

Appraising the Pedagogical Content-Knowledge of Teacher Educators in Teaching Security Education

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Abstract

This study adopted descriptive survey design to appraise the pedagogical content-knowledge of teacher educators in teaching security education. The purpose of the study was to determine the extent in which lecturers in Michael Okpara University of Agriculture, Umudike (MOUAAU) and Alvan Ikoku Federal College of Education, Owerri (AIFCE) adopt pedagogical content knowledge (PCK) in teaching of security education to teacher trainees. Two research questions were posed and a hypothesis postulated to guide the study. Purposive sampling technique was used to select 134 lecturers in School of Education, MOUAAU and 191 lecturers from School of Education, Alvan Ikoku Federal College of Education, Owerri. The instrument for data collection was a questionnaire titled "Teachers-educator Pedagogical Content Knowledge on Teaching Security Education (TPCKSE) with a reliability coefficient of 0.79 determined using Cronbach Alpha. The findings showed that MOUAAU and AIFCE lecturers have high extent of pedagogical content knowledge with regard to teaching of security education to teacher trainees. It was recommended among others that there is need for the relevant authorities in teacher education curriculum to introduce security education into teacher education curriculum.

Keywords: Pedagogical, content-knowledge, teacher, educators, security-education

Introduction

Security is a form of defence where a detachment is created between the assets and threat. Security is the preventative measure taken to protect an environment and people from an impending danger or injury. It is a measure taken to prevent danger and threat (Ofoegbu et al., 2022). Security is the state of being free from threats be it physical, psychological, emotional and financial. It could also connote safety and absence of danger to freedom and the liberty of state, societies and individuals to uphold their independent identity, and

their functional integrity against forces of alteration, which they perceive as aggressive. The underlining cardinal point in security is freedom from threats and threat-free living.

Eke et al. (2022a) see it to include considerable series of trepidations about the conditions of existence. Peace and security in any society exist when individuals live together in an environment without disturbance or violence against their person and property. Every sane individual yearns for security of his life, property and environment. And Nigeria on her part is facing daunting security challenges ranging from Islamic terrorists' incursions in the north, violent crimes in the Southeast and other range of violent activities like mass shooting of defenseless worshippers, bombings, abductions, kidnappings, broad daylight armed robbery, rapes, cultic activities, ethnic and communal clashes and hired assassinations and so on in the other parts of the country. In Nigeria, terrorism and violence have been domestic, communal and gender linked where the most susceptible are the women and children (Eke et al., 2022b). For instance, terrorists' activities along interstates highways are unprecedented in the history of Nigeria, to the extent that plying Nigerian highways are now life threatening risk. This had made Nigeria to be ranked low in the Global Peace Index (GPI, 2021). In states of heighten security challenges, no meaningful sustainable development can take place.

Sustainable development "is the process of achieving human development in an unbiased, rational and safe manner" (United Nation Development Programme [UNDP], 2016). It is a growth that meets the needs of the present generation without partiality to the ability of future generations to meet their necessities. It also involves setting up individuals' and corporates' goals in a way to ensure high quality of life, health and well-being. It also includes taking into consideration social justice and conserving the earth's potential. These social, economic and environmental goals are interdependent and mutually reinforcing. These cannot be comprehensively achieved in an environment that is devoid of security. Balami et al. (2016) described security as the principal purveyor in the economic development of any nation. Security is a serious concern in many parts of the world and a drive for sustainable development. Security is prerequisite for any meaningful development to be initiated, developed and sustained (Obisike & Nwauzi, 2019).

Researchers believe that education has always been a viable tool for transformation and empowerment and should be used to curb the phenomena of insecurity to a minimal level (Eke et al., 2022a; Iwuamadi et al., 2020). This has made many researchers to advocate the inclusion of security education in the school curriculum. Edozie (2014) sees security education as an evolving collaborative constant process from which a society creates knowledge, values and skills for its survival, sustenance, enlightenment and empowerment against all forms of danger and threats to its wellbeing and existence. Fabinu et al. (2016) described security education as that type of education intended to heighten the level of security awareness among the citizenry of a particular country for them to be able to safeguard their immediate environs, nation and the world at large. Furthermore, they see it as an education that helps to enrich people's knowledge against any form of threatening actions to lives and properties, be it at home, in school, in place of work, or in any part of the country. Likewise, Al-Edwan (2016) sees security education as "the teaching and learning of the security concepts and experiences needed to achieve

the national security”. Security education is an education that is meant for every individual in a community aimed at anticipating, preventing, withstanding, adapting and acquiring skills to recover from insecurity incidents. It also includes equipping learners on appropriate knowledge and skills that will help them know what it takes to be free from fear, anxiety, danger, doubt and to have a sense of safety.

Security education drives an essential role in creating the right attitudes in the society in the aspect of enhancing their security, because it affects the appropriate behaviour of members of the given communities and make them not to be susceptible to security threats. Security as a value is linked with modelling the attitudes of members of a given society, which is predisposed by the following factors: awareness of the society, knowledge of ethical values and categories, knowledge of environmental, social and economic threats. An enlightened and informed society can react adequately to emerging threats by taking specific counteractive and precautionary informed actions (Oghenekohwo & Frank-Oputa, 2017). Such knowledge and consciousness on security issues will help to reduce insecurity incidents, which will enhance sustainable development.

Having a clear explanation of what security education is and its encompassing contents is very important for personal security. Little wonder that Eke et al. (2022b) were of the view that abduction threat surviving skills should be integrated in basic education curriculum. To them, this will go a long way to adequately equip school children with effective security tips that will help them in mitigating the incidents of kidnapping and other security threats in school environment. Eke et al. (2022a) are also of the opinion that security threat surviving skills should be integrated in senior secondary English language curriculum. They declared that this could help to mitigate the security challenges schools are facing in Nigeria. It will also help to equip students who are members of the community with security skills that will help curb security threat in the community. In addition, Ofoegbu et al. (2022) believed that abduction threat surviving skills should be integrated in teacher education programme. They believe this will help the teacher trainees to have the necessary content and pedagogical content knowledge and skills to effectively teach security education to their students, and that it will go a long way to create security awareness among community members.

A lot of researchers (Akpan, 2021; Ofoegbu et al., 2022; Eke et al., 2022b; Eke et al., 2022a) have asserted on the need to integrate security education in school curriculum even up to tertiary level. One may need to ask about the pedagogical content knowledge of the teacher educators who are saddled with the responsibility for training the would-be teachers on this very important knowledge content on security. It is also believed that the teacher educators may be called upon to train serving teachers on security education. Similarly, Ojini and Egbai (2019) had opined that universities lecturers have accepted the concept of inclusive education in the university system and thereby putting positive attitude towards it. This significant positive attitude towards inclusive education had improved on the level of acquisition of entrepreneurial skills among students with disability. It is on this note that this paper assessed the pedagogical content knowledge of teacher educators in teaching security education in teacher training colleges and

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universities. Security is very important for peace to thrive well for sustainable national development which is the fulcrum for sustainable national development.

Pedagogical content knowledge (PCK) concept was initially introduced by Shulman (1986). Shulman (1987) defined PCK as the special combination of content knowledge and pedagogy. Shulman conceptualized PCK in two categories. The first category is the knowledge of teaching strategies and representations that suggest how to organize, represent, and adapt the subjects that are taught. The second category is the knowledge of students' subject understanding at different levels. These two components are the unique professional expertise of teachers who act as the bridge connecting content and pedagogical knowledge. Though Shulman initiated the concept of pedagogical content knowledge, there were criticisms on the concept. They include: lack of theoretical and empirical basis for the presence of PCK as a separate category in the knowledge base of teachers, static view of PCK as a type of factual knowledge that could be acquired and applied independently from the classroom context, the possibility of theoretically and empirically distinguishing PCK from content knowledge, PCK has a very narrow framework under two categories and that PCK cannot be normative, as it can vary according to culture (Depaepe et al., 2013). As a result of the obvious flaws in Schulman's initial PCK, several scholars from different subject areas restructured Shulman's PCK model in different ways in an attempt to clarify the borders between PCK and other types of knowledge (Nurullah & Nihat, 2015). Grossman (1990) and Marks (1990) divided PCK into four components: (a) knowledge of students' understanding, (b) knowledge of teaching strategies, (c) knowledge of teaching purposes, and (d) knowledge of curriculum. Grossman expanded Shulman's PCK model by adding knowledge of teaching strategies and knowledge of curriculum as separate components in PCK.

Specifically, pedagogical content knowledge is a dimension of teacher's knowledge that distinguishes between the content expert and the experienced teacher. A content expert is one who possesses content knowledge while the experienced teacher possesses specific content knowledge for teaching. This is to say that PCK involves the teacher's understanding of the content they teach and the teaching environment in which the teaching is involved. Teacher with effective PCK is a facilitator/mediator who consciously help learners construct meaning and sense of knowledge. This helps to transform knowledge and skills into forms accessible to learners (Chang, 2005).

Thus, it is plausible to assess the PCK of teacher educators, to understand the extent they organize and conceptualize their PCK in security education. This is based on the fact that effective organization and conceptualization of content in security education by teacher educators will go a long way to enhancing students' understanding of the knowledge, skills and attitude inherent in security education contents. It is on this basis that the researchers appraised teacher educators' pedagogical content knowledge in teaching security education.

Research questions

1. To what extent is the pedagogical content knowledge of teacher educators of MOUAAU and AIFCE lecturers on teaching security education?
2. Are there differences on the pedagogical content knowledge responses of teacher educators of MOUAAU and AIFCE lecturers on teaching security education?

Hypothesis

Ho1: There is no significant difference in the pedagogical content knowledge mean responses of teacher-educators in School of Education, Michael Okpara University of Agriculture Umudike (MOUAAU) and teacher-educators in School of Education, Alvan Ikoku Federal College of Education (AIFCE) on teaching security education.

Methodology

A descriptive survey design was used for the study. This study sets to appraise the pedagogical content knowledge of teacher educators of MOUAAU and AIFCE on teaching security education. It seeks to specifically determine if there are differences between the pedagogical content knowledge mean responses of teacher-educators in School of Education, Michael Okpara University of Agriculture, Umudike (MOUAAU) and teacher-educators in School of Education, Alvan Ikoku Federal College of Education (AIFCE) on teaching security education. The study was carried out in School of Education, Michael Okpara University of Agriculture (MOUAAU) with a population of 134 academic staff and Alvan Ikoku College of Education, Owerri (AIFCE) with a population of 709 academic staff. The entire academic staff of School of Education MOUAAU was used as sample because the population is small; while purposive sampling technique was employed in selecting the second sample, because the population is large, in which the researchers used 191 academic staff in School of Education in AIFCE. The total sample was 325 teacher-educators.

Instrument for data collection was appraisal questionnaire titled "Teachers-educator Pedagogical Content Knowledge on Teaching Security Education (TPCKTSE). This is a 13-item questionnaire designed by the researchers. The instrument has parts one and two. Part one sought for demographic information of respondents while part two sought information on the PCK of teacher educator on teaching security education. The items had four response categories of Very High Extent (VHE); High Extent (HE); Low Extent (LE) and Very Low Extent (VLE) scoring 4, 3, 2 and 1 respectively. The instrument was face validated by four experts in the Department of Curriculum Studies and Measurement and Evaluation, Michael Okpara University of Agriculture Umudike and Alvan Ikoku College of Education. Their contributions gave rise to the final instrument used for the study.

The instrument was subjected to trial testing using Cronbach Alpha to determine its internal consistency using thirty-six lecturers outside the study population. The reliability of TPCKTSE was 0.79. The instrument was administered to the respondents with the help of two trained research assistants which ensured 100% return. Data were analyzed using mean and standard deviation to answer the research questions. The decision rule was that any mean score of 2.50 and above was regarded as High Extent (HE) otherwise would be regarded as Low Extent (LE). The value of 2.50 was considered as a benchmark for

decision making. The t-test statistics was used to test the hypothesis at 0.05 level of significance.

Presentation of results

Research question 1: To what extent is the pedagogical content knowledge of teacher educators of MOUAAU and AIFCE lecturers on teaching security education?

Table: 1: Appraisal of MOUAAU and AIFCE lecturers on teaching security education

S/N	Items	MOUAAU			AIFCE		
		\bar{x}	SD	REM	\bar{x}	SD	REM
1	Security education should involve knowledge that will help everyone view national security as everybody's concern.	3.50	0.85	H.E	3.61	0.91	H.E
2	Security education should be made to inform learners of various security alert numbers and how they can use them in cases of threats.	3.72	0.91	H.E	3.80	0.88	H.E
3	Teaching of security education should involve the use of active learning collaborative strategies; this will make learning interactive and functional.	3.31	0.74	H.E	3.33	0.73	H.E
4	Security education should capture contents that will expose learners on the dangers that may come from being comfortable with stranger either on social media or in real life.	3.55	0.79	H.E	3.52	0.81	H.E
5	Security education content should capture in it the various methods fraudsters used to scam their victims. This will help learners not to fall victim	3.50	0.86	H.E	3.78	0.71	H.E
6	Security education content should be able to help learners to understand the evil in child labour and trafficking.	2.94	0.43	H.E	2.99	0.51	H.E
7	Security education content should also capture content on self-esteem and self-worth. This will help to reduce cases of suicide and prostitution among youth.	3.01	0.61	H.E	3.54	0.59	H.E

8	Basic environmental health knowledge should be included in the content of security education.	2.21	0.40	L.E	2.10	0.31	L.E
9	Security education content should include cyber security best practices and the do's and don'ts.	3.12	0.63	H.E	3.03	0.53	H.E
10	Security education content should be used to make learners reject extremism and fanaticism	3.28	0.80	H.E	3.29	0.81	H.E
11	Security education should incorporate content that will equip learners with knowledge on prevention of common crimes.	3.91	0.90	H.E	3.92	0.70	H.E
12	Security education should build on the learners' security consciousness.	3.83	0.90	H.E	3.84	0.95	H.E
13	Security education should incorporate in its contents security threat management and mitigation.	3.51	0.63	H.E	3.61	0.78	H.E
Cluster mean		3.34	0.73		3.40	0.67	

Table 1 shows that all the items on the questionnaire were of high extent as they had response mean greater than the instrument scale mean of 2.50. Also, the average mean (3.34) for MOUAU and (3.40) for the AIFCE are greater than the scale mean. This implies that teacher educators have adequate pedagogical content knowledge in teaching security education to teacher trainees. Though item 8 which appraises PCK of teacher educators regarding the inclusion of basic environmental health knowledge into the content of security education has a low extent response, meaning that majority of teacher educators are of the belief that General Study Courses on sciences may have already taken care of such content. But the researchers believed that irrespective of the fact that science courses on General Study courses may have taken care of such content, including it in security education will help to reinforce learning of such topics to the learners.

Research question 2: Are there differences on the pedagogical content knowledge responses of teacher educators of MOUAU and AIFCE lecturers on teaching security education?

Table 2: Summary of MOUAU and AIFCE lecturers' mean response

Group	N	\bar{x}	SD	Difference in \bar{x}
MOUAU	134	3.34	0.73	0.06
AIFCE	191	3.40	0.67	

Table 2, shows that a mean difference of 0.06 exists between PCK responses of MOUAU and AIFCE responses on teaching of security education to teacher trainees. What it means is that the PCK responses of MOUAU and AIFCE differ slightly, though they are all of high extent.

Ho1: There is no significant difference in the pedagogical content knowledge mean responses of teacher-educators in School of Education, Michael Okpara University of Agriculture (MOUAAU) and teacher-educators in School of Education Alvan Ikoku Federal College of Education (AIFCE) on teaching security education for sustainable development.

Table 3: Difference in the pedagogical content knowledge mean responses of teacher-educators in School of Education, MOUAAU and AIFCE

Group	N	\bar{x}	SD	df	T. cal	P.value	Decision
MOUAAU	134	3.34	0.73	323	0.13	0.77	Accepted
AIFCE	191	3.40	0.67				

The results on table 3 indicated that the t-calculated is 0.13 at 323 degree of freedom; and p-value is 0.77, which is greater than 0.05 level of significance. This indicated that the null hypothesis should be retained. Therefore, there is no significant difference between the PCK mean responses of MOUAAU and AIFCE teacher educators on teaching security education to teacher trainees.

Discussion of the findings

Result of the present study revealed the extent of pedagogical content knowledge responses of MOUAAU and AIFCE teacher educators on teaching security education to teacher trainees. Both the MOUAAU and AIFCE teacher educators have high extent of PCK regarding the teaching of security education. This is based on the fact that all the contents in the questionnaire items that will help to effectively enrich the security education course content were acceptable by the teacher educators. And they see them as being appropriate to be included into security education course content. This is to say that if security education is finally introduced to teacher education programme, teacher educators can effectively teach the course as they have the appropriate pedagogical content knowledge. This result is in line with Chang (2005) and Nurullah and Nihat (2015) who averred that effective pedagogical content knowledge of subject by a teacher is a pointer to effective delivery of course content to the learners.

Also, the study showed little difference between the PCK mean responses of MOUAAU and AIFCE teacher educators on teaching security education to teacher trainees. This difference is expected because of peculiarities of human constructs, perceptions and responses.

Conclusion

This study was carried out to appraise the pedagogical content knowledge of teacher educators regarding the teaching of security education course. The result of the study shows that teacher educators have high extent of PCK regarding security education. Also no significant difference existed between MOUAAU and AIFCE teacher educators' pedagogical content knowledge mean responses on teaching of security education.

Recommendations

Considering the fact that MOUAU and AIFCE teacher educators PCK mean responses on teaching of security education are of high extent, the following recommendations have been put forward:

1. There is need for the relevant authorities in teacher education curriculum to introduce security education into teacher education curriculum.
2. There is need to build capacity of teacher educators on how to effectively use learner-centred pedagogy in teaching security education to teacher trainees.
3. There is need for Government to liaise with relevant educational bodies to provide infrastructural and instructional resources in teacher education faculties and schools to help teacher educators to effectively teach security education course.

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