

# HARNESSING PEDAGOGICAL AFFORDANCES OF IMPROVISED RESOURCES IN GEOGRAPHY TEACHING AND LEARNING IN TOWNSHIP SCHOOLS

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## Abstract

Meaningful teaching and learning in South African township schools is hampered by general lack of instructional resources. As key agents of educational change, teachers face the key imperative to embrace pedagogic innovation with a view to realize envisaged educational outcomes. This study explored pedagogical affordances of improvised resources as a sustainable means to enhance the quality of instruction in Geography teaching and learning in township schools. The study adopted a mixed-method approach as part of exploratory descriptive survey design and involved purposively selected teachers from South African township schools as participants. Quantitative data was collected through the administration of a survey questionnaire with the participants while qualitative data was collected through semi-structured interviews and classroom observations. Key findings demonstrated that the use of improvised resources provides meaningful platforms to address pervasive knowledge gaps through coherent development of conceptual understanding in Geography teaching and learning. Theoretical implications for pedagogic innovation are discussed.

**Keywords:** *Improvised resources, affordances, pedagogic innovation.*

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## 1. Introduction

Pedagogic innovation is central to meaningful science teaching and learning. A considerable number of schools in South Africa are still plagued by general lack of resources. Improvised resources can be used to demystify abstract scientific concepts. There is a need for provision of teacher professional development opportunities to enhance teacher professional capacity on the use of improvised resources. The use of improvised resources can serve to maximize the academic experience of students in science classrooms. Students that are frequently taught using improvised resources perform better than those rarely taught using improvised resources (Ong'amo, Ondigi & Omariba, 2017). Yet, teachers lack appropriate skills to use improvised teaching resources in schools (Akuma & Callaghan, 2016). This study primarily explored the pedagogical affordances of improvised resources in Geography teaching and learning in South African township schools.

## 2. Background

Provision of quality education is dependent on the availability of essential resources. However, the South African basic education system is largely characterised by inequitable access to resources (Sedibe, 2011). Improvised resources can be used to circumvent general lack of essential resources in schools. Ubawuike (2018) describes improvisation in science education as the process of creating alternative materials of teaching by replicating standard materials to function similarly as the original ones using locally sourced materials. According to Samba and Eriba (2011), improvisation is essentially the act of construction of instructional materials from locally available materials that can adequately replace or function in place of the original material which otherwise may be very expensive or in short supply or unavailable. Poor learner academic performance could be attributed to inadequate learning facilities (Olayinka, 2016). Teachers lack creativity when it comes to designing learning resources in science classrooms. Ntladi and Ramaila (2020) posit that teachers lack appropriate skills to use improvised teaching resources in schools.

### 3. Purpose of the study

The study explored pedagogical affordances of improvised resources in Geography teaching and learning in South African township schools. The empirical investigation was underpinned by the following concomitant objectives.

- To examine pedagogical affordances of improvised resources in Geography teaching and learning.
- To explore teachers' perceptions about the integration of improvised resources in Geography teaching and learning.
- To explore teachers' experiences about the integration of improvised resources in Geography teaching and learning.

### 4. Research design and methodology

The study adopted exploratory descriptive survey design located within the interpretivist paradigm. Exploratory research design allows for consideration of all aspects of the problem (Akhtar, 2016). In addition, exploratory research design is used to correctly define the problem, identify alternative courses of action, develop a hypothesis, gain additional insights before developing an approach, and set priorities for further examination (Akhtar, 2016). The study involved five (5) purposively selected Grade 12 Geography teachers as participants. Qualitative data was collected through semi-structured interviews and classroom observations. Data was thematically analysed.

### 5. Research findings

Key findings were clustered according to the themes that emerged during data analysis, namely: pedagogical affordances of improvised resources in Geography teaching and learning, teachers' perceptions about the integration of improvised resources in Geography teaching and learning and teachers' experiences about the integration of improvised resources in Geography teaching and learning.

#### 5.1. Theme 1: Pedagogical affordances of improvised resources in Geography teaching and learning

The participants indicated that the use of improvised resources provides opportunities for experiential learning. Furthermore, learners are afforded opportunities to actively engage in the learning activities. These sentiments are encapsulated in the following excerpt.

The integration of improvised resources in Geography teaching and learning promotes experiential learning (hands-on learning), thus developing learners' skills to solve real-world challenges. Making models, charts, and maps enables learners to acquire psychomotor skills.

#### 5.2. Theme 2: Teachers' perceptions about the integration of improvised resources in Geography teaching and learning

According to the participants, the use of improvised resources captures learners' attention and increases their concentration span and generally changes learners' attitude towards the subject. This sentiment is reflected in the following excerpt.

The integration of improvised resources promotes sustained engagement in the learning activities. Learners are afforded opportunities to indulge in cooperative learning.

#### 5.3. Theme 3: Teachers' experiences about the integration of improvised resources in Geography teaching and learning

The participants indicated that improvised resources are affordable and are not as complicated as computers. Therefore, they are convenient for novice and experienced teachers who are not technology savvy. The use of improvised resources serves as a catalyst for enhancing learner academic performance. These sentiments are encapsulated in the following excerpt.

Improvised resources are easy to make. They can be shared with other teachers at school. Learner academic performance improves as a result of the integration of improvised resources.

## 6. Discussion

The study demonstrated that the use of improvised resources provides opportunities for experiential learning. In addition, the use of improvised resources provides opportunities for learners to actively engage in the learning activities. Teachers should make every effort to use accessible instructional resources wherever possible (Olayinka, 2016). Behrendt and Franklin (2014) posit that improvised resources enhance science learning and development of meaningful conceptual understanding. At another pragmatic level, improvised resources help teachers deliver information more accurately especially in instances where repetitions are required for concrete learning to occur (Ong'amo, Ondigi, & Omariba, 2017). However, many science teachers are not equipped with skills to incorporate new ideas in the teaching of science in the classroom (Silverstein *et al.*, 2009). The participants indicated that improvised resources are affordable and are not as complicated as computers. Therefore, they are convenient for novice and experienced teachers who are not technology savvy. The use of improvised resources serves as a catalyst for enhancing learner academic performance. The key advantage of using improvised resources is that they can be produced from readily available materials within the environment (Parker *et al.*, 2018). Improvised resources are often produced to address learning difficulties (Akuma & Callaghan, 2016). According to Dhakal (2020), teachers face the key imperative to embrace pedagogic innovation with a view to circumvent general lack of resources in schools.

## 7. Conclusion

The integration of improvised resources provides opportunities for experiential learning and active engagement in the learning activities. Teachers ought to be implored to embrace pedagogic innovation in order to foster meaningful development of scientific literacy by demystifying abstract scientific concepts.

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