
**SOCIAL STUDIES PRE-SERVICE TEACHERS'
KNOWLEDGE AND ATTITUDE TOWARDS WASTE
MANAGEMENT IN OYO STATE**

¹John Adelani **FAYEMI** & ²Wasiu Adewale **ADELEKE**

¹*College of Social and Management Sciences*

Tai-Solarin University of Education, Ijagun, Ijebu Ode, Ogun State

²*Department of Social Studies*

Federal College of Education (Special), Oyo, Oyo State

Abstract

The long-term health of the environment depends critically on effective waste management. In developing nations, one of the primary reasons that contribute to deteriorating environmental and public health conditions is the use of procedures that are inappropriate for managing solid waste. It is necessary to have an effective waste management system in order to guarantee the safety of both the environment and human health. Formal educational approach to waste management is carried out by Social Studies teachers in primary and secondary schools. Their knowledge and attitude towards waste management is key to their success. This study was designed to examine the influence of community support services on pre-service Social Studies teachers' knowledge and attitude towards waste management in Oyo State. The study employed the descriptive survey research design. The population for the study comprises all Social Studies pre-service teachers in Oyo State: Lanlate College of Education (127), Emmanuel Alayande College of Education (179) and Federal College of Education

(Special), Oyo. Intact classes of NCE II (127, 179 and 218) were taken from each college respectively, making a total of 524. Data collected were analysed and tested at 0.05 level of significance. Findings revealed that there was a significance relationship between community support services and Social Studies pre-service teachers' knowledge ($r=0.174$, $P < 0.05$) and attitude ($r = 0.129$, $P < 0.05$) on waste management. It is therefore, recommended that community support services should be encouraged in every community in order to improve pre-service teachers' knowledge and attitude towards waste management which can in turn improve students' knowledge and attitude towards waste management both at school and community level.

Keywords: Pre-service teachers, Knowledge, Attitude, Waste management, Social Studies.

Introduction

Disposal of solid waste (SWD) has been a long-standing issue in Nigeria. Successive administrations have attempted various approaches, including official and informal education, in an effort to eradicate the issue or reduce it to a level where it can be handled. Osinowo (2001) and Joseph (2006) argue that inappropriate disposal of solid waste, which is a byproduct of the activities that people participate in to sustain their lives, is one of the greatest issues that developing countries throughout the world confront. Solid, liquid, and gas pollutants that pollute the land, water, and air are mostly the result of human activities, as stated by Akin (2009). There is a wide diversity of these wastes.

As human populations grow, so does the amount and complexity of garbage they produce. This garbage poses a growing threat to the natural world. Human health risks, ecosystem decline, soil and water contamination, greenhouse gas emissions, increased temperatures, and shifting weather patterns are only some of these issues (United Nations Environmental Programme, 2011). There may be a higher concentration of obsolete technology in regions

with higher rates of industrial resource use compared to industrialised countries. Used goods are sent to developing countries while being deemed trash here. Appliances, hazardous manufacturing byproducts, gently used clothing and accessories, cars, and footwear are just some of the items that fall into this category (Ayodeji, 2010).

It is possible to classify the factors contributing to the waste management issue into three main groups: trash characteristics, trash impacts, and waste management strategies. The term “waste” is used to describe a wide variety of unwanted materials (Environmental Protection Act, 1990). The term “waste” refers to anything unwelcome that results from human activity but cannot be recycled or reused (Periathamby, 2011). Waste may be defined as everything that has served its purpose in the manufacturing process or in the chain of usefulness and is no longer required (Amasuomo & Baird, 2016).

Waste may be defined as any unwanted byproduct, scrap, or residue that has been discarded because its original owner no longer has any use for it. Materials like this result from a variety of human endeavours, including but not limited to: preparation, production, packaging, repacking, and unpacking, construction, renovation, and mining. Almost everything that is discarded is considered “waste,” even if it may be useful in some capacity. Almost everything that ends up in the “trash stream” really has some use to at least one individual or business. Garbage, as defined by Amasuomo and Baird (2016), consists of everything the owner no longer wants at a given time and place and for which there is no or little market demand.

There are several ways in which garbage may be expressed, just as there are numerous ways in which it can be generated. Vijayalakshmi (2020) makes the common assumption that there are three main types of waste. To put it simply, they are the bedrock upon which the material’s physical state, biodegradability, and effects on human health rest. Based on its physical state, it is further classified as either a solid (which can be seen by the naked eye), a liquid (which includes both household and industrial effluents), or a gas (not seen by naked eye). The ability to biodegrade is used to further classify it into two groups: organic (biodegradable) and

inorganic (nonbiodegradable) (metals, plastics, paper and glasses). According to the effect it has on people's health, it is classified as either hazardous or nonhazardous (non-dangerous).

Wastes have a negative effect on the environment and human health, making trash management and control crucial. Our wastes need to be handled appropriately. Unsafe waste disposal could have negative effects on wildlife and human health. The most significant dangers to public health come from disease-causing organisms, especially rodents and flies (Alam & Ahmade, 2013). The process through which trash decomposes into its individual chemicals often contributes to environmental pollution. Developing nations are especially hard-hit by this problem. Toxic gases released by decomposing trash pose serious environmental risks (Alam & Ahmade, 2013).

It has been shown via study by Vergara and Tchobanoglous (2012) that successful waste management requires meticulous planning and stringent monitoring to prevent unfavourable impacts on the local ecology. The main goal of waste management, as stated by Demirbas (2011), is to provide a safe environment for all living things. Waste management consists mostly on two activities: collecting rubbish and transporting it, as stated by Narayana (2009). "Waste management" describes the steps used to collect, transport, and process trash before finally disposing of it (Demirbas, 2011). Waste management's major goal is to reduce the spread of illness (Fearon & Adraki, 2014).

Amasuomo and Baird (2016) define waste management as "the process of collecting, transporting, and disposing of wastes in the safest and most effective way practicable," with the ultimate objective of mitigating or eliminating the negative impacts of wastes. Waste management entails a number of processes, including waste collection, waste sorting according to waste type, waste transportation with careful labelling, waste treatment using a variety of methods to mitigate waste's negative effects, and waste disposal by recycling, incineration, or burial (Vijayalakshmi, 2020). Some waste management systems are favoured more than others, as stated by Troschinetz and Mihelcic (2009). Examples include preferring alternatives to landfills including reuse, recycling, composting, and

energy generation via burning.

Wastes continue to have a harmful influence, not only on the environment but also on the health of the general population, despite the importance put on waste management. The concepts of waste and waste management (Amasuomo & Baird, 2016) and an evaluation of waste management practises have been the focus of previous research. Preceding studies have focused on these subfields in an effort to develop a remedy for this problem (Adogu, Uwakwe, Egenti, Okwuoha, & Nkwocha, 2015). Teachers of Social Studies who will be charged with instructing students on proper garbage disposal should themselves be well-versed in the subject and enthusiastic about teaching it. Even though these studies have made important contributions to the field of waste management, there has been surprisingly little effort put into studying the impact of a formally taught approach to the problem. Thus, the goal of this study was to gauge how well-versed in waste management theory and practise Oyo State's future Social Studies educators are.

Community support services are the initiatives taken by locals to clean up their area and/or make money from solid waste as part of waste management programmes. In urban settings, waste management falls within the purview of a wide range of community members and municipal officials. Each of these professions reflects a unique level of interest in local affairs. Community members may become involved in trash management in many different ways, such as via exhibiting good sanitation practises, giving financial or in-kind donations, consulting on waste issues, and managing or administering waste services. The sociological concept of "community participation" refers to the ways in which locals organise and take part in initiatives at the scale of an individual's home or neighbourhood in an effort to enhance the quality of life for all its residents (water, sanitation, health, education, etc.). Participation may range from minimal to extensive, depending on the period of the project and the kind of participation (monetary and/or physical contributions, social and/or political commitment). This participation might take the shape of monetary or labor-based donations. For the most part because it implies that the locals should organise into committees to control the machinery.

One may acquire new knowledge via any one of three separate channels: cognitive, emotional, or psychomotor. Craven and Hirnle (2006) suggest that the term “cognitive knowledge” refer to the “logical reasoning” involved in acquiring and processing new information, arriving at a conclusion, or making a judgement or assessment. Learning may be classified as either affective, in which one’s emotions are influenced, or psychomotor, in which one acquires knowledge via the practise of certain physical manoeuvres. Having more information on a topic is not enough to motivate people to change their behavior (Berman *et al*, 2012). Changing one’s behaviour requires both an understanding of the issue at hand and the wherewithal to put that understanding into practise. This is why an emotional appeal is necessary for knowledge to influence behaviour. This is because our feelings regarding a problem or situation are inextricably linked to our thoughts about that problem or situation.

According to Pajares (2002), an attitude may be thought of as a set of interconnected beliefs. One’s beliefs, rather than one’s deeds, are what determine one’s behavior (Ajzen, 2005). This is because bridges are built across disparate faith communities. A person’s attitude toward something might be seen as an inside disposition to act in a certain way, communicated via a positive or negative evaluation of that thing. The term “attitude” refers to a mental disposition to do some kind of action in response to one’s assessment of a given situation. In general, individuals have a mindset that is focused on external entities like goods, other people, and organisations (Scholl, 2002). Attitude may be seen as a person’s feelings, thoughts, and inclination toward a certain line of reasoning in regard to aspects of their environment (Mankilik & Agbo, 2001).

Attitude is one of the three broadly characterised aims of education (Mkpa, 2001). Mkpa noted that, with the right items and indices, one may get many layers of information on a person’s attitude. One approach to assess a person’s disposition is by observing the care with which they embrace or reject ideas. A person’s reaction is how they feel, think, and behave after experiencing something. Attitudes, whether positive or negative, may be transmitted directly or indirectly via one’s words and behaviours in reaction to something

or a set of circumstances (Mkpa, 2001). Obodo (2002) suggests that an attitude may be thought of as a framework that evaluates emotional experiences and assigns them a positive or negative value. Ochonogor (2003) argues that one's attitude may be seen as an outward representation of their core ideals. This articulation is the end result of a person's current and prior environments having an influence on that person's character. This seems to show that people's attitudes may be taught and are impacted by the mental images they create of themselves.

Since wastes may have detrimental effects on both the environment and human health, they must be managed and controlled to minimise their impact. Wastes continue to have a harmful influence, not only on the environment but also on the health of the general population, despite the importance put on waste management. Attempts to find a solution to this problem have inspired a plethora of research into, among other things, the processes involved in waste management and waste conversion, the definitions of waste and waste management, and the assessment of waste management strategies. All these studies came up with good contributions on waste management but with less research focus on formal education approach to waste management and it is important for Social Studies teachers who are going to be responsible for teaching waste management to have knowledge of waste management and positive attitude to it.

Objectives of the Study

Therefore, this study investigated Social Studies pre-service teachers' knowledge and attitude towards waste management in Oyo State. The specific objectives are to:

- i. determine the relationship between community support services and pre-service teachers' knowledge on waste management in Oyo state;
- ii. examine the relationship between community support services and pre-service teachers' attitude towards waste management in Oyo state; and

- iii. find out whether pre-service teachers' knowledge on waste management in Oyo state have significant impact on their attitude.

Research Questions

- i. Is there a significant relationship between community support services and pre-service teachers' knowledge on waste management in Oyo State?
- ii. Is there a significant relationship between community support services and pre-service teachers' attitude toward waste management in Oyo State?
- iii. Does teachers' knowledge and attitude to waste management in Oyo State have significant relationships on their attitude and knowledge?

Methods

The descriptive survey research design of the correlation type was used for this research. Participants in the research were pre-service teachers who were enrolled in either state or federal Colleges of Education in Oyo State, which is located in Nigeria. For the sake of this research, three colleges of education that are owned publicly were purposefully chosen owing to the fact that they have a similar characteristic, namely that they are institutions that are publicly owned. Students from each of the three selected Colleges of Education, Lanlate College of Education (127), Emmanuel Alayande College of Education (179), and Federal College of Education Special (218), Oyo State, had an intact class of NCE II students chosen to participate.

This research was carried out with the participation of a grand total of 524 pre-service educators. The Community Support Service Scale (CSSS), the Pre-service Teachers' Attitude to Waste Management Scale (PTAWMS), and the Pre-service Teachers' Achievement Test on Waste Management were the primary instruments that were used for the purpose of collecting data for this research (PTATWM). The Community Support Services Scale, sometimes known as the CSSS, was developed by the researcher. It

is a twenty-item scale that was designed to assess the Community Support Services. It was modeled after the Likert four-point scale, which has the following response options: strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) (SD). Positively written comments get 4 points on the SA scale, 3 points on the A scale, 2 points on the D scale, and 1 point on the SD scale. This was the opposite for remarks that were written negatively. The researcher came up with the Pre-service Teachers' Attitude to Waste Management Scale (PTAWMS), which consists of twenty-five items with the goal of measuring the Pre-service Teachers' Attitude toward waste management. These items were modelled after the Likert 4-point scale, with strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) being the extremes of the scale (SD). Positively written comments get 4 points on the SA scale, 3 points on the A scale, 2 points on the D scale, and 1 point on the SD scale. This was the opposite for remarks that were written negatively. The researcher devised the PTATWM in order to evaluate the students' general knowledge of waste management. The researcher then had the 20 items picked from the pool reviewed by both peers and experts in order to decide whether or not the questions were acceptable for the learners in question.

The content and face validity of the questionnaires and achievement test items were established by presenting a copy of the draught questionnaire to at least two experts in the field of test and measurement for the purpose of further scrutiny and modification. This was done in order to establish the content of the questionnaires and the achievement test items. The purpose of this was to determine whether or not the instrument was suitable in terms of its language, presentation, clarity, and application. The adjustments that were required were implemented after considering their feedback. In addition, a field trial of the instruments was conducted on pre-service teachers who were enrolled in the College of Education. This aspect of the research was conducted separately from the primary study. In the meanwhile, the Kuder-Richard 21 Formular was used to assess the dependability of the CSSS and PTAWMS instruments, and the results were a coefficient of 0.72 for the CSSS and 0.76 for the PTAWMS. In addition to this, the Kuder-Richard 21 Formular was

used in order to calculate an assessment of the PTATWM's dependability; the formula produced a coefficient of 0.75. Calculations were made to determine the discriminating indices as well as the average difficulty levels for each of the 20 items. The fact that the instrument's average difficulty index was calculated to be 0.46 demonstrated that it was neither either complicated nor overly straightforward.

Data Collected were coded and analysed using Pearson Product Moment Correlation Co-efficient was used to determine the relationships among the independent variable and dependent variables. Each of the research questions was tested at 0.05 level of significance.

Results

Table 1: Summary of Pearson Product Moment Correlation on community support services, pre-service teachers' knowledge and attitude towards waste management

Variable	N	X	S.D		CSS	K	A
Community Support Services (CSS)	524	54.861	13.640	Pearson (r)			
Knowledge (K)	524	53.752	11.985	Pearson (r)	0.174**		
Attitude (A)	524	69.223	13.568	Pearson (r)	0.145**	0.129**	
				Sig. (2-tailed)	0.000		
				Sig. (2-tailed)	0.001	0.003	

**Correlation is significant at the 0.05 level (2-tailed).

Research Question 1: Is there a significant relationship between pre-service teachers' knowledge and attitude towards waste management in Oyo State?

The result as shown in Table 1 revealed that there was a significant relationship between community support services and

pre-service teachers' knowledge on waste management in Oyo State ($r=0.174$, $p<0.05$). This implies that the community support services is significantly related to the pre-service teachers' knowledge towards waste management in Oyo State. This means that community support services determine the level of pre-service teachers' knowledge on waste management in Oyo State.

Research Question 2: Is there a significant relationship between community support service and pre-service teachers' attitude towards waste management in Oyo State?

It could be seen from Table I that that there was a significant relationship between community support service and pre-service teachers' attitude toward waste management in Oyo State ($r=0.145$, $p<0.05$). This implied that the community support services is significantly related to the pre-service teachers' attitude toward waste management in Oyo State. This means that community support services determine the level of pre-service teachers' attitude towards waste management in Oyo State.

Research Question 3: Does the pre-service teachers' knowledge on waste management in Oyo State have significant impact on their attitude?

It can also be seen from Table 1 that pre-service teachers' knowledge on waste management in Oyo State has a significant impact on their attitude ($r=0.129$, $p<0.05$). This implies that pre-service teachers' knowledge is significantly related to their attitude towards waste management in Oyo State. This means that the level of pre-service teachers' knowledge on waste management will determine their attitude toward waste management in Oyo State.

Discussions

The findings revealed that pre-service teachers' waste management knowledge was shown to be significantly correlated with their exposure to community support programmes. This shows that where a prospective teacher resides has a big impact on how much information they will absorb. Educators-to-be who have access to a

community that actively participates in community support services in the field of waste management would benefit much from this exposure. The pre-service teachers will benefit from learning about waste management since it will equip them to better instruct and encourage their future students. This study contradicts findings by Arora and Agarwal (2011), who found that pre-service educators have unfavourable views about waste management.

It was revealed from the findings that there is significant relationship between community support service and pre-service teachers' attitude toward waste management in Oyo State. This denotes that any community where there are consistent support services in the area of waste management will consistently contribute to pre-service teachers attitude to waste management. It also implies that environment where pre-service teacher lives determine the attitude to waste management. If the community renders support services in the area of waste management, then the pre-service teacher will develop good attitude to waste management. This corroborate the finding of Fearon and Adraki (2014) that found out that attitude have significant impact on the motives to use dustbins in the future. Finally, that pre-service teachers' knowledge on waste management in Oyo State has a significant impact on their attitude. The level of knowledge acquired in the area of waste management has influence on the extent of attitude of pre-service teachers toward waste management.

Conclusion

Findings of the study have shown that pre-service teachers' knowledge is significantly related to their attitude towards waste management. It can be concluded from the study that for level of pre-service teachers' knowledge on waste management to improve, their attitude must be given adequate consideration.

Recommendations

It has been brought to limelight that community support services has potent strength to influence pre-service teacher knowledge of waste management, therefore, every pre-service teacher must

engage in environmental sanitations in their various community so that they will be able to know more both positive and negative size of waste management in their various community. Pre-service teachers must develop positive attitude towards waste management in their various community through community support services. This will even influence their attitude to waste management during their teaching practice and when they are engaging in teaching practices. Pre-service teachers should develop more knowledge in the area of waste management because it can improve their attitude towards waste management. Pre-service teachers should be exposed to regular training, workshops, seminars and conferences where they will be enlightened about their involvement in community supports services in their various environments with hope of gaining knowledge in their area of waste management.

References

- Adogu, P., Uwakwe, K., Egenti, K., Okwuoha, A. & Nkwocha, I. (2015). Assessment of waste management practices among residents of Owerri municipal Imo State Nigeria. *Journal of Environmental Protection*, 6, 446-456.
- Ajzen, I. (2005). *Attitude, personality and behaviour*. Buckingham: Open University Press. Retrieved from <http://www.dera.gov.uk>
- Akin, G. (2009). *Energy-environmental science and environmental problems*. Ankara: Tiydem Yayincilik.
- Alam, P. & Ahmade, K. (2013). Impact of solid waste on health and the environment. *Special Issues of International Journal of Sustainable Development and Green Economics*, 2.
- Amasumo, E & Baird, J. (2016). The concept of waste and waste management. *Journal of Management and Sustainability*, 6(4):88.
- Arora, L & Agarwal, S. (2011). Knowledge, attitude and practices regarding waste management in selected hostel students of university of Rajasthan, Jaipur, *International Journal of Chemical, Environmental and Pharmaceutical Research* 2 (1), 40-43.
- Ayodeji, I. (2010). Exploring secondary school students' understanding and practices of waste management in Ogun State, Nigeria. *International Journal of Environmental and Science Education*, 5 (2), 201-215.
- Berman, A., Snyder, S. J., Koziar, B. & Erb, G. (2012). *Fundamentals of*

- nursing, concepts, process and practice. 9th Edition New Jersey: Pearson Prentice Hall.
- Craven, R. F. & Hirnle, C. J. (2007). *Fundamentals of nursing*. Philadelphia: Lippincott.
- Demirbas, A. (2011). Waste management, water resource, facilities and waste conversion processes. *Energy Conversion & Management*, 52 (2), 1280-1287.
- Environmental Protection Act (1990). UK public general acts. Legislation.gov.uk
- Fearon, J. & Adraki, P. (2014). Perceptions and Attitudes to Waste Disposal: An assessment of waste disposal behaviours in the Tamale Metropolis, *Journal of Environment and Earth Science*, Vol. 4, No. 1.
- Joseph, K. (2006). Stakeholders' participation for sustainable waste management. *Habitat International*, 30, 863-871.
- Obodo, T. Y. (2002). Developing positive attitude and interest in mathematics in students in Nigerian secondary schools. A paper presented at a submit workshop organised by the National Mathematics Centre, Abuja.
- Ochonoger, M. B. (2003). Action for environmental protection. Retrieved from www.naijaproperties.com
- Osinowo, F. A. O. (2001). Towards effective waste management in Nigeria. Nigerian conservation foundation, lecture series No. 1, a publication of the NCF.
- Pajares, S. O. (2002). Configuring attitude. Computer supported cooperative work. *International Journal*, 11 (3), 317-347.
- Periathamby, A. (2011). Municipal waste management. In book waste pp. 109-125.
- Mkpa, A. M. (2001). Educational domains. *Education Review*, 6(1), 43-51.
- Mankilik & Agbo (2001). Use and attitude towards Learning Management Systems (LMS) in Saudi Arabian universities.
- Narayana, T. (2009). Municipal solid waste management in India: From waste disposal to recovery of resources? *Waste Management*, 29 (3), 1163-1166.
- Scholl, R. W. (2002). Motivation: Expectancy theory. *The University of Rhode Island Website*. Retrieved 21 January 2022 from <http://www.uri.edu/research/lrc/scholl/webnotes/MotivationExpectancy.htm>
- Troschinetz, A. M. & Mihelcic, J. R. (2009). Sustainable recycling of

municipal solid waste in developing countries. *Waste Management*, 29 (2), 915-923.

United Nations Environmental Programme (UNEP) (2011). Towards a green economy. *Pathway to Sustainable Development and Poverty Eradication*. Nairobi: United Nations.

Vergara, S. E. & Tchnobanoglous, G. (2012). Municipal solid waste and the environment: A global perspective environment. *A global perspective environment and resources*, 37(37), 277-309.

Vijayalakshmi, M. (2020). Modern waste management techniques-a critical review. Innovation and sustainability through E-stem.