Effects of Value Clarification and Action Learning Instructional Strategies on School Children’s Attitude to Civic Education Concepts: The Mountain Learning Ecologies Experience

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Abstract. The current study determined the effectiveness of value clarification and action learning teaching modes on school-age children’s attitude to civic education concepts. It also determined the moderating effects of gender and academic ability on school-age children’s attitude to civic education concepts. In a randomized pre-post-design, 29 school-age children were in learning ecology I (experimental group I), 24 were in learning ecology II (experimental group II), while 93 were in learning ecology III (the control group). There was a significant effect of treatment on school-age children’s attitude to civic education concepts. Further research is proposed to study the sustainability of observed effects in mountain learning ecologies.

Keywords: value clarification, action learning, instructional strategies, school children, attitude to civic education.

Introduction

The attitudes of children to any discipline cannot be undermined in fostering effective interaction with their school teachers in the teaching-learning process. While scholars (Barbu, Yaden Jr., Levine-Donnerstein, & Marx, 2015) have repetitively stressed the im-
Portance of school readiness and achievement in understanding the success of children in school, it is worthwhile to research on strategies of teaching that could be adopted by school teachers to improve the attitudinal component of their students’ learning outcomes bearing in mind their gender and academic abilities. School teachers must be aware of the level of sensitivity of their preferred teaching strategy viz-a-viz students’ innate characteristics to avoid the phenomenon called ‘Pygmalion effect’ (Mizala, Martinez, & Martinez, 2015). This phenomenon, tagged ‘a self-fulfilling prophecy’ by Rosenthal and Jacobson (1968), described the occurrences in the classroom when children unconsciously assimilate school teachers’ beliefs or credence and alter their attitudes to meet the assumptions of the school teachers. Given this classroom situation, research has shown that highly expectant schoolchildren will perform better, while minimally expectant school children will perform worse with children from culturally disparaged background like mountain learning ecologies having impaired educational attainment (Rubies-Davies, 2014; Brault, Janosz, & Archambault, 2014). This study addresses these shortcomings. To achieve this, the quasi-experimental design was used to determine the efficacies of value clarification and action teaching modes, as well as to ascertain how gender and academic ability might moderate the efficacies of these teaching strategies.

Value Clarification Instructional Strategy

Mpeli and Botma (2015) define value clarification as a process of ‘compos mentis’ on what is desirable and considered worthy in life to raise the awareness of personal values (See UNESCO, 2002; Burkhardt & Nathaniel, 2008). The transformative potentials of value clarification instructional strategy have been documented in research (Taylor, 2008; Wistoft, 2009), however with shortcomings of evoking strong emotions on sensitive social issues (Taylor, 2008; Mpeli & Botma, 2015). The transformative learning properties of value clarification instructional strategy makes it a veritable strategy for imbuing the attitudes of school children to a value subject like civic education in disadvantaged geographical locations like mountain learning ecologies. Many studies have pioneered teaching strategies to ease attitudinal change and academic improvement among school children (Heikkila & Knight, 2012; Meissner, 2016; Rosen-Morris & Sitkei, 1981; Cavallaro & Bambara, 1982). The need to evolve specialized teaching strategies for school-age children, especially those with physical and learning difficulties, gained considerable attention in the research of the twentieth century. Rosen-Morris and Sitkel’s (1981) ‘Project SHAPE’, a fine motor curriculum specifically made for promoting spontaneous interaction with objects for severely handicapped children evolved. This was followed by Cavallaro and Bambara’s (1982) two strategies for teaching language during ‘free play’. These scholars utilized incidental teaching strategy and question-label procedure which was implemented by two preschool teaching assistants using alternating experimental
design to facilitate two-word requests in a severely language-delayed preschool child. Surprisingly, educational researchers in music have also realized the need for potent strategies of instruction for different categories of school-age children. Recently and Meissner (2016) utilized the participatory action research paradigm to investigate instrumental teachers’ strategies for facilitating expressive music performance in children’s learning. This research project utilized strategies such as teacher’s enquiry, modeling, discussion, explanation of expressive devices, singing, projected performance, imagery, etc. to improve students’ expressive performance in music. While the analysis of data collected in the study revealed no significant improvement in students’ performance in music, the participating teachers affirmed the strategies of teaching adopted were useful in their lessons i.e. transfer of knowledge. This current study gives new insights into appropriate strategies of instruction for culturally disparaged learners in mountain learning ecologies by investigating the effect of value clarification instructional strategy on students’ attitude to civic education.

**Action Learning Instructional Strategy**

Many assertions have been made about the benefits of action learning instructional strategies for teaching and learning across different disciplinary boundaries. Some of these scholars have reported the teaching-learning utilities inherent in action instructional strategies in the fields of leadership development (Volz-Peacock, Carson, & Marquardt, 2016), change and learning in networks, an aspect of applied behavioural science (Coughlan & Coughlan, 2015) and integration of social media in the classroom (Casey & Evans, 2017). Action learning is built on small groups of colleagues meeting over time to solve problems or issues to get things done. This involves reflection and learning with and from their experiences, and from each other in their quest to change things (Kent, Surrey, & Sussex Leadership, 2014). In the context of science education, action learning has been associated with improvement in students’ academic achievement in physics (Afolabi & Akinbobola, 2012). Some scholars attribute the improvement in students’ learning outcomes to the willingness to share ideas and ‘learn in group’ opportunities afforded learners by the action learning lenses as against the teacher centered approach operated in conventional lecture method (O’Hara, Bourner, & Weber, 2004; Ige, 2012). Evidences from research have shown that action learning has the potentials of developing the three levels of learning namely: leader/individual, team, and organizational (Volz-Peacock, Carson, & Marquardt, 2016). The implication of these strengths of action learning for an educational researcher is that, this instructional strategy can develop the headteacher/teacher, team of learners, and the school as well. It is based on this premises that this study utilized the action learning instructional strategy on the attitudes of culturally disparaged learners in mountain learning ecologies.
The influence of gender and academic ability on strategies of instruction is a subject of utmost interest to educational researchers, which has received great research attention. Concerning gender differences in relation to students' learning outcomes, multitudinous studies have discovered that gender influences school children learning outcomes (Mizala et al., 2015; Amosun, Ige, & Choo, 2015; Lee & Pulido, 2017; Ige & Orungbemi, 2013), yet other studies have found no significant influence of gender differentiations (Afolabi & Akinbobola, 2012; Okorie & Ezeh, 2016; Piraksa, Srisawasdi, & Koul, 2014). Sequentially, several studies have examined the influence of academic ability on school children’s learning outcomes and found equivocal results (Harsh, 1991; Sosa, Berger, Saw & Mary, 2011). The other part of this article progresses as follows. Length 2 enunciates the hypotheses tested in the study and length 3 presents the methodology adopted, length 4 announces the results, and length 5 expounds the philosophical relevance of the results and its verdicts.

**Geography of the Learning Ecologies**

The three learning ecologies selected for this study are situated in Akoko, which consists of about forty towns in the rocky areas of Ondo State, Nigeria. The learning ecologies lie on latitude 7° 18'N to 7° 45'N, and within longitude 5 31°E to 6 06°E. The region of the selected learning ecologies is located at an elevation of two hundred and seventy-two thousand and seven hundred and fifty metres above the sea level. The three selected learning ecologies are enclosed by lofty craggy rock formations that are visible on the surface protruding to over two thousand and seven hundred and fifty metres (Olorunlana, 2014). The locations of these learning ecologies enjoy abundant rainfall of over 1.5 mm in a year, while the cooler day continental air from the North-East prevails from December to February annually (Ige, 2012).

**Research Questions**

In this study, the researcher seeks to test hitherto unaddressed hypotheses concerning value clarification, active learning instructional strategies, conventional lecture method and children’s attitudes to civic education concepts. I utilized the $3 \times 2 \times 3$ factorial matrix to ensure data discipline in a quasi-experimental milieu to scrutinize how two modes of experimental teaching strategies influence school children’s learning outcomes in civic education. Specifically, I seek to test two hypotheses. First, there is no significant main effect of treatment on school age children's attitude to civic education concepts. Second, there is no significant interaction effect of treatment, gender, and academic ability on school age children's attitude to civic education concepts. Research have shown for more
than a decade that gender differences in cerebral cognitive abilities and academic preferences of children can influence their learning outcomes (Amosun, Ige, & Choo, 2015; Martinez, 2015). In this study, I anticipate getting results on the sensitivities of value clarification and active learning instructional strategies to gender and cognitive abilities of the selected school children, hence I hypothesize that there will be no significant interaction effect of treatment, gender and academic ability on school children’s attitudes to civic education concepts.

**Experiential Learning Theory**

The value clarification and action learning instructional strategies tried out on school children’s attitude to civic education in this research project were founded on Kolb’s (1984) four-staged experiential learning theory. Despite earlier claims by scholars (Ng, Dyne, & Ang, 2009; Matsuo, 2015) that experiential learning theory is an adult learning theory because it emphasizes the pivotal role of experience in learning and change, the framework developed by Kolb (1984) is not only applicable to the teaching strategies used in this research project, but to the learners that participated as well. The assertion of Matsuo (2015) is premised on the critical role ‘experience’ plays in Kolb’s (1984) experiential learning, however the school children in the mountain learning ecologies studied for this research had prior learning experiences which are consistent with Dewey’s (1938) clarification. The prior learning experiences did not only emanate from the school environment, but from learning that occurs in the school children’s life and are perceived or recognized by them.

Radford, Hunt and Andrus (2015, p. 467) state that experiential learning provides a veritable platform for experience-based tasks and assessments that require learners to deal with complex issues and take a responsibility for their personal progress. Seed (2008, pp. 210–211) draws on earlier works by Kolb (1984) and proposes that learning comprises four interdependent constructs such as concrete experience, reflective observation, abstract conceptualization, and active experimentation. Seed (2008) further explained that ‘concrete experience’ involves engaging the world through straight experiences, while ‘reflective observation’ involves resolute consideration and meditation, the move from experience to develop a plan for future actions is ‘abstract conceptualization’, whilst ‘active experimentation’ focuses on experimenting the plan by implementation. Baldwin and Rosier (2017, p. 46) cited an earlier clarification by Kolb and Fry (1975) that the experiential learning cycle (See Figure 1) could be enlisted at any point. Baldwin and Rosier (2017) state that other scholars (Kotval, 2003; Tyson & Lowe, 1987) claim that learning becomes most effective when a learner passes through the experiential learning cycle notwithstanding the order.
Experiential learning theory propounded by Kolb (1984) is relevant to this research because it is a learner-centered approach that accommodates individual school children’s academic ability which is a confounding variable in this study (see Seed, 2008, p. 211). The sequences of the value clarification and action learning instructional modules (i.e. VCTM and ALIM) are consistent with the steps outlined by Kolb’s (1984) experiential learning cycle. Baldwin and Rosier (2017, p. 46) affirm that Kolb’s learning cycle is instrumental to best practices for developing activities for an educational programme.

**Methods and Data**

*Experimental Design.* This study adopts the quasi-experimental of pretest/posttest variant to evaluate the effect of the teaching strategies on school children’s learning outcomes (Ige, 2012; Mizala et al., 2015; Piwowar, Thiel, & Ophardt, 2013). In rural learning ecology I, each intact class of participants were exposed to value clarification teaching programme, while participants in intact class in rural learning ecology II, at a different location in the mountain locale, were exposed to action learning teaching programme. Different locations in the mountainous geographical locale were selected to avoid interaction among the selected school children which could affect the outcomes of the study. Participants in the intact class in rural learning ecology III were exposed to conventional lecture method which served as the control group. All treatment in the three rural learning ecologies lasted for twelve weeks. The gender of the school children was systematically permutated as male and female, while academic ability was calibrated as low, average, and high (See appendix 1). Additionally, the quasi-experimental design includes value clarification and action learning instructional strategies as well as conventional lecture method. ANCOVA was used to estimate the main and interaction effects of treatment, gender and academic ability on school children’s attitudes, while controlling for the nuisance effects of gender and academic ability. The Estimated Marginal Mean was employed to illustrate the magnitude of performance across the three rural learning ecologies. All the presuppositions for applying Analysis of Covariance were fulfilled. ANCOVA was used to analyse the data consequent on its higher power and ability to partial out the initial disparities inherent in the pretest values.

*Participants Selection and Sample.* Participants were 146 school children in six junior schools in rural geographical locations in Nigeria. Of the 146 participants, 29 were in mountain learning ecology I which was exposed to value clarification teaching programme, 24 were in rural learning ecology II which was exposed to active learning teaching programme, and 93 were in rural learning ecology III which served as the control group using conventional lecture method, used to teach civic education concepts in schools located in the selected mountain terrains. The ages of participants ranged from 10 to 16 years (m = 12.96 years. SD = 1.60). 68 (46.6%) of the participants were female,
while 78 (53.4%) were male. The three groups were comparable regarding academic ability and gender.

Procedure. The researcher got an informed consent which was gained from the management and participants in the selected rural learning ecologies before the commencement of the study. The participants, their class teachers, as well as the management team were given adequate information about the study and given utmost assurance they could disengage from the study at any time without fear of victimization. They were also assured that their identities would not be disclosed to third parties or the public.

Questionnaire and Measures
1. Students Attitude to Civic Education Questionnaire (SACEQ)
2. Academic Ability Test (AAT)
3. Value Clarification Teaching Module (VCTM)
4. Action Learning Instructional Module (ALIM)
5. Conventional Lecture Method Guide (CLMG)

The instrument for evaluating school children’s attitude to civic education was developed by the researchers. Other instruments for measuring the independent variables were adapted to guarantee their psychometric properties. School children’s attitude to civic education was measured by a twenty-two item questionnaire that collects information on bio-data of the participants and dispositions to civic education concepts. The statements on the questionnaire were rated on 4-Point likert-type statements. The questionnaire was designed to elicit response on the achievement of basic civic concepts for solving civic issues and problems in the selected mountain learning ecologies, development of moral responsibility, and appropriate values and skills needed for active citizenship. The scoring of the questionnaire was reversed for negatively worded items. The items on the questionnaire were subjected to peer and professional review to ascertain their appropriateness for school children. The twenty-two items were tried out on school children that were not part of the study; it produced a good internal consistency with a Cronbach alpha of 0.76. The action learning instructional guide was developed from Marquardt (2004) and Afolabi (2012)’s blueprint on action learning, while Metcalf (1971) and Salawu (2000) rational analysis models were used to design the value clarification module. Participants had 35 minutes of the periods of lesson per week for ten weeks. Teachers in other learning ecologies were giving the instructional guides to determine the suitability of the instruments for school children in mountain learning ecologies. Their comments and suggestions were incorporated into the instructional guides before the commencement of the experimental activities.

The Academic Ability Test (AAT), a modified form of the Sigels cognitive style test was taken from Ige (2001) and used to measure the students’ academic ability. It consisted of twenty cards of pictorial representations. The first picture on each card is coded ‘A’, the second ‘B’, and the third ‘C’ for easy identification. The students were expected to identify the two of the three pictures that had common characteristics, choose any two
pictures from the three in each group that they felt were complementary, and give reasons for such a choice. The test was first administered on sixty students and re-administered after a two week interval on the same group of students. The correlation coefficient of the two sets of responses was computed using Pearson Product Moment Correlation, the stability coefficients of $r = 0.60$ to $0.72$ was obtained.

The value clarification teaching strategy was administered in sequence as follows:
Step I: The research assistant guides the school children in identifying and clarifying civic values.

Step II: The research assistant guides the school children to gather and organize civic facts. The research assistant asks Socratic questions about the ills and benefits of civic issues and problems.

Step III: The school children do a group assessment of the civic issues and problems using real life experiences.

Step IV: Each of the group nominates a member to present tentative value decisions on the selected civic problems and issues.

Step V: The research assistant asks probing questions on reasons why the school children feel the proposed solutions will solve the selected civic problems and issues.

Step VI: The research assistant asks value based questions to evaluate the value principle in the group resolutions of the students.

The stages in the action learning instructional strategy were:
Step I: Clarify the objective of the action learning group. The research assistant presents the problem to the group of school children.

Step II: The research assistant groups the school children taking cognizance of their gender and ability levels, which had been determined by the pre-test.

Step III: The school children meet in groups twice each week for ten weeks to analyse civic problems and identify ways of overcoming these problems.

Step IV: The leader of the group presents the civic problems to other school children in the group and awaits the group suggestions.
Step V: The group with the guidance of the research assistant agrees on the most integral problems to adopt and solve.

Step VI: The group determines the goal.

Step VII: The group develops peculiar action strategies thorough interaction and reflection and tries these out on the identified problems.

Step VIII: The group acts. The school children collect information on the civic problems and tackle it with the group-based strategy.

Step IX: The group repeats the cycle of action and learning until new paths are found, and the civic problems are solved.

Step X: The groups convene under the guidance of the research assistant to present lessons learned as well as progress and chart new course for actions. A member of each group records the concepts after phase of action and learning. The process is repeated until the problems are solved, and transfer of learning occurs.

The researchers put together CLMG to guide research assistants in the control group. This was to ensure uniformity. The CLMG was prepared on each of the concepts selected for the study. The Conventional (Class) Teaching Method Guide is made up of five steps; these are:

– The research assistant introduces the concept;
– The research assistant discusses facts or ideas on the concepts in steps;
– The research assistant gives notes on the concept;
– The research assistant asks questions;
– The research assistant gives assignment to students.

The research assistants utilized in this study were qualified teachers who did not teach the school children in the selected learning ecologies during school days.

Data Analysis. The data collected for the study were analyzed using SPSS 24. Analysis of Covariance and Estimated Marginal Mean aspect of ANCOVA were run to compare the group mean attainment using the pretest scores as a covariate after the treatments have been administered. In this study, the level of significance was set at p < 0.5. Partial eta square ($\eta_p^2$) indicates the effect size, it is small at 0.1, medium .06 and large at .14 (Richardson, 2011; Cohen, 1988; Piworwar, Thiel, & Ophardt, 2013). Estimated Marginal Mean was used to indicate the magnitude of attitude across the groups.
Results

The results are interpreted to reflect the two hypotheses that were analyzed, namely: the main effects and the interaction effects: There is no significant main effect of treatment on school children’s attitude to civic education concepts. The Analysis of Covariance shows large positive effects of the treatment on students’ attitude to civic education concepts. $F_{(2,129)} = 2.57; p > 0.05; \eta^2_p = .27$. This variation indicates that there is a significant difference in the attitudes of the selected school children studied. The estimated marginal analysis shows that with a grand mean of 2.39, the participants of mountain learning ecology II taught with action instructional learning strategy had the greater change in attitude with a mean score of 9.11, followed by participants in mountain learning ecology that were exposed to value clarification teaching strategy with a mean score of 4.14, and participants of mountain learning ecology III exposed to conventional lecture method with a mean score of –3.83. This is a proof of the efficacy of the action learning and value clarification instructional strategies over the ‘chalk and talk’ method used by teachers in other learning ecologies in these mountain settlements. This could be seen from the fact that the independent variables contributed 47.5% $(.410)^2$ of the total variation in students’ attitude (See table 1 & 2). To verify the sources of the significant effects, Scheffe’s post-hoc pairwise comparison was run (See table 3). The results show that the significant effects emanated from the attitudinal mean scores of participants in learning ecology II exposed to action learning instructional strategy, and learning ecology III exposed to conventional lecture method as well as scores of the attitudes of participants in learning ecology I exposed to value clarification teaching strategy and learning ecology III taught using conventional lecture method. Male school children had a higher posttest attitude mean score than their female counterparts in the different learning ecologies ($X_m = 2.59; X_f = 2.20$). The participants with average academic ability in the three learning ecologies benefitted most from the treatment followed by participants with low academic ability (See table 4). The Scheffe’s post-hoc pairwise comparisons show that the differences in the attitude change across ability levels are traceable to the attitude mean scores of participants of average and high ability levels.

In relation to the second research hypothesis, there is no significant interaction effect of treatment, gender, and academic ability on school-age children’s attitude to civic education concepts. The ANCOVA results shows that the interaction effects is neither statistically significant nor indicative of a sizeable effect, $F_{(2,129)} = 0.48, p < 0.05; \eta^2_p = 0.1$ (See table 1).
Table 1
Output of ANCOVA of posttest attitude scores by treatment, gender and academic ability

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>4392.219</td>
<td>16</td>
<td>274.514</td>
<td>7.299</td>
<td>.000</td>
<td>.475</td>
</tr>
<tr>
<td>Intercept</td>
<td>497.042</td>
<td>1</td>
<td>497.042</td>
<td>13.216</td>
<td>.000</td>
<td>.093</td>
</tr>
<tr>
<td>Pre-Civic Attitudes</td>
<td>96.628</td>
<td>1</td>
<td>96.628</td>
<td>2.569</td>
<td>.111</td>
<td>.020</td>
</tr>
<tr>
<td>Treatment</td>
<td>1831.050</td>
<td>2</td>
<td>915.525</td>
<td>24.343</td>
<td>.000</td>
<td>.274</td>
</tr>
<tr>
<td>Gender</td>
<td>.000</td>
<td>1</td>
<td>.000</td>
<td>.000</td>
<td>.997</td>
<td>.000</td>
</tr>
<tr>
<td>Academic Ability</td>
<td>170.376</td>
<td>2</td>
<td>85.188</td>
<td>2.265</td>
<td>.108</td>
<td>.034</td>
</tr>
<tr>
<td>Treatment x Gender</td>
<td>26.893</td>
<td>2</td>
<td>13.446</td>
<td>.358</td>
<td>.700</td>
<td>.006</td>
</tr>
<tr>
<td>Treatment x Academic Ability</td>
<td>28.258</td>
<td>3</td>
<td>9.419</td>
<td>.250</td>
<td>.861</td>
<td>.006</td>
</tr>
<tr>
<td>Gender x Academic Ability</td>
<td>52.484</td>
<td>2</td>
<td>26.242</td>
<td>.698</td>
<td>.500</td>
<td>.011</td>
</tr>
<tr>
<td>Treatment x Gender x Academic Ability</td>
<td>53.768</td>
<td>3</td>
<td>17.923</td>
<td>.477</td>
<td>.699</td>
<td>.011</td>
</tr>
<tr>
<td>Error</td>
<td>4851.651</td>
<td>129</td>
<td>37.610</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9311.000</td>
<td>146</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>9243.870</td>
<td>145</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

a. R Squared = .475 (Adjusted R Squared = .410)

Table 2
Estimated marginal means on students’ attitudes to civic education concepts

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean (X̄)</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERCEPT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Attitudes Score</td>
<td>146</td>
<td>-2.486</td>
<td>-</td>
</tr>
<tr>
<td>Post Attitude Score</td>
<td>146</td>
<td>2.394</td>
<td>0.807</td>
</tr>
<tr>
<td>TREATMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning ecology I (Value clarification instructional strategy)</td>
<td>29</td>
<td>4.135&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.729</td>
</tr>
<tr>
<td>Learning ecology II (Action learning instructional Strategy)</td>
<td>24</td>
<td>9.113&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>1.343</td>
</tr>
<tr>
<td>Control Group (Conventional Lecture Method)</td>
<td>93</td>
<td>-3.826&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.921</td>
</tr>
</tbody>
</table>

Table 3
Scheffe’s pair-wise comparisons of students’ attitudes to civic education concepts across the treatment groups

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean</th>
<th>Learning ecology I</th>
<th>Learning ecology II</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning ecology I</td>
<td>4.135&lt;sup&gt;a&lt;/sup&gt;</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Learning ecology II</td>
<td>9.113&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>-3.826&lt;sup&gt;a&lt;/sup&gt;</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>

* Implies that there is a significant difference
Table 4

Performance across gender and levels of ability

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean (X̄)</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>146</td>
<td>2.588&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>1.124</td>
</tr>
<tr>
<td>Female</td>
<td>146</td>
<td>2.200&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>1.157</td>
</tr>
<tr>
<td>Academic ability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>21</td>
<td>1.755&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.607</td>
</tr>
<tr>
<td>Average</td>
<td>63</td>
<td>4.972&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.808</td>
</tr>
<tr>
<td>High</td>
<td>62</td>
<td>-0.515&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>-3.133</td>
</tr>
</tbody>
</table>

a. Covariates appearing in the model are evaluated at the following values:
Students attitudes = –2.4863.
b. Based on modified population marginal mean.

Discussion and Conclusions

This study has shown the benefits of using active learning and value clarification instructional strategies over the conventional lecture method to teach culturally disparaged school children in mountain learning ecologies. The results indeed confirmed that specialized teaching strategies that are learner-centered are needed for children in learning ecologies in the mountainous geographical locations. The findings have shown that action learning instructional strategy is effective in developing the attitudes of culturally disparaged learners in mountain learning ecologies. This result confirms previous research by Chung and Park (2015), and Ige (2012) on the value properties of action learning instructional strategy. Another important finding is the discovery that teaching strategies utilized in the experimental groups are not gender sensitive and capable of use in changing school children with average attitudes to civic education concepts. This has implications for teachers working in learning ecologies dominated by school children with average learning abilities. The result of this study has shown that not only the teaching strategies adopted by the teacher can influence school children’s learning outcomes, but also innate traits like academic ability. Therefore, it could be inferred that school-age children’s academic ability has potentials to affect other learning outcomes like achievement, thinking dispositions, school success and reflective levels. The sample selected for this study has some limitations with respect to drawing conclusions for learning ecologies in friendly geographical terrains and urban centres that have the requisite facilities for teaching and learning. Therefore, further studies of this nature on students’ attitude to civic education concepts can focus on non-mountainous learning ecologies. Finally, sex stereotypes should be prioritized in educational intervention programmes to create awareness among teachers and reduce the stereotype threat against female school-age children. The experience of the research team for this study shows that
most learning ecologies in the mountainous geographical locations are predominantly dominated by males.

Acknowledgements

Utmost appreciation to Olusayo, my wife of ‘five happy years’ who painstakingly typed this research report and endured sleepless nights with me during the Postdoctoral Research Fellowship, and the SANRAL Chair in Mathematics, Science, and Technology Education at the University of the Free State that funded the research fellowship. However, the author bears the sole responsibility for the opinions expressed in this research. The funding university was not involved in the design of the research, analysis of data and as well as the submission of this article.

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Vertių aiškinimosi ir veiklos mokymosi strategijų poveikis mokinių požiūriui į pilietinio ugdymo sąvokas: mokymosi kalnų ekologinėse sistemose patirtis

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Santrauka


Straipsnyje nurodoma kalnų regionų (ekologinių sistemų), kur buvo vykdomas tyrimas, geografiniai duomenys. Duomenų rinkimo ir analizės skyriuje pristatomi tyrimo priemonės, kurios buvo sukurtos ir naudojamos šio tyrimo duomenims rinktis. Tyrimui surinkti duomenys buvo sisteminai koduojami ir jiems buvo taikoma kovariančių analizė (ANCOVA).

ANCOVA rodo didelį teigiamą taikomų edukacinių strategijų poveikį formuojant mokinių požiūrį į pilietinio ugdymo sąvokas. Straipsnyje parodoma, kad veiklos mokymosi ir vertybių aiškinimosi strategijos yra naudingos mokant vaikus, gyvenančius kalnų (ekologinės sistemos) regionuose.

Esminiai žodžiai: vertybių aiškinimas, veiklos mokymasis, mokymo strategijos, mokiniai, požiūris į pilietinio ugdymo sąvokas.