
11-21-2021

Identification of Needs of Community Schools of Kavre, Nepal for Educational Improvement

Roshani Rajbanshi

Kathmandu University, roshani@kusoed.edu.np

Parbati Dhungana

Kathmandu University School of Education, parbati@kusoed.edu.np

Bal Luitel

Kathmandu University School of Education, bcluitel@kusoed.edu.np

Follow this and additional works at: <https://nsuworks.nova.edu/tqr>



Part of the [Quantitative, Qualitative, Comparative, and Historical Methodologies Commons](#), and the [Social Statistics Commons](#)

Recommended APA Citation

Rajbanshi, R., Dhungana, P., & Luitel, B. (2021). Identification of Needs of Community Schools of Kavre, Nepal for Educational Improvement. *The Qualitative Report*, 26(11), 3551-3562. <https://doi.org/10.46743/2160-3715/2021.4975>

This Article is brought to you for free and open access by the The Qualitative Report at NSUWorks. It has been accepted for inclusion in The Qualitative Report by an authorized administrator of NSUWorks. For more information, please contact nsuworks@nova.edu.



Qualitative Research Graduate Certificate
Indulge in Culture
Exclusively Online • 18 Credits
LEARN MORE

NSU
NOVA SOUTHEASTERN
UNIVERSITY

NOVA SOUTHEASTERN

Identification of Needs of Community Schools of Kavre, Nepal for Educational Improvement

Abstract

Needs assessment is a method to find out the current needs of the school that can be considered for providing quality education to the students. This paper presents the needs of five community schools intending to bring changes in the school community. Thus, this paper aims to identify the needs of the five community schools of Kavre, Nepal, and recommend possible interventions. In-depth interviews, observations, and focus group discussions with different stakeholders provided rich data for this study. School-specific needs were identified from the data based on which recommendations are made for intervention, which are: Teacher professional development, contextualized curriculum, use of technology, and development of school gardening and urine diverting toilet, which would ultimately help to improve education fulfilling the fourth goal of sustainable development.

Keywords

needs assessment, professional development, contextual curriculum

Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

Acknowledgements

The authors would like to thank (Norwegian Agency for Development Cooperation) for providing financial support, Rupantaran project and all team members of Rupantaran for their constant support and Janahit Secondary School, Saraswoti Primary School, Dapcha Secondary School, Kali Ganga Primary School and Navin Primary School for their contribution.

Identification of Needs of Community Schools of Kavre, Nepal for Educational Improvement

Roshani Rajbanshi, Parbati Dhungana, and Bal Chandra Luitel
Kathmandu University School of Education, Hattiban, Lalitpur, Nepal

Needs assessment is a method to find out the current needs of the school that can be considered for providing quality education to the students. This paper presents the needs of five community schools intending to bring changes in the school community. Thus, this paper aims to identify the needs of the five community schools of Kavre, Nepal, and recommend possible interventions. In-depth interviews, observations, and focus group discussions with different stakeholders provided rich data for this study. School-specific needs were identified from the data based on which recommendations are made for intervention, which are: Teacher professional development, contextualized curriculum, use of technology, and development of school gardening and urine diverting toilet, which would ultimately help to improve education fulfilling the fourth goal of sustainable development.

Keywords: needs assessment, professional development, contextual curriculum

A school is a complex system that has many interconnected components, which makes it complete. Each component has its strengths and weaknesses. Finding the current status and identifying the issues of each component has to be done regularly to bring the school into shape. In line with this, Witkin (1977) states that needs assessment is a vital part of educational planning as well as evaluation to set priorities of needs of the school. Finding the problems or the needs is the first step to solve the problem. Normative needs (needs defined by experts), comparative needs (needs of one area compared to needs of another area), felt needs (needs experienced), and expressed needs (needs that are expressed and evident) are different kinds of needs identified by Rothman and Gant (1987). Out of these different types of needs, this study deals with the felt need, which incorporates the problems or needs identified by the participants themselves, but it does not follow the discrepancy model “needs identified as gaps between the ideal situation and the actual situation” (Hannum, 2013, p. 29). As advised by Grant (2002), the purpose of finding the needs of the school is to “help curriculum planning... improve practice and safety or offer individual feedback and educational interventions” (p. 157). Thus, this study explores the contextual issues or needs of five community schools to conduct action research.

While doing so, many times, the needs of the funding agency cast a shadow on the participants’ actual needs as the question arises *who thinks there is a problem?* To avoid such situations and to identify the educational needs of the schools, to design and implement relevant educational programs, this study was conducted by *Rupantaran*, which means transformation, conducted participatory action research to find the needs of the schools. With the aims of providing new knowledge by improving the quality of teaching and learning and fulfilling sustainable development goals regarding education, hygiene, and livelihood, *Rupantaran* conducted participatory action research in five schools of Namobuddha Municipality. Participatory action research is conducted to find the needs of the participants exploring the local culture and practices. Even though this study follows a developmental perspective, an

attempt is made to avoid developmental perspective with a focus on the characteristics identified by Wright and Geroy (1992) that needs assessment should be grounded in organization's culture; it should be proactive versus reactive; the training should meet the actual needs; and various individuals should be affected by the training. Thus, finding "the right thing to do [intervention]" (Kaufman, 1988, p. 21) in community schools by incorporating local people and their wisdom is the basis for doing this action research in a participatory approach. Needs assessments are mostly done in the health sector (medicine) and education to plan for intervention. In the case of Nepal, finding needs for intervention to improve education is rarely done, which shows there is a necessity to do a needs assessment in schools.

The purpose of this study was to identify the needs of the five community schools in rural settings to bring beneficiary changes in the school education through action research. Based on the purpose of this study, the research questions that guided this study are "*what are the current needs of five community schools of Namobuddha Municipality?*" The rationale of this study is that assessing the needs is essential to maintain the gap between the actual condition and desired condition, and the needs assessment helps fill the gap by providing intervention. In addition, Shrestha (1977) suggested that for a proper intervention in the education sector, identification of the needs area is a logical starting point. The needs of each school differ; however, this study enforces the fact that needs assessment is a valid and starting point to identify the areas that needs intervention. Thus, this study was conducted to determine the felt needs which provide contextually relevant references to those who want to bring changes in school education by finding the contextual needs of the schools.

Rupantaran aims to improve the quality of teaching and learning at the basic education level in Nepal through innovative, transformative, and contextualized pedagogical approaches. For which, *Rupantaran* is piloting innovative approaches at schools in diverse settings to stimulate improvements in education, health, sustainability, productivity, and livelihood prospects. Masters, MPhil, Ph.D., and post-doctoral fellows are conducting research and are closely working with school stakeholders to improve the capabilities and to strengthen the overall performance of the schools. The authors are engaged in the project as a post-doctoral fellow, a Ph.D. student, and a primary investigator who are taking the lead in conducting various research in the school. Needs assessment is a crucial step to find out interventions that will address challenges identified by the schools.

Methods

To give importance to the participants' voices, we conducted a qualitative study. This qualitative research is conducted in a natural setting where the researcher acted as an instrument (Lincoln & Guba, 1985). Intending to bring transformation, not only in the schools but also in the participants, we conducted participatory action research with an emancipatory approach (Kemmis, 2008). Participatory action research is an open inquiry involving both the researcher and the participants to find problems and take action together to solve the problem.

The setting began by exploring the school community and its culture. Living in the school community, understanding their life, constantly communicating with the school personnel, exploring indigenous knowledge, we focused on mapping meanings, practices, and identities of the school personnel. Furthermore, we developed the tools based on the meetings and discussions with stakeholders so that the felt needs of the school could be identified to conduct participatory action research.

We chose five community schools of Namobuddha Municipality, Nepal, two of which are secondary schools and three of which are primary schools. For anonymity, we named the schools Jana Priya Secondary School, Deep Jyoti Secondary School, Karuna Primary School, Nava Jivan Primary School and Shree Janata Primary School. We involved the potential

clientele in identifying educational programs to achieve the desired outcomes (Waters & Haskell, 1989), to assess the school community, school inventory, school evaluation, and social diagnosis allowing school members to participate and to be able to speak for themselves. Different stakeholders—teachers, students, headteachers, parents, community members, and members of the school management committee and parent-teacher association were the participants who were involved in assessing the needs of the schools to make schools and the stakeholders accountable for the emergent needs.

Literature mentions questionnaires and interviews as standard data collection methods for needs assessment (Sava, 2012). Sava (2012) suggested different data collection methods for finding the needs, out of which interview, focus group discussion, and observation were considered for this study. We conducted one in-depth interview with the headteachers and one teacher of each school; we conducted one focus group discussion (FGD) with parents, teachers, school management committee and students, which provided rich data for this study. We collected the data during April, May, and June of 2018 based on the time provided by the schools.

We recorded the interviews and focus group discussions which we transcribed and later translated. During data analysis, we reduced the collected data; then, we arranged and organized the reduced data on identified categories; next, we displayed the data compressed and assembled data to draw conclusion (Miles & Huberman, 1994). These conclusions identify needs of the schools, we also presented these conclusions to the schools for verification. Prolonged engagement in the field, sharing the results with the participants, and triangulation of the data through various means provide trustworthiness for this study (Lincoln & Guba, 1985).

We took approval from Nepal Health Research Council to conduct research. We also obtained a Memorandum of Understanding from the district office in advance before we started the project. We informed the headteachers about the project and took consent in advance before proceeding with the needs assessment for ethical consideration. Besides that, before conducting focus group discussion and interview, we took consent from the participants. In the case of the students, we took parental consent, and when that was not possible, we took consent from their teachers. We gave pseudonyms to protect the privacy of the participants.

Findings

Through the focus group discussions and interviews, some of the felt needs that emerged from the data are teachers need professional development to improve their content knowledge as well as pedagogical knowledge; the curriculum needs to be contextualized and local resources needs to be used as teaching-learning materials; use of available technology needs to be done to improve teaching and learning; and use of urine and gardening needs to be connected with the curriculum.

School-based Teacher Professional Development

A way of improving teaching and learning is through professional development, where teachers can engage professionally and enhance their skills and competencies. Most of the teachers of the five schools had obtained formal training at different phases of their career; however, only some of the teachers had attended training in the last five years. More importantly, none of the schools had taken any initiative to conduct continuous professional development for the teachers where teachers could enhance their competencies and skills in the school with their colleagues. The data from interviews and focus group discussions provided evidence for a need for professional development.

During focus group discussion, the teachers from Deep Jyoti School mentioned that they had not taken any effective educational training. The majority of the teachers said that they attended training, but they were not applicable to an actual classroom setting. Early childhood development teachers and primary-level teachers also felt a need for hands-on training on play-based methods to engage students in learning. The main theme of the focus group discussion was that the teachers need training to update themselves on the current curriculum and pedagogy. Even the school management committee (SMC) members of the same school and the community members mentioned that teachers should be provided with training that would update them. Mahendra, a Mathematics teacher, said:

School curriculum and textbooks change frequently, but usually, we are not updated. We neither get any information about it nor any facilitation program to adjust to those changed curriculum and textbooks. Last year, when I went to see my friend in the city, he told me about the changed curriculum. I was shocked. When I returned to school, I looked into the particular section of the curriculum, and I found him correct.

The School Sector Development Plan (SSDP), guided by the Constitution of Nepal, provides an educational framework for the country. SSDP was written with “participatory and inclusive approach with continuous consultation and validation of different stakeholders and beneficiaries” (Ministry of Education, 2016, p. v) and had the vision to have safe schools with skilled, committed, and qualified teachers. However, after the curriculum gets finalized, the schools and the stakeholders are not informed of the changes. The local district office and the Ministry of education hardly take initiatives to update the teachers of the community schools. The teachers who had access get updated and the teachers from rural schools are left out. In the community schools, teachers know about those changes when they receive books incorporating the changes.

Teachers also heavily depend on textbooks for the content. Even though the teachers are aware that textbooks are only a medium, teaching is tied to textbooks. In Karuna Primary School, a female teacher, Ms. Saru finds her role to provide necessary information to the students to make them successful. Also, during focus group discussion, a teacher informed that he/she repeats the information to make students clear on the content. Even though practical education and the local curriculum seem important, teachers feel obligated to finish the course, which they refer to as the textbook. During FGD, teachers from Deep Jyoti School mentioned, “We have to teach according to the need of the curriculum beyond that we cannot teach extra topics which are not related to curriculum.” This shows that teaching is limited to covering the textbook. The view of the teachers has not moved beyond information providers, which aligns with the *banking system* that Freire criticizes.

Another fact that emerged from the data is that most of the teachers from Jana Priya School had not attended any professional development recently. Here are some statements from some teachers showing disappointment for not receiving any professional development training. Ms. Banu, an early childhood development (ECD) teacher, took training a while ago. She said, “I had participated in the TPD [teacher professional development] program some 12 years ago, and I have not been updated thereafter.” Furthermore, she added, “I have already forgotten what was taught in that two-day session. I don’t remember any. I feel the training was not very effective as far as I remember.” In addition, a primary science teacher added, “Back then, I was an active teacher. I used to enjoy my classes. I participated in primary education training some 28 years ago and have not attended any training after that until now.” Another teacher also said:

Last year I participated in a child-centered approach of teaching and learning training, but I couldn't replicate it in my classroom. Training is not given in the actual classroom; and therefore, most of those training are irrelevant. I want the trainers to come to our classes and teach us in the actual setting rather than mock-teaching in the training sessions. The way we play the role of the students and teachers in training is not the same when we engage our students in our classroom.

Even though teachers get training, the relevance of such training is also questionable. How relevant are those training now that were taken a decade ago and that are not applicable to their classroom? Society and the curriculum have changed and so have the students of today. The SSDP mentions integration of ICT, continuous assessment system (CAS), gender equity and social inclusion, and inclusion of children with disabilities. Teachers who have been teaching for more than two decades and who have not received any training in the past five years, how will they be engaged in student-centered pedagogy or inquiry-based teaching-learning emphasized by the National Curriculum Framework document (Ministry of Education, 2007). These are foreign concepts to them.

Similarly, during FGD, teachers of Shree Janata School mentioned using different teaching strategies in the classrooms, but they focused on reading out paragraphs, repeating time and again, and letting students read after them. Another noticeable practice was that the teachers write difficult words on the board and make the students write in their notebooks. The same applies to the questions and answers from the textbook. This teaching approach where the students do not think of possible and creative answers but memorize the answers does not prepare the students to be independent learners, creative, and critical thinkers. This makes students depend on the teacher and their creativity, critical thinking, and analytical skills come under the shadow.

Quality education depends on many factors and one of them is the teacher's pedagogical approach. When teaching is textbook-focused and learning is limited to memorizing the facts, quality education is out of the question. Furthermore, one of the SSDP's strategic interventions is to improve pedagogical practices of the teachers, which is possible through teacher professional development. However, the evidence provided above uncover the context responsive needs of the teachers. Although all schools seem to have almost similar needs, they are different which cannot be addressed fully through centrally prescribed training rather we need to look for alternatives. Either teacher needs hands-on activities following an andragogical approach (Conner, Dev, & Krause, 2018) or minds-on activities that need to be further explored. Here, we see the need for hearts-on and minds-on activities, that is, collaboration and reflection being together in their own place exploring possibilities rather than looking for what we do not have and what we cannot do. According to Zeichner (2003), school-based research proves a transformative professional development activity for teachers. In line with Lambirth, Cabral, and McDonald (2019), transformational professional development enhances teachers' professional agency. School-based collaboration and reflection is the approach that does not look for experts to teach something new, but creates an environment to expand, share and enhance professional agency at almost no cost or low cost. Thus, school-based professional development activities through continuous collaboration and reflection might be one of the alternatives to effectively implement primary curriculum (de Paor, 2016) and enhance the teachers' competencies and skills in the real setting.

Curriculum Contextualization and Use of Local Teaching Resources

Since adopting the national curriculum saves time and effort, teachers blindly jump on the textbook and hardly spend time and effort in developing the local curriculum. In the context of Nepal, we tend to provide context-independent learning by providing contents from the textbook without carefully scrutinizing it to see if local knowledge is emphasized or not. Information provided in the textbook is given more importance than indigenous knowledge, which is taken for granted and is not given preference. Thus, we tend to ignore our knowledge, culture, language, and festival, acquiring foreign knowledge by learning about Christmas and ignoring *Lhosar* and *Chatt* (local festivals of Nepal).

Teachers are simply adopters of curriculum. For instance, during interviews and focus group discussions, none of the teachers said, “I do my own thing in the classroom.” In Jana Priya School, during FGD, a teacher raised a question on local curriculum and contextualizing teaching. A teacher said, “How can we construct a local curriculum without any training and skills on it?” To this, another teacher added, “Yes, we can integrate local curriculum in our subjects, but we need external support for it.” There is a government policy for the local curriculum. The Department of Education has instructed schools to develop their own curriculum and bring it into practice; however, teachers, schools administrations, and resource persons have not taken any initiative.

When schools are isolated from community living, the doctrine of contextualizing curriculum or developing local curriculum becomes superficial. Curriculums of today should be based on habits, attitudes, and traditions of the community (Bobbitt, 1925), understanding local knowledge, history, geography, and culture. The curriculum should be contextualized to relate it to young people of today. For instance, in Deep Jyoti School, during FGD, teachers mentioned that students have theoretical knowledge, but practically, they do not know how to weave a *doko* [local basket]. Another example, students understand kilogram, but they do not know *mana* [approximately 400gm], which is commonly used in the area. This shows that we are giving value to the outside knowledge provided in the textbook and ignoring our local knowledge and local resources.

Local resources can be used as teaching learning materials to contextualize teaching. Our classroom teachings are limited to providing content knowledge which is hoped to be transferred in real-life settings by the students whenever needed. Instead, instruction should be geared towards providing local knowledge using local resources, making the students aware of the local resources available in the area. When students are aware of local resources, they can refer to it in everyday life. For instance, the headteacher of Deep Jyoti School mentioned, “I encourage teachers to bring ideas; I tell them that school will provide support and necessary materials. I encourage teachers to make lesson plans, use local knowledge, and do group discussion with teachers to share and generate ideas.” However, motivation by the headteacher alone cannot bring change as the system reverts to the original.

Using visual teaching materials makes learning easy for the students. In Karuna School, teachers use locally available resources such as pebbles to teach addition and subtraction. A math teacher said, “We could use other materials, education-related materials, to teach math calculation... they [students] learn quickly, I would say.” Likewise, the headteacher mentioned, “We also look at collecting teaching and learning materials for the students.” The teaching and learning in developed countries have moved from using tangible teaching materials to electronic teaching material (Sabzian, Gilakjani, & Sodouri, 2013); however, the community schools in remote areas are struggling to find simple teaching materials for their students.

Thus, it can be stated that it is necessary to bring change in the curriculum and contextualize it based on the place and the need of the students. Furthermore, emphasis should be given to gather and use local teaching resources that would contextualize the learning.

Use of Technology for Teaching and Learning

The world has changed after the invention of technology, especially the computer and the Internet. With the help of technology, teachers can make the classroom interactive and a fun place to study. Schmid et al. (2014) found out that learning with technological cognitive supportive tools used in a student-centered approach have a larger effect on students' learning. In the triangle of students, teachers, and content, technology acts as a tool to bridge teachers with the students (Rajbanshi, 2017). Students, parents, and teachers also acknowledged the need to integrate technology for teaching, learning, and assessing in the schools.

Only having access to technology is not only the parameter that initiates the use of technology in the classroom. Jana Priya School has seventeen desktops, many of which need just basic repair, but the ones that are in working condition are also not used properly. During the interview and focus group discussion, the teachers confirmed they need technological skills and training to incorporate technology for teaching and learning. Thus, to use technology for research, individualized instruction, communication and collaboration (Rajbanshi, 2019) as well as an instructional tool, learning tool, and knowledge construction tool (Rajbanshi, 2017), integration of technology in teaching and learning is a must.

In this technological world, teachers and students are aware of the fact that use of technology has affected every sector of the workforce as well as higher studies. Use of technology, especially PowerPoint for traditional teacher-centered instruction (Bang & Luft, 2013) is a topic of criticism; however, that is not the case in Deep Jyoti School. Having 12 computers, they are not used for teaching and learning. During an interview, a science teacher showed willingness to learn technology and integrate it in a science classroom and said, "Yes, I want to change. I want to use a projector so they [students] can learn visually. "School is the place where students learn science content and having a computer in school and being able to learn the science content visually has a greater impact on the students' learning than through traditional lecture methods. However, being interested in teaching using technology, and teachers being not able to incorporate available technology even for displaying the content for visual representation is a topic of concern for the teachers, which shows a need to use computers in the classroom. Furthermore, teachers as adult learners need to decide what they need to learn (Conner et al., 2018) to have a better effect on pedagogy.

Nava Jivan School is a primary school and has computers as well as mini-laptops for the students. With the advancement of technology, small and child-friendly mini-laptops are available. The students are enthusiastic to use them. Students also mentioned that they wanted to use the computers that are available in the school. During FGD, a student, Bishnu stated, "In science classroom, we listened to the life cycle of a butterfly from the radio." In addition, during the same FGD, everyone in the group mentioned, "It [technology] made learning easier." Technology helps to understand complex and abstract concepts and get bigger pictures. A study conducted by Becker (2000) showed that learning through technology has a positive impact on student's performance. However, the use of computers and mini-laptops seems limited as one of the parents mentioned, "I don't know much about that [technology] but my daughter once came up to me and told me that she wanted to play on these [computers] (showing to the computers). She told me that they weren't allowed to use it."

Teachers are the key persons of their classroom. Even though a teacher's belief is one of the components that determine technology use in the classroom, technological competency is another component that determines technology use in the classroom (Rajbanshi, 2017). Teachers mentioned that they utilize their personal cellphone for classroom purpose. For example, teachers play audio for the students. During FGD, teachers mentioned that they want to learn and teach in a technical way. Even though teachers are willing to improve their teaching style and learn new and innovative ways to teach, training has not been provided to them to use

computers in the classroom, which limits their technology use in the classroom. From these, it can be recommended that the teachers should be trained on technology so they can use the available resources and teach students using technology.

Shree Janata School does not have a computer; teachers use their personal cellphone to show calculations, photos, and music videos as stated by female students during FGD. Students are enthusiastic to learn using computers; and they find the classroom fun and amusing when videos are shown. The students drew pictures of laptops during FGD and mentioned that these will help them study better. Authors such as Earle (2002) and Haley (1998) mention only access to technology is not enough for teachers to actively use technology in the classroom; however, in context of Shree Janata School, access to computers is important for the integration of technology. A parent also informed about the lack of computers in the school and said, "In this computer's generation, we need to have a computer in school." Furthermore, another parent informed that they do not want computers as a showpiece in the school. SMC/PTA mentioned the lack of computers in the school, lack of technological skills in the teachers and importance of technical skills to teach using computers. To this, the headteacher stated that the school has been trying to find funds to bring a computer (even used computer), but it has not happened yet. Moreover, one of the long-term goals of the School Sector Development Plan is to provide knowledge and skills to integrate ICT in education, which cannot be accomplished without access to technology and provide technological skills to the teachers (Ministry of Education, 2016).

Linking Urine Diverting Toilet and Garden with Curriculum

Human urine and faeces are rich in nutrients such as nitrogen, potassium, and phosphorus that can be used as fertilizers in the field. Due to lack of knowledge, human beings use clean water to dilute and discard these nutrients as waste, and to fulfill the need of the plant nutrients, commercial fertilizers are used. Similar is the case in Namobuddha Municipality. Kavre has high ridges with productive land; however, there is scarcity of water. The total population of the municipality is 29,519, where most of the people are engaged in agriculture and animal husbandry (Namobuddha Municipality, 2020). Small amount of animal waste is used in the field; however, use of human excreta in the field is not practiced.

There are many community schools without toilet facilities. Fortunately, all the schools have toilets for the faculty and urinals for the students. The headteacher of Karuna School mentioned attending training on Ecosan and knows about the importance of urine as compost for the plants. In Shree Janata School, collected urine is disposed underground, which may cause groundwater pollution. Having urine diverting toilets and using the urine in the garden can minimize the problem of waste management.

Availability of land is one of the components that affects school gardens. All the schools have additional land that is not in use and is in an abandoned condition, which could be used as a kitchen garden. Karuna School had pomegranate trees but due to construction, they were destroyed. Mr. Rishi from Karuna School stated gardening is important for the school surrounding as well as it supports education. The female students of the same school seemed excited about having a garden in the school. They said they would support maintaining the garden by watering the plants and plucking the weed. Due to initiation of "one school: one garden" policy, Jana Priya School has taken some land on lease to start a garden or kitchen garden.

Having a kitchen garden also satisfies parental concerns. Parents want their children to learn practical skills at schools that are relevant to their home surroundings. When there is detachment of what students learn at school and what they have at home, children tend to devalue local knowledge and culture. Having a school garden and being in the field and

learning the necessary life skills that are relevant to their home environment, the students will not feel detached from their community. Children, likewise, are more interested in studying outside the classroom learning with real-world examples and having a school garden fulfills that gap.

Thus, a urine-diverting toilet can be a bridge between garden and waste management. The establishment of urine diverting toilet helps to manage the waste in a proper way. Furthermore, available urine can be used as fertilizer in the kitchen garden to do organic farming. Having a urine diverting toilet and a garden in the school will solve problems associated with waste; however, that will not ensure sustainability of both the urine diverting toilet or the garden. Both urine-diverting toilets and gardens need to be connected with the curriculum and classroom activity for its sustainability. Urine-diverting toilets could be linked to health education to learn to stay healthy and safe, and gardening could be linked to science and other subjects. So connecting urine-diverting toilets and gardening with classroom activity or curriculum, sustainability of the urine diverting toilet as well as garden could be ensured.

Discussion

To reiterate, the research question that guided this study was “*what are the current needs of five community schools of Namobuddha Municipality?*” To answer this question, interviews with headteachers, teachers, focus group discussions with teachers, students, parents, school management committee, and parent-teacher association provided insights. From the findings stated above, an attempt has been made to answer the research question.

One of the needs identified was teacher professional development. The data showed that many of the teachers of these five schools have been teaching for more than a decade and they have not taken professional development training recently. Thus, teachers needed professional development to enhance their pedagogical skills, content knowledge, and technology incorporation as Koehler et al. (2014) defined it as TPACK. This study aligns with Pokharel and Behera (2016) who mentioned that to bring change in the classroom and improve students’ learning, professional development strengthens, updates and improves skills of the teachers. Use of available technology for teaching and learning is another need that was evident from this study.

Another need that this study identified was a need of contextualization of the curriculum and use of local resources, which aligns with Wagle, Luitel, and Krogh (2019) finding that suggested a country has to come up with contextually relevant place pedagogy. Learning is not meaningful when context-independent content is provided from the textbook. To make learning meaningful local resources need to be identified and used for teaching and learning. Furthermore, Sharma et al. (2019) mentioned relating the curriculum with context and being able to link the content with the context is important. Thus, linking it to the place, the majority of the parents of the students are engaged in agriculture and students can easily relate classroom learning to gardening and use of organic manure such as urine.

Shrestha (1977) also suggested that when different data support the specific needs, the criticality of the needs is high. Therefore, more time was spent on needs assessment to find the right needs of the schools, as both the process and the result are important for bringing change in educational practice. The findings indicated various needs of the schools, and assessing the needs provides a space to improve the organization or an individual (Hannum, 2013). The *Rupantaran* project aims to address the needs of the five community schools; however, fulfilling all the needs of the schools is out of the scope of the *Rupantaran* project. The needs as mentioned earlier, such as teacher professional development, curriculum contextualization, use of technology for teaching and learning and linking urine-diverting toilet and gardening

with curriculum are the major ones that *Rupantaran* identified and planned to intervene for the betterment of the organization as well as school education.

As stated earlier, finding the needs to improve education is rarely done in Nepal. Finding relevant literature regarding needs assessment in schools was one of the limitations of this study. Even though learning through technology is one of the needs of the students, the study could not focus on students due to ethical issues, which is another limitation of this study. Furthermore, needs differ from one school to another; thus, the needs that this study identified are specific to the schools' needs and if similar study will be conducted with the same tools, different needs might evolve at different time. Thus, the generalization of this study cannot be done.

This study implies that intervention is needed in the areas that has been identified by this study. More research is needed i) to improve the teachers' pedagogy through continuous professional development, ii) to contextualize the curriculum and use local resources as teaching materials, iii) on use of technology in the classroom, and iv) to establish urine diverting toilet and gardening and connect with the curriculum.

References

- Bang, E., & Luft, J. A. (2013). Secondary science teachers' use of technology in the classroom during their first five years. *Journal of Digital Learning in Teacher Education*, 29(4), 118-126.
- Becker, H. J. (2000). How exemplary computer-using teachers differ from other teachers: Implications for realizing the potential of computers in schools. *Contemporary Issues in Technology and Teacher Education*, 1(2), 274-293.
- Bobbitt, F. (1925). Difficulties to be met in local curriculum-making. *The Elementary School Journal*, 25(9), 653-663.
- Conner, N. W., Dev, D., & Krause, K. (2018). Needs assessment for informing extension professional development trainings on teaching adult learners. *University of Nebraska Lincoln Faculty Publications, Department of Child, Youth, and Family Studies*. <https://digitalcommons.unl.edu/famconfacpub/246/>
- dePaor, C. (2016). The impact of school-based continuing professional development: Views of teachers and support professionals. *Irish Educational Studies*, 35(3), 289-306.
- Earle, R. S. (2002). The integration of instructional technology into public education: Promises and challenges. *Educational Technology*, 42(1), 5-13.
- Grant, J. (2002). Learning needs assessment: Assessing the need. *British Medical Journal*, 324(7330), 156-159.
- Haley, J. M. (1998). *Failure to connect. How computers affect our children's minds for better and worse*. Simon & Schuster.
- Hannum, W. (2013). Questioning needs assessment: Some limitations and positive alternatives. *Educational Technology*, 53(6), 29-34.
- Kaufman, R. (1988). Needs assessment: A menu. *Educational Technology*, 28(7), 21-23.
- Koehler, M. J., Mishra, P., Kereluik, K., Shin, T. S., & Graham, C. R. (2014). The technological pedagogical content knowledge framework. In J. M. Spector, M. D. Merrill, J. Elen, & M. J. Bishop (Eds.), *Handbook of research on educational communications and technology* (pp. 101-111). Springer.
- Kemmis, S. (2008). Critical theory and participatory action research. In P. Reason & H. Bradbury (Eds.), *The SAGE handbook of action research: Participative inquiry and practice* (2nd ed., pp. 121-138). Sage

- Lambirth, A., Cabral, A., & McDonald, R. (2019). Transformational professional development:(Re) claiming agency and change (in the margins). *Teacher Development*, 23(3), 387-405.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.
- Miles, M. B., & Huberman, A. M. (1994). *An expanded sourcebook: Qualitative data analysis* (2nd ed). Sage Publication.
- Ministry of Education. (2007). *National curriculum framework*. Government of Nepal, Ministry of Education, Curriculum Development Center.
- Ministry of Education. (2016). *School sector development plan, Nepal, 2016-2023*. Government of Nepal, Ministry of Education.
- Namobuddha Municipality. (2020). *Brief introduction*. <http://namobuddhamun.gov.np/en/node/4>
- Rajbanshi, R. (2017). *A phenomenological study on middle-school science teachers' perspectives on utilization of technology in the science classroom and its effect on their pedagogy*. New Mexico State University.
- Rajbanshi, R. (2019). Why use technology in the science classrooms? *The Online Journal of New Horizons in Education*, 9(2), 172-178.
- Rothman, J., & Gant, L. M. (1987). Approaches and models of community interventions. In D. E. Johnson, L. R. Meiller, L. C. Miller, & G. F. Summers (Eds.), *Needs assessment: Theory and methods* (pp. 35-44). Iowa State University Press.
- Sabzian, F., Gilakjani, A. P., & Sodouri, S. (2013). Use of technology in classroom for professional development. *Journal of Language Teaching and Research*, 4(4), 684-692.
- Sava, S. (2012). Methods of needs analysis in educational context. In *Needs analysis and programme planning in adult education* (pp. 59-88). Barbara Budrich Publishers.
- Sharma, G. R., Ahmad, M. S., Batala, L. K., & Ace, B. N. (2019). Policy paradox between local and national agencies of education: A lived experiences from local curriculum development practices in Nepal. *International Journal of Education and Research*, 7(3), 159-170.
- Shrestha, G. M. (1977). *An institutional needs assessment approach to teacher education programs with special reference to Nepal*. Pennsylvania State University.
- Schmid, R. F., Bernard, R. M., Borokhovski, E., Tamim, R. M., Abrami, P. C., Surkes, M. A., Wade, A., & Woods, J. (2014). The effects of technology use in postsecondary education: A meta-analysis of classroom applications. *Computers and Education*, 72, 271-291.
- Wagle, S. K., Luitel, B. C., & Krogh, E. (2019). Irrelevance of basic school education in Nepal: An anti-colonial critique on problems and prospects. *Dhaulagiri Journal of Sociology and Anthropology*, 13, 31-39. doi: <https://doi.org/10.3126/dsaj.v13i0.24032>
- Waters, R. G., & Haskell, L. J. (1989). Identifying staff development needs of cooperative extension faculty using a modified Borich needs assessment model. *Journal of Agricultural Education*, 30(2), 26-32.
- Witkin, B. R. (1977). Needs assessment kits, models and tools. *Educational Technology*, 17(11), 5-18.
- Wright, P., & Geroy, G. (1992). Needs analysis theory and the effectiveness of large-scale government-sponsored training programmes: A case study. *Journal of Management Development*, 11(5), 16-27.
- Zeichner, K. M. (2003). Teacher research as professional development for P-12 educators in the USA. *Educational Action Research*, 11(2), 301-326.

Author Note

Roshani Rajbanshi, Ph.D. is a post-doctoral fellow under NORHED fellowship, Rupantaran, at Kathmandu University School of Education, Hattiban, Lalitpur, Nepal. She earned her PhD in Curriculum and Instruction from New Mexico State University with major in Educational Learning Technology and minor in Biology. Her areas of interest are teacher professional development, STEM (Science, Technology, Engineering and Mathematics) education; inquiry-based science teaching, and afterschool program. Please direct correspondence to roshani@kusoed.edu.np or roshaniraj@gmail.com.

Parbati Dhungana is a visiting faculty at the STEAM Department of Kathmandu University, School of Education. She has been doing her PhD study on Teachers' Professional Development. She co-authored many textbooks including Grade 9 and 10 English, published by Sano Thimi Bhaktapur. She published a couple of articles including journal articles. She has more than two decades of teaching experiences from Kindergarten to University level with multiple leadership responsibilities. Please direct correspondence to parbati@kusoed.edu.np.

Bal Chandra Luitel has been working with a number of Nepali STEM teachers and teacher educators to engage with a host of transformative research methods together with new analytics arising from dialectical, metaphorical, poetic and narrative thinking and representation as a means for conceiving, expressing and implementing visions of an inclusive and life-affirming STEM education in Nepal. Currently, he coordinates a transformative education project called Rupantaran that aims at engaging Master's and Doctoral students to bring forth intimate narratives unfolded during the process of their immersion in a school transformation process of public schools in Nepal. Please direct correspondence to bcluitel@kusoed.edu.np.

Acknowledgements: The authors would like to thank (Norwegian Agency for Development Cooperation) for providing financial support, Rupantaran project and all team members of Rupantaran for their constant support and Janahit Secondary School, Saraswoti Primary School, Dapcha Secondary School, Kali Ganga Primary School and Navin Primary School for their contribution.

Copyright 2021: Roshani Rajbanshi, Parbati Dhungana, Bal Chandra Luitel, and Nova Southeastern University.

Article Citation

Rajbanshi, R., Dhungana, P., & Luitel, B. C. (2021). Identification of needs of community schools of Kavre, Nepal for educational improvement. *The Qualitative Report*, 26(11), 3551-3562. <https://doi.org/10.46743/2160-3715/2021.4975>
