



ENHANCING RURAL TEACHERS' PROFESSIONAL DEVELOPMENT THROUGH PRE-SERVICE TEACHERS' SERVICE-LEARNING

Nonkazimulo Phetha

University of KwaZulu-Natal, South Africa

Abstract

Children who are differently abled from diverse contexts experience inequality regarding education, access to health care, social services, and a quality life. This study aimed to address the lack of awareness about autism spectrum disorder (ASD) in rural areas by focusing on a local primary school. Initial surveys revealed that 99% of the teachers at the school had no knowledge about ASD. To address this, an intervention was conducted to educate the teachers about the disorder. Subsequently, some teachers identified children in their classes exhibiting behaviors and symptoms consistent with ASD, leading them to pledge to consult the parents of these children and suggest autism as a possible explanation. The primary goal of this intervention was to create awareness about ASD in rural areas, where knowledge about the disorder is often lacking due to factors such as illiteracy and ignorance. By choosing a local primary school as the focal point, the study aimed to reach a broader audience and foster understanding and support for individuals with ASD in rural communities. The findings of this study underscore the importance of targeted interventions to raise awareness and support for individuals with ASD in underserved areas.

Keywords: *autism spectrum disorder (ASD), service learning, autism*

Introduction

Rural communities often face additional challenges in providing adequate support and resources for students with autism spectrum disorder (ASD). Researchers define autism spectrum disorder as “an umbrella term for a class of neurodevelopmental disorders characterized by a triad of deficits in social reciprocity, impaired communication, and repetitive restricted patterns of behavior.” (Blenner et al., 2011). Baio (2014) defined ASD as a lifelong developmental disability defined by diagnostic criteria that include deficits in social communication and social interaction and restricted, repetitive patterns of behavior, interests, or activities. This disorder has a range and severity of symptoms that can vary widely. Common symptoms include difficulty with communication, difficulty with social interactions, obsessive interests, and repetitive behaviors. These signs are usually seen when the child is two years old.

The prevalence of autism spectrum disorder (ASD) necessitates a comprehensive understanding of the condition among educators, particularly teachers in rural primary schools. However, our research has indicated a significant lack of awareness about ASD among teachers, particularly in rural areas, where access to information and resources may be limited. This study aims to address this gap by exploring the knowledge and perceptions of primary school educators regarding ASD, and by implementing an intervention to enhance their understanding of the disorder.



Previous studies have shown that Service-Learning experiences can help pre-service teachers develop a better understanding of ASD and contribute to raising awareness about the disorder in rural primary schools. Other scholars have also emphasized the importance of qualitative research methods in understanding the experiences of pre-service teachers and the challenges faced by children with ASD and their families. For example, Burns (1999) and Cornwell (1999) investigated the role of collaborative action research in language teacher education and the experiences of pre-service teachers in conducting research, respectively.

The significance of this study lies in the potential impact on the identification and support of children with ASD in educational settings. By focusing on rural areas, where awareness about ASD is particularly lacking, this research seeks to contribute to the broader goal of improving the inclusivity and support for individuals with ASD in diverse educational contexts. The findings of this study are expected to inform strategies for developing awareness programs tailored to the specific needs of educators in rural areas, ultimately benefiting children with ASD and their families.

Research Problem

The research problem centers around the lack of specific training and professional development opportunities for teachers in rural areas, focusing on supporting students with ASD. Many teachers may have limited exposure to effective strategies and approaches needed to support students with ASD in such settings. This knowledge gap hinders the ability of rural educators to provide quality inclusive education to students with ASD. Addressing this problem is critical to improving the educational experiences and outcomes for students with ASD in rural communities. The research problem is framed within the context of raising awareness about ASD in rural primary schools and the potential impact of providing teachers and parents with the necessary knowledge and training to recognize and address the needs of children with ASD. The scholars cited in the study, including Graham and Robinson (2015), the American Psychiatric Association, and others, have also emphasized the importance of understanding and addressing the challenges associated with ASD, further supporting the relevance of the research problem.

Research Methodology

General Background

The research methodology is based on an interpretivist paradigm. According to Thanh and Thanh (2015), the interpretivist paradigm “is a theoretically understood paradigm that allows researchers to view the world through the perceptions and experiences of the participants. In seeking the answers for research, the researcher who follows the interpretivist paradigm uses those experiences to construct and interpret his understanding from gathered data”. In attempting to find answers for your research, the researcher who uses the interpretivist paradigm utilizes his/ her experiences to construct and interpret his/ her understanding from the collected data.

The study utilized action research. Action research involves a self-reflective, systematic, and critical approach to enquiry by participants who are, at the same time, members of the research community. The aim is to identify problematic situations or issues considered by the participants to be worthy of investigation in order to bring about critically informed changes in practice. (Burns, cited in Cornwell 1999, p. 5). Action research was used because it allowed us to participate and collaborate in the research in solving and ensuring that our goal of obtaining the information from the center was fulfilled. Different activities were done together with our participants in exploring ASD and then raising awareness about ASD. Children's behavior was observed in and outside the classroom, as well as how they interacted with each other, particularly outside the classroom (playground). Moreover, we gathered data from the teachers in the center regarding how they ensured the development of the children.

Participants

The research employed purposeful sampling, targeting autistic children, their teachers, and teachers in rural primary schools. Patton (2002) defined purposeful sampling as one that is used to identify and select information-rich cases that are related to the phenomenon of interest. This means that a researcher identifies and selects individuals who are knowledgeable about the phenomenon of interest. Bernard (2002) and Spradley (1979) noted the importance of the availability and willingness of participants to participate and their ability to communicate experiences and opinions in an articulate, expressive, and reflective manner. It is the most common sampling strategy in qualitative research and pursues cases rich in information which can be studied in a great deal about issues of central importance to the purpose of the research, which is based on autism and raising awareness about autism in a rural primary school. The participants for this research were autistic children and their teachers in the site, as well as teachers in rural primary schools. Using purposeful sampling was advantageous because we were able to identify and select rich information from the behaviors of the autistic children and from their teachers through interviews. Questionnaires were also used to gather information from rural areas teachers.

Sample Description

Information on the study participants is presented in Table 1.



Table 1
Biographic Information for the Autistic Children

Participants	Gender		Estimated age
	Male	Female	
Participant 1		√	6 years
Participant 2		√	6 years
Participant 3	√		7 years
Participant 4	√		4 years
Participant 5		√	5 years
Participant 6	√		5 years
Participant 7	√		5 years
Participant 8		√	5 years
Participant 9	√		6 years
Participant 10	√		6 years

Biography of autistic children’s teachers is presented in the Table 2.

Table 2
Biography of Autistic Children’s Teachers

Participants	Estimated age	Where they live
Participant 1	35 years old	Umlazi
Participant 2	32 years old	KwaDabeka
Participant 3	30 years old	Ntuzuma
Participant 4	33 years old	Itshelimnyama

Data Collection and Instrument

To collect data for this research, observations, interviews, and questionnaires were used, and this helped in a deeper understanding of the disorder and its behaviors. The format of the questionnaire was closed since the participants were provided with possible answers to choose from. These questionnaires were designed to gather the participant’s prior understanding of the research. The format of the interview was oral since various questions

were presented to different participants. The questions of the interview were open-ended, as broader information was required from the participants about the research.

Observation: Observation is one of the major parts of data collection although it is not noticeable. This is because research gathers information through observation of the participants. In this research, researchers observed the participants (autistic children and their teachers), the behaviors of the children towards each other and how they interact. Specific attention was paid to how the children socialize with each other since, in the studies, we noticed that most researchers highlight the fact that autistic children have difficulties in socializing and interacting with other people.

Questionnaires: According to Schmidt (1997), a questionnaire provides a tool for eliciting information which a researcher can put into a table and deliberate; by this, it means that participants will provide information or data for this research. Closed-format questionnaires were distributed to participants before the service-learning presentation about autism spectrum disorder in the local primary school. This approach aimed to gather participants' prior understanding of the disorder.

Semi-structured Interviews: The study utilized semi-structured interviews, allowing for open-ended questions to gather data from the participants. Semi-structured interviews are mostly used to gather data from the participants since the questions are not formalized, allowing for a discussion. It allowed the participants to be flexible and further elaborate on the questions asked. The open-ended question nature allows for the interviewer to discuss some details of the topic in detail and the interviewee to answer freely. These types of interviews also allow the researcher to probe the interviewee to elaborate more on the topic and this works best when the interviewer has several areas that he/she wants to address. The following 7 questions were asked.

Interview Questions

AUTISM SPECTRUM DISORDER

- According to your understanding what is autism spectrum disorder?

- What are the challenges you usually encounter regarding autistic children ever since you started working with autistic children?

- How do you ensure that these children socialize with each other?

- We noticed that when these children first came to this center, many of them had speech problems. How did you manage to improve their speech?

- When you started to be a teacher in this center, did you have any idea about autism?



- What do you think can be improved to improve communication skills in autistic children?

- How do parents assist the teachers in improving the children’s communication and socializing skills?

Table 2
The Questionnaire Used to Find Background Knowledge of Teachers in the Rural Primary School

Questions	A	B	C	Answers from participants(10)
1. What is Autism	It is a mental illness which affects old people	It is a developmental disorder that that effects communication and behaviour	It is a disease which affects the reproductive organs of woman	4/10
2. Who gets autism	Anyone	Old people	Women only	4/10
3. Is autism infectious	Yes	No	I don't know	2/10
4. What to do if a child is autistic	Seek professional help	Pray for child	-	5/10
5. Is Autism diagnosable	Yes	No	I don't know	3/10
6. How frequently do teachers see symptoms of autism from their learners	Less	More	Never been aware	9/10
7. Do teachers communicate with parents if they see these symptoms?	Yes	No	-	10/10

The research emphasized the importance of rigor, reliability, and validity.

Rigor

It is vital for research to have reliability and validity. According to Neuman (1997), the groundwork for clarification rests on triangulated empirical materials that are trustworthy. Trustworthiness was established by using Guba’s model of trustworthiness of qualitative research. The four criteria for trustworthiness are: credibility, transferability, dependability, and confirmability. When we started our research, we started by looking for a site that we would be using to provide our Service-Learning and ensuring that we had all the necessary documents with us as we went around looking for the site. We presented the letter that we had received from our lecturer to the site principal, making it easier for the site principal to

believe us and trust us with regard to where we come from. Record of everything done in the site was kept and pictures were taken, with the permission of the site principal. As data was collected the main aim was to collect data that is reliable and valid.

Credibility

Prolonged field experience and observation

Time was spent with the children at the center to gain their confidence and trust because, as they are autistic, they are easily overwhelmed and, in most cases, when they are introduced to unfamiliar people and things. Time was spent with them with the aim of observing the teachers in the center in terms of how they teach the children and also observing the children's daily routine. Moreover, we reflected on the experiences we had each day and made notes of the experiences as a group. Copies of anonymous transcriptions of interviews and field notes are attached to the research. The findings of the research were submitted and discussed with participants.

Transferability

Complete control of methodology, including verbatim quotes from the interviews. All of that was taken into consideration.

Dependability

Classroom, playground observation and interviews were used. The research methodology was fully described. Copies of anonymous transcriptions of interviews are attached to the research.

Limitations

Conducting research is not always smooth and fun with no challenges. Challenges are always there and sometimes cause the researcher to give up and quit continuing with the research. As we were also doing our Service-Learning and research, we also experienced challenges and there were obviously limitations to our study:

- Planning- is the most important factor of life as it is an act of professionalism, and it is also mostly important for researchers because planning does not only help one develop planning skills, but it helps the researchers to know their possible challenges before action which would help them to encounter those challenges beforehand. Knowing the possible challenges earlier would also help the researchers to manage their time properly. We could not always plan because the children we were working with were vulnerable and easily overwhelmed, so we were cautious that we might plan things that they would not be interested in. We designed the attendance register for both us and our participants so that they will be aware of the times that we are attending the site to prevent confusion and to also prevent time wasted.



- Time management- On our site, we had various activities which were provided by us, and which are part of the service learning. However, we were required to observe for 15 hours and provide our service learning for 10 hours; hence, we could not do other activities that we had planned and only ended up doing a garden.
- Funding- was also one of our limitations because we could not afford to buy all the resources that we actually needed to provide our service learning, which resulted in doing some of the planned activities and not doing them all as we had planned.
- Reliability – the participants may not always remain truthful because some people treasure their personal space and privacy, and that can produce false information.

Ethics

When conducting research that is going to involve human participants, a researcher needs to be aware of ethical issues, such as the safety of the participants and the privacy of the participants. In this research, we informed participants about every step that was going to be taken in conducting the research. With their permission pictures were taken while working with them and ensured that their identity is not exposed for their safety and security as well as protecting their privacy. As Morgan (1996) says to researchers, when conducting their research, they should always keep in mind that they are, in actual fact, entering the private spaces of their participants as they are researching. Reasonably, this raises several ethical issues that should be addressed during and after the research has been conducted. According to Elgesem (2002), researchers are obligated to respect the rights, needs, values, and desires of the participants. They caution researchers to be aware of these and other issues before, during, and after the research has been conducted.

Data Analysis

The data analysis of this study involved a combination of qualitative and quantitative approaches, including observations, interviews, and questionnaires. The researchers used purposeful sampling to identify and select information-rich cases related to the phenomenon of interest, which in this case was autism spectrum disorder (ASD).

Research Results

Service learning was provided to learn more about autism at a Special needs center in Sarnia, Pinetown. Basically, the center caters for children with multiple disabilities which includes autism. It caters for children from approximately 2 years and grooms them until they are ready to continue to other special needs centers. All children in this center showed different characteristics of being autistic as individuals, and that alone helped us accumulate as much information with respect to observing their behaviors. The teachers of the autistic children were also part of the participants. There were 4 of them, all female, and they were between the ages of 30- 38 years.

The qualitative analysis of this research involved observations at the care center (Whizz Kids) on how the autistic behave differently from other normal children, this included the observation of how they behave, learn, and interact with other people as well

as how their teachers cope with them. From what was observed, these children were not familiar with different textures, which could mean that less action was done at the center to introduce the children to different textures.

The research findings highlighted the lack of awareness about ASD in rural areas, leading to children with ASD being neglected and not receiving the appropriate education and support. The study also emphasized the challenges faced by children with ASD and their families in rural areas, such as limited access to special needs centers and insufficient resources in educational settings. The research aimed to address these challenges by engaging with teachers in developing a creative program for children with ASD, including activities like gardening and hand painting.

Figure 1

Planting Sessions with Autistic Kids



Planting sessions with autistic kids were for introducing the children to different textures (soil) with which they were not familiar, with the aim of observing how children respond to the new environment.



Figure 2
Playing Session (Instilling Social Skills)



Discussion

The aim of this study was to explore how well-aware primary teachers are about ASD with the aim of enhancing awareness. Participants in the primary school were 10. There were only 2 male teachers, and all the 8 teachers were female teachers. Judging from the numbers we were able to see, most teachers in the primary school did not have an idea of what autism is. What was also noticed was that other teachers were using their phones to assess google to get some of their answers right. However, we announced to them that they did not need to assess Google as the questionnaires needed their understanding. The issues of them assessing the search site made things difficult for us in terms of knowing if their answers were real or if they did not know anything at all about the autism disorder. Only 4 out of 10 participants had an idea of what autism spectrum disorder was. 4 out of 10 were able to answer the question of who becomes affected by the disorder. Half of the teachers knew that if a child was showing signs and symptoms of autism, professional help was needed. 3 teachers knew that the disorder was diagnosable. However, what caught our attention was that 9 out of 10 teachers said that they did not see the signs of autism in their learners in class, and they all admitted that they had never communicated with the parents of the children. Moreover, with regard to observing the signs from the learners, we assumed that this was because they had never really seen the signs of autism in learners in their classrooms.

Through the questionnaires, we were able to see that most teachers in the primary school did not have information about autism. Several previous studies have highlighted the importance of teachers obtaining professional development regarding ASD (Alexander et al.

2015; Barnhill et al. 2014). According to James (2010), it is essential in that the pre-service student teachers can address poverty, hunger, and develop an understanding of the learners that they teach. Teachers must have a broad understanding of ASD and the needs of students with ASD in educational settings (Hart & Malian 2013).

Figure 3

Picture of the Presentation Occurring in the Rural Primary School



Conclusions and Implications

This study emphasizes the significance of the study's findings and the impact of the intervention in raising awareness about autism spectrum disorder in a rural primary school. The study revealed that prior to the intervention, 99% of the teachers at the school had no knowledge about autism spectrum disorder. However, after the presentation and intervention, some teachers identified children in their classes exhibiting behaviors and symptoms consistent with autism. These teachers pledged to consult the parents of these children and suggest autism as a possible explanation, aiming to provide support for both the parents and the children.

The synthesis of the study underscores the primary aim of creating awareness about autism spectrum disorder in rural areas, where knowledge about the disorder is often lacking due to factors such as illiteracy and ignorance. The decision to focus on a local primary school in the nearest rural area was driven by the recognition that individual outreach in the



rural area would be challenging, leading to the selection of a primary school as the focal point for the intervention.

The conclusion highlights the practical implications of the study, demonstrating the potential for creating awareness and support for individuals with autism spectrum disorder in rural communities. It underscores the importance of targeted interventions and education in addressing the lack of knowledge about autism spectrum disorder in rural areas, particularly among teachers and the broader community. The study's findings and the commitment of the teachers to support children with autism reflect the positive impact of the intervention and the potential for fostering understanding and assistance for individuals with autism spectrum disorder in rural settings.

Acknowledgements

A special and warm gratitude to the principal of Whizz Kids Care Centre for allowing us to work with their children in their school, the teachers who supported and guided us at the school throughout our observation and services, Prof. Angela James who was not only our supervisor of this research but also the lecturer of the module Biology 420, who gave us the opportunity to work with communities and different people and finding our hidden capabilities in the process while doing our service learning. The principal at the local primary school welcomed us and allowed us to present our research to her school, and the teachers at the school, who were present during the presentation, gave us their time to listen to us, Gabisile Ngcobo who was my partner in this journey from start to finish. Last but not least, the children who were also our participants in this research and everyone else who contributed to the success of our research.

References

- Baio, J., Wiggins, L., Christensen, D. L., et al. (2018). Prevalence of autism spectrum disorder among children aged 8 years — autism and developmental disabilities monitoring network, 11 Sites, United States, 2014. *MMWR Surveillance Summaries*, 67(SS-6), 1–23. <https://doi.org/10.15585/mmwr.ss6706a1>
- Bernard, H. R. (2017). *Research methods in anthropology: Qualitative and quantitative approaches*. Rowman & Littlefield. <https://doi.org/10.1002/nur.20259>
- Blenner, S., Reddy, A., & Augustyn, M. (2011). Diagnosis and management of autism in childhood. *BMJ*, 343, Article d6238. <https://doi.org/10.1136/bmj.d6238>
- Burns, A. (1999). *Collaborative action research for language teachers*. Cambridge University Press.
- Cornwell, S. (1999). Interview with Anne Burns and Graham Crookes. *The Language Teacher*, 23(12), Article 510. https://www.researchgate.net/publication/282199978_Action_research
- James, A. (2010). Pre-service student teacher professional development: Research and service-learning. *Problems of Education in the 21st Century*, 26(1), 66-78. <https://www.scientiasocialis.lt/pec/node/470>
- Thanh, N. C., & Thanh, T. T. (2015). The interconnection between interpretivist paradigm and qualitative methods in education. *American Journal of Educational Science*, 1(2), 24-27. <https://doi.org/10.46303/RESSAT.04.01.6>
- Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative Social Work*, 1(3), 261-283. <https://doi.org/10.1177/1473325002001003636>

Schmidt-Nielsen, K. (1997). *Animal physiology: Adaptation and environment*. Cambridge University Press.

Spradley, J. P. (2016). *The ethnographic interview*. Waveland Press.

Received 12 October 2023; Accepted 15 December 2023

Cite as: Phetha, N. (2023). Enhancing rural teachers' professional development through pre-service teachers' service-learning. *Švietimas: politika, vadyba, kokybė / Education Policy, Management and Quality*, 15(1), 33-45. <https://doi.org/10.48127/spvk-epmq/23.15.45>



Nonkazimulo Phetha

Bachelor of Education, University of KwaZulu-Natal, Durban, South Africa.

E-mail: nonkangidi34@gmail.com; 218049845@stu.ukzn.ac.za

Website: https://www.linkedin.com/in/nonkazimulo-phetha-b31226232/?locale=es_ES

ORCID: <https://orcid.org/0000-0003-3849-5216>