

Dr Dipane Hlalele
University of the Free State
Email: hlaleledj@ufs.ac.za

Dr Cias T. Tsotetsi
*Corresponding author.
University of the Free State
Email: tsotetsict@ufs.ac.za

DOI: <http://dx.doi.org/10.18820/2519593X/pie.v34i3.3>

ISSN 0258-2236

e-ISSN 2519-593X

Perspectives in Education

2016 34(3): 29-42

© UV/UFS



Promoting student teachers' adaptive capabilities through community engagement

Abstract

The gap between student teachers and their ability to adapt to the school situation remains a challenge. The literature further indicates that there is an under-utilisation of students' abilities in an ever-changing curriculum that should be responsive to the challenges with which communities are faced. This paper aims to report on the students' adaptive capabilities through a school-initiated community engagement project. Approximately nine students were placed at schools on Saturdays while offering lessons to grade nine learners. A focus group interview was held with the students who offered natural sciences, mathematics and social sciences after the initiative. Findings of this study included raising the students' awareness for the need and ability to improvise in order to attend to the needs of the school and their ability to go out and seek information from other schools, the university and experienced teachers. The students were also able to leave the handouts they had designed for the school. The study provides insights into the adaptability of students in schools and recommends further empowerment spaces for student teachers and the school community.

Keywords: Adaptive leadership, community engagement, expertise, student teachers, rural ecologies

1. Introduction

A crucial element of community engagement is participation by individuals, community-based organisations and institutions that will be affected by the effort. Studies suggest that when community participation is strong throughout a programme's conceptualisation, development and implementation, long-term viability (sustainability) is more likely assured. The University of the Free State, QwaQwa campus (UFS-QQ) recently made a concerted effort to engage students in various projects and programmes that would remind them of the role that the university has to play in the social and economic development of the surrounding community.

For our students, it becomes what Paulo Freire refers to as "pedagogy of hope" (Freire, 1992: 9). Hope, "as an ontological need, demands an anchoring in practice" (Freire, 1992: 9) and this is more likely in our view, to afford students space to develop a critical awareness of society and their role in it, while simultaneously appreciating the

unique contributions that they can make. According to Mokhele and Jita (2010: 1764) as well as Ono and Ferreira (2010), through collaboration between universities and the community as a whole, both stand to benefit. We concur with Laredo (2007) and Stephenson (2011: 95) who assert that students at university need to think of their role in community engagement not simply as the provision of technical assistance that may be drawn from archives, knowledge or from research and development prowess, but as an opportunity for social leadership.

2. Understanding community engagement

Community engagement (CE) is historically associated with the third mission of universities through various labels such as outreach, community service, service learning and community service learning (Hlalele *et al.*, 2015). In this section, the authors attempt to elucidate the concept of community engagement. According to Brown and Schafft (2011: 35), a community refers to a group of people organised around certain commonly held interests and attributes that help create a sense of shared identity. It implies a web of affective relationships that are qualitatively different from those constituting other kinds of human groups. Being part of a community further implies long-term, continuous social interaction that contributes to the formation of personal, social and economic production and reproduction. As a result, members share a sense of belonging, of 'we-ness'. Mothowamodimo (2011: 23) draws from a few authors' opinions and asserts that a sense of community is,

...sets of people who may identify themselves with a place in terms of notions of commonality, shared values or solidarity in particular contexts. These values could be informed by the spirit of botho which is itself a community value. Other values include among others service, charity, respect, togetherness, and hospitality.

Furthermore, the word 'community' is also a broad term used to define groups of people; whether they are stakeholders, interest groups or citizen groups. A community may be a geographic location (community of place), a community of similar interest (community of practice) or a community of affiliation or identity (such as industry or a sporting club).

From the foregoing, we can deduce at least two points that bind a community together. These two points include reciprocity and mutual co-existence, the existence of oneself for self and others and sharing collective ownership. This blends well with the African philosophy of Ubuntu/Botho. The individual is seen in relation to the collective. In McMillan and George (1986: 6), distinction is made between two major uses of the term community. Firstly, there is the 'territorial' or geographical notion of the community-neighbourhood, town and/or city. The second is 'relational', concerned with the "quality of character of human relationships without reference to location". The general discourse in community engagement presupposes the fact that universities have, through time, ostracised and exonerated themselves from communities. Now that they are turning back to play their *de jure* role in communities, it seems as if it is a new trend. In our opinion, this is a reversal of a social travesty. Students are in fact, members of the community before coming to university. Thus, to reintroduce them to communities as if they are outsiders should not be taking place.

Community engagement brings the views of citizens to bear on the development of public services, as individuals who place their own needs within the broader context of the community of which they are a part (Rogers & Robinson, 2004). Whenever a group of practitioners gather to discuss 'what is engagement', a discussion about the diversity of language usually emerges. Depending on the situation in which one is working, 'engagement'

can cover consultation, extension, communication, education, public participation, participative democracy or working in partnership. In many instances, 'engagement' is used as a generic, inclusive term to describe the broad range of interactions between people. It can include a variety of approaches, such as one-way communication or information delivery, consultation, involvement and collaboration in decision-making and empowered action in informal groups or formal partnerships.

'Community engagement' is therefore a planned process with the specific purpose of working with identified groups of people, whether they are connected by geographic location, special interests or affiliation, to identify and address issues affecting their well-being. The linking of the term 'community' to 'engagement' serves to broaden the scope, shifting the focus from the individual to the collective, with the associated implications for inclusiveness to ensure that consideration is given to the diversity that exists within any community.

3. Community engagement for student teachers

Community engagement for student teachers is received with some heightened level of scepticism and is sometimes perceived as an add-on because of the compulsory teaching practice sessions for student teachers. However, some universities including the Australian Catholic University (ACU) and Stellenbosch University argue that through CE,

student teachers are able to engage in a variety of professional learning experiences that should increase their knowledge and skills and further their understanding of the potential for learning within the broader community. It encourages individualised learning as student teachers are able to work in environments that extend their personal strengths and intelligences, and challenge their pre-conceived notions about life and people (ACU, 2016: 2).

4. Adaptive leadership framework

This study is framed using adaptive leadership. Adaptive leadership is the practice of mobilising people to tackle tough challenges and overcome them by tapping into existing community capital. The study is couched within the adaptive leadership framework as espoused by Heifetz (2009). Heifetz, a Harvard University Professor of Public Leadership, maintains that our early ancestors' process of adaptation to new possibilities and challenges has continued over the course of written history with the growth and variation in scope, structure, governance, strategy and coordination of political and commercial enterprise.

According to Heifetz, Grashow and Linky (2009: 18) adaptive leadership is,

The practice of mobilizing people to tackle tough challenges and thrive. Adaptive leadership is specifically about change that enables the capacity to thrive. New environments and new dreams demand new strategies and abilities, as well as the leadership to mobilize them. Adaptation relies on diversity.

Heifetz's (1994: 69-73) theory of adaptive leadership provides a valuable contribution to understanding how communities may be engaged. In this theory, different strategies are followed in different contexts or situations. Three distinct situations leading to associate leadership responses/strategies/approaches were identified. The first and probably the most common one, is the 'Type I' situation where leaders conclude that the challenge requires only their or their team's technical expertise. According to Burke (2007: 419), Heifetz lamented this as an absence of leadership. Many communities are predisposed to the easiest possible

solution and may not challenge the expert's solution. In some cases, the expert may not have understood the situation to the same level as the members of the community would have. At this point, examples of many urban solutions that were used for rural ecologies bear testimony to this. A vivid example is the persistent rebuilding of schools in tornado-prone rural areas of the Eastern Cape (Mniki, 2009). In 'Type II' situations, leaders see a problem as requiring some interaction with the community and in so doing, view it as a shared challenge that warrants the involvement of the community. This approach, according to Burke (2007: 419), combines the leader's expertise, persuasive powers and the input of the communities. However, this type is characterised by limited leadership. In many instances, leaders and experts do not have a ready, feasible solution available to a seemingly intractable situation. This is what Heifetz (1994) calls a 'Type III' situation. While the communities may remain content with quick, tried and tested, easy solutions to the problems, Burke (2007: 419), calls for "an honest and courageous leader who would demonstrate the need for redefining the problem, changing priorities, and possibly greater sacrifice from the members". Type III provides space for dialogue. This may further clarify competing roles and responsibilities. However, it also depowers the expert to being a participant, who similar to all other members of the community, learns from others. For individuals in the position of power, this may not be an easy shift. For the purpose of this study, adaptive leadership refers to Type III situations. We sought, through the study, to place students in situations that make them full members of communities with no better posture and credence than that of the communities with which they engage.

Heifetz's theory further distinguishes between two types of problems communities face. Drawing from his (Heifetz) work titled *Leading Boldly*, Kania and Kramer (2011: 39) mention technical and adaptive problems. Technical problems are those that are well defined; the solution is known in advance and one or a few organisations may be able to provide this. Adaptive problems are by contrast, more intricate and complex; the solution is unknown and no single entity may be able to provide the appropriate service. Educational transformation and health renewal may be classified as adaptive problems. In adaptive leadership, it becomes extremely important for the leader to be fully 'present' to comprehend what is happening as well as understanding key issues and questions from within the social group. A facilitative, inclusive approach is key to a lasting impact (Heifetz *et al.*, 2009; Eubank *et al.*, 2012: 243). Kania and Kramer's work titled *Catalytic Philanthropy* refers to the fact that mobilising multiple organisations and stakeholders may be messier and slower. Examples have been noted in some rural ecologies where such communities resist the pace of modernisation and stick to their indigenous ways. For example, a rural community may decline a particular process because it does not augur well for or resonate with their ways of existence.

The adaptive leadership initiatives have the capacity to challenge and inspire students and afford them the opportunity to lead and stimulate change. According to Adaptive Leadership Intensive (2013: 3), students may further be exposed to:

Learning a powerful, pragmatic and transferable leadership model that can be used in personal, organisational and community settings; stepping out of their everyday environment, gaining insights into a range of social issues and 'reframing' their challenges through an experience of community engagement; reconnecting with their deepest sense of purpose and gaining new impetus to act on the toughest problems they face; developing greater understanding of group dynamics; increasing their awareness of their own behavioural patterns and how they impact others.

From the literature, we can find a link between adaptive leadership and what Hatano and Inagaki (1986) call 'adaptive expertise'. We are of the opinion that the continued practice of the former leads to the latter. Adaptive expertise involves habits of mind, attitudes and ways of thinking and organising one's knowledge that are different from routine expertise and which takes time to develop (Bransford, 2004: 3; Van den Berg & Schulze, 2014: 69). Contrary to routine expertise, which may be limited by inflexibility, overconfidence, bias and the context of their particular domains (Crawford & Brophy, 2006), adaptive expertise is likely to afford university students and parents approaches imbued with flexibility which are likely to prepare them for lifelong learning (Santrock, 2008; Van den Berg & Shulze, 2014: 69). Adaptive expertise also allows the transfer of knowledge and skills to novel problems or the use of current knowledge to invent new procedures (Van den Berg & Schulze, 2014: 69).

5. Research design and methodology

One of the campuses of the University of the Free State in South Africa was approached by a rural, Junior Secondary School for assistance with the teaching of natural sciences and mathematics in grade nine. In response to the above request, six student teachers volunteered to offer lessons on Saturdays. The school would transport student teachers to and from the school. The student teachers would also be offered a reasonable meal that the school could afford. By mid-year, the school requested three more student teachers to assist in the teaching of social sciences.

At the end of the intervention, towards the end of the year, we organised separate interviews for the student teachers and teachers. To enable us to establish how the intervention affected the student teachers' adaptive capabilities, we opted for a focus group interview. We used focus group interviews because they would allow participants to say more than they would do in a one-on-one interview (Kleve, 2009: 2001). We had one focus group with the nine student teachers and one with the three teachers. In a focus group interview, people are able to question and argue. They are more open to agree, enhance or disagree. Participants tend to self-disclose easily in such an interview (Ho, 2006: 5.2; Krueger & Cassey, 2000: 8). It is through arguments that different and complementary perspectives can emerge. Such an interview allows the interruption of a discussion at any stage to achieve clarity.

Of the nine student teachers, four of them were females. Five were males. All of them were final year undergraduate students, whose ages ranged from 22 to 28 years old. Questions were aimed at reflecting on how the project was experienced by teachers and student teachers. Questions were around the successes of the project, challenges encountered by the teachers and student teachers while the project was in progress as well as recommendations for future interactions.

Participants were given consent forms, which explained that they could withdraw at any stage without any negative consequences. They were also assured of their anonymity and confidentiality. Participants signed the consent forms. The interviews were tape recorded and transcribed. Our duty as researchers was to make meaning of the spoken words. For member verification, the transcribed and interpreted spoken words were returned to the participants.

We read the transcripts several times to make sense of them and then coded them according to similar themes (Creswell *et al.*, 2007). We then used critical discourse analysis with more emphasis on how things are done in society (Van Dijk, 1993). We concluded by infusing adaptive leadership in what has been said by the participants.

6. Results and findings

We found that student teachers' adaptive skills had improved through this community-initiated intervention. Five key issues emerged, which are discussed below.

Civic participation

Civic participation refers to an individual's engagement in the activities of his/her community (Longford, 2005: 4). Such an engagement could be through donating time to serve the community. Through the participation of the students in the project, they were able to donate their time to serve the community where the university is. As one of the challenges experienced during the period of the project, one student teacher stated,

You will find that sometimes you would be writing on Monday, and sometimes you are given material on Friday to prepare for Saturday. After the lesson you will have to come back and continue with the university's academic work.

The participation of the students was for the betterment of the learners' academic achievement. Students learned how to plough back into the community. Civic participation involves volunteering. Students were volunteering to donate their time and knowledge without remuneration. Such a donation of time was through preparation on Fridays as well as on Saturdays when they put into practice what they had prepared. The civic participation cultivated a sense of *ubuntu/botho* (humaneness) in the students. It was through selflessness and for the benefit of the learners that student teachers would sacrifice their time and energy to prepare lessons for Saturdays.

While the project initially targeted natural sciences and mathematics, social sciences was only included during the course of the year. According to one of the student teachers, Mr X, a teacher from the same school was approached by the social sciences teacher and requested assistance from the student teachers. "Mr X said that the social sciences teacher approached him saying that she needed help," said one student teacher. Mr A then requested the student teachers to teach the social sciences grade nine learners. By agreeing to teach those learners, the student teachers were demonstrating that they were willing to participate in activities that involved the community.

The learners were not the only beneficiaries from the civic participation of student teachers as highlighted in the preceding paragraph. Student teachers reported that the teachers also benefited.

So too the teachers themselves; they benefited a lot because we left some of copies of the things we were using.

By leaving the copies, student teachers were signifying growth and selflessness in their participation. Student teachers were signifying growth in that they were thinking ahead. The social sciences teacher could then use those copies long after the student teachers had intervened. Such a communal approach of that student teachers and teachers working together in the process of teaching and learning is in line with the African proverb that says, "it takes [a] whole village to bring up a child" (Quan-Baffour, 2012: 299; Tsotetsi, 2013: 227).

According to the sentiments above, the teachers used the power they had in order to request student teachers to present the lessons. The student teachers' duty was to obey the requests by the teachers. There are unequal power relations between teachers and student teachers.

Using adaptive leadership, the teachers and student teachers worked collaboratively to tackle the challenge of teaching concepts with which the teachers were not familiar. The project resulted in a win-win situation. Teachers benefitted in that student teachers taught certain concepts for teachers. Student teachers also left copies at school. The school community gained in that the learners were from the same community. The success of the learners meant an intellectual benefit for the community. Student teachers learned to give back to the community.

Improvisation

Student teachers reported that they had opportunities to improvise. They were provided with textbooks without sufficient information.

We were provided with textbooks with no information on the topics to be presented. For example, we were to teach about the gradient. But only to find that there is no information about the gradient. I then went to Mr Vusi at S Secondary School. I asked for information about the map work. He provided me with the topographical and ortho-photo maps. This made the map work possible, as some of the calculations were to be taken from the map.

Student teachers learned to improvise. Moving from the school where they were requested to assist to S Secondary School was a mirror that demonstrated that they were improving in their adaptive knowledge and skills to suit the context. It was a well thought out idea that student teachers could contact Mr Vusi. These thoughts and actions were implemented through improvisation.

"We found that at the school there were no maps. We tried to download some maps from the Internet, but we could not get the correct one," one of the student teachers added.

So I have learned that if I am given a topic to present, I need to search for information instead of folding my arms.

As student teachers, one would expect them to accept that it was not their fault that the textbook did not have enough information about maps. In order to respond to the challenge, student teachers sourced the Internet and then consulted Mr Vusi. The above student teacher's text weight is carried by the following words, "...I need to search information instead of folding my arms".

Implicitly, the student teacher had learned to adapt. It is in such spaces where hope anchors and manifests itself. The anchored hope urges the student teacher to actively own the problem as well as the process and therefore seek solutions.

One of the student teachers added the following comment,

In maths, some of the topics that are there in the syllabus are not there in the textbooks. We had to use the grade 10 textbooks to cover the grade nine work. Although some topics were included in the grade nine syllabus, they were basically in the grade 10 textbooks.

Student teachers showed a measure of growth and the ability to improvise. Although the school where the student teachers were placed did not have grade 10 classes, the student teachers could adapt and move to other schools that had grade 10. Instead of blaming the mathematics teacher for not giving them sufficient information, they improvised and sought information. It was through improvisation and improved adaptive capabilities that the student teachers could compare the textbooks to the syllabus.

Improvisation was not only about seeking information. Student teachers reported that they had to sacrifice and postpone their study times.

Sometimes you have to submit assignments on Monday. We spent most of our Saturday time at school. When we returned we were generally tired but we managed to keep a balance.

Student teachers were aware of the fact that they needed to pass the courses for which they were registered. However, as highlighted above, they opted to assist learners first. They would tackle their university work only after spending the greater part of Saturday teaching grade nine learners. The self-fulfilment of the student teachers was echoed by one student teacher's comments "So it helps to improvise when there are no resources".

According to CDA, the cultural practice in the society is that people will wait for somebody to take initiative in solving a problem. In the above civic participation, the schoolteachers took the initiative. They invited student teachers to come and be of assistance to the school. In this regard, teachers took a step to better the unsatisfactory condition of having to teach SS while they were unable to teach map-work. They acted instead of waiting for the government officials.

Student teachers on the other hand learned to give back to the community. Adaptive leadership also relies on "two heads are better than one" (Quan-Baffour, 2012: 300). With teachers and student teachers tackling the challenge of teaching and learning, a workable solution was reached. The teachers and student teachers contributed in the teaching of certain concepts as alluded to above.

7. Personal and professional growth

Our findings showed that student teachers and learners demonstrated growth. "For us as future teachers" said one student teacher "we gained experience". The student teacher was aware that she had only the theory from the university. Putting the theory into practice was another step in her growth. In line with the first student teacher, another student teacher reported, "I have learned to link what is being done at the university with what takes place in schools". Experiential learning was complementing the theory learned at university. Teachers stated that the student teachers also showed some professional growth. "Ooh yes...the student definitely gained practical exposure as we all know that at the institution they are taught more theory than practice," commented one teacher "so this project gives them a platform to practise in class". Moreover, a practice of planning lessons together enabled student teachers to learn from one another.

On my side, everything was well. I think like, I gained a lot from [other student teachers]. On the physical sciences part I was not good. So I gained a lot on some topics, like electricity was a very tricky part for me. Working together as a group gave me that confidence. I got to understand it and felt confident. I think working together was very helpful to me.

Teachers disclosed that their learners were active after being taught by the student teachers "Yes, the learners were interested in being taught by students" said the social sciences teacher "especially in SS map-work where there are calculations, as I am not familiar with calculations". We assumed that the social sciences teachers were using the same methods of teaching as our student teachers. However, the above teacher's words show that the student teachers'

presentations supplemented what the teacher had been doing, especially in map-work. The way the student teachers presented their social sciences lessons taught the learners to be active. Consequently, the learners' activity in class was evident.

Teachers felt that they had learned from the interaction with the student teachers. "Teachers for sure benefited from this as they were exposed to different methodologies on how to treat other difficulties," asserted another teacher. One would not expect teachers to learn from inexperienced student teachers but according to the teacher who had commented, the opposite happened. Professional growth remains continual. Additionally, student teachers confirmed that they experienced a sense of professional growth after the intervention as they managed to teach challenging concepts.

We also taught concepts that some teachers were not comfortable to teach. As student teachers we were able to explain those concepts to learners so as to make the job of teachers easier.

Furthermore, student teachers were able to tackle the calculations in social sciences. "Some of the things the teachers didn't know at all, especially the calculations" commented one student-teacher "on the theory part, they were OK. But they did not know how to do things the proper way". Student teachers testified that the intervention had been an immense contribution towards their professional growth.

Adaptation relies on diversity. Complementary teaching methodologies made it easier for learners to understand concepts further. In addition to how teachers had been presenting their lessons, student teachers' method of planning together and teaching concepts that teachers were not familiar with were an advantage to the learners. Teachers also benefitted in that student teachers taught concepts that teachers would have to teach in the forthcoming years. The project, using adaptive leadership as a theoretical framework, motivated the school and the university to work together.

Cooperation

Our findings revealed that students worked together as they were preparing to go to their classes. "We always prepared in groups" one lively student teacher announced "both in natural and social sciences we prepared together". Student teachers would first agree on what should be taught, then prepare together. "In terms of presenting, two teachers would go to a different class," detailed another student teacher and "both of them would be presenting the same topic".

In addition, our findings demonstrated that learners from other schools in the area where the study took place also attended. "Neighbouring schools also benefitted from this project as learners were combined to get knowledge," reported a teacher from the school where the study took place. It was through the cooperation and unselfishness from student teachers, teachers and learners that allowed the intervention by the student teachers to reach a broader ambit. As highlighted in the discussion on adaptive leadership, an inclusive approach is fundamental when tackling a problem whose solution is unknown.

A sense of appreciation

Through the intervention, student teachers had a feeling of self-worth. Student teachers were awarded certificates by the school for the work they had done. Parents, as well as the learners could even see the benefits from the intervention. A student teacher said the following,

The community benefited as the teachers and learners who benefited are from the same community, especially last week; they were there during the award ceremony. So, some of them were happy to see that the university was doing something especially in the natural sciences, social sciences and mathematics.

Teachers also reported that parents appreciated the work performed by student teachers. "This means the parents were happy to see that their children are given extra time to learn" remarked one teacher "and it showed that the school and university are working together". Another teacher also reported that teachers appreciated the work done by the student teachers. "It was a pleasant experience to see how our learners participated and how they related to the students". Implicitly, the student teachers' work was admired.

Moreover, two teachers expressed their appreciation about the value of the intervention:

We benefited significantly from this project as our learners became open-minded and they participated a lot during class hours. Different methodologies were introduced in class that motivated learners to become interested a lot in maths.

In addition, different methodologies were of much help and learners' minds were now broadened so that they could now think for themselves.

While unequal power relations exist between the teachers and student teachers, the project enabled both parties to tackle the challenge of learners understanding concepts and be energetic when participating. Through type III adaptive leadership, the challenge as experienced earlier by the school, was overcome. Student teachers were given an opportunity to stimulate change. On the other hand, they also received certificates and experiences that prepared them for lifelong learning, thereby enhancing their adaptive expertise.

8. Discussion

Our findings revealed that students' adaptive capabilities had improved. Five key issues emerged from the intervention. Firstly, student teachers were able to plough back knowledge into the community through *civic participation*. Accordingly, meaningful community participation extends beyond physical involvement to include generation of ideas, contributions to decision making and sharing of responsibility. They gave of their time for the benefit of the school and the learners. Student teachers were not paid for their participation, teaching the learners on Saturdays, where after they would attend to their university academic work. Furthermore, they left the material that they had been using for the benefit of the learners and teachers. It was out of love and selflessness that they did so. Beneficiaries included teachers, student teachers, learners and the community as a whole. It seems that the students were challenged to tap into adaptive expertise.

According to Lin, Shwartz and Hatano (2005) adaptive expertise is characterised by procedural fluency that is complemented by an explicit conceptual understanding that permits adaptation to variability. Educational environments that support active exploration through three tiers foster the acquisition of adaptive expertise. The first tier highlights the variability inherent to the task environment. The second tier highlights the variability permitted in the individual's procedural application. The final tier highlights the variability of explanation permitted by the culture, such that people can share and discuss their different understandings. The implications for the classroom culture are direct and we consider brief examples from our own work on each of these tiers. We focus on how to help students and notice important sources

of variability. Life always contains variability but people can overlook important differences by applying well-worn schemas.

Secondly, student teachers learned to *improvise*. Their adaptive skills were displayed by their ability to seek information from other textbooks, besides the textbooks given to them by the subject teachers. Student teachers downloaded information from the Internet and compared it with what the syllabus expected. Where the downloaded material could not address the syllabus requirements, student teachers went to other schools to obtain textbooks and maps. They therefore learned to explore ways to find a solution when confronted with a problem.

Thirdly, the participants experienced *personal and professional growth*. Learners' participation in class improved and their exposure to different methodologies resulted in their being more active in class. Approaches by the teachers and the student teachers complemented each other. Student teachers had the opportunity to link the theory taught at the university to what takes place in practice. Thus, student teachers gained experience and exposure. Teachers and student teachers thus benefitted from each other, as teachers could learn from the different methodologies used by the student teachers.

Fourthly, the intervention enabled participants to *cooperate*. Student teachers learned from one another as they were preparing lessons together. For student teachers who were teaching natural sciences, planning lessons together became even more beneficial to them. Natural sciences consisted of two sections: life sciences and physical sciences. For those student teachers who were specialists in teaching life sciences, planning together with the physical sciences student teachers helped them to become more confident about teaching physical sciences concepts. The same applied to the student teachers who were specialists in physical sciences. They benefitted from those student teachers who were life sciences specialists.

Fifthly, the intervention enabled the student teachers to experience a *feeling of appreciation*. They were awarded certificates for the work they had done. The school held a function at which, amongst other things, the university and the student teachers' engagement in the betterment of the learners' academic performance was recognised. The organised function enabled parents and the community to appreciate the student teachers' contribution. Teachers, furthermore, valued the work done by the student teachers.

9. Conclusion

Our findings demonstrated that through cooperation, the university and the community could tackle challenges. Such cooperation gives student teachers an opportunity to develop adaptive skills and expertise. The current study confirms that through cooperation, communities are able to communicate and share their ideas. Through such interaction, student teachers are given an opportunity to plough back into the community their knowledge and develop a sense of self-worth for their contribution. Students at universities need to think of their role in community engagement not simply as the provision of technical assistance, knowledge of research and development prowess but as an opportunity for social leadership and change. This is when Freire's hope is anchored in practice.

10. Implications for theory and practice

Adaptive leadership

The initiative calls for policy designers of the faculties of education to give student teachers more time in schools to be prepared for their real world of work. Such an initiative seems to have a potential of student teachers complementing teachers' work.

References

- Adaptive Leadership Intensive. 2013. Available at <http://leadership.benevolent.org.au/community/event/2013/05/16/adaptive-leadership-intensive-melbourne> [Accessed 3 December 2014].
- Australian Catholic University. 2016. *Community engagement opportunities 2016*. Available at https://www.acu.edu.au/about_acu/faculties,_institutes_and_centres/centres/iace/students_and_alumni/ce_opportunities [Accessed 6 May 2016].
- Bransford, J. 2004. Thoughts on adaptive expertise. Unpublished manuscript. Beijing, China: SINA corporation.
- Brown, D.L. & Schafft, K.A. 2011. *Rural people and communities in the 21st Century: Resilience and transformation*. Cambridge: Polity Press
- Burke, B.F. 2007. Adaptive leadership as a facilitator of public engagement on environmental sustainability issues. *Administrative Theory & Praxis*, 29(3), 412-431.
- Crawford, V.M. & Brophy, S. 2006. Adaptive expertise: Theory, methods, findings, and emerging issues. In V. Crawford, & De Arment, S. Brophy (Chairs). The Adaptive Expertise Symposium. *Symposium conducted at the meeting of SRI International*, Menlo Park, CA.
- Creswell, J.W., Ebersöhn, L., Eloff, I., Ferreira, R., Ivankova, N.V., Jansen, J.D., Nieuwenhuis, J., Pietersen, J., Plano Clark, V.L. & Van der Westhuizen, C. 2007. *First steps in research*. Pretoria: Van Schaik.
- Eubank, D., Geffen, D., Orzano, J. & Ricci, R. 2012. Teaching adaptive leadership to family medicine residents: What? Why? How? *Families, Systems & Health*, 30(3), 241-252. <https://doi.org/10.1037/a0029689>
- Freire, P. 1992. *Pedagogy of hope: Reliving pedagogy of the oppressed*. New York: Continuum.
- Hatano, G. & Inagaki, K. 1986. Two courses of expertise. In H. Stevenson, H. Azuma, & K. Hakuta (Eds.). *Child development and education in Japan*. New York: Freeman. pp. 262-272.
- Heifetz, R.A. 1994. *Leadership without easy answers*. Cambridge MA: Belknap Press.
- Heifetz, R., Grashow, A. & Linsky, M. 2009. *The practice of adaptive leadership*. Boston, MA: Harvard Business Press.
- Hlalele, D., Manicom, D., Preece, J. & Tsoetsi, C.T. 2015. Strategies and outcomes of involving university students in community engagement: An adaptive leadership perspective. *Journal of Higher Education in Africa*, 13(1&2), 169-192).
- Ho, D. 2006. The focus group interview: Rising to the challenge in qualitative research methodology. *Australian Review of Applied Linguistics*, 29(1). 5.1-5.19. <https://doi.org/10.2104/ara10605>

- Kania, J. & Kramer, M. 2011. Collective impact. *Stanford Social Innovation Review*, 9(1). 36-41.
- Kleve, B. 2009. Use of focus group interviews in mathematics educational research. *Proceedings of CERME 6*, January 28 to February 1st. INRP: Lyon France.
- Krueger, R.A. & Casey, M.A. 2000. *Focus groups*. Thousand Oaks CA: Sage Publications. <https://doi.org/10.1037/10518-189>
- Laredo, P. 2007. Revisiting the third mission of universities: Toward a renewed categorization of university activities? *Higher Education Policy*, 20, 441–456. <https://doi.org/10.1057/palgrave.hep.8300169>
- Lin, X., Shwartz, D.L. & Hatano, G. 2005. Toward teachers' adaptive metacognition. *Educational Psychologist*, 40(4), 245-255. https://doi.org/10.1207/s15326985ep4004_6
- Longford, G. 2005. *Community networking and civic participation in Canada: A background paper. CRACIN Working Paper No. 1, February 2005*. Toronto: Canadian Research Alliance for Community Innovation and Networking.
- McMillan, D.W. & George, D.M. 1986. Sense of community: A definition and theory. *Theory and Concepts*, 14(1), 6-23. [https://doi.org/10.1002/1520-6629\(198601\)14:1<6::aid-jcop2290140103>3.0.co;2-i](https://doi.org/10.1002/1520-6629(198601)14:1<6::aid-jcop2290140103>3.0.co;2-i)
- Mniki, S. 2009. Socio-economic impact of drought induced disasters on farm owners of Nkonkobe local municipality. Unpublished Master's dissertation. Bloemfontein: University of the Free State.
- Mokhele, M.L. & Jita, L.C. 2010. South African teachers' perspectives on CPD: A case study of the Mpumalanga Secondary Science Initiative. *Procedia Social and Behavioral Sciences*, 9(10), 1762-1766. <https://doi.org/10.1016/j.sbspro.2010.12.396>
- Mothowamodimo, W.O. 2011. Reclaiming the river's edge: The role of landscape architecture in creating meaningful places for a shared sense of community in Mamelodi. Unpublished PhD thesis. Pretoria: University of Pretoria.
- Ono, Y. & Ferreira, J. 2010. A case study of continuing teacher professional development through lesson study in South Africa. *South African Journal of Education*, 30(1), 59-74.
- Quan-Baffour, K.P. 2012. Partnership in leadership: Exploring the emerging partnership between schools and communities in rural South Africa. *Beauty and the Beast: towards turning the tide in Education, Conference proceedings of the Education Association of South Africa*. Sun City. 10-13 January 2011. Pretoria: Van Schaik. pp. 296-312.
- Rogers, B. & Robinson, E. 2004. *The benefits of community engagement: A review of the evidence*. London: Active Citizenship Centre.
- Santrock, J.W. 2008. *Adolescence, Twelfth edition. Adolescent Psychology*. McGraw-Hill Higher Education.
- Stephenson, M. (Jr) 2011. Conceiving land grant university community engagement as adaptive leadership. *Higher Education*, 61, 95–108. <https://doi.org/10.1007/s10734-010-9328-4>
- Tsotetsi, C.T. 2013. The implementation of professional teacher development policies: A continuing perspective. Unpublished PhD thesis. Bloemfontein: University of the Free State.

Van den Berg, G. & Schulze, S. 2014. Teachers' sense of self amid adaptation to educational reform. *Africa Education Review*, 11(1), 59-76. DOI: 10.1080/18146627.2013.853567. <https://doi.org/10.1080/18146627.2013.853567>

Van Dijk, T.A. 1993. Principles of critical discourse analysis. *Discourse & Society*, 4(2), 249-283. <https://doi.org/10.1177/0957926593004002006>

Acknowledgements



This work is based on the research supported by the University of KwaZulu-Natal Teaching and Learning Fund and National Research Foundation of South Africa (grant number 82616). Any opinion, finding and conclusion or recommendation expressed in this material is that of the author (s) and the university and NRF do not accept any liability in this regard.

