intended to collect information about the age, gender and educational level of the parents of the children who participated in the study.

Presechool self-regulation assessment (PSRA):

Presechool Self-Regulation Scale (PSRS), which was developed by Smith-Donald et al. (2007) and adapted to Turkish by Fındık Tanrıbuyurdu (2012), is an assessment tool designed to implement a performance-based measurement. The scale consists of two major sections, namely an examiner's manual concerning the tasks the children are expected to perform and examiner's assessment form. The first section contains 10 tasks designed to assess children's self-regulation performances. The tasks of Toy Wrap, Snack Delay and Tounge Testare used to determine children's levels of gratification delay. The tasks of Balance Beam, Tower Task and Pencil Tapare implemented to assess children's executive control regarding their ability to follow instructions. The tasks of Tower Clean-up, Toy Sort andToy Returnare tasks used to assess children's social adaptation skills.

The Examiner's Assessment Form, which constitutes the second section of the scale, was developed through an adaptation of Leiter-R Social-Emotional Rating Scale and Problem (Disruptive) Behavior Diagnostic Observation Schedule (DB-DOS) coding system. In this section, children's emotion and attention levels and behaviors were assessed on the basis of examiner-child interaction. 15 of the 28 items in the examiner's assessment form were taken from the attention, impulse control, activity level, socialization level, emotion and energy subdimensions of the Leiter-R social-emotional scoring scale. The remaining 9 items, on the other hand, were selected from among the items that permit assessment in the compliance-noncompliance, intensity and frequency of negative and positive emotions, and presence/absence of physical and verbal violence dimensions of the Disruptive Behavior Diagnostic Observation Schedule coding system. The examiner assessment form is a rubric type assessment tool comprising items scored between 0 and 3. In the validity and reliability study conducted in Turkey, according to the results of the explanatory factor analysis, the scale was found to be composed of two factors, just as the original scale, namely Attention/Impulse Control and Positive Emotion. The Cronbach's Alpha coefficient regarding the reliability of the scale was determined to be (α) 0.83. Tests with reliability coefficients of 0.70 and above are considered sufficient for the reliability of test scores (Buyukozturk, 2011).

Development of self-regulation skills education program

Self-Regulation Skills Education Program was prepared to improve self-regulation skills of six-year-old preschool children. The steps taken in the process of program development during the study are as follows:

(i) Determination of self-regulation skills to be developed.
(ii) Determination of outcomes and indicators concerning the development of self-regulation skills.
(iii) Planning of which acquirements and indicators will be handled at which sessions.
(iv) Deciding on effective learning methods deemed appropriate for the self-regulation skills tplanned to be developed.
(v) Determination of activities intended to develop attention regulation skills.
(vi) Determination of activities intended to develop emotion regulation skills.

(vii) Determination of activities intended to develop behavior regulation skills.
(viii) Planning of activities for each session.

The program is one that is based on the development of self-regulation skills of preschool children aged six. Programs such as the Second Step, The Incredible Years, Promotion of Alternative Thinking Strategies (PATHS), Tools of the Mind and Kindergarten Readiness Study were utilized during the development of the program. 2013 preschool education program led the way in the planning of educational activities and in forming outcomes and indicators. The program developed involves the activities implemented in the 2013 preschool education program (Music, Action, Game, Drama, Art, Turkish activities). The program was so designed that it could be easily integrated into preschool education programs. It was ensured that learning activities be interactive, attractive and fun, with provided transitions between activities. Educational activities were planned on the basis of outcomes and indicators. The program comprises a 10-week, 30 education sessions prepared in accordance with the specified acquirements and indicators. The purpose of the program was to ensure that the children gain and develop attention, emotion and behavior regulation skills, which are subdimensions of self-regulation. The program is child-centered and was prepared taking into consideration children's different developmental levels and the principles of moving from children's close environment to distant environment, from simple to complex and from concrete to abstract. Activities were planned that would allow the children to practice their newly learned skills. It was also ensured that repeat activities be included in order to increase permanance of learning and practice the intended skills. To this end, revision exercises were planned at the end of each unit. The question-answer and brain storming techniques were used to increase participation in the activities. The outcomes were reinforced by including simple, comprehensible and open-ended questions. Questions were prepared like: "Do you think s/he feels happy? What is the face of a happy person like? What shape does our mouth take when we are happy? What shape does our eyebrows take? What may have caused him/her to feel like that? When did you last feel angry? And do you often feel afraid?". The children's interests and needs, length of attention, life experiences and features of the application environment were taken into consideration in order to allow the children to express themselves and their experiences comfortably during the activities. It was also ensured during the program that families participate in the education program through family letters and homework. Necessary permissions were received from the parents and the institutions prior to the implementation of the program. The education program was made ready to implement after views of 5 experts were taken and changes were made in accordance with the expert views.

The content of the Self-Regulation Skills Education Program comprises activities of movement and concentration, video clips, stories, dramatization, enaction, role playing, game and art. Concrete visual materials such as puppets, slides, pictures, photographs, story books, charts and posters were used in the presentation of the content.

In planning the Self-Regulation Skills Education Program, only name and acting with the group activities were included in the first stage, thereby ensuring that the children would feel confidence in the educator and their friends, act in concert with the group and cooperate. Then, activities were included to ensure the effectiveness of the program and enhance concentration. During the preparation of educational instances, activities such as nursery rhymes, songs and finger game were used so that the children would not experience difficulty and there would be a smooth transition to other activities.

An effort was made to support, through multiple activities, skills of focusing and maintaining attention, ignoring irrelevant stimuli, and self-talk and instructions in the exicutive functions section, which is the first unit of SRSA. Executive functions are meachnisms that involve cognitive processes. The cognitive processes dimension aims to support children's self-regulation outcomes by developing their abilities to think about the action before implementing the specified goal, make plans, focus attention on the goal and maintain it, ignore irrelevant stimuli, follow instructions and be able to wait for a reward.

Understanding the impact of our behaviors on people is possible through observation of their reactions. Children's noticing of emotional expressions on the faces of others constitutes the basis of their emotional regulation. Children's learning of facial expressions will accelerate the feelingof controlling their emotions and controlling themselves. To this end, activities involving different emotional states were included in the first session of the unit called recognizing and understanding emotions. Recognizing and defining emotions is considered to be important to solve problem situations in cognitive processes. The content of the program involves activities by which children can relate intellectual and emotional processes. These activities are followed by activities that enable children to listen to their emotions, make sense of them, define different sensations they feel in their bodies and be able to express these sensations. Also, activities were planned whereby children could notice their emotions, make sense of them, and realize that some emotions are relaxing while others are disturbing.

The emotion management unit included activities intended to help children cope with strong feelings such as disappointment and fury, relax, calm down, and control their impulses. The children were made to practice these activities with puppets, thereby enabling them to reflect their emotions and thoughts onto actions and feeling these emotions in their bodies. The activities that were planned were intended to help children adopt and internalize ways to manage their strong emotions. Activities were also included in accordance with the outcomes and indicators that would develop their skills to be able to wait without reacting and control their reactions.

The children were enabled to understand and adopt anger managementsteps, which is necessary for emotion management. The turtle technique, which involves behaving like a turtle and self-talk, was used to help develop the management skill. The activitieswere reinforced through enaction practices. The enaction activities were intended to help children express what they visualize in their minds and interpret what is expressed through actions.

Finally, activities that were intended to enhance the children's problem solving skills were included in the program. What lies at the heart of problem solving is intuiting a distress or noticing that there is something wrong going on. Emotions are elements that help understand a problematic situation. The children in the program were enabled to define the problem situation making use of emotion clues. To this end, video shows and and activities enriched through games were included. At the same time, an effort was made in the program to enable the children to acquire the steps of problem solving (a poster of problem-solving steps), which are necessary to solve a problem. The prepared education program was intended to enable the children to generate more than one solution to problem situations, evaluate their choices and, thereby gaining the skill to choose the best among the solutions. It was ensured through the activities planned that the children should practice hypothetical problem situations and present the solutions they came up with freely.

Implementation of the self-regulation skills education program

The program was so planned as to last 10 weeks and take place three days a week. Each daily session was planned to last 60 minutes. During the program, the children in the experimental group attended both the self-regulation skills education program and the

Table 2. Mann Whitney U test results of the children in the experimental and control groups according to their self-regulation skills pretest scores.

Group	n	Mean Rank	Sum of Ranks	U	p
Experimental	21	19.36	406.50		
				-0.653	0.514
Control	19	21.76	413.50		

p>0.05.

preschool education program. The children in the control group, on the other hand, received only the preschool education program. The children were made to wear name tags. Activities involving movement with names were performed in the early days of the program. They were enabled to act in unison with the group and cooperate. The activities in the program were conducted in big and small groups and by ensuring that all the children participated. Activities of each week were planned separately. Each education session began with a revision of the previous session. The children were given the opportunity to express themselves at the end of the activities. The materials to be used in the program were prepared by the educator beforehand so as to control problems that might arise. Some materials were prepared according to the number of participating children. The treatments were conducted by participation of all of the children. Videos were shot and photographs were taken during the treatments. The program treatments were implemented in the classrooms where the children received their regular education. However, the drama hall of the school was used during the large group activities as this was deemed more appropriate. It was ensured that each child was wearing their name tag to prevent any problem from arising during the activities. Activities involving movement with names were implemented in the early days of the program. It was ensured that the children acted in concert with the group and cooperated. "Self-Regulation Skills Education Program" was administered to the experimental group by the researcher between November 7, 2016 and January 14, 2017. In the same environment and conditions where children were pretested, Preschool Self-Regulation Scale was implemented as a post-test between 16 and 20 January 2017.

Analysis of the data

In the analysis of the data, nonparametric statistics were used. In the situations, which do not have a normal scatter parametric tests can't be used and instead of these tests, non-parametric tests are used. Comparisons between experimental and control groups were administered using Mass Whitney U test. For the pre-test/ post-test score comparisons of experimental and control groups, Wilcoxon Test was used. The analyses were conducted using SPSS and a significance level of 0.05 was sought in comparisons.

FINDINGS

In the study, the forms belonging to the 40 children were completed by the teachers, analyses were made and the findings were presented in the form of tables. As seen in Table 2, a statistically significant difference could not be found between the self-regulation skills pretest scores of the children in the experimental and control groups (U=-0.653, p>0.05). When the mean rank and sum of ranks were taken into consideration, the calculated figure indicates that the children's self-regulation skills pretest

scores prior to the Self-Regulation Skills Education program were similar.

The Mann Whitney U Test results of the scores received from the Preschool Self-Regulation Scale after the treatment by the children in the experimental group who participated in the self-regulation skills education program and those who did not participate in this program are given Table 3. According to this, a significant difference was found at the end of a 10-week intervention between the self-regulation skills of the children who participated in the self-regulation skillls education program and the children who did not participate in this program (U=-5.419, p<0.05). When the mean rank and sm of ranks were taken into consideration, it was understood that the children who participated in the self-regulation skills education program had higher self-regulation skills scores than the children who did not participate in the program. This finding indicates that the self-regulation skills education program is effective in increasing children's self-regulation skills.

The results of the Wilcoxon Signed Ranks Test regarding whether or not the children's self-regulations skills exhibited a significant difference before and after the intervention are shown in Table 4 The results of the analysis indicate a significant difference between the scores which the children who particpated in the study received from the Preschool Self-Regulation Scale before and after the experiment (z=-4.021, p<0.05). When the mean rank and sum of ranks of the difference scores are taken into consideration, it is seen that this difference is in favor of positive ranks, that is the posttest score. According to these results, it can be said that the self-regulation skills education program in question had a significant effect on developing the children's self-regulation skills. As seen in Table 5, a statistically significant difference could not be found between self-regulation skills pretest-posttest scores of the children in the control group (z=-0.348, p>0.05). When the mean rank and sum of rank of the difference scores were taken into consideration, it was found that no progress was observed in the self-regulation skills of the children in the control group.

DISCUSSION

The purpose of the study is to investigate the effects of a

Table 3. Mann Whitney U test results of the children in the experimental and control groups according to their self-regulation skills posttest scores.

Group	n	Mean rank	Sum of ranks	U	*p*
Experimental	21	30.00	630.00		
				-5.419	0.000
Control	19	10.00	190.00		

p>0.05.

Table 4. Wilcoxon signed ranks test results of the self-regulation skills pretest-posttest scores of the children in the experimental group.

Posttest-Pretest	n	Mean Rank	Sum of Ranks	z	p
Negative Rank	0	0.00	0.00		
				-4.021	0.000*
Positive Rank	21	11.00	231.00		
Equal	0				

p>0.05* On the basis of negative ranks.

Table 5. Wilcoxon signed ranks test results of the self-regulation skills pretest-posttest scores of the children in the control group.

Posttest-Pretest	n	Mean Rank	Sum of Ranks	z	p
Negative Rank	6	9.67	58.00		
				-0.348	0.728
Positive Rank	8	5.88	47.00		
Equal	5				

p>0.05.

Self-Regulation Skills Education Program on the self-regulation skills of six-year-old children. The non-equivalent control group quasi-experimental research design was used in the study. The study group consisted of 40 children attending two independent nursery schools. "General Information Form" and "Preschool Self-Regulation Assessment (PSRA)", which aimed to evaluate the children's self-regulation skill levels, were used in the study.

According to the results of the study, a statistically significant difference was observed between the pretest and posttest scores of the experimental group (p<0.05). When the mean rank and sum of ranks of the difference scores were analysed, it was seen that pre-intervention self-regulation skills of the children in the experimental group exhibited a positive development after the Self-Regulation Skills Education Program. The analysis showed that the mean rank for the experimental group children's self-regulation skills posttest was significantly higher than that of control group children (p<0.05). This finding indicates that the self-regulation skills education program is effective in developing children's self-regulation skills.

When the relevant literature is reviewed, it is seen that there are various studies with findings supporting these results. Tominey and McCelland (2011) planned games (cycle time) that are simple at the beginning but become gradually more difficult in order to enable children to practice their theoretical self-regulation skills and enhance their cognitive capacities. The program was implemented with 65 children twice a week for lengths of 20-30 min for a period of 8 weeks. The researchers and the teachers reported at the end of the process that the children's skills of attention, remembering the instructions and following them, and controlling their behaviours developed. A similar study conducted by Sezgin (2016) investigated the effect of "Game-Based Self-Regulation Education Program" prepared for 48-60-month-old preschool children on the children's self-regulation skills. The findings of the study proved that the program developed was effective. In addition, the study stated the need to plan systematic activities aimed at developing behavioral self-regulation skills in terms of the children's readiness for school and improvement of their academic

skills.

As can be seen, children's self-regulation skills can be developed and supported through education. The self-regulation Skills EducationProgram developed within the scope of this study includes features that support the self-regulation skills necessary for children to develop attention and emotion control and to regulate their behaviors accordingly.

Studies testing the efficiency of the education emphasize the importance of supporting learning via visual and multiple reminders (Aksoy and Baran, 2010; Aslan, 2008; Domitrovich et al., 1999; Elias and Berk, 2002; Saltalı, 2010; Shure, 2001; Tominey and McCelland, 2011; Webster-Stratton and Reid, 2010). These features were taken into consideration during the preparation of the program and contents that were effective in children and promoted self-regulation skills were included. In The Self-regulation Skills Education Program, various techniques were used to improve the attention skills of children and to enable them to regulate their emotions and behaviours. The efficiency of the program was proven through movement and concentration, video clips, stories, dramatization, enaction, role playing, game and art activities. It was seen that the video clips used in the study were used in educational activities and had a favorable effect on self-regulation skills (Truglio et al., 2014). A study conducted at Iowa University revealed that the Cookie Monster's effort aimed at self-control had a positive impact on children. The results of the study were associated with children's abilities to behave in accordance with social situations, abide by rules, complete challenging time-consuming tasks and self-regulation (Linebarger, 2014).

Studies conducted in this regard indicate that the self-cntrol skill acquired at an early age is effective in the shaping of children's behaviours and their future (Bierman et al., 2008; Bondurant, 2010). In a study conducted by Mischel (1960), a group of 4-year-old children were asked to wait in a room until their minder returned. The children were told that as a reward, they would receive a few marshmallows or a whole marshmallow. It was seen as a result of the test that 30 % of the children were able to wait. It was found that the school achievements of the children who managed to wait were higher than those of the others and displayed fewer antisocial behaviors at university and after wards (cited in Goleman, 1998). In another study, it was found that adjustment and problem behaviours seen in children were associated with low and high effortful control and these children showed more problem behaviours (Murray and Kochanska, 2002).

Various studies exist emphasizing that self-regulation skills such as planning before acting, focusing and maintaining attention, remembering and following instructions, recognizing and understanding emotions, and being able to control impulses are important in later years in life (Baumeister and Vohs, 2007; Eisenberg et al., 2001; Zimmerman, 2000). Furthermore, individuals with high levels of self-regulation have a lower risk of drug use, antisocial behavior, abnormal eating habits and obesity (Herman and Polivy, 2011; Posner and Rothbart, 2009). An extensive study conducted by Tangney et al. (2004) found that participants having low levels of self-regulation skills suffered from various unfavorable conditions such as substance addiction, alcohol abuse, eating disorders, violence and similar offensive behaviors, and failure at school and work.In a longitudinal study conducted with male participants aged 3-21, Henry et al. (1999) investigatedif there was a connection between crime behaviors and self-regulation. They found that the children's control focuswas related to the duration of school attendance and that the children who dropped out early were more likely to be involved in crime in the future. The findings from the present study and a review of the literature reveal that self-regulation, which integrates with the individual's learning, development and participation in social life, can and should be supported by systematic and planned programs in early childhood.

SUGGESTIONS

The following suggestions can be made on the basis of the results obtained from the study:

(i) Parental awareness can be raised concerning the issue at hand by preparing public service accouncements using mass media.
(ii) It may be ensured that preservice teachers receive theoretical and practical courses aimed at supporting children's self-regulation skills. These courses should emphasize the importance of acquisition of self-regulation skills, and teach how these skills can be given and supported, and what methods and techniques need to be used to this end.
(iii) This study was conducted on children demonstrating a typical development pattern. Future studies can be implemented on disadvantaged children.
(iv) In terms of educational policies, projects can be designed to popularize the Self-Regulation Skills Education Program.
(v) This program can be popularized by implementing an integrated early childhood education program together with those abroad.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

Aksoy P, Baran G (2010). Review of studies aimed at bringing social skills for children in preschool period. Procedia Social and Behavioral Sciences 9:663-669.

Aslan E (2008). The effect of drama based social skills education on social relations and cooperation behaviors of 6-year-old children. Master Thesis, Adnan Menderes University, Aydın, Turkey.

Baumeister RF, Vohs KD (2007). Self regulation, ego depletion and motivation.Social and Personality Psychology Compass 1(1):115-128.

Bierman KL, Nix RL, Greenberg MT, Blair C, Domitrovich CE (2008). Executive functions and school readiness intervention: Impact, moderation, and mediation in the Head Start REDI program. Development and Psychopathology 20:821-843.

Blair C (2002). School readiness integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. American Psychologist 57(2):111-127.

Bondurant LM (2010). The roots of academic underachievement: Prediction from early difficulties with self-regulation. (Doctoral Thesis,The University of Texas), Proquest Information and Learning Company. (UMI 3421467).

Bronson MB (2000). Self-regulation in early childhood: Nature and nurture. NewYork: Guilford Press.

Buyukozturk S (2011). Manual of data analysis for social sciences. Ankara, Turkey: Pegem Academy.

Calkins SD, Fox NA (2002). Self-regulatory processes in early personality development: A multilevel approach to the study of childhood social withdrawal and aggression. Development and Psychopathology14:477-498.

Calkins SD (2010). Commentary: Conceptual and methodological challenges to the study of emotion regulation and psychopathology. Journal of Psychopathology and BehavioralAssesment 32(1):92-95.http://dx.doi.org/10.1007/s10862-009-9169-6

Campbell SB (2002). Behavior problems in preschool children: Clinical and developmental issues. New York: The Guildford Press.

Carlson SM, Wang TS (2007). Inhibitory control and emotion regulation in preschool children. Cognitive Development 22: 489-510.

Cohen L, Manion L, Morrison K (2007). Research methods in education. New York: Taylor and Francis.

Cole PM, Martin SE, Dennis TA (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development. Child Development 75(2):317-333.

Denham S, Burton R (2003).Social and Emotional Prevention and Intervention Programming For Preschoolers. New York: Kluwer Academic Plenum Publishers s.150.

Domitrovich CE, Greenberg MT, Kusche C, Cortes R (1999). Manual for the Preschool PATHS Curriculum. South Deerfield, MA: Channing-Bete Company.

Domitrovich CE, Greenberg MT (2000). The study of implementation: Current findings from effective programs for school aged children. Journal of Educational and Psychological Consultation 11:193-222.

Elias CL, Berk LE (2002). Self-regulation in young children: Is there a role for sociodramatic play?. Early Childhood Research Quarterly 17:216-238.

Eisenberg N, Cumberland A, Spinrad TL, Fabes RA, Shepard SA, Reiser M, Guthrie IK (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. Child development 72(4):1112-1134.http://dx.doi.org/10.1111/1467-8624.00337

Eisenberg N, Smith CL, Spinrad TL (2011). Effortful control: Relations with emotion regulation, adjustment, and socialization in childhood. In: K. D. Vohs ve R. Baumeister (Eds.), Handbook of self-regulation: research, theory, and applications (2. Edition) (pp. 263-283). New York: Guilford Press.

Findik Tanribuyurdu E (2012). Preschool self-regulation scale validity and reliability study. Master Thesis, Hacettepe University, Ankara, Turkey.

Friedenberg J, Silverman G (2012). Cognitive science: an introduction to the study of mind. California: SAGE Publications.

Goleman D (1998). Emotional Intelligence: Why is more important than IQ?. İstanbul: Varlik Publications.

Gulay H, Akman B (2009). Social skills in preschool. Ankara, Turkey: Pegem Academy.

Henry B, Caspi A, Moffitt TE, Harrington HL, Silva PA (1999). Staying in school protects boys with poor self-regulation in childhood from later crime: A longitudinal study. Internatıonal Journal of Behavioral Development 23(4):1049-1073.

Herman CP, Polivy J (2011). The self-regulation of eating. In: K. D. Vohsve R. F. Baumeister (Eds.), Handbook of Self-Regulation: Research, Theory, and Applications (2. Edition). New York: Guilford Press pp. 522-536.

Linebarger DL (2014). Lessons from Cookie Monster: Educational Television, Preschoolers, and Executive Function. The University of Lowa. Colle of Education.

McCabe LA, Cunnington M, Brooks-Gunn J (2004). The development of self-regulation in young children. In: R.F. Baumeister ve K.D. Vohs (Eds.). Handbook of the self-regulation: research theory and applications (pp. 341-357). Newyork: The Guilford Press.

Murray KT, Kochanska G (2002). Effortful control: Factor structure and relation to externalizing and internalizing behaviors. Journal of Abnormal Child Psychology 30(5):503-514.

Polnariev BA (2006). Dynamics of preschoolers self-regulation: viewed through the lens of conflict resolution strategies during peer free-play, (Doktora Tezi, The City University of New York), ProQuest Information and Learning Company, (UMI No. 3241978).

Posner MI, Rothbart MK (2009). Toward a physical basis of attention and self-regulation.Pyhsics of Life Reviews 6:103-120.

Posner MI, Rothbart MK (2000). Developing mechanisms of self-regulation. Development and Psychopathology 12:427-441.

Saltali DN (2010). The effect of emotion education on emotional skills of preschool children. PhD Thesis, Selçuk University, Konya, Turkey.

Sezgin E (2016). Investigation of the effect of game-based education on children's behavioral self-regulation skills.(Unpublished Doctoral Thesis) Gazi University Institute of Educational Sciences, Ankara, Turkey.

Shure MB (2001). I Can Problem Solve (An Interpersonal Cognitive Problem-solving Program) (ICPS). Illinois: Research Press. 2. Baskı.

Smith-Donald R, Raver CC, Hayes T, Richardson B (2007). Preliminary construct and concurrent validity of preschool self-regulation assessment (psra) for field based research. Early Childhood Research Quarterly 22:173-187. http://dx.doi.org/10.1016/j.ecresq.2007.01.002

Tangney JP, Baumeister RF, Boone A (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. Journal of Personality 72:271-324.

Thompson RA, Calkins SD (1996). The double- edged sword: emotion regulation in high risk children. Development and Psychopathology 8:163-182. http://dx.doi.org/10.1017/S0954579400007021

Tominey SL, McClelland MM (2011). Red light, purple light: findings from a randomized trial using circle time games to ımprove behavioral self-regulation in preschool. Early Education and Development 22(3):489-519.http://dx.doi.org/10.1080/10409289.2011.574258

Torres M (2011). Understandıng self-regulation, links to school readıness, and implıcatıons for intervenıng wıth hıgh-rısk chıldren. Unpublished Doctorate Thesis, Pennsylvania State University, USA.

Truglio TR, Stefano ZA, Sanders SJ (2014). Sesamme Street Puts Self-Regulation Skills at the of School Readiness: Zero to Three.NewYork: Sesame Workshop.

Webster-Stratton C, Reid MJ (2010). The Incredible Years Parents, Teachers, and Children Training Series: A multifaceted treatment approach for young children with Conduct Problems. In J. Weisz& A. Kazdin (Eds.), Evidence-based psycho therapies for children and adolescents, 2nd edition. New York: Guilford Publications.

Webster-Stratton C, Reid J, Hammond M (2001) Social skills and problem- solving training for children with early-onset conduct problems: Who benefits? Journal of Child Psychology and Psychiatry and Allied Disciplines 42(7):943-952.http://dx.doi.org/10.1111/1469-7610.00790

Zimmerman BJ (2000). Attainment of self-regulation: A social cognitive perspective. M. Boekaerts, P.R. Pintrichve M. Seidner (Ed.). Handbook of self-regulation (s. 13-39). San Diego, CA: Academic Press.

AJ ACADEMIC JOURNALS
expand your knowledge

Educational Research and Reviews

Full Length Research Paper

Teachers' pedagogical competence as determinants of students' attitude towards basic science in South West Nigeria

Adegbola, Funmi Florence

Department of Science Education, Faculty of Education, Ekiti State University, Ado Ekiti, Ekiti State, Nigeria.

This study investigated teachers' pedagogical competence as determinant of students' attitude towards Basic Science in South-West Nigeria. The study was a descriptive survey type study. Participants were 2160 students randomly selected from 108 secondary schools across four States in South- west Nigeria together. 324 teachers teaching Basic Science in Junior Secondary Schools were purposively selected for the study. Two instruments were used for data collection. The first was a 25 item questionnaire titled "Basic Science Teachers pedagogical Competence Questionnaire (BSPCQ) and the second instrument was also a questionnaire with 25 structured item questions titled "Students' Attitudinal Questionnaire" (SAQ). The reliability of the instruments was determined through test and re-test method which yielded a correlation co-efficient of 0.87 and 0.89 for BSPCQ and SAQ, respectively at 0.05 level of significance. Mean and Ranking Order and Multiple Regression analysis were used to analyze the data. Findings revealed that, teachers' pedagogical competence can significantly influence students' attitude towards Basic Science. It was recommended that, emphasis should be laid on teachers' qualifications while employing Basic Science teachers. Teachers should also intensify efforts in using various teaching styles which could influence students' attitude. It was also recommended that adequate measures should be taken by the teachers to ensure that students benefit from their teaching. In addition, the government and other educational stakeholders should arrange for seminars and workshops for their teachers to boost their levels of competence in the classroom. Teachers should also exhibit positive attitude that can influence students' attitude towards Basic Science.

Key words: Teachers' pedagogical competence, students' attitude, teacher's attitude, basic science.

INTRODUCTION

Education is the bed rock through which any nation can build its citizens. It helps to offer adequate knowledge to life in order to eliminate ignorance and inequality in the society. Specifically, Fadare (2001) noted that this was why late Chief Obafemi Awolowo advocated for free primary education policy in the Western state, Nigeria in

1955. This policy entitled citizens to equal opportunity for education. In view of this, Kosgei et al. (2013) referred to education as a basic human right, which provides a key to enlightenment, wealth and power. Noting that for every individual to achieve this, the role of teachers towards it can not to be jettisoned. Teachers as role models are expected to impart knowledge to students in order to acquire the necessary information needed to function well in the society. Teachers' pedagogical competence influences what they do and this in turn influence the attitude developed by students.

Teachers occupy an important position in the teaching and learning of any academic discipline. Consequently, Orji (2015) emphasized that teachers' management roles are important for a suitable learning climate which could help them to harness all resources for the fulfillment of educational goals and objectives. The author further noted that the effective management of lessons in the classroom can help students develop positive attitude towards learning.

The appropriate use of teaching methods as opined by Etuk et al. (2013) is to incorporate an ordered way of performing a task. However, professional teaching competency requires the full knowledge of utilizing the right method to adopt by the teacher in order to create professional learning opportunities for students especially in the Basic Science. Another important factor in effectiveness of a teacher is the ability to recognize the variance in the learning situation of students and to choose the best method possible for each student (Liakopoulou, 2011). Teachers teaching style such as teachers' explanation respect to students, aggressive behaviour, and pace of teaching among others could either motivate or not motivate students to learn in the classroom (Sakai and Kikuchi, 2009).

Undoubtedly, that the effectiveness of teaching method makes for retention and high performance of students in any subject. The extent to which a method is effective largely depends on the usage by the teacher. Effective methods of teaching are usually evident in the students' attitude. Competence as described by Popoola (2013) is the underlined characteristics of a person relating to the effectiveness of individual performance on any job. Understanding comprises the skills for planning lessons, making decisions on how learning would be systematic, explaining materials clearly, responding to individual differences and guide students how to learn. Knowledge of subject matter deals with specific information teachers need to present content.

Teachers' pedagogical competence seems to significantly relate to students' attitude towards learning in the school. Gbore (2013) remarked that the ineffective teaching of science in secondary school arises from the quality of teachers recruited to teach science. He reiterated that, the teaching of science subjects by people who are neither interested nor qualified may have led

many students in science class, either to end up as drop outs or withdrew them to other discipline. It is obvious that, Basic science teachers need to be professionally competent in order to carry their classroom assignments out effectively. Amoo and Rahman (2004) claimed that the relationship between teachers and students attitudes towards learning is the consequence of a reciprocal influence of student's attitude. Also, Okebukola (2006) argued that the quality of science teachers is a key factor ascribed to the basis of student's constant negative attitude developed towards the subject.

While Huckstep et al. (2003) in their finding affirmed that effective teaching can provide a positive attitude depending on teachers' confidence and in-depth knowledge of the subject matter. The kind of attitude developed by the learner occurs as a result of the observation made by him or her during learning process. Some teachers' teaching styles identified in the classroom (such as lateness, absenteeism, enthusiasm and other positive manners such as mutual respect, rapport among others) can determine the kind of attitude developed by student towards a subject.

Basic Science teachers are supposed to establish a conducive environment for learning to take place but the reverse is the case, as some of Basic Science teachers developed nonchalant attitude towards teaching this subject which has made many students to develop negative attitude towards the subject. Some absent themselves from the class lesson. Students with this experience develop negative attitude towards lesson out of frustration. Wirth and Perkins (2013) noted that teachers' effectiveness contributed significantly to students' attention in the classroom. Students tend to show more interest towards what the teachers teach if they are regular and punctual to their lesson.

A teacher's competence is usually expressed in the classroom in such a way that students take decision in a positive way. Basow (2000) in his own submission concluded that teachers' way of teaching such as warmth, enthusiasm and extroversion apparently separate effective teachers from ineffective teachers. Teachers' commitment to their work plays a significant role in shaping their students' attitude positively towards learning (Wigfield and Eccles, 2000). This is also in line with the findings of Alafiatayo et al. (2016) which revealed that there exists a positive significant relationship among the teachers' abilities on students' attitude towards science subject. Therefore, one could infer that a student's interest may be reliant upon the competence displayed by the teachers' ways of teaching in the classroom.

In line with this, Etuk et al. (2013) affirmed that students' participation in the classroom learning depends on the instructional process and their perception which can presents methodological challenges. Instructional materials used by the teacher play a significant role in

developing positive attitude in the minds of students. The way students interact, think and perceive things determine their interest in the subject.

However, trends in teaching supposed to reflect the professional teaching strategies in the classroom. Teachers supposed to adjust their teaching strategies to enhance students' understanding. With teachers pedagogical competence students tends to achieve adequate knowledge if only they can develop positive attitude towards learning. To claim that teachers are experts in their field of learning, is to judge how good they are at making the instructional system effective. Popoola (2013) described a teacher as someone who supposed to have the competence to teach a particular subject. To her, teacher's efficiency in putting the instructional systems to use, matters a lot in the course of teaching and learning. The researcher went further to describe pedagogical competence as a concept that talks about one's competence in the learning management. Generally speaking, pedagogical competence is the composition of potential behaviours which allows for efficient manifestation of various activities in the classroom. It is a minimum standard which professionals should attain to be effective in his teaching.

Moreover, researches have shown that teachers' pedagogical competences are instrumental to successful teaching and learning in the classroom. However, for a teacher to be able to deliver effectively, he must be able to provide more learning opportunities for students both in quality and quantity (Akhyak snd Bakar, 2013). Today, some Basic Science teachers are unable to discover that whatever step taken by them exerts impact on students' attitude. Oser and Oelkers (2001) stressed that a good knowledge of pedagogical competence will contribute to student's technical and principle of development which will lead to a future successful application in any field. They added that, students will also develop their ways of thinking and creativity that could help their managerial qualities in any field. This implies that teacher must possess good managerial policy which can highly influence the attitude of students towards learning positively.

To ensure and promote pedagogical competence of teachers, Latchem et al. (2006), in an international overview of professional development of teachers, submitted that there is a need for teachers to embrace and master the latest tools and methodologies of passing information to students. Teachers are faced with a big responsibility in the classroom and whatever they do would affect the students either positively or negatively. Therefore, teachers must comprehend both learning and instructional principles. Teachers who have the understandings of the subject content very well would be thorough and express themselves clearly unlike those teachers with weaker background of subject matter (Abrantes et al., 2006). In line with this, Snezana et al.

(2006) believed that competent teachers harmonize the goals of teaching with cognitive abilities of students and try to improve students' learning attitudes.

It appears that numerous factors are in support of negative attitude developed by students in Basic Science. Attitude of students toward learning play a major role in the classroom. The negative attitude often reflected by an individual student usually results to lack of interest (Amoo, 2002). He stressed further that this makes students unable to participate well in any activity related to the subject taught by the teacher. No matter the competence of a teacher teaching a subject, if students' interest towards learning is negative student's academic performance would be impeded.

It is generally believed that the attitude of a person towards a thing has a direct bearing on what he or she is able to do or achieve (Okoro and Uwah, 2013). From this, one would infer that student's positive attitude towards learning is very essential for positive result. Apelgren and Giertz (2010) asserted that having attitude that best promotes students' learning also implies the need for the teacher to ensure good contact with all students. Teachers are thus expected to create good teaching climate by applying skills which could help students develop good study habits, and stimulate them to be active and listening learners.

Purpose of the study

The purpose of this study was to examine teachers' pedagogical competence (such as teacher's knowledge of subject matter, communication, teacher's teaching style, motivation and the use of instructional materials) as determinants of students' attitude towards Basic Science. The study also examined the interaction of each variable of teachers' pedagogical competence on students' attitude towards Basic Science.

Research questions

The following questions were raised for the study.

1. What pedagogical competence influence students' attitude?
2. What is the contribution of each teacher's pedagogical competence in influencing students' attitude?

Research hypotheses

The following research hypotheses were tested at 0.05 level of significance.

1. Will components of teachers' pedagogical competence significantly determine students' attitudes towards Basic

Table 1. Mean and Ranking order of teachers' pedagogical competence influence on students' attitude towards Basic Science.

S/N	Teachers' pedagogical competence	F	Mean	Ranking
1	Use of instructional materials	2089	3.34	1ST
2	Knowledge of subject matter	2089	2.10	4TH
3	Teachers' motivation	2089	2.34	2ND
4	Teachers' communication skill	2089	2.06	5TH
5	Teachers' teaching style	2089	2.26	3RD

Science?
2. Will teachers' pedagogical competence significantly influence students' attitudes towards Basic Science?

METHODOLOGY

Research design

This study employed descriptive research design of the survey type to examine the influence of teachers' characteristics (teachers' experience, qualification, teachers' attitude and gender) and pedagogical competence of teachers (knowledge of the subject matter, motivation, level of communication, teachers' teaching style and instructional materials) as determinants of secondary school students' attitude towards Basic Science. The design is suitable because it enabled the researcher to gather relevant information from Basic Science teachers and students using qualitative measure of survey.

Sample and sampling techniques

Nigeria has six geo-political zones namely South West, South South, South East, North East, North Central and North West. For the purpose of the study, the researcher focused on South West which is believed to be the hub of education, considering the number of schools and literates in the area as compared to other geo-political zones. The South West comprises of six states, namely Ekiti, Osun, Lagos, Ogun, Oyo and Ondo. The sample of the study comprised of 2,160 Junior Secondary School students and 324 Basic Science that were selected using multistage and purposive sampling procedures. The first stage was the selection of three States (Ekiti, Lagos and Oyo) out of six States in South West of Nigeria using simple random sampling technique. The second stage involved the random selection of three Local Government Areas from each of the Senatorial Districts of each state selected making a total of 27 Local Government Areas. The third stage involved the use of simple random sampling technique to select four public secondary schools from each of the selected Local Government Areas making a total number of 108 public secondary schools. Stage five involved the selection of at most 20 students from each of the selected schools (making a total of 2160 students) using simple random sampling technique. The sixth stage involved the purposive selection of three teachers teaching Basic Science in junior secondary school classes from each of the selected schools (making a total number of 334 teachers).

Research instruments

Three sets of instruments such as Basic Science Teacher's

Characteristics and Pedagogical Competence Questionnaire (BSTCPCQ), Students' Attitudinal Questionnaire (SAQ), and Basic Science Students' Performance Test (BSPT) were used to collect data for the study.

Validity and reliability of the instruments

The questionnaires were given to three experts in the field of Basic Science and two experts in the area of test, measurement and evaluation from the University for Face and Content validities respectively. The reliability of the instruments was ascertained by using test – retest method. Pearson's Product Moment correlation was used to determine the reliability of the instrument. The reliability coefficients were found to be 0.87, 0.89 respectively.

Data collection and analysis

The data collected were analyzed using mean, ranking order and multiple regressions.
Result: Question 1. What teachers' pedagogical Competence influence students' attitude towards Basic Science?
Table 1 showed the mean analysis of different variables of teachers' pedagogical competence which can significantly influence students' attitude towards Basic Science. It can be observed from the table that five variables were identified including use of instructional materials, knowledge of subject matter, teachers' motivation, teachers' communication skill and teachers' teaching style. These are important pedagogical skills that would invariably influence students' attitude towards Basic Science. The mean and the ranking order analysis of these variables revealed that teachers' use of instructional material has the highest mean of 3.34; teachers' motivation has a mean of 2.34; teachers' teaching style has a mean of 2.26; knowledge of subject matter has a mean of 2.10, while teachers' communication style has a mean of 2.06. It can therefore be deduced from the table that all the variables especially the teacher use of instructional materials can influence students' attitudes toward Basic Science. It most importantly influences either positive or negative attitude of students towards the subject. When appropriate and simple instructional materials are used, students tend to create a positive attitude towards the subject. Taking the second position is the teachers' motivation. It was discovered that when teachers are appropriately motivated via incentives and other motivation strategies, they create positive attitude towards teaching, which also influences the students positively towards learning. A well-motivated teacher is a creative teacher. In the third position is the teaching style. A competent teacher should have studied his/her students to determine the teaching style that would be most suitable for them, taking into consideration their ages and background among other variables. A teacher's teaching style

Table 2. Multiple regression analysis of teachers' pedagogical competence and students' attitude towards Basic Science.

Model	Unstandardized coefficients		Standardized coefficients	T	Sig
	B	**Std error**	**Beta**		
(constant)	81.581	1.69		48.28	0
Use of instructional materials					
Knowledge of subject matter	0.095	0.072	0.034	1.321	0.186
Teachers' motivation					
Communication style	-0.02	0.049	-0.01	-0.397	0.691
Teaching style	-0.092	0.06	-0.034	-1.544	0.123
	-0.011	0.055	-0.006	-0.202	0.84
	-0.061	0.069	-0.026	-0.879	0.38

$P > 0.05$ Dependent variable: students' attitude towards Basic Science. Multiple $R = 0.051$; $R^2 = 0.003$; Adjusted $R^2 = 0.000$
F ratio = 1.099; P = 0.359.

would make the students to create either positive or negative attitude towards a particular subject. Teacher's knowledge of subject matter and effective communication skill taking the fourth and the fifth positions respectively are also important in influencing students' attitude towards a subject. Brilliant students can easily detect when a teacher is deficient in the knowledge of subject matter, hence a negative attitude can be created towards such subject. Also, when a teacher cannot effectively impart knowledge due to poor communication skills, learners can be discouraged.

Hypothesis 1: Will components of teachers' pedagogical competence significantly influence students' attitude towards Basic Science?

Table 2 revealed that not all the components of teachers' pedagogical competence can significantly determine students' attitudes towards Basic science (R=0.051). This implies that the use of instructional materials is the only predictor variable which can significantly influence student's attitudes towards Basic Science. The value of the coefficient of determinant (R^2=0.000) indicate that all the independent variables jointly accounted for 0% of the total variance in students' attitude towards Basic Science. The F ratio (1.009) is not significant at 0.05 level of significance. This implies that the pedagogical competence variables will not jointly provide a significant explanation for the variation in students' attitudes towards Basic Science. Thus, the hypothesis is accepted. This implies that the components of teachers' pedagogical competence will not jointly significantly influence students' attitudes towards Basic Science.

RESULTS AND DISCUSSION

Table 1 showed that the use of instructional materials was rated the highest among the variables that can influence students' attitude towards Basic Science. This finding is in line with Omebe and Akani (2001)'s assertion that the mastery of Science concepts will not be fully achieved without the use of instructional materials. Onasanya and Omosewo (2011) also added that no matter how well a professionally qualified science teacher may be, if the school lacks instructional materials, he/she would not be able to put his idea into practice and also

translate his competence into reality. Also, the findings of Esu et al. (2004) supported that instructional materials facilitate learning. This study therefore further extends the literature on the importance of the use of instructional materials for effective teaching and learning.

Table 2 revealed that the components of teachers' pedagogical competence cannot significantly influence students' attitude at the same way. The table showed that teacher's use of instructional materials in the teaching of the subject will significantly influence students' attitude, which further corroborates the findings in Table 1. The finding also revealed that there is no correlation between some of the teachers' pedagogical competence factors that can determine students' attitude towards Basic Science. This might be due to other variables which are also responsible for influencing students' attitude towards the subject but are not included in this study.

Conclusion

It can be concluded from the findings of this study that of all the teachers' pedagogical competence variables teachers' use of instructional materials has the highest influence on students' attitude towards the Basic Science. The finding also revealed that the components of teachers' pedagogical competence cannot determine students' attitudes towards Basic Science.

Recommendations

The following recommendations were made based on the findings:

(i) Teachers should use relevant instructional materials which can influence students' attitudes towards learning.

(ii) They should intensify efforts in developing their knowledge of subject matter through the attendance of seminars, workshops and in-service training.

(iii) Teachers should develop their communication skills to help students develop positive attitude towards learning of Basic Science.

(iv) Teachers should use various strategies to motivate students towards learning of Basic Science.

(v) They should adopt the best teaching style which can influence student's positive attitude towards learning of Basic Science.

(vi) They should show their levels of competence while teaching in the classroom.

(vii) Teachers' motivational skills should encourage student's positive attitude towards learning of Basic Science.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

REFERENCES

Abrantes JL, Seabra C, Lages LF (2006). Pedagogical effect, student interest and learning performance. Journal of Business Research 60:960-964.

Akhyak IM, Bakar YA (2013). Implementation of teachers' pedagogy competence to optimizing learners' development in public primary Schools in Indonesia. International Journal of Education and Research 1(9):1-10.

Alafiatayo BM, Anyanwu RI, Salau OA (2016). Effect of selected teacher's abilities on students' attitudes and academic performance in Biology among secondary schools in Sabon- Gari Local Government Area, Kaduna State, Nigeria. IOSR Journal of Research and Method in Education (6):24-29.

Amoo SA (2002). Analysis of problems encountered in teaching and learning of mathematics in secondary schools ABACUS. The journal of Nigeria 27(1):130-135.

Amoo SA, Rahman MA (2004). Secondary school students' attitudes of learning Mathematics in the world of information technology. Implication for Mathematics teachers and teacher preparation. In proceeding of the 42nd Annual Conference of the Science Teachers Association of Nigeria pp. 178-182.

Apelgren K, Olsson T (2010). A Swedish perspective on pedagogical competence: Division for development of teaching and learning. Uppsala University.

Basow SA (2000). Best and worst professors: Gender patterns in students choices. Sex Roles 34:407-417.

Esu AE, Enukoha OI, Umoren GU (2004) Curriculum development in Nigeria for College and Universities. Owerri: Whyte and Whyte publishers.

Etuk NE, Afangideh ME, Uya AO (2013). Student's perception of teachers' characteristics and their attitude towards Mathematics in Oron Education Zone, Nigeria. International Educational Studies 6(2):197-204.

Fadare GM (2001). The UBE (Universal Basic Education) programme: A conceptual analysis and critique. Rivers State College of Arts and Science, Rumuola, Port Harcourt, Nigeria.

Gbore LO (2013). Relative contributions of selected teachers' variables and students' attitudes towards academic achievement in Biology among Senior Secondary School students in Ondo State, Nigeria. Mediterranean Journal of Social Sciences 4(1):243-250.

Huckstep P, Rowland T, Thwaites A (2003). Primary teachers' Mathematics content knowledge: What does it look like in the classroom? Retrieved from www.scribd.com/doc/22550939/journal, on February 20, 2015.

Kosgei A, Mise JK, Odera O, Ayugi ME (2013). Influence of teachers' characteristics on students' academic achievement among secondary schools. Journal of Education and Practice 4(3):76-82.

Latchem C, Odabasi FH, Kabasi I (2006). Online professional development for University teaching in Turkey: A proposal. The Turkish Online Journal of Educational Technology 5(3):4.

Liakopoulou M (2011). The professional competence of teachers: Which qualities, attitudes, skills and Knowledge contribute to a teacher's effectiveness? International Journal of Humanities and Social Science 1(21):66-78.

Okebukola PA (2006). Students performance in practical chemistry: A study of some related factors. Journal of Research in Science Teaching 24(2):119-216.

Okoro CC, Uwah CS (2013). Teacher Gender and attitude of primary school pupils to Schooling in Uyo Metropolis, Akwa Ibom State, Nigeria. Universal Journal of Psychology 1(2):53-58.

Onasanya SA, Omosewo EO (2011). Effect of Improvised and Standard Instructional Materials on Students Academic Performance in Physics in Ilorin, Nigeria. Singapore Journal of Scientific Research 5(3):123-127.

Orji NS (2015). A correlational study of students' attitude and achievement in Chemistry with teacher classroom management behaviour. Nigeria Educational Resource and Development Council (NERDC) Sheda-Abuja.

Oser F, Oelkers J (2001). Die wirksamkeit der lerhrerbildungssysteme. Von der all-rounder bildungZurAusbildungprofesioneller Standards. Zurich:RueggerVertag. International Online Journal of Educational Sciences 3(2):411-423.

Popoola AA (2013). Teacher pedagogical competence in teaching and learning in perception of teachers' knowledge, attitude and teaching skills as predictor of academic performance in Nigerian secondary schools. Educational Research and Review 2(9):165-171.

Sakai H, Kikuchi K (2009). An analysis of demotivators in the EFL classroom. System 37:57-69.

Snezana M, Dragana B, Lidija Z (2006). Teachers' competence as the indicator of the quality and condition of education. University of Kragujevac, Serbia.

Wigfield A, Eccles JS (2000). Expectancy, value theory of achievement motivation. Contemporary Education Psychology 25(1):68-81.

Wirth KR, Perkins D (2013). Learning to learn. Retrieved from www.macalester.edu/academics/geology/wirth/learning.

ACADEMIC JOURNALS
expand your knowledge

Educational Research and Reviews

Full Length Research Paper

The influence of age and gender on class attendance plus the academic achievement of undergraduate Chemistry Education students at University of Calabar

Cecilia Nja[1]*, Bernedette Cornelius-Ukpepi[2] and Christiana Chinyere Ihejiamaizu[1]

[1]Department of Science Education, Faculty of Education, University of Calabar, Calabar, Cross River State, Nigeria.
[2]Department of Curriculum and Teaching, Faculty of Education, University of Calabar, Cross River State, Nigeria.

This article investigated the influence of age and gender on class attendance as well as Chemistry Education students' academic achievement in SED 281, at the University of Calabar. Descriptive survey research design was employed for the study. The target population was two hundred and twenty Chemistry Education students in the Department of Science Education, University of Calabar. A sample size of sixty-four (64) Chemistry Education students of 2018/2019 academic session was used for the study. Data were obtained from existing records for the research. These were: 2018/2019 first semester result of Secondary Chemistry Content 1 and students' register that had their ages. Results obtained showed that the mean score of the female students' class attendance was 83.76, which was greater than that of the males (67.2). The young and matured students had mean scores of 82.11 and 57.20, respectively. Independent t-test and analysis of variance (ANOVA) were used in the study. The null hypothesis that there is no significant difference in the academic performance of the students with regard to class attendance was not accepted. This paper recommends that class attendance should be made compulsory for all undergraduate students in Chemistry Education, University of Calabar.

Key words: Attendance, absent, chemistry, students, achievement.

INTRODUCTION

Society depends on science for economic development. Many scientists are committed to finding more efficient and effective ways to discover natural resources like petroleum and ore. Chemists that develop new chemical substances with potential technological applications and physicists that develop new phenomena like superconductivity develop knowledge that may spur economic development. In a situation where various countries of the world are engaged in economic competition, their support of science is to invest in their economic future (Science, 2011).

Science education is concerned with sharing of science content and process with individuals not traditionally considered part of the scientific community. The learners who are exposed to this scientific knowledge may be children, college students or adults (Wikipedia, 2019).

*Corresponding author. E-mail: njacecilia@gmail.com.

The field teaches learners problem solving skill, manipulative skills as well as critical thinking skills. Science education has increasingly gained prominence in the world, especially in developing nations, because it is considered as a beacon for advancement. It is believed that education is a pivotal part of human development, and can positively influence standards of living, health and governance (Hamidu et al., 2014). More significantly, science education plays a key role in reshaping students' thought processes and patterns. It is apparent that since its inception in Nigeria, science education has brought a dramatic development in the area of education, science and technology as well as contributing immensely to the growth of the nation's economy. The overall importance of education in general and science education in particular to mankind cannot be over-emphasized. No nation can afford to neglect science education at any level of education and hope to thrive in any field of human endeavor. Science education is imperative for meaningful living in any society. It is at the centre of producing resources necessary for socio-economic, scientific and technological development needed for the advancement of any nation (Osuafor and Okonkwo, 2013).

If science is well taught at the primary, secondary and university level in Nigeria, it can propel the young generation into astonishing scientific discoveries. Fortunately, since Nigeria gained her independence in 1960, there has been a considerable national pursuit to increase scientific and technological capacity of the country. This is due to the fact that science is considered as a catalyst that enhances growth and development of a nation. Science and technology is considered as the pivot of any nation's development. The most important benefit of science has been the luxury it has brought to daily life. The mechanization of industrial processes has reduced human effort. Scientific discoveries have made life easy for man (Oak, 2018).

Chemistry and other natural science subjects like Physics and Biology are needed by students to study courses like Medicine/Surgery, Pharmacy, Engineering, Science Education, Science, Agriculture, etc., in tertiary institutions. According to the Joint Admission and Matriculation Board (JAMB) (2018/2019UME/D) in Nigeria, the mandatory subjects needed to study Medical/Pharmaceutical and Health Science and all courses in the sciences (Engineering/Environmental Technology, Agriculture, Education Science and Computer) in the university are English Language, Mathematics, Physics, Chemistry and Biology. Students are to have credit pass in all of them.

These subjects are very important for students' future career aspirations. Unfortunately, students perform poorly in these important subjects. Reports from West African Examination Council Chief Examiner in May/June for senior secondary school certificate examination in Chemistry indicated a persistent trend of students' poor performance over the years (2014-2018).Their performance rates in Chemistry are 31.38, 25.20, 45.81, 49.18 and 46.12%, respectively.

This poor trend in external examinations as revealed by the earlier results indicates that Chemistry students did not have up to 50% credit pass in the five years under review. This is an indicator that Chemistry is not well taught in Nigerian schools.

Science education at all levels of education in Nigeria is in a deplorable state. A lot of assertions and empirical findings have been made for the reason for this poor performance. There are lack of science resources and this contributes to students' poor academic performance in Chemistry (Nbina and Obomanu, 2011; Neji et al., 2014).

A study done by Uzezi and Deya (2017) showed that there was significant difference in the academic achievement of students who belonged to a study group compared to their counterparts who did not belong to a study group. Purcell (2007) and Silvestri (2003) revealed that class attendance contributes immensely to academic outcomes of students.

Halpern (2007) investigated the relationship between class attendance and academic achievement of students using correlation analysis; there was a significant and moderate positive relationship between both (r=0.50, p<0.001). This supports the findings of Woodfield et al. (2006), that class attendance is a significant determinant of academic achievement. The study also found that entry qualifications based on 'A' level scores were also a significant factor of students' academic achievement. This suggests that students attending class are already predisposed to academic achievement.

Dey (2018)'s research on "Class attendance and academic performance: A subgroup analysis" suggested that attending class has a positive and significant effect on exam performance. Fadelelmoula (2018)'s research also had a positive relationship between class attendance and academic performance of students. A similar finding was observed by Khalid and Mehmood (2017).

Ahmed et al. (2013)'s study on "The effect of students' class attendance on their academic performance: A case study at Simad University Mogadishu" found a moderate relationship between class attendance and academic performance of students. Department for Education (2016) reported the link between absence and academic achievement. The findings showed that higher rate of absence leads to low level of academic performance. The report also revealed that female students miss fewer classes than male students. Kassarnig et al. (2017)'s research on "Class attendance, peer similarity, and students' academic performance" discovered that consistent class attendance strongly correlates with academic performance. Blad (2014) found out that students with poor class attendance had lower scores in test compared to their peers who never missed a class. It has been reported that increase in class attendance by

one standard deviation gave rise to increase in Mathematics performance (Njal, 2017). Halpern (2007)'s study on "Class attendance in higher education: Does it matter?" indicated that class attendance has a significant and moderate positive relationship with students' academic achievement.

In other studies that investigated gender effect, it was discovered that females perform better than males (Natasha, 2018). Alfan and Othman (2005), Woodfield et al. (2005), Smith (2004), Lee (2003) Nja et al. (2017) reported a non-joint effect of gender and class attendance on academic performance of Chemistry students. Some previous studies have suggested that females tend to attend class more than males. Woodfield et al. (2006), in a study of 650 students at Sussex University, found that class attendance of females with a mean of 88% was significantly higher than that of the males (84%). Kelly (2012), in a survey at University College Dublin, found that, for those who live on campus, there is a significant evidence (pp=0.004) that females have a higher rate. If a student does not attend at least 70% of the classes, he/she has a probability of two in three to receive a failing mark and a probability of 4 in 5 to have low grades. The 80% rule stated that if a student does not attend at least 80% of the classes, the probability to get failing grades is 50%, whereas the probability not to get high grades is 2 in 3.

In a study by Eisen et al. (2015), there was no statistically significant relationship between class attendance and students' performance after adjusting for control variables that included gender and age. Martin and Walker (2006), in their study on "Students' achievement and University Classes: Effect of Class Attendance, Peers and Teachers", showed that class attendance and class size do not significantly affect university students' learning outcome.

Majority of literature reviewed showed the importance of attending lectures on academic achievement of students; there were results that were at variance, though few. As there was no significant difference in the academic achievement of students who attended lectures and those who did not, this study sought to find out: if gender and age affect class attendance as well as Chemistry students' academic achievement.

Purpose of study

The purpose of this study is to investigate class attendance and its influence on the academic achievement of undergraduate Chemistry students.

Specifically, the study sought to find out:

(1) If age affects class attendance
(2) Influence of gender on class attendance.
(3) Influence of class attendance on academic achievement of undergraduate Chemistry students.

Research questions

The following research questions were used in the study.

(1) How does students' age influence class attendance?
(2) How does students' gender influence class attendance?
(3) What is the influence of class attendance on academic achievement of undergraduate Chemistry students?

Hypothesis

(1) The first null hypothesis stated that: there is no significant difference in class attendance with respect to age.
(2) Second null hypothesis stated that gender does not significantly influence class attendance of Chemistry Education in SED 281
(3) The third null hypothesis formulated that there is no significant difference in the academic achievement of Chemistry Education students in SED281 based on class attendance.

METHODOLOGY

Descriptive survey research design was employed for the study. The target population was two hundred and twenty Chemistry Education students in the Department of Science Education, University of Calabar. A total of sixty-four (64) Chemistry Education undergraduate students were chosen at random from the population. There were 35 males and 29 females. The existing records used were Secondary Chemistry Content 1 first semester result for 2018/2019 academic session and students' register that had their ages. Secondary Chemistry Content 1 first semester result provided the researcher with information on students' academic achievement. The students were classified in three groups based on the percentage of attendance: Group 1, students with low class attendance (50%-70%); Group 2, students with medium class attendance (70 - 85%); Group 3, students with high class attendance (over 85%). Groups 1, 2, and 3 consist of 20, 16 and 28 students, respectively.

RESULTS

Descriptive statistics of all variables by group (Table 1) showed that Group 3 had the highest examination mean of 71.5. This is the group with the highest class attendance mark of 100. The table also revealed that, young students had a higher class attendance mean of 82.11 compared to mature students that had a mean of 57.20. Females had a higher mean of 83.76 and males had a mean score of 67.2.

The t-calculated value of 13.98 was higher than the t-critical value of 2.20 at 62 degree of freedom and at 0.05 significant level. When the calculated value is higher than the critical value, the null hypothesis is not accepted as

Table 1. Descriptive statistics of all variables by group.

Variable unit	N	Min	Max	Mean	Standard deviation
Exam points					
Group 1	28	5	60	25.79	15.60
Group 2	20	23	68	41.1	14.59
Group 3	16	65	80	71.5	6.18
Total attendance 0-12 sessions (50-100)					
Group 1	28	50	70	57.8	8.44
Group 2	20	70	84	77.9	3.93
Group 3	16	85	100	87.38	1.86
Age (Years)		**Attendance**			
Young	36	15	21	82.11	5.72
Mature	28	21	40	57.20	8.47
Gender					
Male	35	-	-	67.2	12.30
Female	29	-	-	83.76	5.79
Age (Years)		**Exams scores**			
Young	34	70	90	54.64	19.15.
Mature	30	05	80	54.04	24.61
Gender					
Male	35	10	88	60.84	21.98
Female	29	05	90	83.76	5.79

there is significant difference in the result. This result therefore implies that there is a significant difference in the class attendance between (age) young and matured Chemistry students.

The t-calculated value of 6.66 was higher than the t-critical value of 2.20 at 62 degree of freedom and at 0.05 significant level. When the calculated value is higher than the critical value, the null hypothesis is not accepted as there is significant difference in the result. This result therefore implies that there was a significant difference in the class attendance between male and female Chemistry students.

The F -ratio value was 58.09922. If the obtained value of "F" is equal to or larger than this critical F-value, then the result is significant at that level of probability. In the result above, F-critical ratio was 3.14 with 63.2 degrees of freedom. In 2 columns and 63 rows on the F Table, the critical value of F is 3.14. Analysis obtained for F-ratio of 58.09922 was larger than the critical F-value of 3.14; as such, it was concluded that the result was significant at p<0.05. The null hypothesis which stated that there is no significant difference in the academic achievement of students with regard to class attendance was not accepted. Class attendance significantly influenced undergraduate Chemistry students' academic achievement.

DISCUSSION

The first research question sought to find out if students' age influence class attendance. Table 1 showed that young students had a higher attendance mean of 82.11 compared to mature students that had a mean score of 57.20.

Table 2 was used to find out if the mean difference was statistically significant. The null hypothesis that stated that age does not significantly influence students' class attendance was not accepted. This was so as the t-calculated value of 13.98 was higher than the critical t-value of 2.20 at 62 degree of freedom and at 0.05 significant level. By conventional criteria, this difference is considered to be extremely statistically significant. This implies that students' ages influence their class attendance. This finding collaborated that of Sharon (2017) that younger students attend lectures more than matured students.

The second research question stated that does gender affect class attendance? This was answered in the affirmative as Table 1 shows that females had a higher

Table 2. Independent t-test of the influence of age on Undergraduates Chemistry students' class attendance (N=64).

Age	N	μ	SD	t-Cal
Young	36	82.1100	5.72	13.98
Matured	28	57.2700	8.47	-

*P-value ≤0.0001, t-critical 2.20, df=62.

Table 3. Independent t-test of the influence of gender on Undergraduate Chemistry students' class attendance (N=64).

Gender	N	μ	SD	t-Cal
Male	35	67.20	12.30	6.66
Female	29	83.76	5.79	-

*P-value ≤0.0001, t-critical 2.20, df =62.

Table 4. Mean, standard deviation and summary of analysis of variance (ANOVA) statistics of the effect of class on students' academic achievement.

Treatment	Low	Medium	High	Total
N	20	16	28	64
∑X	8`22	1144	722	2688
Mean	41.1	71.5	25.7857	42
∑X2	37826	82368	25186	145380
Std. Dev.	6.1752	15.5976	14.5851	22.7072

Source	SS	df	MS	
Between treatments	21301.4857	2	10650.742	F = 58.09922
Within treatments	11182.5143	61	183.3199	-
Total	32484	63	-	-

F-critical = 3.14, *P>0.05.

mean of 83.76 and male Chemistry students had a mean score of 67.2. Table 3 was used to find out if the mean difference was statistically significant. The null hypothesis that stated that gender does not significantly influence student's lecture attendance was not accepted. This was so as the t-calculated of 6.66 was higher than the critical t-value of 2.20 at 62 degree of freedom and at 0.05 significant level. By conventional criteria, this difference is considered to be extremely statistically significant. This implication of this result is that students' gender influence class attendance. This study collaborated that of Khan (2018) who discovered that on the average females attended class (81%) slightly more often than males (78%). In another study, it was discovered that there was a significant difference in the level of absenteeism between male and female students (tobs = 11.08; df = 198; p > 0.05) (Ojo et al., 2016).

The third null hypothesis stated that there is no significant difference in the academic achievement of Chemistry students with respect to class attendance. Table 4 shows that students with low class attendance had the lowest mean followed by students with medium class attendance while students with high class attendance rate had the highest academic achievement mean scores of 41.1, 71.5 and 25.7857, respectively. Analysis of variance (ANOVA) in Table 4 was used to find out if the observed mean scores difference was statistically significant. Analysis of variance revealed that the F value of = 58.09922 at 0.05 significant level was greater than the F-critical of 3.14, *P>0.05. When the calculated F-value is greater than the F-critical value, the result is statistically significant. The null hypothesis that stated that there is no significant difference between class attendance and the academic achievement of undergraduate Chemistry students was not accepted. This implies that class attendance significantly influenced students' academic achievement.

This work is in consonance with that of Dey (2018),

Fadelelmoula (2018), Khalid and Mehmood (2017), Ahmed et al. (2013) and Department for Education (2016) which revealed that low academic achievement is related to low class attendance. Based on measured attendance data of nearly 1,000 undergraduate students, "Kassarnig et al (2017) demonstrate that early and consistent class attendance strongly correlates with academic performance

Conclusion

The research indicated that class attendance is statistically significant in explaining class grade and overall performance of students. Students who miss class frequently significantly increase their chances of getting a poor grade in a given course. At the minimum, the research supports the idea that faculty should strongly encourage class attendance to increase students' examination grades.

Implication of the study to Basic Science and Biology teaching

This study has shown the importance of class attendance to academic performance in the Sciences. When pupils and Biology students attendance classes, they will have better understanding of concept taught that will pave way for improved academic achievement. Young learners are to be guided in the classroom to have maximum academic achievements.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

Ahmed AA, Zeynab AY, Ahmed MD (2013). The Effect of Student's Attendance on Academic Performance: A case Study at Simad University Mogadishu. Academic Research International 6(4):409-417.

Alfan E, Othman MN (2005). Undergraduate students' achievement: the case of University of Malay. Quality Assurance in Education 13(4):329-334.

Blad E (2014). Attendance Affects Achievement: Study Provides State-by-State Look. blogs.edweek.org/edweek/rulesforengagement/2014/09/attendance_affects_achievement_study_provides_state-by-state_look.html

Colby J (2004) 'Attendance and Attainment'. 5th Annual Conference of the Information and Computer Sciences – Learning and Teaching Support Network (ICS-LTSN), 31 August–2 September, University of Ulster.

Dey I (2018). Class attendance and academic performance: A subgroup analysis International Review of Economics Education 28:29-40.

Department for Education (DfE) (2016). Does Poor Attendance Impact on Student Learning https://schoolleaders.thekeysupport.com/pupils-and-parents/absence-and-attendance/strategies-for-managing-attendance/linking-attendance-to-exam-results-secondary

Eisen EC, Aruk TD, Uwe PT (2015). Correlates of class attendance, school type and gender. Education for the Future 1(2):35-39

Fadelelmoula TE (2018). Impact of class attendance on student performance. International Research Journal of Medicine and Medical Sciences 2(6):47-49.

Jamb (2018). Joint admission and matriculation board syllabus for universities matriculation examination 2018-2011. Abuja: Joint Admission and Matriculation Board.

Halpern N (2007). The impact of attendance and student characteristics on academic achievement: findings from an undergraduate business management module. Journal of Further and Higher Education, in Press.

Hamidu MY, Ibrahim AI, Mohammed A (2014). The Use of Laboratory Method in Teaching Secondary School Students: a key to Improving the Quality of Education. International Journal of Scientific and Engineering Research 5(9):81-86

Kassarnig V, Bjerre-Nielsen A, Mones E, Lehmann S, Lassen DD (2017). Class attendance, peer similarity, and academic performance in a large field study. PLoS ONE 12(11):e0187078. https://doi.org/10.1371/journal.pone.0187078

Khalid N, Mehmood K (2017). Effects of Absenteeism on Students Performance. International Journal of Scientific and Research Publications 9(7):151-168.

Khan SN (2018). Attendance at university lectures: A study into factors which influence it, and exam performance as a consequence of it. MSOR Connections Journals 17(1):46-52. https://journals.gre.ac.uk/index.php/msor/article/view/902

Kelly G (2012. Lecture attendance rates at university and related factors. Journal of Further and Higher Education 36(1):17-40.

Lee ACK (2003). Undergraduate students' gender differences in IT skills and attitudes. Journal   of Computer Assisted Learning 19(4):488-500.

Natasha Q (2018). The Mark of a Woman's Record: Gender and Academic Performance in Hiring. American Sociological Review 83(2):331-360.

Nbina JB, Obomanu BJ (2011). Assessment of the effect of problem solving instructional strategies on students' achievement and retention in chemistry with respect to location in Rivers State. World Journal of Education 1(2):27-79.

Neji HA, Ukwetang JO, Nja CO (2014). Evaluating the Adequacy of laboratory facilities on students' academic Performance in Secondary School in Calabar, Nigeria. Journal of Research and Method of Education 3(4):11-14.

Nja CO, Idiege KJ, Obi JJ (2017). Chemistry games with kitchen resources and academic performance in electronic configuration. 9th International Conference on Languages, Humanities, Education and Social Sciences (LHESS-17) Dubai (UAE) Dec. 21-22, 2017.

Njal F (2017). The impact of class attendance on student learning in a flipped classroom. Nordic Journal of Digital Literacy 12p.

Oak M (2018) Importance of Science and Technoogy. Techspirited https://techspirited.com/importance-of-science-technology

Ojo FY, Ojo PO, Onaolapo AP   (2016). Students' Non School Attendance Among Secondary School Students in Ibadan: Implication for Counselling, International Journal of Advance Research 4(11):82-88

Osuafor AM, Okonkwo NAS (2013). Influence of Family Background on Academic Achievement of Secondary School Biology Students in Anambra State. International Journal for Cross Disciplinary Subjects in Education 5(4).

Purcell P (2007). Engineering student attendance at lectures: Effect on examination performance. University College Dublin, Ireland. International Conference on Engineering Education.

Science (2011). What is science part II. Retrieved from http://www.gly.edu/railsback/1122science1.html.

Silvestri L (2003). The effect of attendance on undergraduate methods course grades. Education 123:483-486.

Smith F (2004). "It's not all about grades": accounting for gendered degree results in geography at Brunel University. Journal of Geography in Higher Education 28(2):167-178.

Uzezi JG, Deya GD (2017). Relationship between Peer Group Influence and Students' Academic Achievement in Chemistry at Secondary School Level. American Journal of Educational Research 5(4):350-

356

Wikipedia (2019). Science Education. https//en.m.wikipedia.org>wiki

Woodfield R, Jessop D, McMillan L (2006). Gender differences in undergraduate attendance rates. Studies in Higher Education 31(1):1-22.

AJ ACADEMIC JOURNALS
expand your knowledge

Educational Research and Reviews

Review

Causal theoretical model that favors the use of comprehensive sexuality education

María Julieta Solórzano Salas

Department of Special Education, School of Counseling and Special Education, University of Costa Rica.

This theoretical review goes over the different theoretical variables and constructs that could condition teacher intervention in relation to CSE curricular contents, since teachers' experiences affect the pedagogic decisions they make. The theoretical model includes the constructs of sexual conduct, teacher training, and teacher self-efficacy for sexual education. Sexual behavior is operationalized by the theoretical variables of sexual abuse, sexism, attitude toward sexuality, dogmatic and permissive religiousness, and social, pair and family constructions. Sexual education in teacher training includes the variables in elementary school, high school, university and any further training. The conclusion is that teachers must review their own sexual experiences to deconstruct their understanding and to become an appropriate model for the pedagogic praxis of CSE contents.

Key words: Teacher training, sexual behavior, self-efficacy, comprehensive sexual education, theoretical model.

INTRODUCTION

Today, UNESCO (2018) promotes the theoretical and methodological postulate of comprehensive sexuality education (CSE), as this curricular proposal has demonstrated that since their early ages students start experiencing their sexuality comprehensively and freely, with respect and responsibility toward others. This means that CSE is based on human rights, and it aims to empower people to break stigmas that have culturally oppressed and censored bodily sexual experiences, reducing it to intercourse, and surrounding it with myths and fears that are rarely or never based on the many contributions done by science in this field.

CSE has eight curricular points which interact with each other and include the topics of relationships, values –

rights - culture and sexuality, understanding gender, violence and staying safe, skills for health and well-being, the human body and development, sexuality and sexual behavior and sexual and reproductive health (Herat et al., 2018).

CSE improves trust, self-esteem and the construction of self-efficacy in the students. Thus, the persons who have received this kind of education usually delay their first coital experiences, avoid teenage pregnancies, take voluntary AIDS tests, tend to practice safe sexual behaviors like the proper use of condoms, and have an attitude of empowerment that allows them to critically reflect upon their surroundings, which promotes gender equality (UNESCO, 2015; Rojas et al., 2017).

E-mail: julieta.solorzano@ucr.ac.cr. Tel: (506) 88349066.

CSE has its own curriculum, but it is desirable the topics also be developed in a cross-disciplinary fashion with other curriculum areas and with different school activities.

To implement the CSE proposal, it is important to have professionals in education who have been trained in this curricular discipline and who can become models for future generations; however, several studies (Aguilar, 2015; Bejarano and Mateos, 2016; Díaz and Anguita, 2017; Montero et al., 2017; Cordero and Dumrauf, 2017; Navarro et al., 2018; Manzano and Jerves, 2018) have made evident the fears professors in the West have when it comes to teaching sexuality, since they also represent the social constructions that impregnate sexuality, usually characterized by censorship, fear, and silence, which condition pedagogic guidance and hinder an opportune and precise communication of the points established by CSE. For example, Plaza et al. (2013) conclude that teachers need to participate in a meta-cognitive exercise of their own beliefs and behaviors and of the influence these have on their teaching practices. In sexual education it is paramount teachers value human sexuality as a space for creation and learning through the recognition of fears, ignorance, and resistance (González, 2015).

So, sexual education for teachers should invite them to review their own sexual history, to identify those aspects that, even unconsciously, generate anguish and keep them from feeling secure enough to teach the topics of CSE to the student population. In relation to this, this paper sets forth the theoretical constructs that condition sexual experiences from the Western cultural point of view; thus, the objectives of the theoretical review were to:

1). Establish the theoretical constructs that condition the use of CSE.
2). Operationalize each one of the constructs into theoretical variables.
3). Determine the possible causal relationship of the variables among the constructs.

For the theoretical construction, several data bases from the University of Costa Rica were consulted. They include complete scientific articles (full texts) which evidenced effects between the variables and the sexual behavior, starting in the year 2010 in adult populations. The primary sources were consulted when the community of researchers made references to relevant academics. The revision was done between March 2018 and August 2019.

Theoretical support of the variables and causality included in the theoretical model

According to the contributions of different authors, in the Western context there are at least three constructs that

directly affect teaching CSE and that can be found in every teacher: personal sexual behavior, sexual education training, and self-efficacy to teach the topic of sexuality. Theoretical variables are explored around these three theoretical constructs that explain them.

Sexual behavior

When studying this construct there are many references from the scientific community about the related variables; Dr. Alfred Kinsey explained it in 1948 as a wide spectrum of behaviors, from homosexuality to heterosexuality, with bisexuality in the middle of the spectrum (Brown and Fee, 2003).

Rodríguez et al. (2013) include in the definition of sexual behavior aspects with which the person interacts be it individually or with others, like procreation, pleasure and intimacy. This group of researchers also explains that the beliefs a person has about sexuality, and the judgments they make about themselves and others condition their behaviors.

Sexual behavior is constructed through vicarious learning and models (Bandura, 1989; Bandura and Walters, 1974) through the triad of reciprocate determinism. It states that the behavior, the environment, and cognition help the person embrace social constructs about what is allowed and what is censored in sexuality for each sex and for each age, as well as the parts of the body that should be hidden and not touched. In most cases, this is given through imaginative information about human sexuality. Furthermore, the family avoids becoming a model for sexual behavior, unlike other cultures where older members of the family do help shape the younger ones in matters of proper sexual behavior (Bandura and Walters, 1974). This is why people who come from families with higher levels of sexual anxiety also display deep feelings of inhibition, guilt and anxiety (Barra, 2002; López, 2015).

Aside from family, vicarious learning is also built through the relationship with pairs and by the messages and structures from educational and religious institutions and the media (Foucault, 2002; Moral, 2010; Cantón et al., 2014; Boone, 2015; López, 2015; McNamara et al., 2015; Luquis et al., 2015). This paper shares the findings by López (2015) and Graziano et al. (1998), who say that a group of epistemic theories are constructed by the vicarious experiences combined with the direct and symbolic experiences, which predict the professors' behaviors.

Eysenck (1979) quoted by Barra (2002) says the operationalization of sexual behaviors should be grouped into three factors: one of preliminary caresses, one of sexual relations, and the third of advanced or less conventional practices (for example mouth-genital contact). The research studied was carried out in the United States, Bolivia, Peru, Uruguay, Spain and Mexico.

The researchers measured sexual behaviors to establish relationships or associations with other phenomena like risky sexual behaviors, sexual health, preference between sex with men or women, among others. The group of researchers reviewed worked with populations of young adults or adults, generally university students between the ages of 18 and 32. The reviewed articles included meta-analyses (Petersen and Shibley, 2011; Coyne et al., 2018), longitudinal studies (Ulloa et al., 2016; Haydon, Herring and Tucker, 2012; Monto and Carey, 2014) and cross-disciplinary studies (Jinchuña, 2010; Bahamón et al., 2014; Bagnato et al., 2014; Maas and Lefkowitz, 2015; Folch et al., 2015; Mueses-Marín et al., 2018; Hurtado et al., 2017; Valdez-Montero et al., 2018; Moussa and Cliff, 2018), and they all had a positivist approach to reality. Most of the researches used the concepts of conducts, behaviors or sexual practices as synonyms. In this document, sexual behaviors are defined as the learned practices that people engage in for their sexual experiences, which can be liberal or conservative and traditional. The theoretical variables selected have at least the consensus of two researchers or research groups and have been organized according to the factors pointed out by Eysenck.

Preliminary caress factor: Practice and frequency of sexual caresses (includes hugs, kisses, erotic games), masturbation and erotic dreams.

Sexual and coital relationship factor: Age of the first coital relationship, average number of sexual partners after 18 years of age or in life, average number of sexual partners in the last 12 months, frequency of sexual relations during the past 12 months, romantic attraction toward a man or a woman at present or in the past, practice and frequency of sexual vaginal relations, of sexual anal relations as giver or receptor, active or passive oral sex, premarital sexual relations, sexual relations with occasional or casual partners, homosexual and heterosexual coitus, use and frequency of use of condom in sexual relations in the past 12 months and other birth control methods.

Advanced or less conventional practices factor: Coital relations with prostitutes, group sex, sex with technology resources: phones, chat, video.

In the study of sexual behaviors other theoretical variables were found which determine sexual behaviors, like sexual abuse, sexism, attitude toward sexuality, and religious practices.

Sexual abuse: When people face situations of sexual abuse they display a series of difficulties that condition their harmonious experiences with sexuality because this event has multiple consequences on them, like a higher predisposition to the use and abuse of drugs, the practice of risky sexual behaviors with the consequent possibility of getting a sexually transmitted disease like human papillomavirus, participating in delinquent acts, and mental diseases like depression, which in some cases could lead to suicide attempts (WHO, 2010; De Jong et al., 2015).

The theoretical variable of sexual abuse is very complex, but different researches confirm adults experience the consequences by rejecting sexuality and by changing their psycho-sexual behaviors, displaying erotophobic attitudes; but this event also affects the roles they take on in their work lives, their couples' relationships, their upbringing patterns and some people can even perpetuate the cycle of sexual abuse with other victims (WHO, 2010; Easton et al., 2011; De Jong et al., 2015; Llabaca et al., 2015; Loinaz et al., 2019).

Loinaz et al. (2019) recognize how important it is for professors and educational communities to develop protocols to identify, report and follow-up on the population that has been victim to sexual abuse; however, the teachers can be a part of the silence that characterizes this phenomenon in culture, by avoiding it because of their own traumatizing experiences; increasing with this the possibility that the situation of abuse will keep on occurring to the victim.

Sexism: Social constructs that provide content to sexual behaviors, gender and equality elements interact here, they establish defined standards of behavior for men and women, where the latter is assessed as a person of lower status according to the dominating male vision (Pacheco, 2004; Graña, 2006; Pena, 2012).

Corrales et al. (2005) and Graña (2006) point out that this unequal and asymmetrical relationship between men and women has been present in the development of human history and in every society, justified even in the cosmovisions like religion, to the point that is has been naturalized and perceived as normal.

In the particular case of the teaching and learning processes of the teachers, the bibliographic review makes evident that sexual inequalities still remain and are being reproduced starting with the early training of future teachers and up until their professional practice with a differentiated treatment between girls and boys, educational materials, and invisibilization of women's contributions through history (Corrales et al., 2005; Viotti and Del Valle, 2013; Aguilar, 2015; Bejarano and Mateos, 2016; Hidalgo, 2017; Navarro et al., 2018; Almeida, 2018).

Religion: Religion encompasses a behavioral framework (Foucault, 2001) with a prohibitive moral code in the search for holiness (Runkel, 1998; Foucault, 2001, 2002; Rigo et al., 2016; Monroe and Plant, 2018; González-Rivera et al., 2018; Marco, 2018) which leads people to develop conservative, fanatical, literary and dogmatic interpretations of sexual experiences (Runkel, 1998; Ferreira et al., 2017; Cense et al., 2018; Baron and Jost, 2019; Mcmillen et al., 2011; Tukker, 2013; Rigo et al., 2016; Monroe and Plant, 2018).

Monroe and Plant (2018) explain that the values related to the search for holiness could have a dehumanizing effect because they involve judging other people's behaviors; both researchers report in their findings the existence of neurological stimulation zones linked to disgust that is activated when the person observes other people being socially condemned for their behavior.

On his studies of sexual behavior on German people in the decade of 1980, Runkel (1998) discovered that those who claimed to be non-religious had an average of 3.1 sexual encounters per week, protestants averaged 2.57 and Catholics 2.27; with this evidence, this researcher affirms there is a negative correlation between sexual pleasure and religious affiliation, just as McNamara et al. (2015) and Moral (2010) state.

Researchers report ambivalent results, on the one hand frequently participating in a religious practice increases the presence of sexual behaviors to prevent sexually transmitted diseases and decreases risky sexual behaviors (Lefkowitz et al., 2004; Bagnato et al., 2014; González-Rivera et al., 2018; Rosmarin and Pirutinsky, 2019). People believe those sexual behaviors that move away from religious impositions are sinful, anti-natural, taboo, and prejudiced (Foucault, 2002; Monroe and Plant, 2018; Huarcaya-Victoria et al., 2018), other researchers also make reference to criminalization and stigma (Cense et al., 2018).

However, Cense et al. (2018) assert there is no one single vision of religion and this is not a fixed entity; since it is a personal construction it allows some people to have a flexible attitude toward the religious mandates and other people to follow them in a more dogmatic fashion. Teachers who follow dogmatic practices could enforce partial or indifferent actions toward sexual education because of their own perception of the canons (Ferreira et al., 2017).

The literature has identified two positions to people's sexual behaviors and religion, one that is explained from the dogmatic interpretation and the other from a flexible attitude in regards to the same dogma for those declared as religious practitioners (Foucault, 2002; Mcmillen et al., 2011; McNamara et al., 2015; Luquis et al., 2015; Rigo et al.; 2016). Thus, for example, a permissive religious practice could be explained when a person considers sexual intercourse should only happen in marriage, so they practice abstinence while single, but they also plan their number of descendants by using birth-control methods.

Attitudes toward sexuality: Another construct of interest that has been incorporated in the theoretical model is the attitude toward sexuality, because this conditions sexual behaviors. Attitudes have three components: cognitive aspects that explain how realities are comprised epistemically, behavior which is the reaction to objects and emotions, and sensations and assessments produced by realities (Solórzano, 2013).

In the case of sexuality, there are a series of attitudes that condition the full enjoyment of life due to multiple stereotypes, myths, and erroneous beliefs. Researchers consulted state that the attitude toward sexuality can be explained by the erotophilic and erotophobic attitudes (López, 2002; Fallas, 2009). Both explain the assessment people make of sexual signals from a positive or negative position, and condition in a robust manner sexual behavior (Fisher et al., 1988). Fallas (2009) states that people who display erotophobic attitudes have a more rigid sexual behavior, while the contrary is the case for people with an erotophilic attitude; they consider sexuality as pleasurable and positive.

Fisher et al. (1988) use empirical evidence from different researches in different cultures like India, Hong Kong, Canada and the U.S. to show the link between erotophilia and erotophobia with other personality dimensions; for example, people with erotophobic attitudes are authoritarian and need other people's recognition, have orthodox religious affiliations, sex is aversive to them and they avoid it, women repress their sexual desires or adopt a traditional sexual role.

Erotophobic people display feelings of guilt, have negative reactions to masturbation and homosexuality. Their families were strict, rarely talked about sex or did not share honest answers. They also have difficulties to understand and receive information about sexuality and birth control methods, as well as their use. They cannot plan when they will have a sexual experience, so they have a higher probability to display risky behaviors, like not using protection. They feel stressed when discussing sex with their partners and reject the use of sexual fantasies or erotic products.

On the other hand, erotophilic people display behaviors of self-care and sexual health and can plan a sexual encounter, so they display self-protection behaviors. They are also more open to masturbation and are less likely to have homophobic behaviors. Sexuality is gratifying, and is not associated to punishment.

In the case of teachers, those who have high erotophilia scores are more likely to teach about birth control, abortion and other sexual alternatives to intercourse (Fisher et al., 1988). This means they have a more liberal perspective on sexuality.

Professional teacher training

The construction of the teacher's identity is articulated between the individual, the social, and the necessary teaching skills to face the new educational demands (Marcelo and Vaillant, 2011; Vaillant and Marcelo, 2015).

Professional training aims to promote the transformation of the person in its role as teacher and it enriches the pedagogic perspective the professional takes on during their practice; it can contribute to the containment of their own experiences; moving between the prescriptive and the propositional (Barrón, 2015).

Ávalos and Sotomayor (2012) state that both the initial and the continuous trainings are factors that help teachers improve their educational practice.

Santos and Carvalho (2011) agree that during their training, teachers need tools to guide their future students and to rebuild the know-hows and the behavior patterns they have acquired from society, the media, and family. This is the reason why it is important for teachers provide new meanings to their own attitudes, reformulate erroneous concepts, and identify their own trajectories; this is why they recommend discussing and exchanging life experiences.

Specifically, in the case of sexual education, Manzano and Jerves (2018), Navarro and Hernández (2012); Alexander (2017) recognize that the opinions of the teachers can be another socializing agent, since they are believed to have professional training, and thus, should master wider and deeper knowledge on the topic; however, for an appropriate teaching practice, it is necessary to recognize that they themselves have influences from the cultural constructs regarding sexuality.

Santos and Carvalho (2011) and Navarro and Hernández (2012) state that the topic of education for sexuality implies an important challenge for professionals in education because of their perceptions, education, stereotypes, political influences and pressure from religious groups and families. Even if professional training usually happens in a context of higher education, as has been stated in this paper, teachers have a series of contextual and historical influences that define them, so it is important to incorporate the contributions of other educational experiences like the knowledge acquired in elementary school and high school, as well as other training sources.

Self-efficacy in teaching

In sexual education, the self-efficacy that allows teachers to control the group of beliefs related to human sexuality, and which condition actions is very relevant. Self-efficacy, as Bandura (1982, 1991) explains, refers to the way in which people inferentially judge their capacities in a prospective way (effects of behavior) and, from these self-perceptions, they adapt their behavior to the task at hand. Bandura (1993) adds that self-efficacy is the most penetrating mechanism in the personal agency because it conditions feelings, thoughts, self-motivations, and behaviors.

Contrary to this, when people feel inefficient in the face of an event they tend to believe they will not accomplish it or they will be censored, so they develop an anticipated anxiety and determine it as aversive; however, Bandura (1982) states that people can learn to feel effective in a task and they can develop skills and interests if they find appealing incentives and social rewards.

Self-efficacy is not global; it depends on the task or skill

being carried out (Bandura, 1982; Prieto, 2016). This means a person can feel highly capable in some skills and could dedicate more time and effort to that task, but this will not be the case for those actions in which the person feels less capable. It is important to clarify by this point, as Bandura (1982; 1993) explains, that self-efficacy is independent from the real capacities of the person or efficacy itself (Velásquez, 2012). This is the reason why it is not considered as the genesis of the causal chain of the behavior because self-perceptions of efficacy can exceed, match, or remain under the real accomplishments. It all depends on how the person values this and is self-regulated (Bandura, 1991). Between self-efficacy and behavior there are four tightly interconnected psychological processes; as Bandura explains (1991, 1993), these have to deal with the cognitive, motivation, affective assessments, and the deliberate selection of the actions to execute.

In the case of teachers, Bandura (1993) explains that teachers who lack a safe sense of instructional efficacy display a weak commitment to teaching and dedicate less time to academic matters. At the same time he affirms the environments in the classroom are determined by self-efficacy of the teachers in their ways of teaching. Conscious and unconscious personal experiences and beliefs operate in the thoughts and subjectivity of the teachers, conditioning the decisions they make in their educational practice in regards to their didactics, contents, methodologies, and evaluation forms (Ávalos and Sotomayor, 2012).

Recent researches affirm that teachers who are about to graduate and those already practicing have gaps in their knowledge of basic contents for sexual education, and the sexual behaviors they assume show there are difficulties in the exercise of their own sexual rights. This could affect their self-efficacy to impart the topic of sexuality (Santos and Carvalho, 2011; Martínez et al., 2011, Preinfalk, 2014, 2015; López, 2015; Álvarez and Rodríguez, 2017).

Barrón (2015) explains that teachers are constant carriers and builders of their reality based on their own reading of the society they belong to, so it is necessary they critically analyze their conceptions so they can modify their own praxis.

In the case of sexual education, Manzano and Jerves (2018) state that teachers can feel insecure of their own knowledge, so they do not resort to it. This limits the possibilities of promoting a critical and responsible attitude on the students. This is the reason why some sort of affinity to teaching sexuality needs to be present in the teachers, because it is impossible to teach something you do not believe in (Montero et al., 2017).

Finally, it is good to highlight the interpersonal skills teachers need to have to approach sexuality, such as openness to any questions the students might have, a desire to learn new information, creativity, empathy, and good communication using simple language (Alexander,
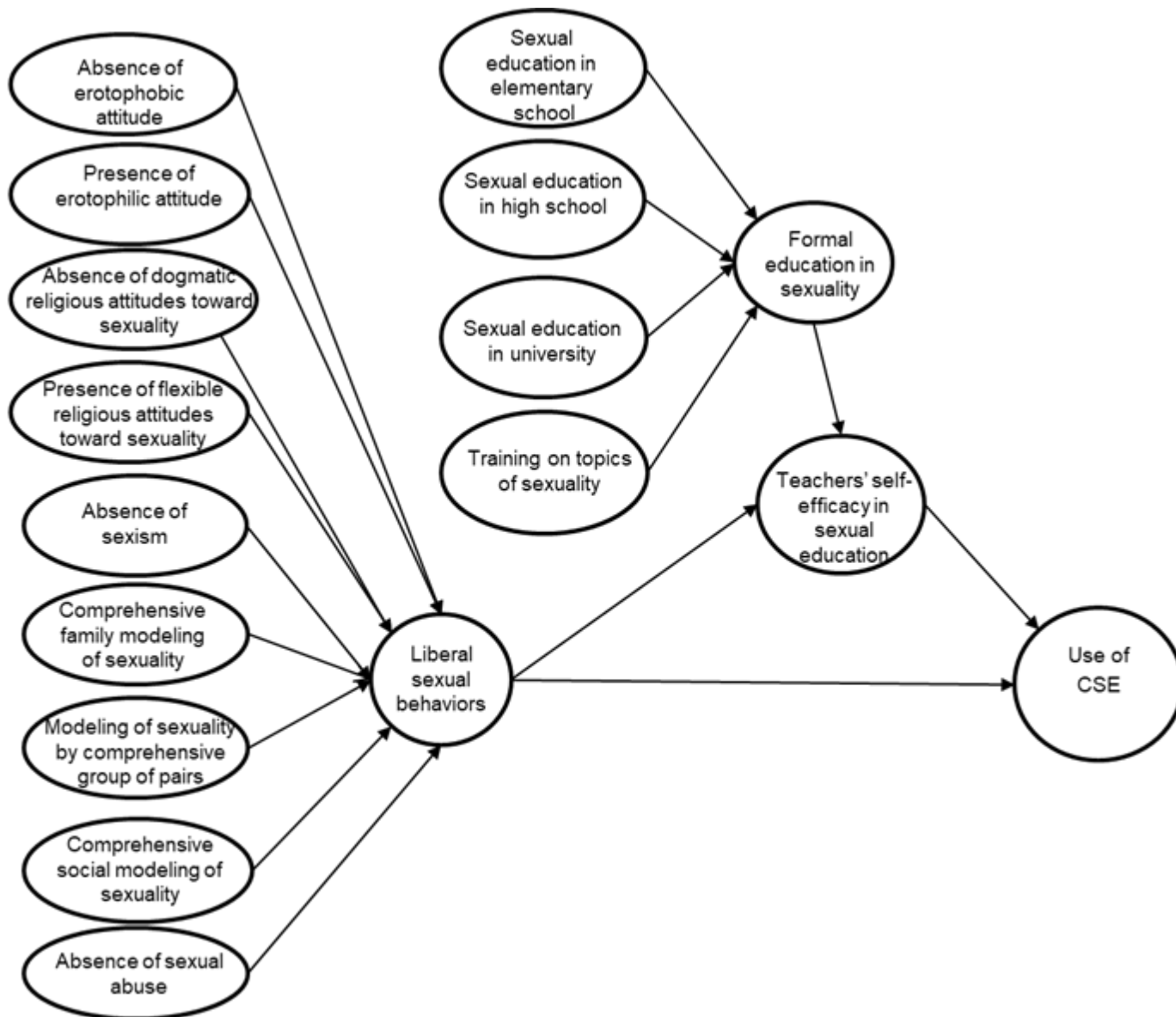
Figure 1. Causal modeling of the theoretical variables and constructs that intervene so teachers can use CSE.
Source: Own (2019).

2017).

Explanation of the composition of the proposed theoretical model

After the bibliographic review, as detailed in Figure 1, there are three theoretical constructs that can predict the use of CSE in a pertinent way by sexual education teachers. First, there are the personal sexual practices, which are going to be liberal if the person displays erotophilic attitudes. This person also displays flexible attitudes toward religiousness, does not have sexist

behaviors, and the vicarious learning and modeling acquired from his family, his group of pairs and his social group have allowed him or her to build a comprehensive reference base of sexuality.

Based on the theory it could be deduced that some theoretical variables seem to be mutually excluding, such is the case of erotophobic attitudes and erotophilic attitudes, because the person would tend more toward one of the attitudes. The same is the case with dogmatic religious attitudes or flexible attitudes toward sexuality. Another theoretical construct involved is the teachers' training on the topic of sexual education, including every experience throughout their lives, since elementary

school, high school and university, as well as other training spaces, it is expected this training is given from a comprehensive perspective of human sexuality. Thus, the teacher is constructed and defined by his or her own experiences and, these interact comprehensively. The model defines a group of interrelated variables that serve as a guide to reflect and recognize in their own experiences the interpretations that condition their own perception of human sexuality. This in turn can introduce biases or facilitate the pedagogic decision, both in the educational approach to the topics and in the communication with students and their families. Reflecting on the above will also affect self-efficacy for CSE.

As the theory states, teachers with more self-efficacy also display high interest in being trained on this topic. Teachers' self-efficacy is considered a theoretical construct. That is also an indicator of the relevance to properly teach CSE. This is because the positive beliefs of the teachers while teaching and guiding students promote learning spaces to build new understandings of human sexuality and to deconstruct their cultural content. At the same time, teachers' self-efficacy with regard to sexual education also receives feedback from the personal experiences of sexuality, meaning their own practices, any formal education received on the subject, and the predominance of positive attitudes. All this allows the person to build meanings of human sexuality that step away from censorship, fear and silence.

CONCLUSIONS

Studying CSE makes evident the constant need for teachers to acknowledge in their own bodies their sexual experiences and the presence of their cultural and social heritage. What is most important of their understanding is to begin the exercise of personal reconstruction with the purpose of becoming a real model for new generations in terms of equality and respect for others, and to begin the critical analysis of the implications of sexuality in the comprehensive development of the person as a whole, and a person who is committed to his or her environment.

The proposed theoretical model does not intend to be exhaustive, but it is a possible reference to begin understanding the aspects that should be included in the training of teachers, which should really affect the way in which they value and analyze sexuality, starting with themselves. A limitation of this proposal is that there is no empirical evidence of causality, a task that is being developed in the framework of a doctoral dissertation.

However, it is important to mention that incorporated theoretical variables and constructs are specific to a historical moment. These could be modified, so their reading is not static, it is likely the reader will introduce many others. It is also interesting to reflect upon the complexity assumed when stating that teachers need to self-reflect on their own sexuality to be able to offer an

appropriate CSE teaching. If the idea is to promote CSE in a cross-disciplinary fashion with other areas of the curriculum, every teacher working in an educational institution should review his own life experiences and consider himself as a sexual being to take on a positive attitude toward sexuality.

Finally, the theoretical model proposed can become a reference for teaching and help update teachers' knowledge of CSE. This demands a comprehensive approach of the many and complex variables that intervene and are constructed throughout a person's life. The challenge is to understand them from personal experience and find answers that will help overcome those that become obstacles for the pedagogic mediation of CSE.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

ACKNOWLEDGMENTS

REFERENCES

Aguilar C (2015). Igualdad, género y diversidad sexual en la Formación Inicial de maestro/a en la Universidad Jaume I (UJI). Temas de educación 21(1):77-96. http://repositori.uji.es/xmlui/bitstream/handle/10234/159004/aguilar_2015_Igu.pdf?sequence=1&isAllowed=y

Alexander A (2017). Positive youth development program, stimulator to Increase competences for sexual educator: a documentation study. Journal Experientia 5(1):55-68. http://scholar.google.es/scholar_url?url=http://journal.wima.ac.id/index.php/EXPERIENTIA/article/download/1552/1442&hl=es&sa=X&scisig=AAGBfm0m2i3Rg8a8xHT8wy9-ybf-GECmww&nossl=1&oi=scholaralrt

Almeida S (2018). La ciudadanía sexual e íntima como espacio para el reconocimiento de la igualdad sexual y de género en la educación sexual. In Venegas M, Fernández A (Eds.) De la igualdad de género a la igualdad sexual y de género: Reflexiones educativas y sociales pp. 185-202. https://ebookcentral-proquest-com.ezproxy.sibdi.ucr.ac.cr

Álvarez T, Rodríguez Y (2017). Evaluación de los conocimientos y actitudes hacia la sexualidad de futuros/as docentes de educación primaria. Revista de estudios e investigación en psicología y educación. Extr 06:1-5. https://doi.org/10.17979/reipe.2017.0.06.2332

Ávalos B, Sotomayor C (2012). Cómo ven su identidad los docentes chilenos. Revista Perspectiva Educacional 51(1):57-86. http://www.perspectivaeducacional.cl/index.php/peducacional/article/viewFile/74/32

Bandura A (1982). Self-Efficacy Mechanism in human agency. American Psychologist 37(2):122-147. https://pdfs.semanticscholar.org/8bee/c556fe7a650120544a99e9e063eb8fcd987b.pdf

Bandura A (1989). Social cognitive theory. https://www.uky.edu/~eushe2/Bandura/Bandura1989ACD.pdf

Bandura A (1991). Social cognitive theory of self-regulation. Organizational behavior and human decision processes. Educational Psycolohist 50(2):248-287. http://dx.doi.org/10.1016/0749-5978(91)90022-L

Bandura A (1993). Perceived self-efficacy in cognitive development and functioning. Educational psychologist 28(2):117-148. https://www.uky.edu/~eushe2/Bandura/Bandura1993EP.pdf

Bandura A, Walters R (1974). Aprendizaje social y desarrollo de la personalidad. Madrid: Alianza Editorial.

Bagnato M, Jenaro C, Flores N, Guzmán K (2014). Factores culturales asociados a las conductas sexuales en estudiantes universitarios de Uruguay y España: Estudio Preliminar. Psicología, Conocimiento y Sociedad 4(1):6-32. https://revista.psico.edu.uy/index.php/revpsicologia/article/view/176

Bahamón M, Vianchá M, Tobos A (2014). Prácticas y conductas sexuales de riesgo en jóvenes: una perspectiva de género. Psicología desde el Caribe. Universidad del Norte 31(2):327-353. http://www.redalyc.org/articulo.oa?id=21331836009

Baron J, Jost J (2019). False equivalence: are liberals and conservatives in the United States equally biased?. Perspectives on Psychological Science 14(2):292-303. https://doi.org/10.1177/1745691618788876

Barra E (2002). Psicología de la sexualidad. (2 Ed.) Chile: Editorial Universidad de Concepción.

Barrón C (2015). Concepciones epistemológicas y práctica docente. Una revisión.REDU. Revista de Docencia Universitaria 13(1):35-56. http://red-u.net/redu/files/journals/1/articles/899/public/899-3923-1-PB.pdf

Bejarano M, Mateos A (2016). La educación afectivo-sexual en el sistema educativo español: análisis normativo y posibilidades de investigación. Revista Ibero-Americana de Estudos em Educação pp. 1507-1522. https://periodicos.fclar.unesp.br/iberoamericana/article/view/8334.

Brown T, Fee E (2003). Alfred C. Kinsey: A Pioneer of Sex Research. American Journal of Public Health 93(6): 896-897. http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=9925282&site=ehost-live&scope=site

Boone T (2015). Messages about sexuality: an ecological perspective. Sex Education 15(4):437-450. http://dx.doi.org/10.1080/14681811.2015.1036981

Cantón D, Ramírez M, Cantón J (2014). Papel moderador del sexo en las prácticas de crianza. International Journal of Developmental and Educational Psychology 1(1):275-283. http://dx.doi.org/10.17060/ijodaep.2014.n1.v1.373

Cense M, Neef M, Visscher W (2018). Culture, Religion and Sexual and Reproductive Health & Rights. The Neeterlands: Rutgers. https://www.rutgers.nl/sites/rutgersnl/files/PDF/Kennisdossiers_pdf/Culture-Religion-SRHR.pdf

Cordero S, Dumrauf A (2017). Innovaciones en Educación Sexual a partir de la reflexión sobre la práctica en la formación docente. Trabajo presentado en XI Encontro Nacional de Pesquisa em Educação em Ciências – XI ENPEC Universidade Federal de Santa Catarina, Florianópolis, SC. http://www.abrapecnet.org.br/enpec/xi-enpec/anais/resumos/R0863-1.pdf

Corrales L, Delgado M, Herrera C, Pereira Z, Sancho J, Zamora M (2005). Sexismo en Educación Preescolar: la perspectiva docente. Revista Electrónica Educare 8:139-155. http://revistas.una.ac.cr/index.php/EDUCARE/article/view/1273

Coyne S, Ward L, Kroff S, Davis E, Holmgren H, Jensen A, Erickson S, Essig L (2018). Contributions of mainstream sexual media exposure to sexual attitudes, perceived peer norms, and sexual behavior: a meta-analysis. Society for Adolescent Health and Medicin 30:1-7. https://doi.org/10.1016/j.jadohealth.2018.11.016

De Jong R, Alink L, Bijleveld C, Finkenauer C, Hendriks J (2015). Transition to adulthood of child sexual abuse victims. Aggression and Violent Behavior 24:175-187. http://dx.doi.org/10.1016/j.avb.2015.04.012

D Easton S, Coohey C, O'leary P, Zhang Y, Hua L (2011).The effect of childhood sexual abuse on psychosexual functioning during adulthood. Journal of Family Violence 26:41-50. https://doi10.1007/s10896-010-9340-6

Díaz S, Anguita R (2017). Estereotipos del profesorado en torno al género y a la orientación sexual. Revista Electrónica Interuniversitaria de Formación del Profesorado 20(1):219-232. http://dx.doi.org/10.6018/reifop.20.1.228961

Fallas M (2009). Educación afectiva y sexual Programa de formación docente de Secundaria. (Unpublished doctoral dissertation). Universidad de Salamanca, España.

Ferreira M, Marcelino T, de Morais A (2017).Educação em direitos humanos e desenvolvimento moral na formação docente: a influência da religiosidade em tempos de "ideologia de gênero". Revista on line de Política e Gestão Educacional 21(2):1260-1282. https://periodicos.fclar.unesp.br/rpge/article/view/10173/7029

Fisher W, White L, Byrne D, Kelley K (1988). Erotophobia-Erotophilia as a dimension of personality. Journal of Sex Research 25(1):123-151. http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=5688020&site=ehost-live&scope=site

Folch C, Álvarez J, Casabona J, Brotons M, Castellsagué X, Grupo Jóvenes e Internet (Sep.- Oct, 2015). Determinantes de las conductas sexuales de riesgo en jóvenes de Cataluña. Revista Española de Salud Pública 89(5):471-485. http://dx.doi.org/10.4321/S1135-57272015000500005

Foucault M (2001). Historia de la sexualidad 2. El uso de los placeres. (14a. ed.). Buenos Aires: siglo veintiuno editores, s.a. de c.v.

Foucault M (2002).Historia de la sexualidad 1. La voluntad de saber. (29 a.ed.). Buenos Aires: siglo veintiuno editores, s.a. de c.v.

González Y (2015). Sexualidad: algunas reflexiones en el proceso educativo escolar. Revista actualidades investigativas en Educación 15(3):1-15. http://dx.doi.org/10.15517/aie.v15i3.20335

González-Rivera JA, Aquino-Serrano FV, Ruiz-Quiñones BS, Matos-Acevedo JM, Vélez-De la Rosa I A, Burgos-Aponte K, Rosario-Rodríguez K (2018). Relación entre espiritualidad, búsqueda de sensaciones y conductas sexuales de alto riesgo. Revista de Psicología 27(1):1-11. http://dx.doi.org/10.5354/0719-0581.2018.50739

Graña F (2006). El sexismo en el aula Educación y aprendizaje de la desigualdad entre géneros. Uruguay: Editorial Nordan-Comunidad. https://eva.udelar.edu.uy/pluginfile.php/308218/mod_resource/content/2/Gra%C3%B1a,%20Francois%20-%20%20EL%20SEXISMO%20EN%20EL%20AULA%20(fragmento).pdf

Graziano W, Jensen L, Sullivan G (1998). Temperament, activity, and expectations for later personality development. Journal of Personality and Social Psychology 74(5):1266-1277. http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=648810&site=ehost-live&scope=site

Haydon A, Herring A, Tucker C (2012). Associations between patterns of emerging sexual behavior and young adult reproductive health. Perspectives on Sexual and Reproductive Health 44(4):218-227. https://doi:10.1363/4421812

Herat J, Plesons M, Castle C, Babb J, Chandra-Mouli V (2018). The revised international technical guidance on sexuality education – a powerful tool at an important crossroads for sexuality education. Reproductive Health 15:1-4. https://doi.org/10.1186/s12978-018-0629-x

Hidalgo M (2017). Influencia de los roles y estereotipos de género en las percepciones y expectativas académicas y profesionales del alumnado universitario. (Unpublished doctoral dissertation). Universidad de Córdoba, España. http://helvia.uco.es/xmlui/bitstream/handle/10396/15116/2017000001681.pdf?sequence=1

Huarcaya-Victoria J, Dávila-Palacios JS, De La Cruz-Oré J (2018). Relación entre la actitud hacia la homosexualidad y actitud religiosa en médicos de un hospital general. An Fac med 79(2):138-143. http://dx.doi.org/10.15381/anales.

Hurtado M, Veytia M, Guadarrama R, González-Forteza C (2017). Asociación entre múltiples parejas sexuales y el inicio temprano de relaciones sexuales coitales en estudiantes universitarios. Nova Scientia 9(19):615-634. http://www.redalyc.org/articulo.oa?id=203353519032

Jinchuña G (2010). Comportamiento sexual y problemas de salud en estudiantes de la Universidad Andina Néstor Cáceres Velásquez. Revista de investigación carrera profesional obstetricia pp. 14-17. http://revistas.uancv.edu.pe/index.php/RICPO/article/viewFile/401/32

8

Lefkowitz E, Gillen M, Shearer C, Boone T (2004).Religiosity, sexual behaviors, and sexual attitudes during emerging adulthood. The Journal of Sex Research 41(2):150-159. https://doi10.1080/00224490409552223

Loinaz I, Bigas N, de Sousa A (2019). Comparing intra and extra-familial child sexual abuse in a forensic context. Psicothema 31(3):271-276. http://www.psicothema.com/pdf/4542.pdf

López F (2002). Sexo y afecto en personas con discapacidad. Madrid: Biblioteca Nueva.

López N (2015). La educación afectiva y sexual en el actual y futuro profesorado. (Unpublished doctoral dissertation). Universidad de las Palmas de Gran Canaria, España. https://acceda.ulpgc.es:8443/handle/10553/16887

Luquis RR, Brelsford GM, Pérez MA (2015). Exploring Latino college students' sexual behaviors in relation to their sexual attitudes, religiousness, and spirituality. Journal of Religion and Health 54(4):1345-1357. http://doi.org/cskc

Llabaca P, Fuertes A, Begoña O (2015). Impacto de la coerción sexual en la salud mental y actitud hacia la sexualidad: un estudio comparativo entre Bolivia, Chile y España. Psykhe 24(1):1-13. https://doi:10.7764/psykhe.24.1.558

Maas M, Lefkowitz E (2015). Sexual Esteem in Emerging Adulthood: Associations with Sexual Behavior, Contraception Use, and Romantic Relationships. The Journal of Sex Research 52(7):795-806. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4362922/

Manzano D, Jerves E (enero – abril, 2018). Educación sexual: Percepciones de docentes de la ciudad de Cuenca 2013-2014. Revista Electrónica Educare 22(1):1-15. https://dialnet.unirioja.es/servlet/articulo?codigo=6228635

Marcelo C, Vaillant D (2011). Desarrollo profesional docente: ¿cómo se aprende a enseñar?. https://ebookcentral-proquest-com.ezproxy.sibdi.ucr.ac.cr

Marco J (2018). Sexuality, Law, and religion in latin america: frameworks in tension. Religion and gender 8(1):14-31. https://brill.com/view/journals/rag/8/1/article-p14_3.xml

Martínez J, Orgaz B, Vicario I, González E, Carcedo R, Fernández A, Fuertes A (2011). Educación sexual y formación del profesorado en España: diferencias por sexo, edad, etapa educativa y comunidad autónoma. Revista de Formación del Profesorado e Investigación Educativa: pp. 37-47. https://dialnet.unirioja.es/servlet/articulo?codigo=3844427

Mcmillen E, Helm H, Mcbride DC (2011). Religious Orientation and Sexual Attitudes and Behaviors. Journal of Research on Christian Education 20(2):195-206. https://doi:10.1080/10656219.2011.590755

McNamara C, Willoughby B, Clayton K (2015). Living your faith: associations between family and personal religious practices and emerging adults' sexual behavior. Journal of Adult Development 22:159-172. https://doi.org/10.1007/s10804-015-9209-2

Monroe A, Plant A (2018). The dark side of morality: prioritizing sanctity over care motivates denial of mind and prejudice toward sexual out-groups. Journal of Experimental Psychology: General (In Press) https://www.ncbi.nlm.nih.gov/pubmed/30570329

Montero L, Valverde P, Dois A, Bicocca M, Domínguez C (2017). La educación sexual: un desafío para la educación católica. Educación y Educadores 20(3):343-363. http://educacionyeducadores.unisabana.edu.co/index.php/eye/article/view/5817

Monto M, Carey A (2014). A New Standard of Sexual Behavior? Are Claims Associated With the "Hookup Culture" Supported by General Social Survey Data?. The Journal of Sex Research 51(6):605-615. https://doi:10.1080/00224499.2014.906031

Moral J (2010). Religión, significados y actitudes hacia la sexualidad: un enfoque psicosocial. Revista colombiana de psicología 19(1):45-59. http://www.redalyc.org/articulo.oa?id=80415077005

Moussa M, Cliff R (2018). Emerging adult risky sexual behavior predicted by parental overprotection: moderated mediation analysis. Family Process Institute 10(10):1-14. https://www.ncbi.nlm.nih.gov/pubmed/30221756

Mueses-Marín HF, Tello-Bolívar IC, Galindo-Orrego MI, Galindo-Quintero J (2018). Perceptions about sexual risk, HIV and HIV-testing in Cali, Colombia. Colomb Med (Cali) 49(2):139-147. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6084922/

Navarro N, Hernández A (Julio-Diciembre, 2012). Influencia de las actitudes de los padres ante la educación sexual y la discapacidad intelectual. Psicología y Salud 22(2):195-203. http://repositoriocdpd.net:8080/handle/123456789/768

Navarro L, Estevan L, De Lemus S (2018). Importancia del lenguaje inclusivo en la intervención para la reducción del sexismo. En Venegas, M. y Fernández, A. (Eds.) De la igualdad de género a la igualdad sexual y de género: Reflexiones educativas y sociales pp. 115-128. https://ebookcentral-proquest-com.ezproxy.sibdi.ucr.ac.cr

Pacheco C (2004). Prácticas sexistas en el aula. Paraguay: UNICEF-Copipunto. https://www.unicef.org/paraguay/spanish/py_practicas_sexistas.pdf

Pena M (2012). Formación del profesorado en la atención a la diversidad afectivo-sexual. (Unpublished doctoral dissertation). Universidad Complutense de Madrid, España. https://eprints.ucm.es/16718/1/T34011.pdf

Petersen J, Shibley J (2011). Gender Differences in sexual attitudes and behaviors: a review of meta-analytic results and large datasets. Journal of Sex Research 48(2-3):149-165. http://dx.doi.org/10.1080/00224499.2011.551851

Plaza V, González L, Meinardi E (2013). Educación sexual integral y currículo oculto escolar: un estudio sobre las creencias del profesorado. Revista da SBEnBio 6:54-68. http://ri.conicet.gov.ar/bitstream/handle/11336/15965/CONICET_Digital_Nro.19432_A.pdf?sequence=2&isAllowed=y

Preinfalk ML (2014). La educación sexual en el ámbito universitario: estudio diagnóstico en la Universidad Nacional de Costa Rica. (Unpublished doctoral dissertation), Universidad Pablo Olavide, España. https://rio.upo.es/xmlui/bitstream/handle/10433/1594/mar%c3%ada_luisa_preinfalk_tesis.pdf?sequence=1&isAllowed=y

Preinfalk-Fernández ML (2015). Desafíos de la formación docente en materia de educación sexual. Revista Electrónica Educare 19(1):85-101. http://dx.doi.org/10.15359/ree.19-1.5

Prieto L (2016). Autoeficacia del profesor universitario eficacia percibida y práctica docente. (2ª ed.) México: Alfaomega.

Rigo C, Saroglou V, Uzarevic F (2016). Make love and lose your religion and virtue: recalling sexual experiences undermines spiritual intentions and moral behavior. Journal for the Scientific Study of Religion 55(1):23-39. http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=116817009&site=ehost-live&scope=site

Rodríguez G, Mealy M, Smith V, Di Placido J (2013). Sexual behavior in Costa Rica and the United States. International Journal of Intercultural Relations pp. 48-57. http://dx.doi.org/10.1016/j.ijintrel.2012.06.002

Rojas R, de Castro F, Villalobos A, Allen-Leigh B, Romero M, Braverman-Bronstein A, Uribe P (2017). Educación sexual integral: cobertura, homogeneidad, integralidad y continuidad en escuelas de México. Salud pública de México 59(1):19-27. http://dx.doi.org/10.21149/8411

Rosmarin D, Pirutinsky S (2019). Problematic sexual behavior and religion among adult jewish males: an initial study. American Journal of Men's Health 13(1):1-9. https://10.1177/1557988318823586

Runkel G (1998). Sexual morality of Christianity. Journal of Sex & Marital Therapy 24(2):103-122. https://10.1080/00926239808404924

Santos N, Carvalho D (2011). Estratégias didáticas de educação sexual na formação de professores de Ciências e Biologia. Revista Electrónica de Enseñanza de las Ciencias 10(2):345-366. http://reec.uvigo.es/volumenes/volumen10/ART6_VOL10_N2.pdf

Solórzano J (2013). Escala ACTDIV para medir la actitud hacia la diversidad.Revista Actualidades investigativas en educación 13(1):1-26. 10.15517/aie.v13i1.11715

Tukker ME (2013). Where sexuality and spirituality meet: an assessment of christian teaching on sexuality and marriage in relation to the reality of 21st century moral norms. HTS Teologiese Studies/ Theological Studies 69(1):1-8. http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S0259-94222013000100103

Ulloa E, Salazar M, Monjaras L (2016). Prevalence and correlates of

sex exchange among a nationally representative sample of adolescents and young adults. Journal of child sexual abuse 25(5):524-537. http://dx.doi.org/10.1080/10538712.2016.1167802

UNESCO (2015). Emerging evidence, lessons and practice in comprehensive sexuality education a global review. Francia: UNESCO. https://www.unfpa.org/sites/default/files/pub-pdf/CSE_Global_Review_2015.pdf

UNESCO (2018). International technical guidance on sexuality education An evidence-informed approach. New York: United States of América. http://unesdoc.unesco.org/images/0026/002607/260770e.pdf

Valdez-Montero C, de la Rubia J, Onofre-Rodríguez D, Benavides-Torres R, Ahumada-Cortez J (2018). Validación de un inventario de conductas sexuales en hombres que tienen sexo con hombres. Journal Health NPEPS 3(2):327-351. http://dx.doi.org/10.30681/252610103129

Vaillant D, Marcelo C (2015). El abc y d de la formación docente. Madrid: Narcea. https://ebookcentral-proquest-com.ezproxy.sibdi.ucr.ac.cr

Velásquez A (2012). Revisión histórico-conceptual del concepto de autoeficacia. Revista Pequén 2(1):148-160. http://www.ubiobio.cl/miweb/webfile/media/265/8%20REVISI%C3%93N%20HIST%C3%93RICO-CONCEPTUAL%20DEL%20CONCEPTO%20DE%20AUTOEFICACIA.pdf

Viotti M, Del Valle A (2013). Identidades de género en la escuela: una mirada desde el nivel inicial y el primer ciclo. La Aljaba Segunda época 17:169-178. http://www.biblioteca.unlpam.edu.ar/pubpdf/aljaba/v17a10viotti.pdf

World Health Organization/London School of Hygiene and Tropical Medicine (2010). Preventing intimate partner and sexual violence against women: taking action and generating evidence. Geneva, World Health Organization. https://www.who.int/violence_injury_prevention/publications/violence/9789241564007_eng.pdf

ACADEMIC JOURNALS
expand your knowledge

Educational Research and Reviews

Full Length Research Paper

A two-way perspective on social loafing and organizational cynicism

Sevda Seven Şarkaya[1] and Zeynep Meral Tanriogen[2*]

[1]Ministry of Education, Turkey.
[2]Educational Sciences, Faculty of Education, Pamukkale University, Turkey.

The aim of this study is to reveal the effects of the relationship between social loafing and organizational cynicism. The sample of the study was selected using stratified cluster sampling method, comprising 71 schools and 1043 teachers working in primary and secondary schools in Pamukkale district of Denizli province. In the study, relational screening model and quantitative methods were used. The data of the study were collected using Organizational Cynicism Scale and Perceived Coworker Loafing Scale. During the data analysis, parametric tests were used on account of normal distribution. Pearson Product Moment Correlation tests as well as multiple and simple linear regression analyses were performed to examine the sub-problems of the study. Owing to the characteristics of the measurement tool, the predictive power of both variables was measured using a two-way perspective. The results of the study revealed that organizational cynicism is a predictor of social loafing and there is a positive and moderate relationship between them. It was seen that as teachers' organizational cynicism attitudes increased, social loafing behavior also increased. At the same time, social cynicism was found to be the predictor of organizational cynicism and it was suggested that when teachers' social loafing behaviors increased, organizational cynicism attitudes also increased. According to these results, it was concluded that both variables affect each other.

Key words: Organizational cynicism, social loafing, teacher, primary school, secondary school.

INTRODUCTION

Organizational cynicism

The concept of cynicism is a pattern thinking and life style that emerged in Ancient Greece (Brandes, 1997), dating back to B.C. 500 (Mantere and Martinsuo, 2001). Cynicism is a philosophical movement that highlights the importance of virtue and rejects worldly wishes and desires (Kasalak and Bilgin-Aksu, 2014). According to

cynical philosophy, there are some principles that cynical individuals advocate (Gökberk, 2000; Cevizci, 2002). Some of these principles are self-sufficiency and abstinence from the blessings of the world.

In cynical philosophy, the individual rejects moral values and social rules, and lives according to the rules of nature. The basic principle of cynical philosophy is to be virtuous and according to this philosophy, virtue is

based on knowledge. The individual can only meet the needs surrounding him as long as he becomes knowledgeable. A wise person is the person who is virtuous and self-sufficient (Kalağan, 2009; Gökberk, 2000). In other words, the concept of cynicism is a philosophical view of life that adopts the principle of achieving true virtue by being purified from artificial needs. According to popular philosophy, cynicial individuals posses a daring manner that tells the truths directly, and do not recognize traditions and customs (Bora, 2011). Since ancient times, the concept of cynicism has changed in terms of meaning and is seen as a concept with a negative connotation (Helvacı, 2010).

Cynicism is a multidimensional concept which is the subject matter of different disciplines such as philosophy, religion, political sciences, sociology, administration and psychology. Cynicism is a sardonic and critical point of view, caused by negative experiences and feelings of an individual (Karacaoğlu and İnce, 2012: 30). Candan (2013) emphasized that while cynicism was perceived as a lifestyle in the past, today it is perceived as distrust in values. In general, cynicism is defined as disbelief in sincerity and goodness in the motives and actions of humans and such persons has a tendency to reveal such in a sarcastic manner as well as points to mistakes cynically (Tokgöz and Yılmaz, 2008).

According to Anderson (1996), cynicism is a broad concept that includes an attitude of distrust, contempt, avoidance, despair and disappointment towards individuals and objects.

Research into organizational cynicism increased in the late 1980s and early 1990s. In the studies on organizational cynicism, the question "What kind of negative attitudes do employees have towards their organizations?" was answered, and as a result of the literature review based on this context, different definitions and a theoretical framework of organizational cynicism were presented (Kalağan, 2009).

Organizational cynicism refers to negative attitude by an employee towards his organization, because the person believes the institution is not honest (Karacaoğlu and İnce, 2012: 32). On the other hand, Kalağan (2009) defines organizational cynicism as an attitudinal phenomenon that contains negative feelings, humiliating and critical behavior, and includes hidden or direct hard criticisms, cynical (negative) beliefs and negative emotions towards the organization.

The concept of organizational cynicism is basically grounded on the lack of principles of truthfulness, honesty, justice, sincerity and intimacy. Administrators of organizations are devoid of these principles, for the sake of their individual interests; thus, it gives rise to behaviors that are based on hidden motivations and intrigues within the organization (Abraham, 2000).

According to Erdost-Çolak (2018), there are numerous factors that lead to emergence of organizational cynicism. Due to personality traits of individuals, the implementation of unfair policies within an organization and mismanagement may lead to increase in cynicism. According to Özgener et al. (2008), four key factors in the appearance of organizational cynicism are: *high expectations, experience of disappointment, being humiliated/being despised, and skepticism.*

Dean et al. (1998) studied organizational cynicism in three dimensions: cognitive (belief), affective and behavioral dimension. In the first dimension, which is the cognitive dimension, the employee maintains the belief that the organization lacks honesty. For affective dimension, the beliefs that emerged in the first phase are transformed into feelings such as anger, sarcasm and hate towards the organization. In the third and last dimension, behavioral dimension, the beliefs and feelings formed in the aforementioned phases turn into behavior. In this dimension, the employee criticizes and complains about the organization to the others. In this study, these three dimensions were evaluated.

Also, organizational cynicism has a negative effect on individuals and organizational effectiveness. Besides, a great number of studies reveal that organizational cynicism attitudes decrease motivation, organizational commitment, organizational citizenship behavior, job satisfaction and the intention to create change, and that it is a concept associated with organizational justice, psychological contract violations, organizational policies, perceived organizational support, performance, organizational stress, alienation and emotional exhaustion (Kalağan and Aksu, 2010; Balcı, 2016; Güneş, 2017).

There are many suggestions in the research studies aimed at reducing or eliminating organizational cynicism which has significant effects on the organization and the individual. These suggestions are generally as follows (Balcı, 2016; Ergen, 2015): involving employees in the decision making process, maintaining effective communication with employees, informing people, establishing trust, evaluating the change from the employees' perspectives, creating environments where employees can express their feelings, and being objective in the distribution of awards.

Doğan et al. (2012) define social loafing as the situation in whereby the individual's production tendency is less while working in a group than working individually. Bayram-Candan (2017) stated that social loafing involves individuals showing less focus on the job during group work, due to the presence of other group members. According to Ilgın (2013), social loafing is the state in which an individual makes less effort than expected in the group tasks. Latane et al. (1979) describe social loafing as a disease, since it has negative consequences for individuals, societies and social institutions. Social loafing leads to decrease in human productivity.

Group size is regarded as the most important factor causing social loafing. According to the first study in this area conducted by Ringelmann (1913), an inverse relationship was found between the effort spent and the

size of the group, and this inverse relationship is called "Ringelmann Effect"cited in Kurnaz (2016).

Pabico et al. (2008) suggest that group members with social loafing behaviours have two different roles, freerider and sucker. Freeriders are those who do not make any effort to perform tasks within the group, but receive the same award as the other group members. When it comes to the definition of sucker, it is considered as a special type in social loafing, and people with the role of sucker take over the duties and responsibilities that freeriders do not fulfill or other group members (Öge and Kurnaz, 2017).

When the reasons of social loafing are investigated, the studies conducted by Ilgın (2010) and Özek (2014) revealed that if the level of interdependence is low in an assigned task, individuals increase their performance by considering that their efforts will be noticed. If the individual believes that his/her contributions are identifiable, he/she does not show social loafing behavior. However, in the groups in which the sense of "us" is adopted; individuals do not tend to show social loafing behaviour. Group size is another key factor that affects social loafing behavior. As number of people in the group increases, an individual may think that the workload in his part has decreased and thus show social loafing behavior.

Latane et al. (1979) argued that social loafing behavior was attributed to three reasons: attribution and equity, submaximal goalsetting and evaluation error. Liden et al. (2004) categorized the antecedents of social loafing into two categories, individual and group antecedents.

Social loafing behavior is one of the most important anti-production behaviors that affect the efficiency and performance of an organization negatively. Therefore, it is of critical importance for organizations to find solutions to prevent such behavior. In this sense, it is possible to encounter various solutions in different studies. Rothwell (1999), for instance, suggested that a good group performance can be achieved with the formula of collaboration, content (job description) and choice (task to be done) (Balcı, 2016).

Schools are social organizations. The main purpose of these organizations is to prepare individuals for life and work life in the best way. At this point, the most important task falls on teachers, who are the keystones of educational institutions and human resources. However, in order for them to be able to perform their duties in the best way, teachers' attitudes towards the school they work for and their degree of effort are of great importance. The way in which they evaluate school policies and practices, their trust or distrust in school administration, and their evaluation of school administration as fair or unjust are the factors that determine the degree of this attitude and effort. If teachers believe that the practices in their school are unfair and that their efforts are not identifiable and visible, they will feel distrust in their school and show cynical attitudes within the school. As a result, they will show social loafing behavior since they are not sure if their efforts in group work will be distinguished, identified and rewarded. Considering that, this situation prevents schools from achieving their goals and from being successful. Thus, this study aims to investigate the relationship between teachers' organizational cynicism attitudes and social loafing behaviors.

To this end, the following research questions were answered:

(1) Is there a statistically significant relationship between primary school and secondary school teachers' perceptions of organizational cynicism and coworker loafing?
(2) Do the organizational cynicism attitudes of primary and secondary school teachers predict their social loafing levels?
(3) Do the social loafing behaviors of primary and secondary school teachers predict their organizational cynicism levels?

METHODOLOGY

In this study, relational screening model was used according to the purpose of the research. According to Karasar (2002), relational screening model is used to determine whether there is a relationship between two or more variables, and the degree and direction of the relationship between the variables. The variables of the study were social loafing and organizational cynicism. The study tried to reveal whether there is a statistically significant relationship between teachers' organizational cynicism attitudes and social loafing behaviors. Besides, the study examines the direction and to what extent organizational cynicism attitudes predicts social loafing levels as well as the direction and to what extent social loafing behaviors predicts the level of organizational cynicism.

The population of the study comprised 2271 teachers working in 87 public primary and secondary schools in Pamukkale district of Denizli province in 2018-2019 academic year. The sample of the study comprised 1043 teachers working in 71 public primary and secondary schools determined through stratified cluster sampling method. The stratified cluster sampling method is used when there are strata or clusters in a population with certain boundaries. The important point in this method is to study the population with reference to the stratas in the population (Yıldırım and Şimşek, 2005).

In the research, "Organizational Cynicism Scale" and "Perceived Coworker Loafing Scale" were used as data collection tools. Organizational Cynicism Scale used in this study was developed by Brandes et al. (1999) and adapted to Turkish by Kalağan (2009). The scale consists of 13 items and has three sub-dimensions: cognitive, affective and behavioral. As a result of the reliability analysis conducted in this study, Cronbach's Alpha value of the overall scale was calculated as 0.93, and Cronbach's alpha value of the sub-dimensions was calculated as 0.83 to 0.96.

Perceived Coworker Loafing Scale used in this study was first developed by George (1992) and it comprised 10 items. Then 3 more items were added by Liden et al. (2004) and was converted into a scale in which employees evaluated their friends. The Perceived Coworker Loafing Scale developed by Liden et al. (2004) was adapted to Turkish by Ilgın (2010). As a result of the reliability

Table 1. Pearson Product Moment Correlation Analysis conducted to determine whether there is a statistically significant relationship between teachers' perceptions of organizational cynicism and coworkerloafing.

Correlation	Organizational cynicism	Cognitive cynicism	Affective cynicism	Behavioral cynicism	Social loafing
Organizational cynicism	1				
Cognitive cynicism	0.891**	1			
Affective cynicism	0.855**	0.641**	1		
Behavioral cynicism	0.838**	0.603**	0.605**	1	
Social loafing	0.536**	0.511**	0.432**	0.432**	1

**p<0.01.

analysis conducted in this study, the Cronbach's alpha value of the Colleagues' Social Loafing Perception Scale was calculated as 0.92. In the process of applying the scales, 71 schools that were included in the sample were visited one by one and the teachers were reached. The teachers were informed about the purpose and importance of the research and the data were obtained from a total of 1043 teachers. Pearson Product Moment Correlation and multiple and simple linear regression analysis were used to analyze the data.

FINDINGS

Findings related to the first sub-problem

Pearson Product Moment Correlation Analysis was conducted to determine whether there is a statistically significant relationship between primary and secondary school teachers' perceptions of organizational cynicism and coworkerloafing. The results are shown in Table 1.

As a result of the pearson correlation analysis conducted to determine whether there was a significant relationship between organizational cynicism and social loafing scores, a moderate, positive and significant relationship was found between them (r=0.536, p<0.01). According to Büyüköztürk (2011), values between 0.00 and 0.30 show a low level relationship, values between 0.30 and 0.70 show a moderate level relationship and values between 0.70 and 1.0 show a high level relationship. On the other hand, when the level and direction of the relationship between social loafing and the sub-dimensions of organizational cynicism was examined, it was found that there was a moderate, positive and significant relationship between cognitive dimension and social loafing (r=0.511, p<0.01); a moderate, positive and significant relationship between affective dimension and social loafing (r=0.432, p<0.01), as well as a moderate, positive and significant relationship between behavioral dimension and social loafing (r=0.432, p<0.01). In the light of these findings, it can be said that if the scores increase in the overall scale and in sub-dimensions of the organizational cynicism level of the teachers, social loafing scores will also increase. Accordingly, it is revealed that social loafing behavior will increase when organizational cynicism increases within

the organization, or social loafing behavior will decrease when organizational cynicism attitude decreases.

Findings related to the second sub-problem

Multiple linear regression analysis was conducted to identify the effect of teachers' organizational cynicism level on the perceived coworker loafing. When one of the two variables which are found to have a relationship is determined as the predicted variable and the other as a predictor, the process of explaining the relationship between them with a mathematical equation is called regression analysis (Büyüköztürk, 2011). In this study, it was determined through correlation analysis that there was a linear relationship between organizational cynicism and social loafing. Organizational cynicism was the independent variable (predictor) while social distinction was the dependent variable (predicted). The results of the multiple linear regression analysis are shown in Table 2.

As seen in Table 2, as a result of multiple linear regression analysis, the sub-dimensions of organizational cynicism had a significant low level relationship with the perceived social loafing (R= 0.54, R^2=0.29, p<0.01). Accordingly, the cognitive dimension, affective dimension, and behavioral dimension account for 29% of the total variance in the perceived coworkerloafing. The standardized (β) coefficients and t values revealed that according to the order of importance, the cognitive dimension, behavioral dimension and affective dimension are the significant predictors of colleagues' social loafing perception, respectively.

Considering the findings obtained, it can be said that if organizational cynicism behaviour is observed within the organization, social loafing behavior will also appear. If an individual believes that his or her organization lacks honesty, he or she may feel distrust in the organization and other colleagues within the organization, and may be sceptical of the integrity of the organization due to the discrepancies between the policies and practices in the organization. This may cause the individual to exhibit cynical attitudes within the organization. The individual

Table 2. Multiple linear regression analysis conducted to determine the effect of sub-dimensions of organizational cynicism on teachers' perceived coworkerloafing.

Predictor	Social loafing (Predicted variable)				
	B	Standart Error	β	t	p
Constant	17,656	0.767	-	23,028	0.000
Cognitive Dimension	0.721	0.077	0.341	9,394	0.000
Affective Dimension	0.327	0.099	0.120	3,298	0.001
Bahavioural Dimension	0.421	0.096	0.154	4,393	0.000

R=0.541, R^2=0.293, $F_{(3-1039)}$=143.317, p=0.000.

Table 3. Simple linear regression analysis conducted to determine the effect of teachers' perceived coworker loafing on organizational cynicism level.

Predictive variable	Organizational Cynicism (Predicted variable)				
	B	Standard error	β	T	p
Constant	9,925	0.914	-	10,854	0.000
Social loafing	0.558	0.027	0.536	20,473	0.000

R=0.536, R^2=0.287, $F_{(1-1041)}$= 419.144, p=0.000.

who develops negative attitudes towards the institution he/she works for, may naturally doubt if his/her efforts within the organization can be identified and his/her efforts within the group can be distinguished. Similarly, the individual who is doubtful about the distinguishability and visibility of his/her efforts within the group may be suspicious of the institution in that he/she will be rewarded in accordance with his/her efforts. This may cause an individual to exhibit social loafing behavior in group work.

When these points are taken into consideration, it can be said that organizational cynicism is an antecedent of social loafing and cynical attitudes within the organization can cause loafing behavior.

Findings related to the third sub-problem

In this study, in the second sub-problem, it was determined that the teachers' level of organizational cynicism had predictive power on social loafing perception. In the third sub-problem, on the other hand, the predictive power of social loafing perception on organizational cynicism was determined. The question was handled using a two-way perspective.

The effect of perceived coworker loafing on organizational cynicism

Simple linear regression analysis was conducted to determine the effect of teachers' perception level of social loafing on organizational cynicism. In this study, a linear correlation between social loafing and organizational cynicism was determined using correlation analysis. Social loafing was the independent variable (predictor) and organizational cynicism was the dependent variable (predicted). The result of the simple linear regression analysis is shown in Table 3.

According to Table 3, as a result of simple linear regression analysis, it was found that perceived coworker loafing had a low and significant relationship with organizational cynicism (R =0.536, R^2=0.287, p<0.01). Therefore, it can be said that the perceived coworker loafing is a significant predictor of organizational cynicism. Due to teachers' perception that their colleagues do not make enough effort in the group, the feeling of distrust appears; thus, making teachers develop negative attitudes towards their colleagues. Avoiding responsibility in task distribution, prioritizing individual goals rather than the group objectives, dealing with other works other than the task itself within the working hours, placing their own responsibilities on others, not doing their own part of the work and behaving loosely while doing the job may lead to social loafing behavior. In addition, loafing behaviors exhibited by colleagues in group work can lead the individual to feel angry and get furious towards friends and develop a belief that the work will not be as desired. This may lead to the emergence of cynical attitudes in the school.

The effect of perceived coworker loafing on cognitive dimension

Simple linear regression analysis was conducted to

Table 4. Simple linear regression analysis conducted to determine the effect of the perceived coworker loafing on cognitive dimension level.

Predictive variable	Cognitive Dimension (Predicted variable)				
	B	Standard error	$\overline{\beta}$	T	P
Constant	3,725	0.423	-	8,808	0.000
SOCIAL LOAFING	0.242	0.013	0.511	19,178	0.000

$R=0.511$, $R^2=0.261$, $F_{(1-1041)}=367.792$, $p=0.000$.

determine the effect of teachers' perception level of social loafing on cognitive dimension. Social loafing variable (predictor) and cognitive dimension were the independent and dependent (predicted) variables. The result of the simple linear regression analysis is shown in Table 4.

From the analysis of Table 4, using simple linear regression analysis, it was found that perceived coworker loafing had a low and significant relationship with cognitive dimension (R =0.511, $R^2=0.261$, p<0.01). Accordingly, it can be said that perceived coworker loafing is a significant predictor of cognitive dimension. One of the most important reasons why individuals develop negative attitudes towards the organization and believe that the organization lacks honesty is because what is said and done in the institution are different, and there are few common aspects in the policies, objectives and practices of the organization.

Incompatibility of human behaviors within the organization, relationships based on interests and people's behaviors in line with their self interests, lying and resorting to fraud may result in cynical attitudes at the cognitive dimension level in an organization. On the other hand, regarding social loafing behavior, the behaviors observed include prioritizing their individual benefits instead of organizational benefits and placing their own responsibilities on others, behaving loosely in group works and doing the job they want instead of the task assigned to them. In this sense, the loafing behavior of people may lead the individual to hold the belief that his/her organization is not sincere and lacks honesty and decency. This situation reveals that teachers' perception that their colleagues' exhibit social loafing behavior may cause teachers to show cynical behaviors at cognitive dimension in the school.

The effect of perceived coworker loafing on affective dimension

Simple linear regression analysis was conducted to determine the effect of teachers' perception level of social loafing on affective dimension. Social loafing and affective dimension were the independent variable (predictor) and dependent variable (predicted), respectively. The result of the simple linear regression analysis is shown in Table 5.

From Table 5, using simple linear regression analysis,

it was found that perceived coworker loafing had a low and significant relationship with affective dimension (R=0.432, $R^2=0.186$, p<0.01). Accordingly, it can be said that the perceived coworker loafing is a significant predictor of affective dimension. Anger, hatred, sadness and disgust against the organization stood out in the affective dimension. At the same time, feelings of disdain, anger, disappointment and distrust were prominent. However, social loafing behaviors exhibited by their colleagues cause teachers not to trust their colleagues during task completion; thus, not fulfilling their responsibilities. The disruptions encountered and low efficiency during the task can cause anger and frustration. The coworkers' loafing behaviors, especially during tasks that are meaningful to the individual, may lead him/her to feel more annoyed. This suggests that coworkers' loafing behavior may lead to cynical behavior at school in the affective dimension.

The effect of perceived coworker loafing level on behavioral dimension

Simple linear regression analysis was conducted to determine the effect of teachers' perception level of social loafing on behavioral dimension. Social loafing and behavioral dimension were the independent (predictor) and dependent variables (predicted), respectively. The result of the simple linear regression analysis is shown in Table 6.

From Table 6, using the simple linear regression analysis, it was found that perceived coworker loafing had a low and significant relationship with the behavioral dimension (R=0.432, $R^2=0.187$, p<0.01). Accordingly, it can be said that the perceived coworker loafing is a significant predictor of behavioral dimension. In the behavioral dimension, there are verbal or nonverbal negative behaviors exhibited towards the organization. Discussing what is going on at work with outsiders, complaining and criticizing–the organization and using insulting and sarcastic language towards the organization are cynical behaviors that emerge in the behavioral dimension. In this sense, social loafing behaviors of colleagues may cause the individual to constantly criticize and complain, revealing feelings of distrust and anger. Particularly in individual or group work, people who fulfill

Table 5. Simple linear regression analysis conducted to determine the effect of teachers' perceived coworker loafing on affective dimension level.

Predictive variable	Affective dimension (Predicted variable)				
	B	Standard error	$\bar{\beta}$	T	p
Constant	1,963	0.344	-	5,710	0.000
Social loafing	0.158	0.010	0.432	15,445	0.000

R=0.432, R^2=0.186, $F_{(1-1041)}$=238.535, p=0.000.

Table 6. Simple linear regression analysis conducted to determine the effect of teachers' perceived coworker loafing on cognitive dimension level.
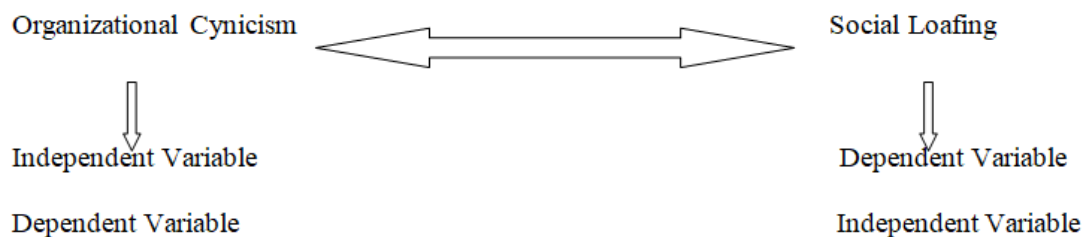
Predictive variable	Behavioral dimension (Predicted variable)				
	B	Standard error	$\bar{\beta}$	t	P
Constant	4,237	0.343	-	12,368	0.000
SOCIAL LOAFING	0.158	0.010	0.432	15,474	0.000

R=0.432, R^2=0.187, $F_{(1-1041)}$=239.452, p=0.000.

Figure 1. Two-way perspective.

their duties and are happy to take responsibility may make harsh criticisms and complaints as they have more feelings of anger and frustration. The practices carried out on specific occasions and activities in schools, the fact that the responsibility of group and commission works is always fulfilled by the same teachers, that the other teachers do not fulfill their responsibilities because there is someone to do the work, may cause the teachers who fulfill their responsibilities to criticize and discuss this situation with the people both within and outside the school and complain about the school and colleagues.

Owing to the characteristics of the measurement tool, a two-way perspective was developed in the study, and the power of organizational cynicism to predict social loafing and the power of social loafing to predict organizational cynicism were measured. When the sub-problems were examined, it was seen that both variables affected each other at almost the same level. In other words, while cynical attitudes that arise in the organization can reveal social loafing behavior, social loafing behaviors exhibited in group works can create cynic attitudes by creating distrust and anger towards the organization (Figure 1).

As shown in Figure 1, both variables affect each other, and this indicates that not only negative attitudes produce negative behaviors, but also negative behaviors produce negative attitudes. In brief, it can be said that while distrust towards the organization and the belief that it is not honest cause negative behaviors in the individual; negative behaviors such as social loafing in the organization can cause the individual to develop negative attitudes towards the organization. This result displays that organizational cynicism and social loafing are important, intentional, anti-productive behaviors, hidden or explicit, and they affect the effectiveness of organizations negatively.

DISCUSSION

When the findings of the study were taken into consideration, it was found that there was a relationship between organizational cynicism and social loafing perception, and organizational cynicism predicted social cynicism. In the literature, the studies majorly examine

the relationship between virtual cynicism and organizational cynicism (Özdemir, 2017; Yıldırım and Karabey, 2017). This situation limits the comparison of the study with different studies. There is only one study encountered that investigated the relationship between organizational cynicism and social loafing. Balcı (2016), in his study that examines the relationship between organizational cynicism, presenteeism and social loafing, revealed that organizational cynicism plays a partial mediating variable role between presenteeism and social loafing. This result shows similarity with the result of the present study. It can be stated that attitude theory, one of the theories explaining organizational cynicism, supports this result because attitude theory suggests that organizational cynicism occurs in three dimensions. According to Dean et al. (1998), cognitive dimension, which is the first, involves the belief that the organization lacks honesty. The second dimension, the affective dimension, is the stage where beliefs in the first phase are transformed into feelings such as anger, hatred and contempt against the organization. The last stage, the behavioral dimension, is the stage in which beliefs and feelings in the first two stages are transformed into behavior. This theory suggests that behavior appears at the last stage. Doğan et al. (2012) defines social loafing as "the individual's tendency to produce less when working with a group than working alone". This definition reveals that social loafing is a negative behavior. These two points support the fact that there is a relationship between organizational cynicism and social loafing and that organizational cynicism is the predictor of social loafing. Similarly, Güney (2017) emphasised that behavior is shaped according to the knowledge and feelings of such a person.

In addition, in this study, a two-way perspective was developed because of the characteristics of the measurement tool and it was determined whether social loafing was the predictor of organizational cynicism. When the findings of the study are taken into consideration, it is seen that social loafing predicts organizational cynicism as well. Thus, not negative attitudes do not only lead to negative behaviors but also negative behaviors lead to negative attitudes. However, when the literature was examined, there were no studies investigating if social loafing is the predictor of organizational cynicism. This situation makes it impossible to compare the study with previous studies. Erdost-Çolak (2018) argued that the implementation of unfair policies within the organization, the dismissal in the organization when not in the crisis period and the existence of the mismanagement style are effective factors in the emergence of organizational cynicism. Likewise, Dean et al. (1998) emphasized that organizational cynicism stems from the fact that behaviors in the organization do not comply with each other and that the employees of the organization lie and cheat; and that relationships in the organization are based on the individual interests. This situation indicates that the behavior of the organization and its employees is effective in the emergence of organizational cynicism. Briefly, it is emphasized that negative behaviors are effective in negative attitudes exhibited towards the organization. Ilgın (2013) defined social loafing as a situation whereby the individual makes less effort than expected in group works. When this definition is considered, it is seen that social loafing is a negative behavior in which the person conceals his real performance and acts according to his own interests. This situation may create cynical attitudes in the individual by creating distrust towards colleagues. As a result, social loafing behavior is an antecedent that reveals organizational cynicism.

This study opines that organizational cynicism attitudes are as effective as the underlying factor of social loafing behavior observed in educational institutions. Similarly, it is also seen that social loafing is effective in the emergence of organizational cynicism attitudes. In short, it can be said that there is a two-way effect. In this sense, these behaviors preventing production and performance in educational institutions should be given primary attention and necessary precautions should be taken.

SUGGESTIONS

In order to reduce cynical attitudes that may emerge in the organization, the seminars that the teachers participate at the beginning and end of the academic year should be transformed into in-service training aimed at all teachers for new applications, methods and technological developments, and hands-on training should be given as well. This can help prevent teachers' resistance to change, open them to innovation and eliminate existing cynic behaviors. Consistency between the policies and practices of the school, fair rewarding system and inclusion of teachers in decisions making process can be effective in preventing the cynical behaviors that may arise.

To prevent social loafing in the organization, teachers' performance can be increased by creating environments that will allow them socialize and cooperate as well as strengthen team spirit. In this way, social loafing behavior will be reduced. Studies show that socialization and cooperation have an effect on improving performance and reducing social loafing. Working with smaller groups can reduce social loafing. In addition, building trust within the organization would play an essential role in reducing social loafing. It may be beneficial for managers to handle human resources management comprehensively, so as to recognize and prevent anti-productional organizational behaviors. It can be considered that a supportive organizational culture that can be formed with human-based leadership behaviors in organizations can positively affect the motivation of employees and have

positive contributions on both variables. In such an organizational atmosphere, the work environment in which the employees are involved may also direct the behaviors in line with the achievement of the purpose of the organization. At this point, this problem can be resolved through in-service trainings or by postgraduate education in the field of education management.

SUGGESTIONS FOR FUTURE RESEARCHERS

Further study should employ qualitative data to have deeper understanding of the underlying problems of teachers exhibiting organizational cynicism and social loafing behavior may contribute to the literature and administrators. For future studies, the relationship between leadership behaviours of the managers of the schools, motivation strategies of the organizations, dimensions of organizational culture and the work environment of the colleges as well as the concepts of social loafing and organizational cynicism can be examined. This study is limited to primary and secondary schools. Conducting it in different school level can contribute to literature. Organizational cynicism and social loafing can be studied with different variables.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

ACKNOWLEDGEMENTS

REFERENCES

Abraham R (2000). Organizational cynicism: Bases and consequences. Genetic, Socialand General PsychologyMonographs 126(3):269-292.

Anderson LM (1996). Employeecynicism: an examinationusing a contractviolationframework. Human Relation 49:1395-1418.

Balcı O (2016). İlköğretim okullarında görev yapan öğretmenlerin ve yöneticilerin örgütsel sinizm, kendini işe verememe (presenteizm) ve sosyal kaytarma arasındaki ilişkinin incelenmesi: Arnavutköy İlçesi Örneği. Doktora tezi, İstanbul   Arel Üniversitesi Sosyal Bilimler Enstitüsü İşletme Yönetimi Anabilim Dalı, Turkey.

Bayram Candan D (2017). Ankara ili kamu ortaokullarında görev yapan öğretmenlerin sosyal kaytarma davranışları. Yayınlanmamış yüksek lisans tezi, Ankara Üniversitesi Eğitim Bilimleri Enstitüsü Eğitim Yönetimi ve Politikası Anabilim Dalı, Turkey.

Bora T (2011). Sol, sinizm, pragmatizm. İstanbul: Birikim.

Brandes PM (1997). Organizational cynicism: İtsnature, antecedents, and consequences (Unpublished doctoral dissertation). TheUniversity of Cincinnati, Cincinnati.

Büyüköztürk Ş (2011). Sosyal bilimler için veri analizi el kitabı. Ankara: Pegem Akademi.

Candan H (2013). Örgütsel sinizm ve işgören performansına olası

etkileri. Kahramanmaraş Sütçü İmam Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi 3(1):181-194.

Cevizci A (2002). Paradigma felsefe sözlüğü. İstanbul: Paradigma Yayınevi.

Dean Jr JW, Brandes P, Dharwadkar R (1998). Organizational cynicism. The Academy of Management Review 23(2):341-352.

Doğan A, Bozkurt S, Demir R (2012). Sosyal kaytarma davranışı ile algılanan görev görünürlülüğü arasındaki ilişkinin incelenmesine yönelik bir araştırma. SÜ İİBF Sosyal ve Ekonomik Araştırmalar Dergisi pp. 53-79.

Erdost-Çolak E (2018). Örgütsel sinizm. A Keser, G Yılmaz, S Yürür (Ed.), Çalışma Yaşamında Davranış içinde (4. baskı, s. 325). Umuttepe Yayınları.

Ergen S (2015). Öğretmenlerin örgütsel sinizm düzeyleri ile örgütsel bağlılıkları arasındaki ilişki. Yayınlanmamış yüksek lisans tezi, Gazi Üniversitesi Eğitim Bilimleri Enstitüsü Eğitim Yönetimi ve Denetimi Anabilim Dalı, Ankara, Turkey.

Gökberk M (2000). Felsefe tarihi.İstanbul: Remzi Kitapevi.

Güneş İ (2017). Okul yöneticilerinin liderlik düzeyleri ile örgütsel sinizm arasındaki ilişki: İstanbul Bahçelievler Örneği. Yayınlanmamış yüksek lisans tezi, İstanbul Aydın Üniversitesi Sosyal Bilimleri Enstitüsü, İstanbul, Turkey.

Güney S (2017). Örgütsel davranış. Ankara: Nobel Yayınevi, 4. Basım.

Helvacı MA (2010). Örgütsel sinizm: Yönetimde yeni yaklaşımlar (Edt. Memduhoğlu, H.B., Ve Yılmaz K.). Ankara: Pegem Akademi.

Ilgın B (2010). Örgütsel vatandaşlık davranışlarının oluşumunda ve sosyal kaytarma ile ilişkisinde, duygusal zeka ve lider üye etkileşiminin rolü. Doktora tezi, Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı, Ankara, Turkey.

Ilgın B (2013). Toplumsal bir hastalık: Sosyal kaytarma. Uşak Üniversitesi Sosyal Bilimler Dergisi 6(3).

Kalağan G (2009). Araştırma görevlilerinin örgütsel destek algıları ile örgütsel sinizm arasındaki ilişki.Yayınlanmamış Yüksek Lisans Tezi, Akdeniz Üniversitesi Sosyal Bilimler Enstitüsü, Antalya, Turkey.

Kalağan G, Aksu MB (2010). Organizationalcynicism of there search assistants: A case of Akdeniz University. Procedia Social and Behavioral Sciences 2:4820-4825.

Karacaoğlu K, İnce F (2012). Pozitif örgütsel davranışın örgütsel sinizm üzerindeki etkileri: Kayseri ilindeki imalat sanayi işletmelerinde bir araştırma. Yayınlanmamış yüksek lisans tezi, Nevşehir Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı, Turkey.

Karasar N (2002). Bilimsel araştırma yöntemi.Ankara: Nobel Yayınevi.

Kasalak G, Bilgin-Aksu M (2014). The relationship between perceived organizational support and organizational cynicism of research assistants. Educational Sciences: Theory and Practice 14(1):125-133.

Kurnaz G (2016). Sosyal kaytarmanın çalışan performans düzeyine etkisi üzerine biraraştırma. Journal of International Social Research 9(44):1143-1150.

Latane B, Williams KD, Harkins S (1979). Many hands make light the work: The causes and consequences of socialloafing. Journal of Personality and Social Psychology 37:822-832.

Liden RC, Wayne SJ, Jaworski RA, Bennett N (2004). Social loafing: A field investigation. Journal of Management 30(2):285-304.

Mantere S, Martinsuo M (2001). Adopting and questioning strategy: exploring the roles of cynicismanddis sent. Presented at 17th European Group for Organisation Studies Colloquium, July 5-7, Lyon, France.

Öge HS, Kurnaz G (2017). Presenteeism ile sosyal kaytarma arasındaki ilişki: Otomotiv işletmesinde bir araştırma. International Journal of Academic Value Studies 3(16):115-129.

Özdemir HÖ (2017). Yöneticilerin otantik liderlik tarzlarının çalışanların sinizm ve sanal kaytarma davranışları üzerindeki etkileri. Doktora tezi, Nevşehir Hacı Bektaş Veli Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı, Nevşehir, Turkey.

Özek H (2014). Örgütlerde sosyal kaytarma davranışı ile psikolojik iklim ilişkisi ve konuyla ilgili bir araştırma. Doktora Tezi, İstanbul Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı İnsan Kaynakları Yönetim Doktora Programı, İstanbul, Turkey.

Özgener Ş, Öğüt A, Kaplan M (2008). İşgören-işveren ilişkilerinde yeni bir paradigma: Örgütsel sinizm, örgütsel davranışta seçme konular (Edt. Mahmut Özdevecioğlu ve Himmet Kaplan), G. Ü. V.

Ankara: İlke Yayınevi pp. 53-72.

Pabico JP, Hermocilla JAC, Galang JPC, De Sagun CD (2008). Perceived Social Loafing In Undergraduate Software Engineering Teams. Philippine Information Technology Journal 1(2):22-28 (cited in Öge & Kurnaz, 2017).

Rothwell JD (1999). In the Company of Others. New York. McGraw-Hill Higher Education.

Tokgöz N, Yılmaz H (2008). Örgütsel sinizm: Eskişehir ve Alanya'daki otel işletmelerinde bir uygulama. Anadolu Üniversitesi Sosyal Bilimler Dergisi 8(2):238-305.

Yıldırım A, Şimşek H (2005). Sosyal bilimlerde nitel araştırma yöntemleri. Ankara: Seçkin Yayıncılık.

Yıldırım SK, Karabey CN (2017). Etik iklim ve orgütsel kontrol mekanizmalarının sanal kaytarma davranışı üzerindeki etkisinde örgütsel sinizmin aracılık rolü. Gazi Üniversitesi Sosyal Bilimler Dergisi 4(11):556-594.

ACADEMIC JOURNALS
expand your knowledge

Educational Research and Reviews

Full Length Research Paper

Socio-cultural diversity as determinant of Social Studies students' academic performance in Calabar, Cross River State, Nigeria

Bernedette U. Cornelius-Ukpepi*, Rita A. Ndifon and Ibe O. Sunday

Department of Curriculum and Teaching, Faculty of Education, University of Calabar, Nigeria.

Students' academic performance in Social Studies has been poor for the past years. Blame has been levelled on teacher factors, students' attitude towards the subject, and lack of learning materials. This study therefore seeks to find out if socio-cultural diversity among students is responsible for their poor performance in Social Studies. The purpose of this study is to examine learners' socio-cultural diversity as determinant of academic performance in Social Studies in Calabar Education Zone of Cross River State, Nigeria. To achieve the purpose of this study, two hypotheses were formulated as a guide. Literature was reviewed based on the two identified variables of social and cultural diversity. Both theoretical and empirical review was carried out. Survey research design was adopted and a sample of 488 students was selected through simple random technique from a population of 5,039. Questionnaire was used for data collection. The instrument was face validated and the reliability estimate was established through the Cronbach Alpha method with coefficient of 0.75 and 0.72. Kuder Richardson formula -20 was used for social studies achievement test with a reliability coeffient of 0.81. Pearson Product Moment Correlation and Independent t-test were employed to test the hypotheses at 0.05 level of significance. The result revealed that, social and cultural diversity significantly influence Social Studies students' academic performance in Calabar Education Zone. It was recommended that, socio-cultural diversity of learners should be considered while teaching so that every learner will benefit from the instruction.

Key words: Learner, social, cultural, diversity, academic performance.

INTRODUCTION

Education is an instrument for national development and social change. It is vital for the promotion of a progressive and united Nigeria. It maximizes the creative potentials and skills of the individual for self-fulfilment and general development of the society. It is therefore, meant to be qualitative, comprehensive, functional and relevant to the needs of the society. Thus, Federal Republic of Nigeria (2013) stated that, education is the bed rock of any nation, which is the reason for government's heavy investment in education of her citizens. Education is the

Table 1. Learners' performance in Social Studies in the JSCE 2014-2016.

Year	No Enrolled	Credit (1-6)	Fail (f-9)
2014	929,271	269,767(29.03%)	514,187(55.33%)
2015	833,204	252,271(30.28%)	523,879(62.88%)
2016	1,073,537	272,922(25.42%)	593,201(55.26%)

Source: Obtained from the Department of Planning Research and Statistics, Calabar April, 2017.

key to a nation's development. For a nation to achieve her educational, scientific, and technological goals, her citizens must have skills, aptitude, ability, and creative potentials needed for the achievement of these goals and this can also be actualised through effective study of Social Studies

Mezieobi and Mezieobi (2013) opine that Social Studies is an integrated field of study covering social sciences and the humanities. It is a field of study that focuses on man and his environment taking into consideration relationships or interactions that equip man with skills and knowledge to conquer himself and the environmental problems. Also, Odey (2019) maintained that Social Studies is a subject that equips students with skills and knowledge and the development of positive attitudes towards Nigerian cultural heritage. Kazi (2017) refers to Social Studies as representing and portraying of oneness and indivisibility of knowledge and the reality of man's interaction with the environment. Social Studies primarily is an integrated subject area designed to help students acquire the necessary skills, norms, knowledge and ideals of the society to enable them function adequately in the society. Furthermore, Coe (2014) views Social Studies as a discipline that helps students become responsible citizens in a culturally diverse, democratic society within an interdependent world. This is why students in a Social Studies classroom had to perform well in order to show that appropriate skills have been acquired.

Over the years, academic performance of students in Social Studies has been poor in Calabar municipality. Many efforts have been made by the teachers and the government to improve students' performance but to no avail. A quick check on the academic performance of junior secondary school examination report in Social Studies indicates that, there is poor performance in the subject by the students from 2014-2016. The result is seen in Table 1.

As indicated in Table 1, the failure rate of 55.33 % was recorded in 2014, showing that the failure rate was high, in 2015 the percentage of failure was 62.88%, and in 2016 the percentage of failure rate was 55.26%. This is a clear indication that the failure rate of learners in Social Studies has declined steadily through the years.

The academic progress of children, adolescents and adults determines the quality and quantity of manpower that will be available for the much desired break-through of Nigeria in science, technology, arts, and entertainment (Abam, 2019). Education provides the human capital that will initiate, plan, direct and execute the development processes and activities that are critical for the economic growth and development of a nation

But if students continue to fail, the objectives of the introduction of Social Studies would not be fulfilled. Odey (2019) carried out a study on socio-cultural practices and academic performance in Social Studies students in Ogoja Education Zone. A sample of 2000 Social Studies students were randomly selected from a population of 21,022. Survey research design was adopted and questionnaire was the instrument used to gather data. Simple regression analysis was used to determine the influence. It was found that socio-cultural practices significantly influence students' academic performance in social studies.

Biriye (2011) carried out a study to investigate the social-cultural factors that affect the academic performance of secondary school students in Garrissa District. Four research questions were formulated to guide the study. The study employed descriptive research design. The sample comprised 8 head teachers, 145 teachers and 351 students. Data were collected with questionnaires and interview guide. The findings revealed that, there were several social-cultural factors that affected students' performance. For example communities' strong attachment to their culture and cultural conflicts was also seen as factor that affected performance. Based on the findings, it was concluded that social-cultural factors .had effect on students' performance. Schools however should use different strategies to enhance students' performance among secondary school students in Garrissa District.

Odey (2019)'s finding on poor performance in Social Studies was as a result of socio-cultural practices while Biriye (2011)'s study revealed that socio-cultural factors were responsible for poor academic performance. These authors did not investigate the influences of socio-cultural diversity on academic performance. It is on this premise that this study seeks to find out whether some socio-cultural factors in terms of social and cultural diversity have any relationship with academic performance of students in Social Studies. The socio-cultural factors identified include; language, race, customs, interaction

patterns, religion, mode of dressing and eating, ethnicity, background, attitudes etc. In the context of this study, we are looking at culture in terms of customs and social diversity in terms of interaction patterns.

A group of people who share things such as language, values, tradition, and ways of doing things are said to possess a common culture. When most people share that culture, it is called the majority or dominant culture. The ability to give every child a chance to succeed in school depends upon a full understanding of culture and learning. This is because, according to Odey (2019) culture and education are closely related; while culture provides the content to learn, education preserves and transmits the cultural values. Culture influences many aspects of our lives. Kauchak and Eggen (2011) maintained that students come to school with a history of learning influenced by the cultures of their homes and neighbourhoods and that some attitudes and values complement learning and others do not. For instance, if a child is raised in a culture where children do not respond when adult is talking or make decision, such a child may feel withdrawn and will not be bold to ask or answer questions in the class unlike his/her counterpart who come from a democratic home and speak freely. This may be a hindrance to the child's progress in school.

According to Kauchak and Eggen (2011) cultural diversity refers to the different cultures encountered in classrooms and how these cultural differences influence learning. Konan et al. (2010) reviewed literature of several studies which have attempted to examine the effects of cultural diversity on performance and discovered that diversity is associated with both positive and negative outcomes. The authors found that negative impacts of diversity concern group cohesion and conflict and that the positive impact of diversity relates to superior group performance. The review also indicated that racial diversity has positive effects on complex thinking and further found that racially diverse groups performed better on an idea-generation task than did racially homogeneous groups. This review was done in the United State. In the Nigerian context, it may not be different; hence children come from different cultures in terms of child rearing customs and interaction patterns in the numerous cultures in Nigeria and in Calabar in particular. Culturally, it is believed that children from disparate cultural backgrounds perform differently in cognitive tasks- for instance, their understanding of how knowledge is gained. Also parents encourage children to communicate with others in different ways depending on their cultural background. For example, parents in some African cultures, especially, Nigeria often encourage their children to be silent unless they are directly spoken to, not to argue with adult and not to speak their minds (Shahaeian, 2014). This is in contrast with most Western cultures where children are given opportunity to speak at will. This attributes of remaining silent except when spoken to may often be regarded as exhibiting shyness and not so

highly valued in the Western culture. This in African culture can influence a child's academic performance. Socio-cultural factors of language, law, values, religion, family background are the largest scale forces within societies that affect the thoughts, behaviours and feelings of individuals (Njok and Edinyang, 2014).

Also, Essien et al. (2016) investigated the influence of cultural inhibitions on students' academic performance in Social Studies. One hypothesis was formulated to guide the study and Expost-Facto research design was adopted. A cultural inhibition questionnaire was used to obtain the data and Pearson product moment correlation was employed to analyze the data. The result revealed a significant positive relationship between cultural inhibitions and students' performance in Social Studies.

On the contrary, Whipps-Johnson (2016) carried out a study on teachers' awareness of cultural diversity and academic achievement in ninth grade academics and senior high schools and found that there was no significant relationship between teachers' awareness of cultural diversity and perceived academic achievement growth or perceived persistence in school as measured by perceived dropout rates. No statistically significant differences were found between ninth grade schools

Social difference is an important determinant of students' academic performance. Because social differences are the key part of the developmental process, they may have a negative effect on young people due to peer pressure and peer conformity

As children socialize, interact, and work with themselves, such relationship influences them positively or negatively. Diversity constitutes a crucial aspect of functionalism in areas of educational performance (Kauchak and Eggen, 2011). Learner diversity encompasses a broad range of educational concepts, including the social setting, the psychological environment created through social contexts, and numerous instructional components related to teachers' characteristics and behaviours.

Human beings live in groups; sociologists have advanced several reasons in support of group living. Living in groups which begins with childhood peer interaction has influence on each other. Every child in school is a member of a very important group in his class (Kauchak and Eggen, 2011); how he gets on with his class members affects his social difference towards school hence his learning.

In consonance with this, Roberts (2013) studied a group of girls whom he taught English composition using group method. The author grouped the subjects for the study into different groups. The investigation found that learners who worked in groups achieved significantly higher than those who worked individually. Since student-student relationship affects the learning of Social Studies; every school child must be fully adjusted to the classroom work group for effective participation.

In the classroom grouping, children are expected to

play their roles in the process of learning and are encouraged to interact positively with each other. This is because the more learners participate in the study group, the more they learn from it. Ogletree (2012) who asserted that a child who is socially rejected develops feelings of insecurity and inferiority because it seems to him he is not worthy of peer love and is evidently worthless. Learners are more positive about having youngsters as work partners. In a socio-metric study of two school communities, Jones (2011) noted that in a regular classroom, socio-metric acceptance scores increased as much as 2.0, while rejection scores decreased as low as 1.0. The study showed that reasons for rejection are because of un-acceptance behaviour such as bullying, fighting, showing-off and an apparent inability or desire to conform to group stands or behaviour. Student-student social relationship serves as an organizer and motivator of learners (Kauchak and Eggen, 2011. This is because when students interact with one another, they become more motivated to learn and build relationships.

Inner thought, wishes, ability to understand the needs and feelings of others, contribute to this shift in interaction patterns. According to the investigator, a determination in the social acceptance level of children has negative effect on the behaviour of the individual learners. According to Ferguson (2002), a child with high ability who is socially maladjusted in school often develops negative social differences toward school rules and regulations. Such social differences are evidenced by the way he/she completes assignments and voluntarily participates in learning activities.

Social difference in terms of how people interact with one another is a notable force that influences the life of an adolescent more than any other single force. According to Prashant (2017) social diversity is the feature of the society which is determined by caste, class religion, occupational pattern and general customs. Adolescence period has been identified to be a time individuals desire to find themselves more frequently in the midst of peers rather than staying with adult members of the family through interaction. Adolescents form peers on symbolic foundation involving intelligent members, physically strong members and financially buoyant members (Mezieobi and Mezieobi, 2013: 15). However, such group usually has group norms, ideals and goals. The need to interact with people who can see things in their own frame of interest is uppermost among the factors that make adolescents go for peer membership. At adolescent age, parents do not understand why their children view things the way they do.

In a study carried by Achinstein and Ogawa (2012) on study habit, social difference and achievement of primary school learners in Science in the Southern Akwa Ibom State of Nigeria showed that social difference contributed substantially more than other variables in the study to predict achievement. This shows that a student's social difference towards Science subjects is a very important factor in achievement. This implies that, social skills difference of interaction of the student, be it with fellow students or parents or others around him is significant in the student's achievement in school.

Social interaction which differs among students as an outcome of learning process is very vital because it conditions other variables that can make the study of Social Studies worthwhile. Granted that social difference interaction is a necessary ingredient for learning, many studies have proved that it is not an end in itself but rather a means to an end. According to Alfaro and Umaña-Taylor (2010) a student claimed to have studied well for an examination, the study is not the cause of his success, rather it is the social interaction. To support the matter further, for instance, a student who possesses a positive social difference towards schooling, will help him to develop a good or effective study habit, which in turn improves the learners' level of studying. In this case Alfaro and Umaña-Taylor (2010) maintained that though positive social difference towards the subject is instrumental to his academic success but nevertheless, it is not the direct cause rather it conditions the effective study habit, which is the direct cause.

According to Alfaro and Umaña-Taylor (2010) the social interaction difference of learners and their parents to education significantly correlate. To him, children gradually develop positive social difference to learn; if they are not motivated in school they develop negative social difference to learning which influence their academic performance in a negative way. In human modelling, the parent or any other member of the child's family may be the learner's model, and if the model for instance, is the academic type who do not only make sound efforts but also derive pleasure in pursuing his or her academic interest, the chances are that the child would want to be like his or her model. This admiration for his model may motivate him into activities and once the right or positive social difference has been formed, the child will naturally derive pleasure in working hard in order, to achieve success in his academics.

Alfaro and Umaña-Taylor (2010) maintained that, learners with negative social interaction difference towards a subject or a teacher do not learn with the same degree as learners with more positive social interaction difference. The author further maintained that the importance a student attaches to a subject will determine the extent and amount of efforts he or she puts into studying the subject. In other words teachers should present and handle their subject in a way that will not generate negative social interaction difference on the part of the student.

Russell and Russell (2014) carried out a study to survey the general social difference of Nigerian learners toward Physics. The survey was confined to Physics major who were in their third and fourth year in the Nigerian Universities. Approximately, 200 learners drawn from all the Nigerian universities participated in the study

by completing 15-item questions. Responses were made voluntarily and anonymously. Findings from the survey revealed that very few learners love to study physics and those who opted for physics do so because they meant to earn a job ticket; other results showed that student were not satisfied with the research activities and the teaching of Physics in the universities.

THEORETICAL FRAMEWORK

Socio-cultural theory of cognitive development was propounded by Lev Semyonovich Vygotsky (1978). This theory stresses the fundamental role of social interaction in the development of cognition. The author believed strongly that community plays a central role in the process of "making meaning" (1978, p. 90). Socio-cultural approach to cognitive development states that cognitive growth occurs in a socio-cultural context that influences the form that it takes, and many of a child's most noteworthy skills evolve from social interactions with parents, teachers, and other elders.

Vygotsky proposed that infants are born with a few elementary mental functions which consist of attention, sensation, perception, and memory that are eventually transformed by the culture into new and more sophisticated mental processes which are called higher mental functions. For example, young children's early memory capabilities are limited by biological constraints to the images and impressions they can produce. However, each culture provides its children with tools of intellectual adaptation, which is Vygotsky's term for methods of thinking and problem-solving strategies that children internalize from their interactions with more competent members of the society.

Vygotsky argues instead they learn through guided participation. This is a kind of apprenticeship in thinking. The idea of an apprenticeship or guided participation may seem reasonable in cultures where children are integrated early into the daily activities of adult life, like African countries whose hunting-and-gathering lifestyle has remained virtually unchanged for thousands of years. Guided participation is the adult-child interaction in which children's cognitions and modes of thinking are shaped as they participate with or observe adults engaged in culturally relevant activities. In order to gain an understanding of Vygotsky's theory of cognitive development, one must understand two of the principles of Vygotsky's work: the More Knowledgeable Other (MKO) and the Zone of Proximal Development (ZPD).

The More Knowledgeable Other refers to someone who has a better understanding or a higher ability level than the learner; a child's peers or an adult's children may be the individuals with more knowledge or experience. The Zone of Proximal Development refers to the difference between what a child can achieve independently and what a child can achieve with guidance and encouragement from a skilled partner. It is the range of abilities that an individual can perform a task with assistance, but cannot yet perform independently.

The relevance of this theory to this study is that, children are seen as active participants in their education so they need to be active in all activities they undergo during learning. In many cultures, children do not learn by going to school with other children, nor do their parents formally teach such lessons as weaving and hunting, this theory puts the teacher in the role of a mentor who ensures the transmission of the social values of diverse culture from one generation of learners to another. Socio-cultural theory looks at the important contributions that society makes to individual development. This theory stresses that interaction between developing people and the culture in which they live play a significant role in the social and cultural development of the young generation.

To Vygotsky, adults are important source of cognitive development. Vygotsky believed that much important learning by the child occurs through social interaction with skilful tutor who can inculcate the socio-cultural values on the children. The tutor may model behaviours and or provide verbal instructions for the child. This according to Vygotsky refers to cooperative dialogue. But where the interaction does not yield positive results then such behaviour modelled and or interaction should not be retained so that it does not lead to poor performance in academics.

Vygotsky's theory is reciprocal teaching used to improve learners' ability to learn from text. In this method, teachers and learners collaborate in learning and practicing four key skills: summarizing, questioning, clarifying, and predicting.

Also, Vygotsky's theory is relevant to instructional concept such as scaffolding and apprenticeship in which a teacher or more advanced peer helps to structure or arrange a task so that a learner can work on it successfully. The theory also feeds into the current interest in collaborative learning, suggesting that group members should have different levels of ability so more advanced learners can help less advanced members operate within their zone of proximal development that is, less advanced learners learning with more advanced learners in a similar situation before they can attempt it alone.

It is believed that for children to be able to socialize and learn effectively at home, school, and outside school, it is dependent on the kind of lifestyle they live, the people they interact and mingle with. Some learners find it difficult to ask question in class neither do they answer question nor do they associate with those who are more knowledgeable than they are because of the way they are raised. In some cultures children are not allowed to speak their minds at home even when they are affected. These can influence them negatively or positively at school. This theory stresses that parents, care-givers, older siblings and peers are responsible in the training

Table 2. Cronbach alpha reliability estimate of research instrument (N=50).

Variables	Number of items	μ	SD	Cronbach Alpha
Cultural Diversity (Custom)	6	17.82	2.75	0.75
Social Diversity (Interaction pattern)	6	16.80	2.52	0.72

Table 3. Reliability coefficient of Social Studies Achievement test (SOSAT) using Kuder Richardson Formula-20.

Parameter	K	∑PQ	S^2	R
SOSAT	60	11.64	59.44	0.81

and developing higher order functions in the younger ones so they should inculcate in children positive moral values that will help mould them positively.

According to Vygotsky, learning has it basis in interacting and sharing views of what is learnt with learners from different family, social and cultural backgrounds. Once this occurs, the information is then integrated in the individual level, but where there is poor interaction from these diverse families, social and cultural groups, learning may be hindered which may lead to poor academic performance.

Purpose of the study

The main purpose was to examine the relationship between socio-cultural diversity and learners' academic performance in Social Studies in Calabar Education Zone of Cross River State. Specifically, this study sought to:

1) Determine whether cultural diversity (customs) of learners relate with their academic performance in Social Studies
2) Find out the relationship between social diversity (interaction pattern) of learners and their academic performance in Social Studies.

Null Hypotheses

1) Cultural diversity (customs) does not significantly relate to learners' academic performance in Social Studies
2) Social diversity (interaction pattern) does not significantly relate to learners' academic performance in Social Studies

MATERIALS AND METHODS

The aim of the study was to examine the relationship between socio-cultural diversity as determinant of academic performance among junior secondary school learners in social studies in Calabar education zone of Cross River State, Nigeria. The survey research design was adopted for the study; a sample of four hundred and eighty-eighty (488) learners was used for the study from a population of five thousand and thirty nine (5,039). Stratified and sample random sampling techniques were employed. The instrument for data collection was a structured questionnaire titled "Learner Diversity Questionnaire (LDQ) and Social Studies performance Test (SOSPT). The instrument was validated and reliability coefficient of internal consistency was obtained; the indices were 0.75 to 0.72. The performance test was 0.81 (Tables 2 and 3).

RESULTS

Hypothesis one

This hypothesis stated that, there is no significant relationship between cultural diversity of learners and their academic performance in Social Studies. The independent variable in this hypothesis is cultural diversity of learners; while the dependent variable is academic performance in Social Studies. To test this hypothesis, learners' academic performance was correlated with their cultural diversity using Pearson Product Moment Correlation Analysis. The result of the analysis is presented in Table 4.

The result of the analysis as presented in Table 4 reveals that the calculated r-value of 0.378 is higher than the critical r-value of .062 at .05 level of significance with 486 degree of freedom. With this result, the null hypothesis which stated that there is no significant relationship between cultural diversity of learners and academic performance in Social Studies was rejected. This result indicated that, cultural diversity of learners has a significant positive relationship with their academic performance in Social Studies. This implies that cultural diversity of learners has a positive or negative impact on their academic performance. This is because learners whose culture allows them to speak up and share their idea are likely to ask questions in class and answer questions, while those who are inhibited are shy and this may affect their academic performance.

Table 4. Pearson Product Moment Correlation Analysis of the relationship between cultural diversity of learners and Academic performance in Social Studies (N=488).

Variables	x̄	SD	r-value	Sig
Cultural diversity(customs) of learners	20.4590	2.19725	0.378	
Academic performance	17.9262	1.77210	Sig .000	

*Significant at .05, critical r = .062, df = 486.

Table 5. Pearson product moment correlation analysis of the relationship between social diversity of learners and Academic performance in Social Studies (N=488).

Variables	x̄	SD	r-value	Sig
Social diversity(interaction pattern) of learners	21.5307	1.58764	r-value 0.939	
Academic performance	17.9262	1.77210	Sig .000	

*Significant at .05, critical r = .062, df = 486.

Hypothesis two

This hypothesis stated that, there is no significant relationship between social diversity of learners and their academic performance in Social Studies. The independent variable in this hypothesis is social diversity of learners; while the dependent variable is academic performance in Social Studies. To test this hypothesis, learners' academic performance was correlated with their social diversity using Pearson Product Moment Correlation Analysis. The result of the analysis is presented in Table 5

The result of the analysis as presented in Table 5 reveals that the calculated r-value of 0.939 is higher than the critical r-value of 0.062 at 0.05 level of significance with 486 degree of freedom. With this result, the null hypothesis which stated that there is no significant relationship between social diversity of learners and academic performance in Social Studies was rejected. This result indicated that, social diversity of learners has a significant positive relationship with their academic performance in Social Studies. This indicates that learner's social life has positive or negative effect on their academic performance because learners with good social lifestyle can interact freely with their peers and exchange academic ideas than learners that are not social.

DISCUSSION

Cultural diversity and academic performance

The result of the first hypothesis indicated that cultural diversity in terms of customs on how parents raise their children has a significant positive relationship with their academic performance in Social Studies. This finding lends credence with the view of Kauchak and Eggen

(2011) who said that students come to school with a history of learning influenced by the cultures of their homes and neighbourhood and that some attitudes and values acquired complement learning while others do not. The finding of this hypothesis is also supportive of Odey (2019) who found that socio-cultural practices significantly influence student's performance in Social Studies.

This finding also aligned with Vygotsky (1978) who propounded socio-cultural theory. He said that infants are born with a few elementary mental functions which consist of attention, sensation transformed by their culture into new sophisticated mental processes. It is believed that for children to learn effectively in the school depend largely on the lifestyle acquired from home and the people they interact with. Some learners find it difficult to ask questions or answer questions in the classroom nor do they associate with more knowledgeable others because of the way they were raised in their culture. This may be a hindrance to their progress in school. To Vygotsky, learning has its basis in interacting and sharing views of what is learnt with learners from varied family, social and cultural backgrounds.

Again, the finding is in support of Shahaeian (2014) who maintained that parents always encourage children to communicate with others in different ways depending on their cultural background. For instance, parents in some African cultures especially Nigeria often encourage their children to be silent unless they are directly spoken to , not to argue with adults and not to speak their minds. This type of custom is capable of making children shy in class and this may affect their academic performance.

Furthermore, this finding lends credence to Essien et al. (2016) who investigated the influence of cultural institutions on students' academic performance in Social Studies and found a significant positive relationship

between cultural institutions and students' academic performance in Social Studies. This shows that a culture where children are not allowed to air their views, inhibit their active participation when they are out of home.

On the contrary, the finding is in contrast to Whipp's-Johnson (2016) who carried out a study on teachers' awareness of cultural diversity and academic achievement in Ninth grade academic and senior high schools and found no statistical significant differences between the ninth grade. This implies that cultural diversity is not a significant factor affecting academic performance

Social diversity and academic performance

The result of the second hypothesis showed that there is a significant relationship between social diversity in terms of interaction patterns and students' academic performance in Social Studies. This is an indication that poor social interaction between the learners and the teacher and among peers may hinder the learners' academic performance. On the other hand if the interaction is cordial and productive; it will enhance students' academic performance.

This is in consonance with Njok and Edinyang (2014) who opined that socio-cultural factors of language, law, values, religion, and family background are the largest scale forces within societies that affect the thoughts, behaviours and feelings of individuals. This implies that these factors may hinder or enhance students' academic performance.

This finding further aligned with the proponent of socio-cultural theorist Vygotsky (1978) who maintained that students' cognitive growth occurs in a socio-cultural context that influence the form that it takes and many of a child's noteworthy skills evolve from social interactions with parents, teachers and other elders (interaction).

Again the finding is in line with Kauchak and Eggen (2011) who maintained that as children interact and work among themselves, such relationship influences them positively or negatively and that diversity constitutes a crucial aspect of functionalism in areas of educational performance.

The finding further supports Achinstein and Ogawa (2012) who carried out a study on social skills differences of students and achievement in primary school and found that social differences contribute substantially more than any factor in the study to predict achievement. This shows that social skill differences in terms of interaction patterns of students can enhance student's achievement in school.

Also, the finding is in terms with Alfaro and Umafia-Taylor (2010) who believed that children gradually develop positive social skills in their diverse nature to learn, but if not motivated in school, they will develop negative social skills of disliking teachers and their subjects which will influence their academic performance

in a negative way. The authors went further to say that learners with negative social interaction difference towards a subject or a teacher do not learn with the same degree as learners with positive social interaction pattern.

The finding again lends credence to Vygotsky's theory where he stated that adults are important source of cognitive development and believed that much important learning by a child occurs through social interaction with skillful tutors who can inculcate the socio-cultural values on the child.

Learners who worked in groups achieved significantly higher than those who worked individually. Since student-student relationship affects the learning of Social Studies, every school child must be fully adjusted to the classroom work group for effective participation.

Conclusion

Based on the findings, it has been revealed that socio-cultural diversity is a strong determinant of students' academic performance in social studies. After carrying out the analysis, the result showed that social diversity significantly relate to students' performance. This is an indication that, if students have good social standing with themselves and the society, they will certainly do well in Social Studies but if in the process of socialization, they develop deviant behaviours, it will as well affect them in school outcomes. The same is applicable to the cultural differences. If students are from a culture where, they are not allowed to respond to adult, speak out their minds and take informed decisions, it will affect their performance negatively. However, if the reverse is the case, it will help them positively in their academic performance.

Recommendations

The cultural variations among learners especially the differences within subcultures should be taken into consideration by teachers while teaching.

Also, learners should be encouraged to interact with one another even though they are diverse, since they exist among learners the introvert, and the extrovert. This is because the way a student gets on with his class members affects his learning.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

Abam OG (2019). Teacher personal attributes, classroom behaviour and academic performance of junior secondary school students in

Social Studies in Cross River State, Nigeria. Calabar: Unpublished Ph.D Thesis.

Achinstein B, Ogawa RT (2012). New teachers of color and culturally responsive teaching in an era of educational accountability: Caught in a double bind. Journal of Educational Change 13(1):1-39. doi:10.1007/s10833-011-9165-y

Alfaro EC, Umaña-Taylor AJ (2010). Latino adolescents' academic motivation: The role of siblings. Hispanic Journal of Behavioral Sciences 32(4):549-570.

Biriye DA (2011). The influence of socio-cultural and economic factors on the academic performance of secondary school students in Garissa District, Kenya.College of Education and External Studies (CEES).University of Nairobi, Kenya. http://erepository.uonbi.ac.ke:8080/handle/123456789/4715

Coe C (2014). Social Studies in Washington State.Retrieved from http://www.education.com.

Department of Planning, Research and Statistics (2017). Cross River State Secondary Education Board Statistics Department.

Essien EE, Essien CK, Obot IE (2016). Cultural inhibitions and students' academic achievement in Social Studies in colleges of education in Cross River State, Nigeria Research on Humanities and Social Sciences. 6(15), www.iiste.org.

Federal Republic of Nigeria (2013). The National Policy on Education.Yaba Lagos. NERDC Publishers.

Ferguson RF (2002). What doesn't meet the eye: Understanding and addressing racial disparities in high-achieving suburban schools. Retrieved from www.ncrel.org

Jones A (2011). Knowledge, skills, and dispositions for diversity. Retrieved from http://files.eric.ed.gov/fulltext/ED522824.pdf

Kauchak D, Eggen P (2011). Introduction of teaching: Becoming a professional. London: Pearson.

Kazi NP (2017). Social Studies for Nigerian Schools. Jos: Wais Press Ltd.

Konan PN, Chatard A, Selimbegovi L, Gabriel M (2010). Cultural Diversity in the Classroom and its Effects on Academic Performance : A Cross-National Perspective. DOI: Social Psychology 41(4):230-237. DOI:10.1027/1864-9335/a000031

Mezieobi KA, Mezieobi KS (2013). Community resources: The least thought about and utilized in Social Studies pedagogy in Nigeria. Rivers Journal of Social Studies 8(6):1-14.

Njok PC, Edinyang SD (2014). Socio-Cultural factors affecting the teaching and learning of Social studies in Nigeria. Journal of Education and practice 5(24):1-7.

Odey MO (2019). Socio-cultural practices and upper Basic school students' academic performance in Social Studies in Cross River State, Nigeria. Unpublished Ph.D Thesis.

Ogletree QD (2012). The relationship between elementary teachers' beliefs about diversity and their selections of multicultural materials for instructional practices in one urban school district (Doctoral dissertation). Retrieved from ProQuest.

Prashant D (2017). Meaning and definition of social diversity.Social Sciences. Prashantdhaked4939. Retrieved on the 12/11/2019

Roberts AC (2013). Cultural competence: An investigation of urban high school English teachers' practice. (Doctoral dissertation).Retrieved from ProQuest Dissertations & Theses Full Text. (1347387042)

Russell ML, Russell JA (2014). Preservice science teachers and cultural diversity awareness.Electronic Journal of Science Education 18(3).

Shahaeian A (2014). Diversity in the classroom means children develop differently.The conversation. Retrieved 10/11/2017.

Vygotsky LS (1978). Mind in Society: The Development of Higher Psychological Processes, Harvard University Press, Cambridge.

Whipps-Johnson J (2016). "Teachers' Awareness of Cultural Diversity and Academic Achievement in Ninth Grade Academies and Senior High Schools" Dissertations. 265. https://aquila.usm.edu/dissertations/265

Related Journals:

International Journal of
**Educational Administration and
Policy Studies**

International Journal of
English and Literature

Journal of Languages and Culture

Journal of
Fine and Studio Art

International Journal of
**Library and Information
Science**

Journal of Media and
Communication Studies

Philosophical Papers and Review

Journal of
African Studies and Development

Journal of
Music and Dance