

RELATIONSHIP BETWEEN LEARNING STYLES AND CRITICAL THINKING ABILITY AMONG TRAINEES OF POLICE INSTITUTIONS IN NIGERIA

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Abstract

This study investigated the critical thinking ability and learning styles of trainees in Police Colleges in Nigeria. The design adopted for this study was a descriptive survey design. The population of this study was 14,320 police trainees enrolled in various police training institutions in Nigeria. The random proportionate sampling strategy was used to select 375 respondents from the six (6) police training institutions comprising both male and female trainees. Two instruments were used to collect data for this study. They are the "Owolabi Critical Thinking Test (OCTT) (2011)" and the Index of Learning Styles (ILS) by Felder and Soloman (2003). The OCTT and ILS are both standardised tests. The reliability of the OCTT was established at 0.71 using the Cronbach's alpha. The test-retest reliability of the ILS ranges from 0.73-0.87 within interval of four weeks. Three research questions and one null hypothesis were raised to guide the study. Mean scores and percentages were used for the analysis of the research questions. The hypothesis was tested at 0.05 level of significance using multiple regression. The findings showed poor critical thinking ability among trainees. The dominant learning style dimension among trainees is the active, sensing, visual and sequential dimension. The relationship between learning styles dimensions and critical thinking ability of trainees in Police Colleges was found to be significant. It is therefore recommended among others that: programme for training institutions in the Nigerian Police should infuse elements of critical thinking in the curriculum; teachers/trainers should be made to appreciate that trainees come with different learning approaches and care must be taken to provide tutoring that meets their needs as learners.

Introduction

The Nigerian society has been undergoing significant transformation over the years in terms of new and emerging trends of social vices, disorderly behaviours, misconducts, criminal activities, militancy, religious uprisings and more recently, the threat of terrorism. This has necessitated corresponding modifications in the training of police officers in an attempt to adapt to new

trends and meet the expectations of citizens. The functions of the Nigeria Police Force as spelt out in Section 124 of the 1999 Constitution include, protection of lives and property, prevention and detection of crime, maintenance of law and order, apprehension of offenders, due enforcement of laws and regulations which they are directly charged, performance of military duties within and outside Nigeria.

Police training institutions are many in Nigeria. They were established in different locations to serve specific purposes. Some train fresh recruits from the society while some employ and train cadet trainees of the rank of Inspectors of Police and Assistant Superintendent of Police. Others were established to provide refresher courses to serving members of the rank and file. Some train serving trainees in special areas such as operations, investigations, intelligence, information and communications technology among others.

To achieve the goal of policing the nation, development of police trainees became a priority in terms of providing the type of training that will prepare the police officer to face the challenge of unpredictability of events. Dealing with a very diverse population, with significantly different personality, religious, educational and cultural bias, the police ought to be equipped to respond appropriately to novel situations as they occur on a daily basis. Developing the capacity to think with emphasis on accuracy and speed thus became a necessary component of police education. Training trainees for critical thinking therefore ought to be a cardinal goal of police education.

The job of Police officers is quite complex requiring skills, sound mind and intelligence to excellently execute. As DuFour (2018) argued, every day, officers interact with suspects, witnesses, or victims. They respond to extremely complex situations that often involve frightened or angry people. To do so effectively, high level critical thinking skills, which are rarely focused on as part of law enforcement training is required. To be proficient in the skills needed to master the job of a police officer, it takes a unique individual, along with special skills that are too often overlooked. This appears to be the situation in Nigeria today where people are recruited indiscriminately into the police service for untenable reasons such as desperation to get a paid job, federal character requirement and other sundry political considerations.

When a police officer charges a person with a crime they are expected to show probable cause. Probable cause deals with compilation of sufficient evidence to prove beyond reasonable doubt that the offender committed the crime. The officers are supposed to have done this before arrest and prosecution which is rarely the case in Nigeria. In many cases suspects are tried practically in the court of public opinion (media trial), or treated as guilty

before they are even charged with any offence which leaves many people with the thinking that the police is a mere tool in the hands of the ruling class. With this tool, perceived opponents or those with opposing views are persecuted rather than prosecuted.

The entire process of police work according to DuFour (2018) is based on forming sound arguments as not forming a sound argument could mean potentially imprisoning the wrong person or coming to the wrong conclusion about the situation. Officers must have well-honed critical thinking skills in order to come to a sound conclusion and then make a bullet-proof argument.

Ennis (2011) in a compilation of several conceptualizations of critical thinking opines that critical thinking can be described as a persistent and sceptical mind-set that always checks for accuracy and searches for potential flaws in the argument. It is argued by DuFour (2018) that critical thinking is an area of forensic science, because of its adherence to the scientific method. The focus of Police education in Nigeria appears to be different from this. Officers appear to lack capacity to look for the flaws in their evidence and reasoning during an investigation. DuFour (2018) concludes that officers who are intelligent, able to think clearly under pressure, and compassionate are going to be effective because they are better able to make good decisions, detect suspicious behaviour, and see through lies.

The men and women of the Police Force no doubt require critical thinking as a component of their training to prepare them for the daunting task of policing the nation. Current trends as it relate to practices of the officers tend to indicate that the capacity to think critically is lacking or to say the least insufficient, which unveils a lacuna in their training programme.

The researchers also wonder if the individual learning styles of police trainees are a factor in their training programme. Current police training practices in the training institutions are functions of instructors' experiences where they use the training manuals and pass on to trainees what they know, through largely lecture methods which the trainees have to assimilate and comprehend before examinations. Rarely is the learning style of trainees a factor in police training. Felder and Silverman (1988) had theorized that learning styles are related to an individual's information transfer process hence their importance in learning

The Felder- Silverman Learning Style Theory categorizes an individual's preferred learning styles by a sliding scale of five dimensions. These are sensing-intuitive, visual-verbal, inductive-deductive, active-reflective and sequential-global (Felder& Silverman, 1988). Felder-Silverman Learning Styles Model classified students as:

- Sensing learners (those who are concrete, practical oriented towards facts and procedure) or intuitive learners (who are conceptual, innovative oriented towards theories and meanings);
- Visual learners (those who prefer visual representations of presented material-pictures, diagrams, flow charts) or verbal learners (learners who prefer written and spoken explanations);
- Inductive learners (learners who prefer presentations that proceed from the specific to the general) or deductive learners (those who prefer presentations that go from the general to the specific);
- Active learners (learn by trying things out working with others) or reflective learners (those who learn by thinking things through, working alone);
- Sequential learners (are linear, orderly, learn in small incremental steps) or global learners (holistic, system thinkers, learn in large leaps) (Felder & Silverman, 1988).

It is well established that critical thinking affects individual performance. Collins and Onwuegbuzie (2000) had proved that critical thinking is significantly and positively correlated with academic achievement. Students' approaches to learning were also associated with higher quality learning outcomes and academic performance (Mayya, Rao & Ramnarayan, 2004), and increased knowledge (Murphy & Alexander. 2002). Having shown the viability of both critical thinking and learning styles as important variables in police education, this study looked at whether training in Nigeria Police training institutions were provided with the trainees' learning styles in mind and whether this has any impact on their disposition to critical thinking. This is significant because effective training for individuals in the police profession should focus on building their critical thinking skills.

The police profession bears some uniqueness in function. The law allows the officers to bear arms, take away a person's liberty, make life/death decisions in execution of force order 237, create legal documents, prosecute cases, resolve disputes and save lives and properties on a daily basis. In addition, officers respond to burglar alarms, enforce traffic laws, arrest suspects, carry out investigations, rescue victims, and recover stolen properties, among others.

In attempting to identify, manage and mitigate these crimes, critical thinking is fundamental in order to conceptualize, analyse, synthesize, evaluate and implement decisions at the spur of the moment. In Nigeria, multiple cases of irrational actions on the part of the Police have been reported leading to unwarranted injuries or even deaths that are extra-judicial in nature. The average Nigerian Policeman is usually perceived in very bad light.

Members of the public often deride them and question their sense of judgement. They appear to be a crisis of confidence in the Police and this does not augur well for peaceful co-existence of the country. This observed failure of the Police to meet desired expectation is perhaps traceable to some vital but missing component in police education curriculum among which is inculcation of critical thinking aptitudes.

Additionally, the police profession faces new, unique and complex problems in today's technologically advanced society. Crime and criminality is fast changing from simple to complex resulting in emerging trends of violent crimes such as terrorism, kidnapping, civil unrest, religious bigotry, cattle rustling, armed robbery, and politically related offences. These crimes require some level of literacy on the part of the police to think critically and create acceptable strategies to mitigate and combat them on daily bases in different locations in Nigeria.

Police education that employs traditional mode of instruction (largely lecture method) lacks the capacity to inculcate critical thinking skills because it pays no attention to the appropriateness of learning styles of the trainees in developing their capacity to observe, experience, reflect, reason and communicate. This study is therefore predicated on the need to assess the extent of preparedness of the trainees for this task as well as tease out appropriate learning styles in improving the critical thinking ability of police personnel.

To guide the conduct of this study, the following research questions were raised:

- What is the level of critical thinking among trainees of police colleges?
- What are the common learning styles of trainees of police colleges?
- What is the relationship between critical thinking ability of trainees and their preferred learning style?

It is further hypothesized in this study that there is no significant relationship between critical thinking ability of trainees and their preferred learning style.

The study was carried out among recruits of Nigerian Police Colleges cutting across the six geopolitical zones of Nigeria.

Method

The design adopted for this study was a descriptive survey design. The population of this study is police trainees enrolled in various police training institutions in Nigeria. The total number of such trainees as at 2016 was

14,320. Using the sampling table by Krejcie and Morgan (1970), a sample size of 375 respondents were selected from the six (6) police training institutions comprising both male and female trainees. The random proportionate sampling strategy was used to ensure that the size of the sample taken from each geopolitical zone from the following police training institutions is proportionate to the size of the population.

Two instruments were used to collect data for this study. They are the “Owolabi Critical Thinking Test (OCTT)” and the Index of Learning Styles (ILS) by Felder and Soloman (2003). The OCTT instrument was originally designed to collect data on undergraduate’s critical thinking ability in Nigerian universities. The OCTT was adapted to the peculiar situation of the Police trainees by rewording some items and removing irrelevant ones. The OCTT has 23 items and has a Test Answer Format. In scoring the critical test instrument, right or wrong answers format was used where right answer attracts one (1) mark and a wrong answer attracted no mark (zero).

The Index of Learning Styles (ILS) Questionnaire was a 44-item questionnaire designed to assess students’ preferences on the four dimensions of Felder Soloman’s Learning Style preferences of: Active/Reflective Learning Style, Sensing/ Intuitive, Visual/Verbal and Sequential/Global Styles. The items in the ILS questionnaire have two options- (a) or (b). Each category has a score ranging from 1 to 11 ($11 \times 4 = 44$). The prompts present situations and the respondents select one of the dichotomous options that best describes him or her. A respondent can score 1-3 or 5-7 or 9-11 on each category.

The OCTT and ILS are both standardised tests. However, due to the modifications made to the OCTT, further test of reliability was needed by the present researchers. The split-half method of reliability was adopted using 20 respondents from a training school that did not participate in the main the study. The data collected was analysed using the Pearson’s Product Moment Correlation statistics and yielded a reliability index of 0.76. Felder and Spurlin (2005), the test-retest reliability of the ILS ranges from 0.73-0.87. Further test of reliability was not required in this present study based on the above.

The collected data was subjected to analysis using descriptive and inferential statistics such as mean and multiple regression.

Results

Table 1: Level of Critical Thinking of Trainees of Police Colleges

Critical Thinking Ability	Levels	Frequency	Percentage
Evaluation of Arguments	Poor	181	48.27
	Good	194	51.73

	Total	375	100.00
Recognizing Assumptions	Poor	285	76.00
	Good	90	24.00
	Total	375	100.00
Test of Inference	Poor	175	46.67
	Good	200	53.33
	Total	375	100.00
Overall Critical Thinking Ability	Poor	239	63.73
	Good	136	36.27
	Total	375	100.00

Table 1 indicates the level of critical thinking of trainees in Police Colleges in Nigeria as grouped in three segments of critical thinking. These are evaluation of arguments, where 181 (48.27%) of the trainees were poor while 194 (51.73%) were good. In recognizing assumptions, 285 trainees (76.00%) were poor while 90 (24%) were good. The results also show that 175 trainees (46.67%) were poor in test of inference while 200 (53.33) were good. In overall critical thinking ability, the data analysis revealed that 239 (63.73%) trainees were poor while 136 (36.27%) were good in critical thinking ability. Critical thinking ability among police trainees in this study is therefore poor.

Table 2: Learning Styles of Trainees of Police Colleges

Learning Styles	Frequency	Percentage
Active	265	70.67
Reflective	110	29.33
Total	375	100.00
Sensing	83	22.13
Intuitive	292	77.87
Total	375	100.00
Visual	265	70.67
Verbal	110	29.33
Total	375	100.00
Sequential	327	87.20
Global	48	12.80
Total	375	100.00

Table 2 presents the four categories of learning styles with each category having two dimensions. In the Active/Reflective category, 265 (70.67%) of the trainees belonged to the active dimension of learning style while 110 (29.33%) trainees were in the reflective dimension. Similarly, in the

Sensing/Intuitive category, 83 (22.13%) trainees were in the sensing dimension of learning style while 292 (77.87%) trainees were in the intuitive dimension of learning style.

Furthermore, the data analysis shows that 265 (70.67%) trainees were in the visual dimension of learning while 110 (29.33%) trainees were verbal in the Visual/Verbal category of learning style. Finally, Table 6 indicates that 327 (87.20%) trainees were in the sequential dimension of learning style while 48 (12.80%) trainees were global in the Sequential/Global dimension of learning style. The active, sensing, visual and sequential dimension was dominant among respondents.

Table 3: Model Summary for Test of Predictability of Critical Thinking Ability by Learning Styles Dimension

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.227	.052	.041	4.18022

The R value, correlation coefficient is a measure of the quality of the prediction of the dependent variable. An R- value of .227 indicates relatively low level of prediction.

The R Square called the coefficient of determination, shows the proportion of variance in the dependent variable that can be explained by the independent variable. The R square value of .052 indicates that 5.2% of the variability of the dependent variable (critical thinking ability) can be explained on the basis of the trainees' learning style dimension.

Table 4: ANOVA Table for Test of Predictability of Trainees' Critical Thinking Ability by Learning Styles Dimension

Model		Sum of Squares	df	Mean Square	F	Sig.	Decision
1	Regression	351.782	4	87.945	5.033	.001	Rejected
	Residual	6465.456	370	17.474			
	Total	6817.237	374				

a. Predictor: (Constant), Learning Style Dimension.

b. Dependent Variable: Critical Thinking Ability

Table 4 shows whether the independent variables significantly predict the dependent variables. A significant value of .001 (less than the 0.05 level of significance) shows that the independent variables significantly predict the dependent variables. The hypothesis is therefore rejected. This implies that

learning style dimensions significantly predicts critical thinking ability of trainees in Police Colleges in Nigeria. Thus, the hypothesis is therefore rejected.

Discussion

The first finding of this study showed that trainees in Nigerian police Colleges were poor in critical thinking ability with 63.73% trainees being poor while 36.27% were good in critical thinking ability. This finding supports the findings of Rudd, Baker and Hoover (2000) who observed that the undergraduate Agriculture students scored below 50 (low) in all construct areas indicating that the students do not possess strong disposition towards critical thinking. Also, the finding agreed with that of White and Burke (1994) who discovered that the total critical thinking scores for 123 Senior Level Education Majors in Texas was below national norms indicating poor critical thinking.

The second important finding of this study indicated the four categories of learning styles with each category having two dimensions. In the Active/Reflective category, 70.67% of the trainees belonged to the active dimension of learning style while 29.33% of the trainees were in the reflective dimension. Similarly, 22.13% of the trainees were in the sensing dimension of learning style while 77.87% of the trainees were in the intuitive dimension of learning style. Furthermore, the data analysis shows that 70.67% of the trainees were in the visual dimension of learning while 29.33% of the trainees were in the verbal dimension of learning style. It is also indicated that 87.20% trainees were in the sequential dimension of learning style while 12.80% trainees were in the global dimension of learning style. The dominant learning style is the active, sensing, visual and sequential dimension as the percentage show. The finding agrees with Bell (2007) whose finding showed that students were categorized predominately as active, sensing, visual and sequential learners. However, the finding of the present study disagrees with Peresamy, Suryana and Govindan (2009) who revealed that students' major dominant learning styles were visual, verbal, sensing and global. The general trend in the body of literature is that students possess more than one learning styles, although one style is often more dominant.

It was also found that learning styles dimensions significantly influenced critical thinking ability of trainees in Police Colleges in Nigeria. This establishes that there is significant relationship between learning styles and critical thinking ability. The finding disagreed with the work of Rudd et al (2000) who in their finding confirmed that there was no significant difference in the critical thinking skills of students across their general learning styles.

However, this study has exhumed learning style as a factor of critical thinking although only 5.2% of the variability of critical thinking ability can be explained based on the trainees' learning style dimension.

Conclusion

This study analysed the critical thinking ability of trainees with different learning styles in Nigerian Police Colleges. Findings from this study showed that the trainees were poor in critical thinking ability. The implication of this finding is that trainees are not generally disposed or do not have the skills to think critically.

Second, the dominant learning style among trainees is the active, sensing, visual and sequential dimension. Other learning styles were isolated in recessive amounts which corroborates the general trend in the body of literature that students possess more than one learning styles, although one style is often more dominant. It is further concluded that learning style dimensions is significantly related to critical thinking ability of trainees in Police Colleges although with a relatively low level of prediction as only 5.2% of the variability of the dependent variable (critical thinking ability) can be explained based on the trainees' learning style dimension.

Recommendations

In view of the above findings and conclusion, the following recommendations are made:

1. Designers of the programme for training institutions in the Nigerian Police should infuse elements of critical thinking in the curriculum to ensure that graduates are exposed to this critical skill.
2. Teachers/ trainers should be made to appreciate through seminars/workshops that trainees come with different learning approaches and care must be taken to provide tutoring that meets their needs as learners.
3. Since there is relationship between learning styles and critical thinking, teachers/instructors should help learners by allowing unique approach to problem solving which will help them to develop skills in both their preferred and less preferred modes of learning (that is, their learning styles).
4. Finally, the Nigeria Police Force should borrow a leaf from the United States Department of Education and other educational bodies' lofty goals to imbibe the teaching and assessment of critical thinking disposition and skills into the curriculum of recruits and cadet officers' programmes. This will not just be beneficial to the

recruits/cadet officers, but the Nigerian Police Force and the nation in general.

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