Education and Development – 30

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Preface

Journal publication has been one of the important activities of CERID for a long time; and, *Education and Development* is one of our regularly published journals. Hereby, forum is created for expression of intellectual thoughts in education. Accordingly, authors have contributed us through their writings on several concerns related to education. By means of their writing, they have demonstrated theoretical insights, and also reported the innovative practices in their scholarly papers included herein. We would like to offer our sincere thanks to them for their contribution, and also hope similar cooperation from them in the future.

Teaching-learning and research are vitally important for enhancement of quality in education. Research is disseminated through publication in the academic field; and it plays significant role to improve the existing situation of education. Educational environment, broadly speaking, consists of the dimensions of physical and technological environment, instructional environment, psychological environment (involving relationship among teachers, non-teaching staff and students), and socio-economic and political environment. This volume has come at a time when education sector has largely been affected by Covid-19 pandemic, and the need for restructuring higher education along with ICT integration has strongly been realized. In this regard, online teaching-learning has been adopted as an alternative to the face-to-face mode of instruction. Authors in this volume have contributed their thoughts over these important concerns in education.

We would like to stress the point that our effort of publishing this journal in particular has been a significant attempt towards professional development of the academicians involved in analytical and research-based writings – particularly for the university level teachers aspiring to upgrade their positions and enhancing themselves to gain academic strength. The published materials in this journal will also be the good source of reading to the audience interested in education – including university teachers, research scholars and students. We request all readers and the concerned academia to enjoy reading the papers included herein, and would like to welcome all constructive feedbacks and suggestions for the betterment of the journal in the days ahead.

Surendra Giri, PhD
Executive Director, CERID
**Editorial**

‘Education and Development’ is a regularly published journal of CERID, which has been a forum for authors to express their insights and ideas on pertinent concerns in the field of education – including the issues of contemporary and perennial interest. Publication of this volume of the journal has been a significant attempt towards this direction. This volume, in particular, has accommodated various contemporary concerns of education including the issues related to the challenges faced by teachers in education, student motivation in higher education, ICT, online and virtual teaching-learning, school management and leadership, concerns related to socio-economic and gender perspectives in education, instructional issues at micro level such as teaching-learning lexis in language, influence of COVID-19 in education and problems related to disability in education.

Writing scholarly papers for journal publication is, of course, a meticulous task whereby critical and creative mind has to operate; and the writer needs to be really insightful in organizing the contents in academically sound way. Getting writers and developing them towards this direction is a challenging work in the developing world in particular. In this connection, producing an academic journal of good quality is, thus, a challenging endeavour amidst the situation of lacking financial and human resources. CERID, in the course of publishing a journal like this, has been moving ahead facing these challenges for a long time. However, we have been successfully tackling this problem and getting success in it. We would like to express our gratefulness to the individuals who cooperated us in various ways towards this direction.

Mostly the authors of the articles included in the journal have developed their write-ups based on the study and analysis of factual data and thereby attempted to generate knowledge in the concerned field. In this way, knowledge building process has been followed in the process of writing and publicizing the papers. We are much thankful to all the authors and contributors who made efforts to develop the papers and refined them many times before giving them the final shape for publication. Moreover, we cannot remain without acknowledging the contribution of those scholars who supported us by peer-reviewing the articles and thus giving the relevant feedback for improving the papers regarding the ideas and insights expressed in the write-up and internal organization of articles.

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Student Motivation for Academic Performance in Higher Education in Nepal

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Abstract
Motivation plays a key role in improving students’ learning outcomes. This study explored student motivation for better learning efforts and performance in examination in various campuses, which were classified as high, medium and low performing ones in connection with their academic performance. Students’ motivation was assessed in terms of their perception towards relevancy of the academic programme, motivation and commitment to complete the study, family environment and responsibility. Factors motivating students to attend the classes regularly were also examined. Utilizing a cross-sectional mixed-methods research design, 800 participants were selected to take part in the study from three ecological belts of Nepal. FGD and self-administered questionnaires were used as tools for data collection. Data were analyzed using SPSS 20.0. The results showed the students’ commitment to complete the academic programme in time was weak as less than half (42.5%) of them were committed to completing their studies with excellent grades/marks. It was found that only a quarter of the students (26.6%) considered that the curriculum they studied was highly relevant; even a quarter of the students (24.4%) from high-performing campuses reported it—only one-fifth of them from high performing campuses expected to achieve A+ or distinction marks. The study environment in the family was found to be less enabling as only half of the students had separate study rooms at home. Students had to take responsibility for caring for their family members and children as well. Majority of students (68.4%) self-reported that they were always regular in the class, highest in low performing campuses (71.1%), followed by high performing (67.7%) and medium performing campuses (65.3%). By university, the population of students who were always regular was highest in KU (81.2%), followed by
Student Motivation for Academic Performance in Higher Education in Nepal

TU (68.5%), PU (62.9%) and PokU (61.1%). It has been suggested that the students should be provided with the opportunity for learning and earning environment and the curricula should be amended from time to time to make them employment oriented.

Keywords: Self-awareness, perception, chi-square test, category of campuses, attendance,

Introduction

Student motivation is a crucial factor in higher educational institutions for academic achievement. Motivation can be defined as the act or process of motivating; the condition of being motivated; a motivating force, stimulus, or influence, incentive, drive, something that causes a person to act (Merriam-Webster, 1997). Motivation is one of the major factors required to achieve anything, which pushes the individual to become successful. Wigfield and Tonks (2002) and Gardner (2001) maintain that a motivated individual strives to achieve the goal, is insistent and attentive to the task, enjoys running for the goal, regards success as positive reinforcement, and uses strategies to reach the goal. Therefore, motivation can be considered goal-directed behaviour (Demir, 2011).

Student motivation, as mentioned by a social-cognitive model of motivation, includes the dimensions of expectancy beliefs (self-efficacy, attributions, control beliefs), value choices (goal orientation, interest, importance), and metacognition (self-regulated learning) (Pintrich and others, 1993). Following this model, meta-cognition and motivation form a symbiotic and dynamic relationship. A person continually evaluates intrinsic and extrinsic feedback to dynamically adjust their motivation towards learning (Schunk and Zimmerman, 2012). When this happens, a student is said to be self-regulating their learning, with the cognitive ‘energy ’expended being labeled as motivation (ibid., p. 22).

Research has revealed that motivation is an important predictor of students’ achievement (Beal and Stevens, 2007; Broussard and Garrsion, 2004; Johnson, 1996; Sandra, 2002; E. M. Skaalvik and S. Skaalvik, 2006; Zhu and Leung, 2011). Motivation behaviour encompasses many aspects, including motivational orientation – which acts as a driving force that encourages a person to engage in a task (Stewart and others, 2010). Motivational orientations consist of several constructs, including intrinsic motivation,
extrinsic motivation, personal relevance, self-efficacy, self-determination, and assessment anxiety.

Modern theories of motivation have focused on exploring the relationship between individual’s beliefs, values, goals and their association with achievement outcomes (Eccles and Wigfield, 2002). Motivational forces are most often described as either being intrinsic (driven by curiosity or pleasure derived from performing the task) or extrinsic (the product of external reward) in nature. behavior (Shamloo and Cox, 2010). This study mainly focused on internal and external motivational factors playing a role in the students' academic performance.

Intrinsic motivation is the inner force that motivates students to engage in academic activities because they are interested in learning and enjoy the learning process (Schiefefe, 1991). As Harter (1978) explained, intrinsic motivation is the true drive in human nature, which drives individuals to search for and face new challenges, as a result of which they are eager to learn even when there are no external rewards. Students with the learning goals of mastery over science content and skills are said to be intrinsically motivated (Cavallo and others, 2003). They engage in mental and physical activities holistically, remain highly focused throughout the activities with clearly defined goals; they are self-critical; self-reflected, their actions are realistic; and they are usually relaxed and not afraid to failure during learning. A research study done by Stipek (1988) concluded that intrinsically motivated students learn independently and always choose to do challenging tasks. They integrate their knowledge acquired in school with their experiences gained from outside school. They often ask questions to broaden their knowledge and learn regardless of external push factors or help from teachers. They take pride in their work and express positive emotions during the learning process. Highly intrinsically motivated students are able to learn new concepts successfully and show a better understanding of the subject matter (Stipek, 1988).

Extrinsic motivation drives students to engage in academic tasks for external reasons. Such factors include parental expectations or the expectations of other trusted role models, etc. According to Benabou and Tirole (2003), extrinsic motivation promotes effort and performance, with rewards serving as positive reinforcers for the desired behaviour. This sort of motivation typically produces immediate results and requires less effort in comparison to intrinsic motivation (Ryan and Deci, 2000). A problem with extrinsic motivators is that they typically do not work over the long term. Once the
Student Motivation for Academic Performance in Higher Education in Nepal

Rewards are removed, students can lose their motivation (DeLong and Winter, 2002). Extrinsically motivated students tend to focus on earning higher grades and obtaining rewards. It has been pointed out that extrinsic motivational factors can make negative impacts on students’ intrinsic motivation (Biehler and Snowman, 1990; Bain, 2004).

In the context of higher education in Nepal, in general, the pass rate of Bachelor’s level students (20.2%) has been poorer compared to that of Master's degree level (61.1%) (UGC, 2016). In this connection, an exploration into the role of motivation for student learning has been much relevant. Thus, the main purpose of this study was to explore student motivation for learning efforts and performance in university exams.

Study area

The study covered the seven provinces of Nepal, spanning over three ecological regions (mountain, hill and terai). The study also covered four universities: Tribhuvan University (TU), Kathmandu University (KU), Purbanchal University (PU) and Pokhara University (PokU). Faculty/School/Department, University Campuses, Controller of Examination, Dean, HoD, Campus Chief, students, and faculty members were involved. The higher education institutions, including the universities and the campuses that were the primary beneficiaries of the Higher Education Reforms Project (2014-2020), were also covered in the study.

Methodology

The study followed a cross-sectional design, using both quantitative and qualitative methods and tools for data collection. Samples were drawn from all categories of campuses, including constituent, affiliated, community and private categories. Based on the average pass percentage of students in the campuses, they were categorized into three types—high performing (upper 66.6% and above), average/medium performing (33.6% to 66.5%), and low performing (less than 33.5%), in addition to representing the high, average and low performing campuses, accredited and non-accredited campuses were also included in the sample.

Multi-stage cluster sampling was employed for campus selection after the determination of sampling frame identifying the high performing, average performing and low performing campuses. Sampling ensured the selection of constituent, affiliated, community and private campuses from four faculties/streams. After that, sample students were selected by applying
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proportionate sampling based on the proportion of enrolled students in the four universities.

A self-administered questionnaire was used to collect data from 800 students from the selected campuses. The quantitative data was collected by administering this questionnaire among the final year and/or final semester students. In addition, a qualitative method was also used, including focus group discussion (FGD) and interviews (semi-structured). FGDs were conducted with students and teachers while interviews covered a wide spectrum of stakeholders, from students to the Deans and Heads of Department (HODs). Students who participated in the questionnaire survey were not involved in FGDs and interviews. After seeking approval from the university and campus authorities and written consent from the study participants, data were collected. Interviews were tape-recorded after receiving permission. Interview notes were prepared in the Nepali language, translated into English for coding and analysis.

Secondary data were also included in the initial phase. The study team reviewed documents such as the Second Higher Education Project reports, informational documents related to the Higher Education Reform Plan, and all available Education Management Information System (EMIS) documents. The research team designed the survey based on these documents. The research team prepared the initial draft questionnaires, FGD guidelines and class observation tools.

Results and discussion

In this study, student motivation was assessed in terms of their perception towards relevancy of the academic programmes, motivation and commitment to complete the study, motivation for future employment and factors motivating students to attend the classes regularly.

Perception towards the relevance of academic programme and curriculum

In simple terms, a curriculum can be considered in four facets: Content, methods, purposes and evaluation. The existing pattern of curriculum and teaching-learning process is perceived as traditional and questionable in our context due to lack of integrated curriculum which did not include an open system based, problem-based and theme-based curriculum. It means individual, community, and national needs are not considered while designing the curriculum. Besides, evidence and research-based curriculum
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frameworks are ignored while constructing the curriculum. Descriptive statistics presented in Table 1 shows that only a quarter of the students (26.6%) have realized that the course they studied is highly relevant. The number of students reporting high relevance of the curriculum is limited to just about a quarter of respondents (24.4%), even in the high-performing campuses. The courses were moderately relevant for most students (59.9%), while 10.7% of students found the courses less relevant.

Table 1
Student perception on the relevance of the curriculum

<table>
<thead>
<tr>
<th>SN</th>
<th>Response categories (Ranked)</th>
<th>Campus categories</th>
<th>Total % (N=831)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High performing % (n=405)</td>
<td>Medium performing% (n=143)</td>
</tr>
<tr>
<td>1</td>
<td>Highly relevant</td>
<td>24.4</td>
<td>30.1</td>
</tr>
<tr>
<td>2</td>
<td>Moderately relevant</td>
<td>57.8</td>
<td>55.9</td>
</tr>
<tr>
<td>3</td>
<td>Less relevant</td>
<td>13.6</td>
<td>13.3</td>
</tr>
<tr>
<td>4</td>
<td>Not relevant</td>
<td>4.2</td>
<td>0.7</td>
</tr>
</tbody>
</table>

FGD data also demonstrated that the curriculum was not relevant under the Faculty of Education. Regarding course implementation, the students were found quite dissatisfied in the case of TU because there was an absence of course orientation in the second and third semesters. Regarding exam hall environment, some exam centers were found strict and some were loose which even allowed writing while goofing around. Urmila, during an informal talk, shared that she has a habit of rampant cheating in examinations. She said, "If you visit the toilet during exams, you will find a library there." Students mentioned that exams must include practicals, not just written exams. In the existing practical exams, we find biases in scoring.

Students’ commitment towards completing the degree

Under the influence of globalization, after 1990, Nepali students started to migrate away in foreign study, learning and employment opportunities. Existing social discrimination, exploitation, alienation and lack of employment opportunities in Nepal also push the student community towards foreign land. The majority of students studying in a running
programme in the present classroom are waiting for visas and passports. Table 2 shows the students' perception towards commitment to complete the current study programme.

**Table 2**

<table>
<thead>
<tr>
<th>Perceived commitment ( Ranked scale)</th>
<th>Campus categories</th>
<th>Total % (N=835)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High performing% (n=404)</td>
<td>Medium performing% (n=147)</td>
</tr>
<tr>
<td>1 Complete with excellent grade/mark</td>
<td>41.8</td>
<td>44.9</td>
</tr>
<tr>
<td>2 Complete it easily</td>
<td>42.1</td>
<td>31.3</td>
</tr>
<tr>
<td>3 Try to complete it</td>
<td>14.4</td>
<td>22.4</td>
</tr>
<tr>
<td>4 Not sure to complete</td>
<td>1.7</td>
<td>1.4</td>
</tr>
</tbody>
</table>

As indicated in Table 2, only 42.5 percent of the students were committed to completing their study with excellent grades/marks (the proportion was found similar in the students studying in high, medium and low performing campuses). Thus, the majority of respondents were not motivated to complete their current degree with excellent grades; though, a little more than one-third (38%) of the student participants reported that they could easily complete it. Nearly one-fifth (18.3%) of them expected to try to complete the course, while a small minority was unsure if they could complete the course.

According to FGD information, some of the students perceived that the current degree programme could not provide learning and earning opportunities for them, as there is a lack of linkage between education and employment. They want to migrate to a foreign land for study, employment opportunities, and practical and skill-based education. Thus, they could not commit to completing their current study programme.

**Students expected grades in the running programme**

After conducting the assessment system, teachers applied the letter grading system to measure the effectiveness of teaching-learning through formative
Student Motivation for Academic Performance in Higher Education in Nepal

and summative evaluation. The semester system has launched a letter grading system of evaluation to motivate students with the aim of meeting quality education. Student grade point average (GPA) has been at the heart of decades of developmental and educational investigation which has addressed a range of contextual, motivational and psychological variables which influence and predict student GPA (Coleman and others, 1966; Eccles and Wigfield, 2002; Robbins and others, 2004).

At TU, letter grading is done on a four-point scale ranging from 0 to 4 grades. A student must secure a minimum GPA of 2.7 or grade 'B minus' (Grade B-) in each course. In order to pass the semester examination, students must secure a minimum of Grade B or Cumulative Grade Point Average (CGPA) of 3. All affiliated and constituent campuses of TU follow the same examination system. There is 40 percent weightage of internal assessment, and 60 percent weightage is in the external examination (Office of the Controller of Examinations, TU, 2019).

According to the COE of KU, there is the practice of continuous assessment and end-of-semester exam system. In continuous assessment, the weightage of internal assessment is 50 percent and end-of-semester/external examination is 50 percent. However, in some colleges, 60 percent weightage is given to internal assessment and 40 percent to the end of semester examination.

In PoKU, Internal assessment and external/final examination cover 50 percent each. Similarly, at PU, the weightage of internal assessment and final/external examination comprise 30 percent and 70 percent, respectively.

Students have obtained higher marks in the internal assessments and relatively lower marks in all universities and academic programs in the external/final evaluation. The related descriptive statistics are presented in Table 3.

<table>
<thead>
<tr>
<th>SN</th>
<th>Expected grade</th>
<th>High performing % (n=405)</th>
<th>Medium performing % (n=146)</th>
<th>Low performing % (n=283)</th>
<th>Total % (N=834)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A+/distinction</td>
<td>22.7</td>
<td>26.0</td>
<td>21.2</td>
<td>22.8</td>
</tr>
<tr>
<td>2</td>
<td>B+ - A/first division</td>
<td>59.8</td>
<td>45.2</td>
<td>55.8</td>
<td>55.9</td>
</tr>
</tbody>
</table>

Table3

Students' expected grade in study programme by categories of campuses
### Table 3: Grade Expectations among Students

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Category</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>B/ average</td>
<td></td>
<td>16.5</td>
<td>25.3</td>
</tr>
<tr>
<td>Non Response</td>
<td></td>
<td>1.0</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Table 3 indicates that on the whole, the majority of the students (55.9%), more from the high performing campuses, expected to achieve B+–A/first division (more from the high performing than other campuses), while one-fifth (22.8%) of students expected to achieve A+/distinction. The study data indicate that majority of the students from different categories of campuses expected the grade in a similar pattern. Internal and external motivating factors are more responsible for achieving an excellent grade.

According to FGD information, students perceived that physical facilities at campuses (e.g., classroom hygiene, library, laboratory, internet facilities), psychological environment at a campus, competent teachers, use of teaching technology, teachers' friendly behaviour, examination system, calendar system as well as socioeconomic background of family and students' needs, solid desires and interest are more responsible for securing expected grades during the campus period.

It can be concluded that weightage in the examination system, physical facilities, teacher competency, students' socioeconomic background, and needs/desires play a vital role in securing the expected grade in the academic programme at the campus level.

### Factors associated with the motivation of students regularly present in classes

Students' regular presence in class is important to maintain students' academic performance in higher education. Student engagement plays a key role in increasing their academic achievement. Descriptive data are presented in Tables 4, 5 and 6 by categories of universities and campuses.
As shown in Table 4, eighty percent class attendance requirement to attend the final examinations was a main motivating factor for KU students, while joyful lectures were the motivating factor for students in PU, PokU and TU. 'Joyful activities' in the classroom were the second most important motivating factor for KU students. Classroom and college environments were not considered strong factors for student motivation. Unemployment also played a role in regular class attendance at TU and PU. Similarly, other factors for students' motivation for regular classes were found in TU (7.6%), KU (6.2%) and PoKU (5.6%) – which include support of family, good economic status, late marriage, the interest of campus administration, self-awareness, an expectation of good grade achievement, and dream of students for passing examination.
As shown in Table 5, the main factors motivating the students to attend classes regularly include the requirement of 80 percent attendance, which was found in 'high performing' categories of campuses than others. Over two-thirds of the students from low-performing campuses reported that they enjoyed teachers' lectures in the class. However, only one out of ten students considered that their classroom/college environment was encouraging.

Nearly seven percent of students also mentioned some other factors that motivated them for regularity – which include: self-knowledge, awareness of the importance of education, family background and support, teachers’ friendly behaviour, suitable location of campuses, peaceful campus environment and systematic campus administration.

When data were considered by campus types, joyful lectures were rated as the main motivating factors by students mainly from affiliated (76.2%) and autonomous (64.3%) campuses; however, it was the main motivating factor...
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for students of constituent (51.4%), community (59.4%) and private (55.6%) campuses.

Table 6

Student motivation to attend classes regularly by the type of campuses

<table>
<thead>
<tr>
<th>Motivating factors</th>
<th>Campus types</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Constituent</td>
<td>Community</td>
</tr>
<tr>
<td>80 percent attendance required for final exam</td>
<td>26.8</td>
<td>12.9</td>
</tr>
<tr>
<td>Students enjoying lectures</td>
<td>51.4</td>
<td>59.4</td>
</tr>
<tr>
<td>Encouraging classroom/college environment</td>
<td>8.2</td>
<td>13.4</td>
</tr>
<tr>
<td>Students not having part-time jobs</td>
<td>3.8</td>
<td>5.5</td>
</tr>
<tr>
<td>Easy way to pass time</td>
<td>2.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Others(self-awareness, knowledge, family background and support)</td>
<td>7.4</td>
<td>6.9</td>
</tr>
</tbody>
</table>

As some students mentioned, joyful teacher lectures in classroom activities are the most powerful motivating factors for class attendance. They mentioned that they are dependent on the teacher-centered method from the beginning of their school life to college life – as there were insufficient learning materials such as textbooks and references books in the local context.

The following statement from a student during data collection illustrates a case in point:

After being in the University Campus, I found huge buildings from outside; but inside, it is just in a shallow and
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hollow foundation. Due to corruption, all activities conducted inside University Campus were shocking for me. I have 80 percent of my attendance which is compulsory in a semester system but if there is a political connection, such 80 percent of attendance is not necessary, but I have not had the link to political connection.

It can be said that joyful lectures were rated by students as the main motivating factors for class attendance in different categories of higher education institutions. Teachers played a key role in creating suitable and joyful classes in this way. Regular campus attendance rules for a final examination, the physical environment of classroom and campus, fair administration, good economic background, and supportive family environment of students are also found to contribute positively to students' regular presence in the class.

Family environment and responsibility of students

Family is the social production, reproduction, educational unit and first school for children. A family's socioeconomic and educational resource creates the social status of the family environment. The dynamics of a family is located within the social structure and status (class/ caste in many cases). A good socioeconomic environment in the family can support the students' academic performance. Parents' socioeconomic status (SES) also determines the household's living condition (e.g., reflected in study rooms, internet facilities, etc.). In addition to SES, students' family environment works as an important factor in predicting academic achievement (Davis-Kean, 2005; Duncan and others, 1994; Gutman and others, 2003; Jacobs and Harvey, 2005; Turner and others, 2009). For many students, the family is a primary source of support and a key environment of socialization (Hill and Tyson and others, 2009); and, early research revealed that the quality of the relationships within a students’ home environment, be this with parents, siblings or caregivers, has an important bearing on their academic performance (Duff and Swick, 1978; Jacobs and Harvey, 2005). This section has focused on the interlink between students' family household environment and academic performance, as elaborated below.

Table 7 presents the descriptive statistics related to parents’ socioeconomic status. A little more than half of the students (56.3%) had a separate study room at home, which means 43.7 percent of students did not have a separate room for study. The proportion of students in affiliated campuses was a little
higher than in constituent campuses.

Table 7
Distribution of students who have separate study rooms at home by categories of campuses

<table>
<thead>
<tr>
<th></th>
<th>Constituent campus % (N=372)</th>
<th>Affiliated campus % (N=461)</th>
<th>Total % (N=833)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54.8</td>
<td>57.5</td>
<td>56.3</td>
</tr>
<tr>
<td>No</td>
<td>45.2</td>
<td>42.5</td>
<td>43.7</td>
</tr>
</tbody>
</table>

By campus types, almost the same proportion of students reported that they have separate study rooms (54.8% in constituents and 57.5% affiliated). \( \chi^2=0.585, p=0.444 \). It can be argued that family standard of living indicates the students' living conditions, and more than half of the respondents have separate study rooms at home, which might contribute to enhanced academic performance at the campus.

As shown in Table 8 and 9, one out of five students reported that they were fully responsible to their family's management while studying; whereas more than half of them (55.2%) had no role for family's responsibility and considered themselves as free and self-motivated for study during campus period. Responsibility of helping younger siblings was a little higher among students from low-performing campuses. In total, 1.3% of students had responsibility for their children. Overall, one-third of students are directly or indirectly linked with family responsibility in terms of financial and other kinds of support in the high, middle and low performing campuses as well as a constituent and affiliated campuses. Students in the majority were found self-motivated and feeling free for study.
Table 8
Responsibilities of students during the study in high, mid and low performing campuses

<table>
<thead>
<tr>
<th>SN</th>
<th>Students’ Responses</th>
<th>Campus categories</th>
<th>Total % (N=834)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High performing % (n=404)</td>
<td>Medium performing % (n=147)</td>
</tr>
<tr>
<td>1</td>
<td>Full responsibility of family</td>
<td>20.0</td>
<td>17.0</td>
</tr>
<tr>
<td>2</td>
<td>Responsibility of brothers/sisters</td>
<td>13.1</td>
<td>13.6</td>
</tr>
<tr>
<td>3</td>
<td>Responsibility of own children</td>
<td>2.2</td>
<td>0.7</td>
</tr>
<tr>
<td>4</td>
<td>Free for study/No responsibility of others</td>
<td>58.2</td>
<td>58.5</td>
</tr>
<tr>
<td>5</td>
<td>Others (family income management, caring illness)</td>
<td>6.4</td>
<td>10.2</td>
</tr>
</tbody>
</table>

Table 9
Family responsibility of students during the study by campus categories

<table>
<thead>
<tr>
<th>Students Responses</th>
<th>Constituent campus % (N=373)</th>
<th>Affiliated campus % (N=461)</th>
<th>Total % (N=834)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full responsibility of a family</td>
<td>24.4</td>
<td>18.4</td>
<td>21.1</td>
</tr>
<tr>
<td>Responsibility of brothers/sisters</td>
<td>16.9</td>
<td>14.1</td>
<td>15.3</td>
</tr>
<tr>
<td>Responsibility of own children</td>
<td>2.7</td>
<td>0.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Free for study/No responsibility of others</td>
<td>48.0</td>
<td>61.0</td>
<td>55.2</td>
</tr>
<tr>
<td>Others (family income management, taking care during illness)</td>
<td>8.0</td>
<td>6.3</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Table 9 revealed that, compared to constituent campuses, more students from affiliated campuses were found to have no family responsibility during their study, whereas 24.4 percent students from constituent campuses and 18.4 percent of them from affiliated campuses reported they had full responsibility of family [$\chi^2=21.184$, p=0.000]. Overall, data indicate that students free of responsibility and having time for self-study were in good numbers, which is the source of motivation to study. This, in turn, must have played a vital role in their academic performance.
Motivation towards the study of existing courses and programmes

Various factors make an impact on the motivation of students entering higher education. Such factors range from their preparation for university (how much information they know about the university), course choice, future aspirations, and perceptions about higher education. Studies have indicated that student motivation has strongly been linked with academic performance, in particular higher GPA in higher education (Richardson and others, 2012; Robbins and others, 2004; Lazowski and Hulleman, 2016). In addition to its direct association with GPA, motivation has consistently been shown to influence a range of student-level pro-educational characteristics and behaviours which support the development of learning, namely deeper learning strategies, superior student adjustment and a greater level of academic engagement (Busato and others, 2000; Vansteenkiste and others, 2005; Richardson and others, 2012). Evidence has also suggested that high levels of motivation in one particular area (for example, maths or science) can also be applied to other areas (Gottfried, 1990). Taken together, the evidence supporting the role of motivation in predicting optimum academic achievement has allowed it to become a crucial component in research exploring academic success (Robbins and others, 2004; Pinder, 2011 cited in Gamble, 2019). Regarding this study, main variables include students' self- and family engagement for supporting their study.

Table 10
Motivators for students to study the course by categories of campuses

<table>
<thead>
<tr>
<th>Categories</th>
<th>Constituent campus % (N=374)</th>
<th>Affiliated campus % (N=459)</th>
<th>Total % (N=833)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None but myself/ (Self awareness)</td>
<td>70.6</td>
<td>61.0</td>
<td>65.3</td>
</tr>
<tr>
<td>Parents</td>
<td>22.2</td>
<td>32.9</td>
<td>28.1</td>
</tr>
<tr>
<td>Senior siblings</td>
<td>4.0</td>
<td>4.8</td>
<td>4.4</td>
</tr>
<tr>
<td>Others (campus administration, teachers’ behaviour, senior friends and peers)</td>
<td>3.2</td>
<td>1.3</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Most of the students from both constituent (70.6%) and affiliated (61%) campuses responded that they were inspired by themselves to study the course. Parents were more influential in the case of students from affiliated campuses (32.9% against 22.2% from constituent campuses). The differences were significant ($\chi^2=15.039, p=0.002$). It reveals that students’ self-motivation towards their study course is good in general, and a bit higher in the case of Constituent campuses compared to the affiliated ones.

**Attendance in classes in different categories of campuses and university**

In theory, students are required to have 75-80 percent attendances in each course at the graduate and post-graduate levels for attending their final examination; but in practice it is not strictly followed in different campuses. Attendance is generally not taken except in technical subjects. Under the semester system, students must have eighty percent attendance for appearing in the external (or final) examination. Oghuvbu (2010) and found that students’ attendance was positively and significantly related to academic performance. In the same way, Stinebrickner and Stinebrickner (2008) also found a significant and substantial effect of attendance on students' academic performance.

As shown in Table 11, a little more than two-third (68.4%) of students claimed that they were always regular in class; and it was reported highest by the students from low performing campuses (71.1%), followed by the students from high performing campuses (67.7%) and medium performing campuses (65.3%).

<table>
<thead>
<tr>
<th>Table 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of student attendance at class by categories of campuses</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SN</th>
<th>Frequency of attendance</th>
<th>Categories of campuses</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High performing %</td>
<td>Medium performing %</td>
</tr>
<tr>
<td>1</td>
<td>Always regular</td>
<td>67.7</td>
<td>65.3</td>
</tr>
<tr>
<td>2</td>
<td>Sometimes miss class</td>
<td>29.6</td>
<td>28.6</td>
</tr>
<tr>
<td>3</td>
<td>Rarely attend class</td>
<td>2.0</td>
<td>4.8</td>
</tr>
<tr>
<td>4</td>
<td>Never attend classes</td>
<td>0.7</td>
<td>1.4</td>
</tr>
<tr>
<td>5</td>
<td>Total N</td>
<td>406</td>
<td>147</td>
</tr>
</tbody>
</table>

As Table 12 reveals, the number of students who were always regular was found highest at KU (81.2%), followed by TU (68.5%), PU (62.9%) and
Student Motivation for Academic Performance in Higher Education in Nepal

PokU (61.1%). Chi-square test result $[\chi^2=41.067, p=0.000]$ indicated a statistically significant relationship between the regularity of students and categories of universities. It means there is a significant association between the regularity of students by categories of the university.

Table 12
Frequency of student attendance by university

<table>
<thead>
<tr>
<th>SN</th>
<th>Frequency of attendance</th>
<th>TU %</th>
<th>KU %</th>
<th>PokU %</th>
<th>PU %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Always regular</td>
<td>68.5</td>
<td>81.2</td>
<td>61.1</td>
<td>62.9</td>
</tr>
<tr>
<td>2</td>
<td>Miss class sometimes</td>
<td>27.9</td>
<td>17.2</td>
<td>37.5</td>
<td>35.5</td>
</tr>
<tr>
<td>3</td>
<td>Rarely attend class</td>
<td>3.0</td>
<td>-</td>
<td>-</td>
<td>1.6</td>
</tr>
<tr>
<td>4</td>
<td>Never attend class</td>
<td>0.6</td>
<td>1.6</td>
<td>1.4</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion

The perception of students on the relevance of existing courses and programmes indicates that only a quarter of the students believe that the courses or programme they are studying are relevant for them. Some students raised questions on the relevance of the course due to lack of job market, the traditional pattern of curriculum and poor management of the evaluation system. Moreover, students' commitment to complete the course with good performance was weak, as less than half of them were committed to completing their studies with excellent grades. Only one-fifth of them from high-performing campuses have the expectation of achieving the highest marks. These things have contributed to somehow reduced motivation of students in their study. However, nearly two-thirds of students have been self-motivated towards studying the existing programme. By university, students who were always regular were found highest at KU, followed by TU, PU and PokU, respectively.

Acknowledgments

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and all CERID faculties for their constructive support during data collection, analysis and report writing.

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Retention and Recall of Lexicon Using Semantic Maps

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Abstract

Semantic maps ensure a high potential to facilitate enhanced quality of understanding words. ESL students are often presented with new English vocabulary items that are many times pre-organized in sets of semantically related words. Although there is an assumption that word grouping facilitates the activities for vocabulary learning, little or no empirical justification is offered by researchers in support of employing this teaching technique. This study aims to examine to what extent semantic relatedness influences ESL vocabulary recall and retention for middle school students of Telangana. The current study was conducted with 30 seventh grade students who were divided into two groups to compare the effects of presenting semantic maps and wordlists for reading comprehension activities. The results reveal that both teaching strategies have positive effects on vocabulary recall and retention. Between these two strategies semantic mapping was found to yield better results on recall. The difference between the groups can be explained from the perspective of information process theory and memory model. Significant learning and effectiveness of semantic maps was found in the experiment group.

Keywords: Semantic maps, recall, retention, syntactic, wordlists, vocabulary learning
Introduction

Vocabulary is one of the major components of language learning and considered the most important aspect of second language acquisition. It is difficult to learn a language without mastering the vocabulary as learners find it difficult to communicate in a particular language without this component. According to Laufer (1997, p. 140) learning vocabulary is one of the important elements; and neither comprehension nor production of language is possible without it. Learning vocabulary cannot be separated from other language skills, such as listening, speaking, reading and writing because the more words the learners know, they will be able to understand what they hear or read. As English is a second language for a large population of learners, remembering and recalling vocabulary seems difficult for ESL learners especially while memorizing new words and enhancing their vocabulary knowledge.

One of the problems in making use of a wordlist in vocabulary teaching-learning is that some teachers and learners focus solely on working with the list alphabetically and students might not find the words in context in the materials they are reading. Another problem that might arise is that students may never practice the words in meaningful ways if they focus only on the spelling and meaning of words, but not on using the words themselves in speaking and writing. Therefore, in order to get the real benefit from wordlists, teachers need to make sure that they provide frequent encounters of the words being taught to the learners since it is crucial for vocabulary acquisition; and when students are exposed to the same words many times, the result will be a higher degree of learning, an increased ability to remember and use the word. Therefore, teachers should vary their strategy in teaching vocabulary and motivate the students to learn words actively and independently.

One of the strategies that can be used to teach vocabulary is semantic mapping. It is one of the most powerful approaches to vocabulary teaching because it engages students in thinking about word relationships. This strategy increases students’ active exploration of word relationships; therefore, it leads them to a deeper understanding of word meanings by developing their conceptual knowledge related to words. Hence, this strategy can help students to memorize new words easily and effectively.
Retention and Recall of Lexicon Using Semantic Maps

Review of Relevant Studies

In this section, some studies on word list and its relationship with vocabulary teaching-learning are briefly presented as given under the themes that follow.

Semantic maps and reading comprehension

To foster vocabulary acquisition in the long-term memory, teachers and language researchers have attempted to follow several strategies of teaching vocabulary. One among these strategies is the use of semantic maps. The strategy has some teaching privileges as it helps learners to categorize words in the reading text through visualization (Duffy, 2009). Bear and others (2011) emphasize the importance of this strategy as it prompts learners to activate their schemata in the learning of highly specialized vocabulary in various disciplines.

Integration of vocabulary items in a meaningful context through reading can enhance better learning outcomes in both reading and vocabulary (Nagy, 2005). According to Rivers (1981), most of the words are introduced to the learner through reading texts. Nunan (1989) supported this notion by confirming that readers depend on vocabulary existing in their mental structures while reading as vocabulary consists of interrelating systems. Presenting the items from reading text to the learners in a systematized manner illustrates the original nature of vocabulary and at the same time enables them to internalize the items in a coherent way.

In recent years there are numerous ESL textbooks, and ESL learners are thereby exposed to the English language through pre-organized semantic clusters - i.e. groups of words that share certain semantic and syntactic similarities. These groupings such as arm, leg, toes, fingers are presented as a lexical set (Gairns and Redman, 1986), whereas semantic maps are categorical structuring of information in graphic form (Heimlich and Pittelman, 1986, p. 779) that help in categorizing word-meanings and the key attributes by distinguishing one word from another. The brainstorming phase of semantic maps gives educators the insight into learner’s schemata. Thus, it can show interests, level of readiness, gaps, misconceptions, and errors (Johnson and Pearson, 1978). Ideas from one student will trigger ideas from the other students in a chain reaction in thought process (Heimlich and Pittelman, 1986, p. 34).
Retention and Recall of Lexicon Using Semantic Maps

**Wordlists**

Wordlists are prepared for the study of L2 vocabulary to improve students’ knowledge base and retention of vocabulary. According to Mehrpour (2008), wordlist strategies are the study of words in lists with explanation of their meanings in the target language or with a translation of their meanings in the first language for longer memorization of words. A number of studies suggest that increased amount of rehearsal leads to a higher probability that an item will be transferred to the long-term memory (Atkinson and Shiffrin, 1968; Waugh and Norman, 1965), or leads to stored images of greater strength, which are then more easily retrieved from memory (Gillund and Shiffrin, 1984). An explicit strategy for vocabulary acquisition is learning words from a list. Recent research indicates that working with a word list can be a very efficient means of acquiring L2 vocabulary (Nation, 1995; Meara, 1995) and vocabulary learned in lists is found resistant to decay and can be retained over several years (Hulstijn, 2001; Nation, 2001). Using lists and cards also facilitates self-directed learning and learner autonomy, as learners may work at their own pace (Nakata, 2008, p. 7). Shillaw (1995) reports success in a semester-long project using word lists with students at a Japanese university. Thornbury (2002) points out that the value of learning from lists may have been underestimated and suggests several techniques for using word lists in classroom. Recent research into word list learning suggests that teachers of second languages are taking a renewed interest in using word lists for vocabulary instruction.

**Semantic maps as a teaching strategy**

In vocabulary teaching, semantically related words are the sets of words which have certain connections, share common meanings, or compose a network in meanings. The pragmatic benefit has possibly contributed to the popularity of lexical-sets in some widely listed course books for English class (Nation and Waring, 1997). Developments in “lexical semantics” have prompted the development of the “semantic field theory”, “semantic networks” or “semantic grids” which organize words in terms of interrelated lexical meanings. The “semantic field” theory suggests that the lexical content of a language is best treated not as a “mere aggregation of independent words” but as a collection of interrelating networks or relations between words (Stubbs, cited in Amer, 2002).

It is noteworthy that words can be grouped together (relating one another) following different criteria. Animals, for example, may be grouped in terms
Retention and Recall of Lexicon Using Semantic Maps

of physical features; they may be grouped in terms of non-physical features also such as pet, wild, food, etc. (Gairns and Redman, 1986). Moreover, course book authors who favour lexical-sets have believed that showing the connections among words promotes learners’ vocabulary concept learning (Folse, 2004). First, one of the rationales for presenting related words can be drawn from meaningful learning; and distinction is made between rote learning, a passive process, and meaningful learning, the active process of relating new information or concepts to learners' prior knowledge.

To be specific, a spreading activation model proposed by Collins and Loftus (1975) is one of the frequently cited theories to support the use of lexical-sets in vocabulary teaching (Bolger and Zapata, 2011; Hashemi and Gowdasiaei, 2005). In this model, the network consists of nodes representing words and lines between nodes representing connection between words. The length of the line shows how strongly the words are semantically associated (Randall, 2007). Once a certain node in a network is initiated, this activation spreads through the whole network, thus leading to the activation of other nodes in the network (Collins and Loftus, 1975). The spread results in a faster process. Simultaneous presentation of related words possibly strengthens the links between words and facilitates vocabulary learning. Additional theoretical support is found in the levels-of-processing theory (Morin and Goebel, 2001). Researchers have noted that recognized information can be processed at a variety of levels from shallow to deep, and that the amount of cognitive effort that is given to the process determines the quality of the retention. Proponents of lexical-sets approach have claimed that when related words are presented at the same time, learners benefit from comparing, contrasting and organizing or chunking the words (Chin, 2002; Hashemi and Gowdasiaei, 2005; Jullian, 2000; Randall, 2007; Seal, 1991).

Objective

The study was conducted with the aim of finding out the extent to which semantic relatedness influences ESL vocabulary recall and retention among the middle school students of Telangana state, India.
Retention and Recall of Lexicon Using Semantic Maps

Research questions

The following research questions helped in finding out the efficacy of the two strategies of vocabulary teaching.

a) Does semantic mapping and wordlist strategy play a significant role in promoting students’ knowledge and in retention of L2 vocabulary?

b) Which strategy has a greater influence on students’ retention of L2 vocabulary: semantic mapping or wordlists?

Methodology

Subjects

To explore the effectiveness of both semantic mapping strategy and wordlist strategy, two groups of ESL students were chosen. They were 30 seventh grade ESL learners with a mean age of 12 years (SD=1.62), fluent in the Telugu and Hindi languages, and learning English formally from grade 1. The researcher divided the subjects into two groups and assigned them as experimental group (EG) and the control group (CG). The EG (n=15) received Semantic mapping strategy as the treatment and CG (n=15) received the wordlists strategy as the treatment. All the students had 6 years of experience in the target language with a proficiency level ranging from high beginners (A2) to low intermediate level (B1) and were able to understand simple texts and use vocabulary in conversations and writing. They were proficient in reading skills but were not comfortable in speaking. The following table gives information about the participants’ linguistic background. Data were collected using a questionnaire administered before the experiment.

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>11</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Beginning age for English</td>
<td>6</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Years of formal instruction</td>
<td>4</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>% of English they use in a day</td>
<td>25%</td>
<td>75%</td>
<td>50%</td>
</tr>
<tr>
<td>Level</td>
<td>A2</td>
<td>B1</td>
<td>A2, B1</td>
</tr>
</tbody>
</table>

Table 1

Students’ background
Retention and Recall of Lexicon Using Semantic Maps

Average rating of the skills were – Reading\(^1\), Listening\(^2\), Writing\(^3\), Speaking\(^4\) (\(^1\) most comfortable, \(^4\) least comfortable). The questionnaire responses show that school is the major source of L2 exposure and teachers the only model for most of the learners. A few of the learners mentioned ‘tuition’ and ‘home’ as additional sources. While school is the place of L2 use for all of them, some of them said they use L2 at home and also the ‘playground’ for some indicating peer interactions in L2. Their responses also indicate a range of literacy practices at home and school, such as book reading, digital media such as movies and internet which means they have exposure and opportunities to use L2 in the overlapping domains of both home and school.

Materials and procedure

To conduct this research words for the vocabulary test were drawn from unit 6 and unit 7 of grade VII Students’ English Course book. First, frequency of the words was considered important for the learners as most of the words are repeated; and it was assumed that recall would be easier for them. Second, the words had to be familiar for the learners. Third, various word forms were selected as similar forms create confusion in comprehending. A proficiency test, two reading comprehension texts with intermediate level vocabulary, a pre-test and a post-test with questions which included comprehension and retention questions, a video, writing task and a feedback form were used. This research was carried out through reading and writing modules.

Subjects were divided into two groups: an experimental group (EG) and a control group (CG). 40 target words were selected and made a list. Before and after the experiment, both groups were given pre-test and post-test respectively, to understand the vocabulary levels. The pre-test contained 25 multiple-choice test items that aimed at investigating the homogeneity of learners’ vocabulary knowledge. Following the pre-test, three vocabulary lessons (incorporated into reading comprehension texts) were given to the EG using semantic mapping strategy while the CG continued with the wordlist and traditional vocabulary teaching techniques. In other words, each treatment of the intervention process was presented through semantic maps vocabulary teaching technique with a six step procedure for EG and wordlists with traditional teaching techniques for the CG. After the intervention and completion of vocabulary lessons, post-test was administered to both the EG and CG. For the post-test, similar test items were employed which were used for the pre-test. The pre- and post-test scores were compared using paired t-test.
Retention and Recall of Lexicon Using Semantic Maps

It was an in-class teaching model undertaken for 6 weeks with 1 hour per day. In the first class the participants were given a proficiency test with multiple choice questions with ten ‘high beginners’ level vocabulary and ten ‘low intermediate’ level vocabulary taken from Coursebook in comparison to Paul Nation’s word list. They were given 15 minutes to mark their responses and the sheets were collected. In the remaining time the participants were exposed to the concept of semantic frames- a method to learn existing and new vocabulary, through a text. They were asked to read the text and underline the words which they felt were complex to comprehend. A pre-test was given to check their comprehension and retention of words. The first ten items had vocabulary which demanded their meanings and the second ten words had meanings which demanded exact words. Then input was provided using the semantic frame technique. On the second day the subjects were given a worksheet – a post-test which included the same questions as the pre-test. Their responses were collected.

In the second half of the session a domain was chosen – cooking. A cooking video was chosen and a framework was made with 15 possible words that can be used to explain the process. Then all those words were provided as input along with their meanings using the semantic frame technique. A cooking video was played and the learners were asked to write a recipe on their own using the input provided to them, to check their comprehension and retention of the words. Their responses were collected.

Table 2
Data elicitation scheme

<table>
<thead>
<tr>
<th>Methods</th>
<th>Comprehension</th>
<th>Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Words were given and meanings were asked</td>
<td>Meanings were given and words were asked</td>
</tr>
<tr>
<td>2.</td>
<td>Use words or their meanings provided in the framework while writing the recipe.</td>
<td>Use the exact words provided in the framework while writing the recipe</td>
</tr>
<tr>
<td>3.</td>
<td>Place the words under correct headings</td>
<td>Meanings were given and words were asked</td>
</tr>
</tbody>
</table>

On the third day ‘house’ domain was chosen. Different words related to the domain were provided in a box along with their meanings. Then four prompts were given, and the learners were asked to arrange the words under appropriate prompts. This aided in understanding their comprehension skills. In order to assess their retention capacity a test was given which included
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meanings or explanation of particular words in which the learners were asked to write the accurate vocabulary. Their responses were collected and recorded. Finally, a feedback form on ‘Semantic frames effect on learning second language vocabulary’ was given to the participants and the responses were recorded.

For implementing the wordlist strategy each week target words were chosen from the course books. An academic pool of words was compiled using lextutor.com. This list included mostly the 40 most frequent words; then these words were written on colourful flashcards, and after being presented to the students in context they were added to the list on the wall every day. Therefore, the list was compiled by the teacher rather than asking the learners to do so. There were two lists on the walls. Each day a revision activity was conducted and when students knew the word, the word appeared in the use list; but when they could not, it was put in the lose list. Knowing the word included aspects of word knowledge such as part of speech, synonyms, antonyms, collocations and example sentences. In addition to ‘use it/lose it’ activity, the implementation schedule also included different comprehension and retention activities.

Results and discussion

Students’ responses to the comprehension items (multiple-choice, translation, words in context, words in isolation) were scored. The result of test was analyzed using t-test formula to make sure whether there was a significant difference between pre-test and post-test in the EG and CG, and to know which strategy was more effective. Standard deviation was computed before counting the t-test. Quantitative analysis of comprehension scores was performed using ANOVA to determine if there were statistically significant differences between the means of scores in the two strategies (semantic mapping and wordlists).

Pre-posttest findings in the EG

A pre-test was held in the beginning of the study to know the beginning condition of the students’ vocabulary mastery before getting treatments. In the pre-test, the students had to answer 25 multiple-choice items in 40 minutes. The results were compared to the post-test which followed the same pattern. In both these tests, some learners gave either the exact answers to the questions, or they left a blank near the questions to which they did not know the answer. A few learners tried to explain the answers for the
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comprehension questions in the way they have understood it rather than giving the accurate answers that were given as inputs. In the retention test, instead of writing the exact word, the learners through their comprehension of the word used another word that was related to the prescribed word. For example: when the actual word was ‘snatch’, (the meaning of the word was given through the inputs provided) the learner had understood the word meaning but could not retain it. So when they were tested for the actual word, one of the subjects had written *stealed* (stole) which is nearest in meaning to the targeted word. This word was probably drawn from their schema which they had acquired in their past years of studying.

The results are presented in the following table:

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Progress of EG from pre- to post test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EG</td>
</tr>
<tr>
<td>Pre-test</td>
<td>15</td>
</tr>
<tr>
<td>Post test</td>
<td>15</td>
</tr>
</tbody>
</table>

The mean score of the group at the beginning of the experiment was 3.0 (N = 15 and M = 3 and SD = 1.77); and at the end of the experiment it became 18.4 (N = 15 and M = 18.4 and SD = 5.97). This shows a big difference in students’ knowledge level of the target words before and after the experiment (15.5). The difference in the mean scores before and after the experiment using ANOVA is identified at 0.00 (P-value = 0.00 and T-value = 3.98). When the statistical significance of the mean scores is set at 0.05 or lower (P <= 0.05), this means that the above value (0.00) indicates a statistical significance. Therefore, the results indicate a statistical development in vocabulary knowledge level before and after the experiment to a significant degree.

**Pre-posttest results in CG**

The mean scores of CG in the pre-test and the post-test are compared using the descriptive statistics tool to investigate the development in students’ knowledge level of the target words within the group over a six-week period which was the period of experiment. Below table explains the difference.
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Table 4
Pre-posttest comparison in CG

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>15</td>
<td>2.4</td>
<td>1.59</td>
</tr>
<tr>
<td>Post test</td>
<td>15</td>
<td>14.7</td>
<td>3.08</td>
</tr>
</tbody>
</table>

The big difference in the mean scores indicates a considerable development in students’ vocabulary knowledge after employing the wordlist strategy. The results were also compared using ANOVA to ascertain whether the difference in the mean scores is statistically significant. As illustrated in table 4, the mean score of CG at the beginning of the experiment is 2.4 (N = 15 and M = 2.4 and SD = 1.59), which became 14.7 at the end of the experiment (N = 15 and M = 14.7 and SD = 3.08). This shows a big difference in students’ knowledge level of the target words before and after the experiment (12.3). This suggests the use of wordlists in the classroom promotes students’ knowledge level of L2 vocabulary. The result of the above figure shows that the difference in the mean score of the control group before and after the experiment using ANOVA is identified at 0.00 (P-value = 0.00 and T-value = 3.75). When the statistical significance of the mean scores is set at 0.05 or lower (P <= 0.05), this means that the above value (0.00) indicates a statistically significant difference. Therefore, the results indicate statistical development in vocabulary knowledge level before and after the experiment.

Mean score comparison between Pre- and Post-Tests: EG and CG

The difference of experimentation could be seen through the difference of mean scores between the two groups.

Table 5
Mean score comparison of EG and CG

<table>
<thead>
<tr>
<th>Group</th>
<th>pre-test</th>
<th>post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG</td>
<td>3.0</td>
<td>18.5</td>
</tr>
<tr>
<td>CG</td>
<td>2.4</td>
<td>14.7</td>
</tr>
</tbody>
</table>
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The table above shows that the mean score of the pre-test in the EG was 3, while the mean score of the post-test was 18.5 in the same group. The percentage of the students’ improvement of this group is higher when compared to that of CG. Therefore, there was a significant improvement between the pre-testing to post-testing situation achieved by the students of EG. In short, the writer concluded that there was better improvement of the experimental group’s achievement after they received the treatment by using the strategy of semantic mapping in teaching vocabulary.

Conclusion

In this study, it was found that use of semantic mapping is an effective way of enabling the students to achieve greater progress in vocabulary learning. As a result, the students had positive attitudes towards this method. The findings were also consistent with the literature review. This leads to the implication that semantic mapping can improve students’ vocabulary comprehension; and this is a promising strategy for vocabulary teaching and learning. Therefore, the current study suggests that language teachers may be better off going to the class with no fixed or preconceived maps or graphs to maximize the benefit of using semantic maps as a vocabulary teaching strategy in the classroom.

References


Retention and Recall of Lexicon Using Semantic Maps


Retention and Recall of Lexicon Using Semantic Maps


Effect of COVID -19 Pandemic on Mental Health of Students: A Contemporary Literature Review

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Abstract
The globally increasing trend of COVID -19 pandemic has got worldwide attention from several nations. Along with physical health, pandemic diseases have shown a tremendous negative impact on mental health in the general population throughout the world. To find out the impact of this pandemic on the mental health of students, a systematic review of different national and international literatures was carried out to complete this study. Elevated anxiety, depression, stress, and sleeping disorder were found as the major mental disorders among the students. Most of the results of reviewed studies were based on online survey. In Nepalese context studies on the impact of Covid -19 on mental health are very limited, hence the findings might be useful to explore the possible mental problems among the Nepalese students; and the result will be helpful to follow the necessary further steps to minimize the COVID-19 induced mental problems among the targeted group.

Keywords: Pandemic, COVID -19, mental health, student

Introduction
The 2019 Coronavirus disease (COVID-19) has gained intense attention globally, posing serious threats to people's lives. To date (June 7, 2021), over 173 million confirmed cases and 3.72 million deaths attributable to this disease have been reported (World Health Organization [WHO], 2021) globally. In Nepal, on 13 January, 2020 a 31-year-old Nepali student of Wuhan University, who had returned home on 5 January 2020, admitted with mild symptoms (Bastola and others, 2020) was the first case of COVID
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-19; and after that, the spread of the virus was increased rapidly, and currently positive cases are above 2000 per day. The data on June 7, 2021 reported that the total number of confirmed cases of the disease has reached up to 591494 and with 7990 cases of death (Ministry of Health and Population [MOHP], 2021). To manage the disease spread among the community, different countries have adopted the process like the shutdown of schools and colleges, home confinement of students, limited mobility, postponed student examinations, shutdown of the recreational and amusement centres, etc. During the pandemic disease spreading situation, unpredictability, uncertainty, seriousness of the disease, misinformation, and social isolation have been found associated with physical and psychological distress and symptom of mental illness (Yang and others, 2020).

The impact of COVID-19 might be noticed in all cultures, geography, age, sex, and occupation. Among them, students may constitute a particularly vulnerable population for mental health problems in the light of challenges commonly associated with transitions to adulthood and the frequent economic and material difficulties of this population [Auerbach and others, 2020 as cited by Husky and others, 2020]. As a new disease, the empirical studies on the impact of COVID-19 on the mental health of the students are very limited. In the Nepalese context, empirical studies on the impact of the mental health of Nepalese students are rare. Hence, this study is intended to summarize the results of other national and international studies related to the effect of COVID-19 on the general population with a focus on student’s mental health situation globally and in the Nepalese context. The result of the study might be useful to identify the possible mental disorders and the result might be useful to develop an appropriate strategy to reduce the mental disorders on the students which arise due to the COVID-19.

Methods

The current article is a narrative review of the existing literature on mental health effects due to the COVID-19 pandemic among school and university students. A search of the Elsevier database, science direct, lanset phychiatry, and google scholars and other online resource materials were undertaken using the search terms “COVID-19”, “mental health”, “anxiety”, “stress”, “depression”, “students”, in various combinations. Three broad themes were identified across and were used to organize the review, which are: (i) Attempt to focus on the general mental health implication during widespread pandemic, (ii) Impact of COVID-19 on the general population,
and (iii) Impact of COVID-19 on student’s mental health. The review is based on the studies based on the primary data collected by different scholars and institutes.

Results and Discussion

The important points derived from the review of literature on the effects of COVID-19 pandemic are summarized hereafter under the relevant themes.

General mental health implications during the spread of pandemic

Large-scale disasters, whether traumatic, natural, or environmental, are almost always accompanied by increase in depression, post-traumatic stress disorder (PTSD), substance use disorder, a broad range of other mental and behavioral disorders, domestic violence, and even child abuse (Galea and others, 2020). About 10% of New Yorkers showed the signs of major depressive disorder in the month following the 9/11 attacks, in addition to 25% who reported increased alcohol use (Amal, 2020). A higher level of stress was reported after the devastating earthquake in Nepal in 2015 (Baral and KC, 2019). Like the other adverse situations, during the outbreak of the epidemic and pandemic diseases like SARS in 2003 and Ebola in 2014, several psychiatric disorders like anxiety, depression, and post-traumatic stress disorder were found particularly in survivors and healthcare workers (Bortel and others, 2016; Mak and others, 2010). Currently, COVID-19 has spread throughout the world and a larger population in the world has been affected. The practice of physical/social distancing and lockdown associated with COVID-19 has led to alternation in behavioral pattern and discontinuation of routine functioning with possible long term effects for mental health and psychological well-being; and home confinement through self-isolation and quarantine have affected persons to be suffered from temporally undetermined stress. It has increased anxiety and depression while disrupting sleep, with the consequences upon emotional functioning as other past natural and traumatic incidence and disease pandemic (Altena and others, 2020; Majumdar and others, 2020).

The possible impact of the COVID-19 pandemic on different types of mental disorder symptoms in the victim has been reported by several scholars. According to Shanafelt and others, (2020), different sorts of anxiety symptoms like cognitive symptoms, emotional symptom, somatic symptoms, autonomic symptoms, and behavioral symptoms have been seen in COVID-19 pandemic situation; and higher fear and insecurity has been
found in the victim. Similarly, Montemurro (2020) and Gunnell and others (2020) have reported that the COVID-19 outbreak may generate emotional distress and anxiety and other psychological distress that may lead to self-killing and intensification in the suicide rates. The fear of passing on the disease to their loved one, fear of dying alone and staying away from family are all contributing factors, misinformation about the disease is the other possible cause behind the mental disorder in the general population. At large, all of the studies that have examined the psychological disorders during the COVID-19 pandemic, and have reported that the affected individuals show several symptoms of mental trauma, such as emotional distress, depression, stress, mood swings, irritability, insomnia, attention deficit hyperactivity disorder, post-traumatic stress, and anger (Brook and others, 2020; Wang and others, 2020). Thus, these studies have well explained the poor mental health among people due to Covid-19 pandemic disease outbreak.

Impacts on general population

The prevalence of different types of mental disorders has been reported in the population living at different geographical regions, races, ages, and income groups. Zandifar and Badrfam (2020) highlighted the role of unpredictability, uncertainty, seriousness of disease, misinformation, and social isolation contributing to stress and mental morbidity in Iran. According to Brooks and others (2020), individuals being in the quarantine may experience psychological distress in the form of anxiety, anger, confusion, and post-traumatic stress symptoms. Similarly, Wang and others (2020) have reported 16.5% moderate to severe depressive symptoms with 28.8% moderate to severe anxiety symptom and 8.1% moderate to severe stress on the general population in China (n= 1210); and female gender, student status were associated with a greater psychological impact of the outbreak and higher levels of stress, anxiety, and depression. Likewise, Huang and Zhao (2020) have reported the cases of higher sleeping disorder among 18.2% (n=7236) respondents in China; and health care professionals were found more likely to have poor sleep quality in comparison to other occupational groups.

In Israel, at least one type of psychiatric symptom related to COVID-19 has been reported in 793 among 976 participants (Lahav, 2020). Lahav found that younger children, females, people having a below-average income, being diagnosed with the disease, living alone during the outbreak, having high-risk health problems, and those negatively self-rating one's health status
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were associated with elevated distress. In another systematic and meta-analysis survey among 33062 participants, carried out by Pappa and others (2020), the prevalence of anxiety was estimated to be 23.2% while that of depression was 22.8% among the studied group and female health care profesionales and nurses, who were seen with higher rates of affective symptoms compared to males and medical staffs respectively. Regarding the prevalence of insomnia, it was estimated to be 38.9% among them. From these above studies, the prevalence of different types of mental disorders was found higher in females, students, and low-income groups.

FIGURE 1: IMPACT OF COVID-19 PANDEMIC ON MENTAL HEALTH (SOURCE: SALARI AND OTHERS, 2020)

An online cross-sectional study undertaken by Gao and others (2020) among 4872 Chinese citizens aged 18 years, from Jan 31 to Feb 2, 2020 reported that the prevalence of depression, anxiety, and combination of depression and anxiety (CDA) was 48.3% (95%CI: 46.9%-49.7%), 22.6% (95%CI: 21.4%-23.8%) and 19.4% (95%CI: 18.3%-20.6%). It also showed the severity of mental disorder due to COVID-19 among the general population. In another study in China, Huang and Zhao (2020) have reported that the
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Overall prevalence of generalized anxiety disorder (GAD), depressive symptoms, and sleep quality were 35.1%, 20.1%, and 18.2% respectively among the participants. The study has also shown that younger people reported a significantly higher prevalence of GAD and depressive symptoms than older ones.

In the USA, a tracking poll study was conducted among American people, which reported that 57% (n=1226) of the population has their lives majorly disrupted by the pandemic (Kirzinger and others, 2020). Similarly, in another study conducted among 5470 respondents by Czeisler and others (2020), overall, 40.9% of the respondents who completed surveys during June reported an adverse mental or behavioral health condition, including anxiety disorder or depressive disorder (30.9%), trauma and stressor related disorder (TSRD) symptoms related to COVID-19 (26.3%), increased substance use to cope with stress and emotions related to COVID-19 (13.3%) and having seriously considered suicide in the preceding 30 days (10.7%) in the USA. In a similar report by Czeisler and others (2020) in a different socio-demographic group, at least one adverse mental or behavioral health symptom was reported by more than half of the respondents who were aged 18-24 years (74.9%) and 25-44 years (51.9%), of Hispanic ethnicity (52.1%), who held less than a high school diploma (66.2%), and those who were essential workers (54.0%), and unpaid caregivers for adults (66.6%). In this study, in the USA also, the prevalence of different types of mental problems were found higher among the students. Elevated rates of anxiety, depression, harmful alcohol use, and decrease in mental well-being was reported by Ahmed and others, 2020 among young people aged 21-40 years in comparison to other age groups from the study among 1074 Chinese people living in the US.

There is a very little literature available on the mental health effect that arises due to COVID in the context of Nepal. From the limited available studies, lockdown, curfews, self-isolation, social distancing, and quarantine have been found associated with the overall physical, mental, spiritual, and social well-being of Nepali people (Poudel and Subedi, 2020). The study by Acharya and others (2020) also shows a significant association between self-perceived stress and COVID-19. Among the respondents, 76.7% reported that they had moderate self-perception of stress after the outbreak of COVID-19; and 5.3% of them reported high stress. In another qualitative cross-sectional study by Sigdel and others (2020) conducted among the general population of Nepal (n=349) it was found that prevalence rates of
depression, anxiety, and depression-anxiety co-morbidity was 34.0%, 31.0%, and 23.2% respectively. The same report also showed that females, those living alone, health professionals, and those who spent more time accessing information about COVID-19 were significantly more likely to have depression and anxiety.

Along with depression, anxiety and stress, a higher suicide rate has also been seen in the current situation. A total of 1,647 cases were filed as of June 27 in police stations in Nepal, with an average of 18 people killing themselves every day since the enforcement of the lockdown (The New Indian Express, 7 July 2020). According to Singh and others (2020), during the COVID-19 pandemic, suicide cases in Nepal have increased by 20% and the rate of mental health illness is predicted to see a further rise after the pandemic. Starting from 24th March 2020, within 74 days of lockdown measures to reduce the transmission of COVID-19, on an average 16.5 people have lost their lives in a day, while in the year 2019 the rate was 15.8 a day (The Jakarta Post, 2020 as cited by Singh and others, 2020). In this way, increase in suicide cases is somehow linked to the COVID-19 pandemic in Nepal (My Republica, 2020).

From the above-mentioned studies, COVID-19 was found to be linked with many mental disorders among the general population in the globe. The common mental disorders were low mood, irritability, stress, anxiety, insomnia, emotional exhaustion, anger, depression, and post-traumatic stress symptoms. Among them, anxiety and stress along with sleeping disorders are found most common in different geographical areas and age groups. In Nepalese situation COVID-19 related mental health risk factors in Nepalese youths might have been caused due to deficiency of funding in youth mental health services, social media use, a suddenly-imposed lockdown, lack of understanding of lockdown restrictions, sudden work/student life changes, and abrupt postponement of Secondary Education Examination (SEE) (Sharma and others, 2020).

**Impacts on students’ mental health**

Among the different vulnerable groups affected by COVID-19, students have also been found suffering from various mental disorders. The results of some studies on the mental health effect among students have been summarized in table 1.
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Table 1

OBSERVATIONAL STUDIES OF MENTAL HEALTH CONCERNS RELATED TO COVID-19 ON STUDENTS.

<table>
<thead>
<tr>
<th>Author and others (2020)</th>
<th>Country of origin</th>
<th>Population</th>
<th>Methodology</th>
<th>Instruments</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chen and others (2020)</td>
<td>China</td>
<td>College students</td>
<td>Cross-sectional study online</td>
<td>Depression (PHQ-9), living rhythm</td>
<td>7.7% of the students have depressive symptom due to COVID-19 Pandemic.</td>
</tr>
<tr>
<td>Husky and others (2020)</td>
<td>France</td>
<td>University students (n=291)</td>
<td>Online survey (DASS 21 and IES)</td>
<td>Stress and anxiety</td>
<td>Stress elevated in the overall 61.6 %, depression elevated 60.2%</td>
</tr>
<tr>
<td>Khan and others (2020)</td>
<td>Bangladesh</td>
<td>Students</td>
<td>Online survey</td>
<td>Depression, stress and anxiety</td>
<td>Perceived COVID-19 symptoms were significantly associated with higher scores in DASS stress, depression and anxiety.</td>
</tr>
<tr>
<td>Marelli and others, 2020</td>
<td>Italy</td>
<td>University Students and administrat</td>
<td>Web based survey</td>
<td>Insomnia, anxiety</td>
<td>Insomnia reached 40%, 27.8% showed</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Researcher(s) and Year</th>
<th>Country</th>
<th>Sample Description</th>
<th>Methodology</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Son and others, 2020</td>
<td>United States</td>
<td>Collage student (N=195)</td>
<td>Interview survey</td>
<td>Stress, anxiety (71%) indicated increased stress and anxiety</td>
</tr>
<tr>
<td>Dangi and George (2020)</td>
<td>India</td>
<td>Students (n= 1530)</td>
<td>Non-experimental-survey design</td>
<td>Anxiety 76.44% students were having severe anxiety and 23.66% students were having moderate anxiety.</td>
</tr>
<tr>
<td>Acharya (2020)</td>
<td>Nepal</td>
<td>School, college and university student (n= 300)</td>
<td>Online</td>
<td>Stress 42% has increased stress,</td>
</tr>
</tbody>
</table>

Most of the studies have been carried out through online survey. Chen and others (2020) have conducted a study to describe living rhythms, depressive symptoms and regulatory emotional self-efficiency (RESE) among the 1210 students across the territory of China; and depressive symptom was detected among 7.7% participants. Major symptoms were lack of energy, lack of pleasure and sleep disorder; and the rate of depressive symptoms among students was found higher than in the general population during this pandemic situation.
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In another study conducted by Son and others (2020) in the United States among 195 students, 138 (71%) respondents indicated increased stress and anxiety due to the COVID-19 outbreak. Multiple stressors were identified that contributed to the increased levels of stress, anxiety, and depressive thoughts among students. These included fear and worry about their health and of their loved ones (91%), difficulty in concentration (89%), disruptions in sleeping patterns (86%), decreased social interactions due to physical distancing (86%), and increased concerns on academic performance (82%). Higher level of anxiety among the students during the confinement period was reported by Husky and others (2020) in France in the online study conducted among 291 university students.

COVID-19 outbreak has disrupted the lives of many people across the world. The worldwide rapid increase of infected cases has created a sense of uncertainty and anxiety about what is going to happen. A tremendous level of stress among the university fraternity, inclusive of students along with the unfavorable effects on learning and psychological health, has also been reported by Alrabiaah and others (2020). The major higher degree of depression, anxiety and stress was also reported on the students in Bangladesh (Khan and others, 2020). Similarly, a higher level of depression, anxiety and stress among university students from different countries in Australia has been reported by Collins (2020). Along with the other forms of mental disorder, Marelli and others (2020) have reported a higher level of sleeping problem and insomnia among the students in Italy; and similarly higher sleeping problem has been reported in China by Chen and others (2020). According to YoungMinds’ survey in the United Kingdom, 83% of young people think that their already existing mental health conditions got worse as a result of the suspension of educational activities along with loss of routine and limited social communication (YoungMinds, 2020). Approximately one out of every four students were found suffered from anxiety in China (Cao and others, 2020); and in another study, about 60% of the students seemed to have moderate to severe IES score (Odriozola-González and others, 2020 as cited by Khan and others, 2020). Hence the rates of mental disorders have been found different at different locations and circumstances.

In India, Majumdar and others (2020) surveyed among 325 undergraduate and postgraduate students, and found more extensive feelings of sleepiness, with significantly (p < .05) increased daytime nap duration, and depressive symptomatology (p < .001) as compared to before COVID-19 pandemic.
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The same report has illustrated that the chronic stress of living through a pandemic led to a host of physical symptoms like headaches, insomnia, digestive problems, hormonal imbalances and fatigue.

There are rare instances of systematic study on the effect of COVID-19 among students in the Nepalese context. A preliminary online survey conducted by Acharya (2020) among the students of the school, college, and university level has shown 42% elevated stress among the respondents due to COVID-19 in Nepal. Similarly, schools, colleges, and universities were closed due to the government lockdown in the country. The majority of students’ final exams were postponed until further notice. The uncertain academic progression could have had a negative impact (Samadarsi and others, 2020).

Generally, it is considered that aging increases the risk of COVID-19 infection and mortality; however, the results of existing studies show that during the pandemic, the levels of anxiety, depression and stress are significantly higher in the age group of adolescents and youths. The main reason for this seems to be that this age group takes more concern over the future consequences and economic challenges caused by the pandemic, as they are key active working forces in society and are, therefore, mostly affected by redundancies and business closures (Hang and Zhao, 2020). Hence, the epidemic has brought not only the risk of death from the viral infection but also unbearable psychological pressure among the students of different levels (Yang and others, 2020).

Conclusion

COVID-19 pandemic has rapidly increased and created calamity throughout the world. This contagious virus has not only raised concerns over general public health but has also shown the psychological and mental disorders among the general population. From this review, it has been concluded that the COVID-19 pandemic has a huge effect on mental health of individuals, and the rate of its prevalence has differed according to the age group, geographical areas, and income level. In this context, it is vital to identify the individuals prone to psychological disorders from different groups and at different layers of populations. Students are among the more sensitive groups and the negative effect on their mental health might affect their own future life as well as in the national development ultimately. In the context of Nepal, systematic studies in this regard are not sufficient. Hence it is
essential to develop and implement some appropriate psychological strategies, techniques, and interventions, to preserve and improve the mental health of students and other general population through more specific studies in local context.

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Teaching Learning English through *Hasya Rasa*

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**Abstract**

Language classes should be interesting and enjoyable to learn language effortlessly; learners should learn language without stress and burden in learning process. This article aims to describe rasa theory as a teaching method in language classroom. The research has occupied qualitative descriptive textual method; it is a library research. Language learning should be fun and stress free. The selected humorous poems and jokes make memorization of vocabulary items and their usages easy. The short-situational plot and dialogues make learning and memorization natural. Jokes and humorous poems help to learn language stress-free. It becomes more effective for the learners of about six to twelve years and the beginners. This article describes only ‘hasya rasa’ among other ‘rasas’ in rasa theory. Teaching-learning English through (hasya) rasa theory is a unique and interesting method in ELT. This article provides ELT practitioners with the insight to explore more about the implication of rasa theory into ELT.

**Key words**: rasa theory, hasya rasa, humour, joke, humorous poems.

**Introduction**

English is taught and learnt for academic purposes at school and college level. Teaching English in language classroom should be made as effective as possible; and after learning, the learners should be able to use English language where and when necessary. The aim of this article is to discuss whether *hasya rasa* can be used to teach and learn English language naturally and effectively. First, there is a brief discussion of *hasya rasa* in connection with English language teaching (ELT). Then, humorous poems and jokes are presented as examples.

Students and other people who pass the school level feel it difficult to communicate in English. They cannot express their everyday matters in English. Despite their learning at school level, they cannot communicate in English. They find more formal, serious subject matters in language classes
**Teaching Learning English through Hasya Rasa**

so that they worry about the content of learning. This can discourage them to use the English language. Humourous texts like poem, short story and joke make their mind free and encourages learners to express themselves to their teachers and other friends. This helps them to learn language with relaxation. This situation provokes us to discuss the role of hasya rasa in connection with language classrooms. The crucial question is how can hasya rasa be applicable in language class?

So, the major objective of this article is to show how hasya rasa can be applied in teaching-learning English in classroom. Among nine different types of rasa-s described in the literature, hasya rasa is discussed in the context of teaching and learning of English rather than discussing it as a form of aesthetic pleasure; and the discussion is limited to elementary and basic level language class.

The description and discussion presented in this paper will be useful for basic level teachers in the course of teaching English as a foreign language. Instructors can use short humourous texts or poems, jokes or short story for language class. Besides, course book writers can also gain insights or examples to include humourous short texts that can be used as materials. They can also be useful for researchers in conducting action researches and experimental researches.

In this article, humourous poems and joke are randomly selected for description. Articles related to rasa theory have been reviewed and the insights from them are discussed. Rasa theory was adopted to find out hasya rasa in the poems and joke.

**Review of literature**

*Hasya rasa* is one of the nine rasa-s. Bharatamunni introduced hasya rasa in his *Natyasastra*. It is based on the emotion of laughter. Laughter arises from the situations where a person/character wears unusual or unfit clothes and ornaments, and/or uses distorted language, and performs the acts of incongruent walking and behaviours, and the like in a poem or joke. The *sthayibhava* (dormant emotion) of hasya rasa is *hasa* (humour). Homour refers to the quality in something that makes it funny and amusing. It has the ability to create laugh at things that are amusing.

Abrams (2005) states, "In the normal use, the term 'humour' refers to what is purely comic: it evokes sympathetic laughter, or else laughter which is an end in itself" (p. 340). Readers or audiences are made to laugh at things or
Teaching Learning English through *Hasya Rasa*

persons because they are not only laughable, but they are also being ridiculed. "Humour is the tendency of a particular cognitive experience to provoke laughter and provide amusement" (Wikipedia, 2013). People of all ages, professions, cultures, and locations respond to humourous texts, that is, to laugh, smile, or be amused at somebody or something funny. Realization of *hasya rasa* varies from person to person, and depends on social, cultural, professional levels. Each culture has different expectations of humour. Humour is a message whose verbal skills or incongruity has the power to evoke laughter. It makes language learners stress free.

Comic *rasa* can be traced in the East *Vedas* and in the West. Humour has been a major theme in the literature of the East and the West. Comic sentiment is an important emotion for human life. It relieves the mind of human beings from tension for a while. In art or literature, humour is presented to make readers or viewers laugh and give amusement. *Hasya rasa* is produced with the combination of *vibhava*, *anubhava* and *vyabhicharibhava* which are found in a circumstance of the play. A comic appearance, comic utterance or behaviour stimulates laughter in readers or viewers. Any character that wears funny dress speaks in distorted languages and performs comic actions in a play is the *alambana vibhava* (object) of *hasya rasa*. *Anubhavas* (consequents) of *hasya rasa* are biting the lips, narrowing of the eyes, the nose and cheeks, perspiration, holding the sides, etc. The transitory emotions of *hasya rasa* are *alysa* (lethargy), *nidra* (sleep), dreaming, etc. With the help of these components, the dormant emotion laughter (*hasa*) is relished as *hasya rasa*. A broken order, unexpected comic happening, unusual language use, ironic remark, satire, etc. make readers or viewers laugh. “Where laughter (not happiness) and love are found together, the comic element will blend into the general atmosphere of fun and festivity” (Patnaik, 2013, p. 117). *Hasya rasa* belongs to positive states of readers’ or viewers’ mind. Humour appeals the readers. Language teachers and learners can use *hasya rasa* many times to make language class effective.

Teaching language through *hasya rasa* is a unique and interesting approach. It is based on two premises. One is that language learning should be fun and stress free, which should happen in a natural environment. The next is that the humorous texts make easy memorization of vocabularies and their usages. Humorous poems, short stories, short plays or jokes are short-situational exchanges, which make it easy to learn and memorize effortlessly and naturally. Jokes and humorous short texts unconsciously help language
Learning. Humorous short literary texts and jokes offer full and various contexts in which characters from many social backgrounds are depicted. A humorous text is seen best as a complement to other materials used to teach English language effectively and naturally. "The mastery of jokes and comedy unconsciously helps to increase one's language capability" (Eynon, 2012, v).

Students can find their thoughts, feelings, customs, possessions in local jokes and short texts. Such teaching-learning activities increase a "learner's receptive vocabulary and facilitates transfer to a more active form of knowledge" (Collie and Slater, 2000, p. 4). Jokes or humorous short texts provide a rich context in which lexical or syntactical items are made more memorable. Students gain familiarity with the features of language. Students may become more creative and adventurous to use English language. Humorous texts erase stress and make students active. Humorous texts and jokes foster personal involvement in the language learning process. Students are drawn into the text. They become well-motivated in language class. They become eager to listen and tell other jokes and humorous short stories, poems in English language. Jokes and humorous short texts make cultural enrichment, language enrichment, personal involvement, and the language class interesting. This strategy increases personal involvement by arousing the students' interest and positive reactions. Texts should be from students' interests, cultural backgrounds and language level. The straightforward, plain and simple language of jokes and humorous short texts are helpful to learn English effectively and naturally.

A text having serious, abstract and formal contents in language class may fail to produce successful learning because it can make students bored. They may spend much time of the lesson thinking of the formal subject matter of the lesson than learning language. Although they seem to be engaged in practice of such lesson, their effort and attention given to learning language may not be natural and effective. If the students become bored in language class, they may involve in unruly behavior and make unnecessary noise in the class. Teacher has to control the class. More valuable teaching learning time may be wasted in controlling the students and motivating them to the lesson. If the students are interested in what they are doing, they enjoy the language class and continue to learn more efficiently; and it becomes easier for the teacher to teach language. "Interest is an essential feature of successful practice, just an optional improvement" (Ur, 2010, p. 9).
This strategy aims to create intrinsic motivation in language class. “Humour can open people’s eyes” (Meyer, 2008, p. 563). Jokes and humorous short texts stimulate students to participate in practice and learn English language effectively because of the interest arousing features of such kind of text. Even a boring teaching item can easily be made interesting by using a joke or humorous short texts. A teacher can arouse and maintain interest through jokes, humorous short texts, locally known people, local folk tales, and amusing poetry, proverbs and quotations. These help to elucidate the complex linguistic features and meanings. Then, language teaching becomes more natural and effective. Humorous texts are interesting and funnier. Students can share their own personal experiences, opinions, ideas and feelings in the language class. Humorous texts make language classes finny and amusing. Then they easily participate in language learning activities. This strategy provides students with the opportunity to participate in language learning process. Hoomour texts also provide thoughts; “humour is often used as a play of light that allows us to perceive shades of meaning that might be invisible” and “laughter engenders thought as well as pleasure” (Meyer, 2008, p. 562). Therefore, teaching learning English language through *hasya rasa* (laughter) becomes much more fruitful and effective than the other techniques.

**Illustration**

Humorous texts carry funny cultural backgrounds, customs, things, language. Therefore, learners may not be worried to memorize subject matters of the text. They just enjoy humourous texts and tell others the same in English language. They also start using English in their lives. In order to make the humorous short texts more educational and enjoyable, questions are asked regarding the subject matter of the humorous short texts. Sometimes, learners need to think outside the texts to respond some of the questions. Learners may learn the vocabulary used in the texts. They may practice unfamiliar words in their own contexts. They can give similar meanings, opposite meaning, change word-classes, use them in other contexts, etc. Learners will become familiar with the meanings of words, phrases and idioms through explanation of the texts and other features of lexical and syntactical items. Then they can internalize the meanings of the vocabulary items used in the texts. In the context of having Nepali as the native language, learners can also translate the original Nepali humourous texts into English language and vice versa.
Teaching Learning English through *Hasya Rasa*

**Text 1. The Video**

‘The Video’ written by Fleur Adcock is a humourous poem. Its subject matter is simply ludicrous in two stanzas of twelve lines. The poem is about video. In the first stanza of six lines, a mother gives birth to a baby named Laura. Mother’s sister Ceri, father and midwife are around the mother’s bed. Father and Ceri are “trying to focus the camcorder on Mum’s legs and baby’s head.” In the second stanza, after giving birth to the little infant, the mother becomes thin and busy more. Ceri plays the video repeatedly. It makes the mother go back in the labour pain. As other poets “leave [readers] smiling, grinning, chuckling, and laughing out aloud because they use language that is witty, surprising, teasing, or satirical” (Meyer, 2008 1264), Adcock also leaves readers smiling and laughing out aloud. In this poem, the poet/speaker leaves readers smiling, grinning, chuckling, and laughing aloud. In the labour pain of a mother, Ceri ‘watched’ the baby’s head in the mother’s genital. Ceri watched it instead of the midwife who has the knowledge of labour pain. This situation makes readers smiling, chuckling. Here, *hasya rasa* is realized. Ceri and the mother’s sexual organs function as *vibhavas* of *hasya rasa*. The activity of Ceri do not fit (*vikrita*) here because it is not her job to observe the child delivery. She should feel shame but her activity shows shamelessness (*dristya*); such *vibhavas* cause laughter. Humourous poetry “engenders thought as well as pleasure”. Students laugh at the father and Ceri who made a video of giving birth to Laura.

**Classroom activities**

**Activity 1:** Students listen to the poem from the teacher or recorder for listening practice.

**Activity 2:** Students are divided into groups and asked to discuss about the labour pain if they have seen or heard. (For speaking practice)

**Activity 3:** Questions are asked to the students. (The teacher can ask students to read the poem and writes some questions answer with fun.)

a) Have you seen your mother when she was giving birth to your sister or brother?

b) Has your father made a video of your birth?

c) Is it good to take video of mother and baby in labour pain?

d) Were the father and Ceri serious about the pain of mother?
Teaching Learning English through *Hasya Rasa*

e) Have you watched any domestic animal giving birth to its baby?

**Activity 4 Vocabulary:** Teacher provides opportunities for students to talk about the various aspects of vocabulary knowledge – for instance, pronunciation, synonyms, antonyms, denotative and connotative meaning, hyponymy, homophony, homography, homonymy, polysemy, metonymy, collocation, recognizing and changing word-classes, use, etc. Some vocabulary items from the poem include: video, born, watch, gather, midwife, move over, focus, camcorder, go back, thin, busy, in reverse.

The teacher can engage students in practicing these vocabulary items in different uses. For example, the word ‘watch’ means ‘look at’ or ‘observe attentively over a period of time’, like watching cartoons, films. The teacher can ask students and give other words having the meaning of looking: see, look, view, observe, gaze, stare, gape, peer, glimpse, notice, eye, study, etc. He can discuss about their meanings and uses in context. The teacher may give opposite and other meanings of ‘watch’. In this way, he can discuss about the words that are unfamiliar for students. Students learn vocabulary effectively connecting with the humourous text.

**Activity 5 For More Practice:** A teacher asks the students to write a few paragraphs regarding what they would do if they were at the time of giving birth to a baby, and how they would convince your father to care your mother.

**Text 2: Howard Nemerov’s “Walking the Dog”**

Howard Nemerov’s poem “Walking the Dog” also makes children smiling or laughing aloud because he has used a teasing and satirical language. *Hasya rasa* is experienced while going through the poem. The subject matter is simple but it creates laughter. The persona goes for walking with dog in the morning walk- “Two universes mosey down the street.” The persona clearly says “two universes”- one of human being and the other of a dog. They are “connected by love and a leash and nothing else.” The dog finds the things that the man cannot find. The dog is enchanted by a bush. Their relation is maintained by patience balancing. They do not “think each other’s thoughts.” Their common interest is in shit on the way. They wander along the way observing excrement or waste materials. The dog’s sense is sharper than the man. The dog signifies the place by sniffing, and “squats and shits”. They return home with dignity. Here is a satire to people who work along the street with their dogs in the morning. They both excrete waste materials in
the materials; the excrement mixes in the water and dust. Here, the word ‘dignity’ also satirizes. The person who excretes on the way, how does he walk with dignity? How is he called a “master”? Such language that is teasing or satirical makes laughter in the poem. Thus, hasya rasa is experienced. Some readers may not laugh wildly but chuckle while reading the poem.

Hasa (laugh) is the sthayibhava (dormant emotion) of hasya rasa. Hasa is quickened by different bhava like vibhava, vyabhicharibhava. In this poem, the person and the dog are alambanavibhava, which are the determinants to cause laughter. The speaker takes his dog along the street to excrete waste materials in the street – “our interest in shift”. The environment in which the dog and the speaker wander is called uddipanavibhava; the uddipanavibhava helps to increase the bhavas. The street where men and animals like the dog excrete waste materials becomes dirty is the environment. Such environment intensifies the experience of hasya rasa. Hasya rasa is experienced by an idea but not by the situation itself. The speaker seems rich and educated but walks down the street with the dog and both excrete in the street. This idea is satire that produces laughter “…squats and shits/ Whereon we both with dignity walk home”. Human being is considered superior to other animals; but the dog can get more information than man can. It is also a satire to man. The readers chuckle here. The laughter ranges from gentle smile (smitta) to wild laughter (atihasita) according to levels of characters or status of the readers. This poem satirizes the so-called rich and educated people who walk along the street with dogs and excrete waste materials in the street. The poet Nemerov uses laughter to engender pleasure and thought of frippery.

Students laugh at the man who excretes on the road with his dog.

Classroom activities

Activity 1: Students listen the poem carefully from their teacher. It is for listening practice and they know the way of reciting the poem.

Activity 2. Students read and discuss the poem that makes them laugh in the class.

Activity 3. Question answers (Teacher asks some questions and students answer with fun.)

a) Do you have a dog at your home?

b) Do you or your family member take the dog to the road for excretion?
c) Have you ever excrete the waste material from your body on a road or public place?

d) What do you think about the persons who expel feces from the body on the road?

e) Is it good to shit openly on the road?

Activity 4 Vocabulary: Teacher provides opportunities for students to talk about different aspects of vocabulary – for instance, pronunciation, synonyms, antonyms, denotative and connotative meaning, hyponymy, homophony, homography, homonymy, polysemy, metonymy, collocation, recognizing and changing word-classes, use, etc.

Teacher can discuss the words unfamiliar to students, which may include: universe, mosey, connect, leash, mooch, snout down, hidden, sight, enrapture, bush, haul, patience, symbiotic, content, shit, sluice, inspect, sniff, squat, dignity, etc.

The teacher may make students practice these vocabulary items in different uses. For example, they can discuss the pronunciation of the word ‘mosey’. It means to walk or move in a leisurely manner. Its synonyms are walk, run, move, wander, trudge, tread, promenade, stride, stroll, meander, shuffle, linger, saunter, march, tramp, etc. Teachers can discuss about the homophones of ‘mosey’ and their meanings: mousy, mossy, mussy, mousey, massy, etc.

Activity 5 For More Practice: Teacher asks the students to write a few paragraphs describing what they would do if they had a pet dog at home. Or, what they would say to the person who takes his dog on the road for excretion and he also excretes on the road.

Text 3. Searching for Lodging (Bas basna khojne)

In a village, a traveler was searching a lodge in the evening. But he could not find because there were no lodges in the village. Then he wished to request villagers to stay that night at their home. He reached a nearest house, and requested:

Traveler: Namaste aamai (mother), would you give me a room (bas)?

Old woman: Bamboo (bans)? There is some in the garden. Cut and take it away.

Traveler: No, no. I mean to sleep.
Old woman: What?! You want to sleep with an old lady like me?! You bastard! Rascal!

In searching for a place to sleep, the traveler wandered and night fell. He goes to a house and asks:

Traveler: Hello sister, is there a place to sleep (bas) at your home?

Young woman: In our house, we are only females, daughter and daughter-in-laws, today, no male. Therefore, it wouldn't be right to give lodging to a male.

The traveler went to almost all houses in the village. But all people explained the same reason, about females, daughter and daughter-in-laws. No one was ready to provide him lodging. He was disappointed.

Traveler (angrily, again visits a house): In your house, are there females, daughters and daughter-in-laws?

House owner (feeling a bit astonished): Why do you ask? What do you want to do?

Traveler: I want to spend a night.

[Students: (laugh) Haha haha haha haha haha]

Classroom activities

Activity 1: For listening practice, the teacher reads aloud in front of students, or brings the recorded text and asks his students to listen carefully.

Activity 2: Students are divided into groups and instructed to go to other classes to tell the same joke. (For speaking practice)

Activity 3: Question-answers (Teacher asks some questions and students answer with fun.)

a. What did the old woman understand by 'bas' and 'sleep'?

b. Why did the traveler not get lodging in the village?

c. Why was the male not given to sleep at night in the house where there were only females?

d. Would he get lodging if the traveler was a female?

e. Did the traveler look for lodging or daughters and daughter-in-laws at the last house?
f. In your opinion, did he get lodging in the last house?

Activity 4 Vocabulary: Teacher provides opportunities to the students to talk about various aspects of vocabulary knowledge, for instance, pronunciation, synonyms, antonyms, denotative and connotative meaning, hyponymy, homophony, homography, homonymy, polysemy, metonymy, collocation, recognizing and changing word-classes, use, etc. Some of these items include: 'bas', 'bans', bamboo, room, garden, bastard, rascal, traveler, wander, daughter-in-law, lodging, explain, sleep, reason, provide, disappointed, angrily, visit, astonished, spend, etc.

Some Sample Sentences for Vocabulary
1. Is it cheaper to live in a lodge than a hotel?
2. Is there bamboo near your house?
3. You bastard! You made her cry.
4. Your mother is a daughter-in-law of your grandfather.
5. It is difficult to explain the effects of God.
6. Ramila was disappointed not to be chosen in a cricket team.
7. My parents looked astonished at my result.

Activity 5 For More Practice: Teacher asks the students to write two paragraphs describing what they would do if they were in the same condition as the traveler, and how they would convince the villagers to provide them lodging.

Conclusion
In learning English, people become worried about contents, instead of learning the language that is necessary for daily life. Instead of more formal and complex contents, we can include the contents having humorous poems and jokes, so that learners enjoy hasya rasa in the class and practice with fun even outside the classes. Texts having humour help learners learn and expose them in the target language naturally and effectively. It becomes easy to remember the contents and to tell or write similar other poems and jokes. Language learners become creative in language use in this way. Teachers and students enjoy texts and get pleasure in teaching and learning because of hasya rasa experience. This analysis exposed that teacher can teach language skills and aspects including the linguistic features using the
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humorous poems, jokes or short stories. Grammatical categories, grammatical functions, grammatical transformations, and grammatical operations can also be discussed in the language classes. It is also possible to analyze language used in humorous poems and jokes in terms of context. It becomes much more effective for the children of about six to twelve years. We should teach language at elementary level, but not the contents. Textbooks may not be necessary in language classes. Language classes should be interesting and enjoyable, and learners learn language effortlessly and naturally through *hasya rasa* explication. It makes easier to learn English through the experience of *hasya rasa*.

References


Impact of ICT on Adopting Online Education at Higher Education in Nepal: A Factual Analysis

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Abstract

This article primarily concerns the impact of ICT in adopting online education in higher education in Nepal. It focuses on the baseline information about the impact of ICT on higher education. This study has adopted a narrative literature review with a descriptive-analytic method to reveal the salient features associated with the impact of ICT in higher education. The study has adopted a rigorous interpretative process and synthesized the impact of ICT on adopting online education. The utilization of ICT in education is enforcing teachers as well as educational institutions to review pedagogical practices. No matter, the issue of use of ICT has been raised in the whole educational system; and similarly, there are also the issues related to equality in access to education and the delivery of quality education for the learner due to the lack of policy provisions, infrastructure and competencies of the teacher and the student. Thus, the increasing trends of utilizing ICT have been enforcing to transform the structure of education system as well as educational pedagogy.

Keywords: higher education, ICT, online education, technology

Introduction

Education in the world is full of inspiring innovations and it is in the course of extent beyond the immediate context. It is due to flourishing the life of every child by giving them access to the best possible education innovations (Spencer-Keyse and Warren, 2018). Nepal has been taking initiatives to connect with the emerging useful innovations in education to transform the traditional teaching strategies into the modern learning environment (Rana, 2018). However, the inequalities in access due to lack of physical infrastructure and resources, it has been reinforcing social inequalities and
Disturbing the access to higher education (Devkota, 2021). The key challenges of innovations are in adapting and implementing these innovations well in different contexts and scales. But, at the same time, it is also necessary to be careful while managing, developing and implementing such innovations rapidly on a larger scale throughout the country otherwise such innovations can sometimes do more harm than good in the long run.

Online education or e-learning is also one of such innovations for educating people in the formal education system by the use of Information Communication Technology (ICT). It is used as an umbrella term for any type of online course and learning that takes place across distance education and not in a traditional classroom (Singh and Thurman, 2019). ICT is a scientific, technological and engineering discipline and management technique used in handling information, its application and association is found in social, economic and cultural matters (UNESCO, 2002). ICT tool comprises electronic devices like computer software and hardware, networking, telephone, video, multimedia and the internet. ICT is used in education in different forms of technology-assisted programmes, like television-assisted instruction, radio-assisted instruction, computer-assisted instruction, mobile learning, and internet-assisted instruction.

In the Nepalese context regarding online education, some questions are critically related to the access of quality internet for each learner and the skillful human resource to handle the ICT. Proper knowledge and skill about operating and implementing ICT in education are essential for effective knowledge transformation; otherwise such new technologies should not be imposed without enabling the teachers and students to comprehend these fundamental shifts (Odero, 2017). Without the knowledge and skills of such technologies among the entire students and teachers, it is really a difficult task to radically switch from a traditional classroom to an online class.

Nepal has developed and implemented different plans and policies concerning ICT in education from school to university level. Gradually the use of ICT in education is scaling up day by day in terms of infrastructure, skill and content. ICT has been introduced as a subject as well as a tool for instruction in various subjects in school education through the National Curriculum Framework for School Education 2005 (Ministry of Education and Sports, 2005). In the same way, the ICT master plan (2013-2017) also aims to enhance equal and equitable access for quality education by improving the service delivery system and increasing digital devices in
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education (MOE, 2013). Similarly, the use of ICT assists students in the knowledge-building process, gaining better results, increasing interest in quality education, and making them able to solve problems (Jha and others, 2019). Thus, students' attraction towards ICT is also increasing day by day. However, the efforts for integrating ICT in teacher education, training and professional development programs seem to be insufficient and unsatisfactory in comparison to its adaption in society (Kunwar and others, 2020). However, to underpin online learning, ICT and educational technology in online education should be used properly (Kunwar and others, 2020; Paudel, 2021). The School Sector Development Plan 2017 has emphasized ICT to improve classroom delivery, increase access to learning materials; and improve the effectiveness and efficiency of educational governance and management by establishing an ICT enabling learning environment. Thus, technology can help to learn move beyond the classroom and take advantage of learning opportunities available in museums, libraries, and other out-of-school settings (Darling-Hammond and others, 2020).

Present Context of using ICT in Teaching and Learning

Integration of ICT in teaching and learning is a complex process. It may encounter a number of hurdles due to the lack of infrastructural and technical accessibility. The present condition of using ICT in the classroom, in the context of Nepal, has faced several problems regarding limited accessibility and network connection. The inaccessibility to resources in teaching and learning de-motivates the teachers and also discourages them from integrating new technologies into education. In the Nepalese context, infrastructural barriers such as equal access to broadband internet throughout the country are creating difficulties (Kunwar and others, 2020). Similarly, inaccessibility and an insufficient number of ICT tools have been also creating barriers to the successful ICT implementation in education. The technical assistance or support in the classroom to utilize the resources related to ICT is another problem that is also affecting the integration of ICT in teaching. Technical problems are also the barriers for teachers in the Nepalese context that have created problems in the smooth delivery of class in natural flow (Devkota, 2021; Rana and Rana, 2020). Thus, ICT-friendly training and essential ICT tools for each teacher are necessary for effective classroom delivery.

Learners' attitude and access to technology may influence the delivery process of online education. Successful implementation of online learning
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depends on the skillful integration of ICT services. Integration of ICT in education generally means technology-based teaching and learning that closely relates to the utilization of learning technologies and the integration to improve and increase the quality, accessibility and cost-efficiency of the delivery of instruction to students (Ghavifekr and Rosdy, 2015). Hence, the integration of ICT in content delivery makes the learner engaging and online learning effective (Kunwar and others, 2020). In the context of Nepal, lack of implementation strategies of ICT education policy, low funding for resources and ICT infrastructure, traditional knowledge delivery mode of universities, lack of skilled workforce and political influence in the education sector are major challenges to transform traditional education systems of universities and schools (Rana and others, 2019). Most of the teachers with limited ICT skills are one of the major challenges to effectively integrate digital technology in teacher education and produce skillful teachers to transform the traditional education system to a modern way of learning in Nepal (Rana and Rana, 2020). Similarly, lack of clear educational policy, limited ICT infrastructure and teachers' poor ICT knowledge and skills have impacted the expected efficient practice and teaching activities in the higher education institutions using available digital technology. Hence, teacher preparation with advanced professional training related to ICT and integrating of ICT in education is necessary for the effective implementation of online education in higher education in Nepal.

The impact of ICT on all aspects of human activities has been so wonderful (Jha and others, 2019). Most significantly it can impact human activity through teaching and learning. Additionally, ICT plays a key role in digital curriculum, governance, and success of education at all levels around the globe, as well as in Nepal (Malak and others, 2019). ICT can assist the student to learn more effectively by the use of a wide range of new pedagogy. A distance learning programme cannot be envisioned without the use of ICT (ibid.). It gives the frame of teaching and learning through distance education mode, and also gives speed to learning. Thus, ICT has a greater impact on implementing online classes.

Significance of the study

The increasing trends of adapting ICT in modern society have also been affecting the education system in the world. In these scenarios, especially the developed countries are adopting technology in the instructional activities in schools and colleges as per the need and progress of the society. However,
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some countries like Nepal have been struggling to maintain the technological gap between the progress of the society and instructional activities in the educational institution. The use of technology in teaching and learning activities at school and colleges has been lagging behind in comparison to the technology being used in society. The educational pedagogy or the way of transforming knowledge in school and college is still teacher-centric. Thus, the use of technology as per the demand of society is essential and educational institutions should fulfill the need of society. So, the study has great significance to make aware of the concerned individuals and the institutions about the use of the technology in education as per the demand of the society and the needs of the learners.

The study can sensitise the educational stakeholders about the impact of ICT in online education in the context of Nepal. This study also brings out the barriers of utilizing ICT in education due to the access of different aspects like physical, social and technological conditions. This study can provide some important insights about ICT integrated teaching and learning and can help to strengthen and prepare better educational programs for the days to come. Furthermore, it helps the concerned authority for better installation of the online learning programme in the future. It also helps to enable the educational authority to develop an ICT integrated curriculum as well as to reform pedagogical aspects in education. The objective of this paper is to find out the impact of ICT in online education at higher education in Nepal that could contribute to pedagogical perspectives in Nepal and other countries.

Methodology

The study is based on a review with the descriptive-analytic method, which was used to disclose the salient features associated with the impact of ICT in higher education in Nepal. Based on this method, some related studies have been compared and summarized on the basis of the author's self-experiences of more than two decades of teaching at university level. Thus, the baseline information regarding the impact of ICT in higher education was deduced. A rigorous qualitative approach was followed in the study and data were synthesized following interpretative process. To this end, mostly secondary sources of data were used to explore the impact of ICT in different dimensions of online education at higher levels. In this connection, various research results, publications, reports, periodicals, books, journals and newspapers were reviewed to collect the data.
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Results
This section presents some results and discussion concerning the impact of ICT on implementation of online education in higher education in Nepal.

New innovations and adaptation of resources
The main concern of adapting innovations and resources in education is hoping to provide at least some help, encouragement and inspiration to the learner. Modern education system should provide equity in education globally and narrow down the diversified allocation of resources, tools and technology by means of special support and interventions. Teaching and learning in contemporary higher education in several contexts are largely traditional and often ineffective to meet the demands of learners and the market (Mandal, 2018). This shows substantial improvement in the whole education system in the present situation. However, the traditional classroom teaching with the use of body language, eye contact, facial expressions and intonation create visual and sensuous effects on learners' perception (Gulnaz and Ismaiel, 2017). Effective utilization of these cues not only address learners' heart and mind but also tend to heighten their feelings and emotions, and make them behold to contemplate on the wonders of the lesson. Anyway, such learning is becoming more teacher-centered. In the present situation, innovation of new resources and technology is making the learner continually more creative, constructive and independent. It is also making the world boundless regarding the access to skill and knowledge. Such increasing use of emerging modern technology and learning trend gradually push the world to the online learning ecosystem (Kunwar and others, 2020). Nevertheless, if the traditional system is switched to online teaching then body language and facial expressions are under restrictions as it is difficult to use these skills through virtual class and only voice can fully function in such cases. Therefore, in online teaching, faculty should appropriately slow down their speech to allow students to capture the points being presented; otherwise the faculty has less control over teaching, and students are more likely to “skip the class” (Bao, 2020).

Impact of ICT in online education
The impact of the technologies on teaching and learning in higher education in Nepal is still unclear; and there is a huge gap between policy and government implementation systems (Rana and others, 2019). The discourse
on the implementation of digital technology in higher education settings focuses mainly on students' learning rather than on professors' teaching (Alexander and others, 2017; Bates and Sangra, 2011). Students and teachers feel online classes more stressful and physically sleepy due to remaining busy for a long time on the computer and mobile screens (Khan and others, 2021). Therefore, online classes cannot replace traditional face-to-face instruction. Online teaching may create some obstacles such as decreased student motivation, delayed feedback and feelings of isolation due to the lack of physical presence of classmates and teachers (Verma and others, 2020). Therefore, the loneliness of students in online teaching can have more likely to skip the class or inactive participation in learning activity. The roles of teachers in online environment differ meaningfully from their traditional roles in a face-to-face classroom setting (Guri-Rosenblit, 2018). Most teachers nowadays do not possess sufficient digital literacy (Wineburg and others, 2016; Alexander and others, 2017). To equip the teachers with adequate tools to use efficiently and effectively the wide range of capabilities enabled by the new technologies necessitates a conceptual redefinition of the teachers' roles, well-designed training, and ongoing support systems for students and teachers in teaching-learning (Guri-Rosenblit, 2018). The little attention paid to the key role of teachers in online settings results in a restricted adoption of technologies in higher education so far. In most higher education institutions, the new technologies are used mainly for add-on functions and not for substituting face-to-face encounters or for intensive web-enhanced teaching. (Bates and Sangra, 2011)

Young students possess a natural inclination towards studying through the web, taking more responsibility for their personal and educational activities; and they are found expecting to use relevant digital tools when they study at university (Ubachs and Konings, 2017). Many of them use the new technologies for various purposes, such as downloading music files, chatting with friends, playing complex video games and even preparing fancy Powerpoint presentations; but most of them do not know how to study extensively through the electronic media, or sometimes not willing to do so (Wineburg and others, 2016). They must be familiarized with new digital environments; and develop habits that cultivate the continuous mastery of new digital skills, given the rapid pace of technological development (Alexander and others, 2017; Ubachs and Konings, 2017). It follows that learning effectively and efficiently through electronic technologies requires training and cannot be taken for granted as a natural attribute possessed by
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the young generation (Guri-Rosenblit, 2018). Thus, shifting to digital platforms from the traditional face-to-face mode of classroom learning in higher education, different challenges concerning access and implementation of the resources and technology related to teachers, students, parents, and pedagogy should be endured. In online classes, students feel isolated due to the lack of group projects, communication and restriction in outdoor activities, which leads to social isolation (Adnan and Anwar, 2020). In addition, social isolation is a symptom of dropout from school (Khan and others, 2021).

As stated by Devkota (2021), infrastructural preparedness, curricular constraints; students’ and teachers’ ICT knowledge and access; internet access to them, etc. have impact on implementing online education. Similarly, online teaching and learning experiences of teachers and students, their attitude towards online instruction, challenges for attending online classes, socio-economic constraints, info-techno literacy, student support system, etc. can also impact on employing online learning. (ibid.)

Therefore, special mechanism should be established to support the effective implementation of online learning in higher education. In the present context, online education cannot cover all learners due to limited access to the internet and digital devices (Kunwar, Shrestha and Poudel, 2020). Thus, it is difficult to settle everyone in online learning environments in the prevailing context due to the lack of adequate knowledge of ICT.

Role of ICT in pedagogic transformation

ICT helps to strengthen the delivering process and makes teaching and learning easy, interesting and attractive (Shakya and others, 2017). It is the means of pedagogic transformation as potential digital technology (Tariq Zafar, 2019). Thus, the use of ICT is enforced to redefine the pedagogical boundary as well as the physical distance, classroom, school, college and university. Student-driven learning and inquiry, collaboration, personalization and flexible learning may all be enabled and enhanced through the use of ICT in education. The use of ICT has enabled the learners to access learning online materials, get immediate feedback, communication with each other through different synchronized and asynchronized modes, or collaborative platforms or social media (Kunwar and others, 2020). In the present context, social media and other communication technologies are becoming powerful means for knowledge transformation and flourishing
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(Ferguson and others, 2019). Such platforms are becoming equally useful for the students, teachers and parents. Though educational technologies can enhance teaching and learning processes, many practical challenges are being faced while implementing them in practice (Bai and others, 2019; Rana and others, 2019). Students can engage in their formal class, discussions and other collaborative communication for their knowledge development and the teachers can engage with different professional communities or sharing knowledge to others as the expert elsewhere (OECD, 2017).

The use of ICT in education also helps to spark the process of effective delivery (Ferguson and others, 2019). It also opens up new perspectives of the teaching and learning process. Rapid spread of ICT in education has caused the teacher, administrators and the educational planners to rethink their roles for the future (Tariq Zafar, 2019). The proper integration of ICT in teaching and learning not only increases the chance of gaining education along with increased productivity but also provides various opportunities to the learners and makes teachers aware of their new roles and responsibilities in the educational setup (Sharma, 2015). Nonetheless, technological competency in both teachers and students is a prerequisite for successful online education and in the absence of such skills, imparting online education is a challenge for many educators and students (Kunwar and others, 2020). The use of ICT may change many of the strategies employed by both students and teachers in the learning process. The use of ICT helps to process, extracting, and editing, sending or receiving digital data at a faster rate.

It utilizes a variety of tools and services that handles knowledge efficiently, and quietly contributes to societies for the overall growth and development. ICTs are increasingly seen as an integral part of modern education system; thus it is known as a catalyst for change, and it has the power to transform every aspect of society (UNESCO, 2011). However, in the present situation, most of our higher education institutions do not have enough preparedness for the support services with regard to students towards online pedagogy, online resources, digital library, and learning requirements and competencies (Kunwar and others, 2020).
Role of ICT in higher education

ICT is the means of delivering education using different tools and techniques. It helps to foster live contact between the teacher and the student through different live platforms. Proper use of ICT in education can transform the whole teaching and learning process leading to a paradigm shift in both content and teaching methodology (Kjellsdotter, 2020). The integration of ICT in education can impact incredibly in improving the quality of education and make it more accessible and affordable. The new technologies have been changing the teaching and learning in higher education moving from the traditional face-to-face classroom to online learning (Ni She and others, 2019). Some major roles of ICT in higher education deduced from the different literature are as follows.

- helps teaching and learning process through the use of effective software and hardware,
- helps teachers to instruct, interact and provide feedback to their students,
- helps teachers and students to be accessed with their concerned institutions,
- helps to promote effective innovative teaching skills as well as teachers’ professional development,
- helps to prepare, develop and disseminate various technology-based plans and documents related to teaching and learning,
- helps in different fields of education and research as an assisting tool like assignments, communication, data collection, documentation, and conducting research,
- helps to perform technology-related tasks at a faster rate and keep relevant records safely,
- helps to communicate properly with students, teachers and other persons fast and easily,
- helps the teacher to motivate students and make learning fun and interesting,
- helps teachers to shift towards technology-based instruction from traditional instruction,
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- helps to restructure the curriculum, materials and pedagogy in education.

Conclusion

The use of ICT in education, no doubt, has been transforming education from traditional teacher-centered to digital learner-centered mode. The growing trend of using ICT in society is enforcing the teachers and educational institutions to re-assess their own beliefs and pedagogical practices. Such a growing trend of adopting ICT in education requires redefining the meaning of literacy. The use of ICT has been changing the working style, educational system, curriculum, teaching-learning approaches and assessment system. The use of emerging technologies has been changing the definition of education as well as its pedagogy. Use of ICT in teaching and learning is rapidly growing everyday throughout the world. Hence, integration of ICT and educational technology should be improved to keep up flourishing online learning. The ICT infrastructure, as well as the knowledge and skills of the teachers, are necessary to enhance utilization ICT in education.

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Post-School Transition Challenges for Students with Disabilities in Nepal: Perspective from Disability Interpretive Lens

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Abstract
This study attempts to address the issue of post-school transition which is very important yet ignored in the field of special education in Nepal. The study is a qualitative research based on the phenomenological approach using disability interpretive lens. Three special schools from three different districts of Kathmandu valley were selected as sample schools by convenience sampling method. There were 8 respondents in total where 3 were head teachers and 5 were experts; and all the respondents were selected by purposive sampling method. All the head teachers of three special schools of the study area and experts of special education were considered the population of study. Interview guidelines were prepared and validated after reviewing by special education experts. Document study was also another method of data collection and the obtained data are used to support the result of the study. Data triangulation was done to maintain the reliability of the study. The result indicated that there has been a huge gap in understanding and implementing post-school transition in special education of Nepal. The educational policies and documents lack incorporating this segment of educational issue. Schools having IEPs and existing curriculum lack planning on post-school transition. Similarly, lack of disable-friendly school infrastructures, lack of people’s awareness and poverty are also some challenges for effective implementation of post-school transition process. It is very important for concerned authorities and agencies to address this left
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over vital educational issue in their policies and educational documents as soon as possible.

**Keywords:** Post-school transition, student with disability, special school

**Introduction**

Planning for post-school transition is an essential part in special education process where Individualized Education Programme (IEP) is prepared (Heward, 2013). According to Barbara and Cynthia (2006), IEP includes planning for post-school transition for the holistic development of an individual child. Post school transition is an important event where a student has to adapt in completely new situation with the help of the knowledge and skillshe/she has carried with him/her. Therefore, schools should provide necessary knowledge and skills relevant to their post-school life to those students before leaving their schools. Especially, post-school transition planning for students with special needs or students with various types of disabilities such as having physical disabilities is one of the most concerning issues in Nepal.

Successful transition makes easier to find jobs, enroll into higher education, and builds confidence in participating in social and community activities (Bangser, 2008). More specifically, the objective of transition planning is to help the students after school life ends, into the world of employment, further education and assimilation in societies (Greene, 2003; Baer and others, 2003). According to Strategic Plan 2016-2020 of Queensland USA, students with disabilities have more complex, focused, and intensive transition requirements to empower them and find the pathway towards successful goals of life. A good transition planning process brings students, their educational or life goals, hopes and aspirations together to form a firm foundation of their future. Careful planning and preparation helps smooth transition into employment, vocational training, higher education, and life in the community.

According to United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2015), the experience from the Republic of Korea has been useful where promotion and enabling collaboration and communication among three major stakeholders of high schools, colleges, and the government are generally expected. Similarly, for transition in the world of employment, generally people with disabilities have to face more difficulties. This is because, during school period, they need to be involved
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in vocational training programs so that they acquire the necessary skills to enter in the skilled occupations (Bradley and Ngoc, 2003). Arulampalam (2001) has argued that probability of employment, future earnings and risk of future unemployment to the students for transition called ‘scarring effect’is also prevailing in the context of Nepal, especially for students with disabilities. Transition planning is considered a process of empowering students with knowledge and skills to participate effectively in the community and the sphere of economy.

Statement of the Problem

Disability in Nepal has occurred due to various reasons like difficult geography, conflict, road and other accidents, congenital disability etc. There is a large population of people with physical disability in the country. In this regard, students with physical disabilities constitute the largest number of students in the general and special schools of Nepal. The school cycle completion rate of students with disabilities is low; hence dropout rate is seriously higher. Furthermore, employment opportunities for such students during post school transition are critically rare. Students with disabilities enter the government job and higher education in very nominal number; and most of the students with disabilities return to their communities after the completion of schooling year. Hence, students with disabilities face many barriers and issues in their schooling years. In this situation, transition programs can be the most relevant strategy for helping them succeed in their adult life (Heward, 2013).

In Nepal, majority students with disabilities studying in high schools follow the common curriculum along with their normal counterparts. Some special schools (for example, schools for the students with intellectual disability) follow special education curriculum which focuses on learning activities of daily living, communication, and other adaptive skills (Curriculum Development Centre, 2010). Majority of students study either in regular school across the country or in the schools specially targeted for the students with physical disabilities. But they have to follow the same curriculum as done by their normal counterparts of other schools. In such cases, there are no any special provisions of transition planning for their post school life.

Recently, the high school education of Nepal has been continuously reformed by incorporating vocational skills-based curriculum, whereby students can study science, agriculture, engineering, law, education etc. as an
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elective subject. The provision of local curriculum also addresses the learning needs of vocational education for all the students including those with physical disabilities. It provides autonomy in setting twenty percent of local and relevant contexts for enriching curriculum (Curriculum Development Centre, 2010). However, concrete transition plans targeted for individual students are lacking. Education policies are also silent in this regard despite consisting of some relevant educational programmes for the development of the student’s schooling life.

Methods

This study was carried out by using qualitative paradigm (Denzin and Lincoln, 2011) and following descriptive research design. There are 32 special schools in Nepal (Ministry of Education, 2016), among which three special schools of Kathmandu valley (one each from Kathmandu, Bhaktapur and Lalitpur districts) were selected by using convenience sampling method. All the head teachers of special schools of Nepal and experts in the field of special education working in the country were considered as the population of the study.

Altogether 8 respondents were selected by purposive sampling method (Merriam and Tisdell, 2016). Altogether 3 Head Teachers (each one from a selected school), and 5 experts (especially those who have direct involvement in the process of policy formulation regarding special education) were selected. The following table shows the demographic information of the respondents.

Table 1

<table>
<thead>
<tr>
<th>Respondent categories</th>
<th>Sex</th>
<th>Age</th>
<th>Training received on special education</th>
<th>Teaching experiences (Yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Less than 10 days</td>
<td>10 days to 1 month</td>
</tr>
<tr>
<td>Head teachers</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Experts</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>-</td>
</tr>
</tbody>
</table>

Different interview guidelines (Creswell and Poth, 2018) were developed and given to the head teachers, and experts. Validity and reliability of the
research tools were ensured by receiving consultation and revision with peers and experts of special education. Document study (Merriam and Tisdell, 2016) was another important method used for enriching data. Document study was done mainly to support the data which were collected by the interview process. The information obtained from document study was helpful for triangulating interview data to increase the reliability of study.

In qualitative research, respondents’ consent is an important ethical issue (Creswell and Poth, 2018) which was established from the chosen respondents. Mostly the interviews were conducted during the convenient time of the head teachers. Some interviews were also done by telephone calls. However, the duration of time allocated for each participant was similar. Interview was conducted in 25 minutes for each respondent; and it took almost four days to complete the task of data collection. Document study was focused on finding the existing situation of special education in Nepal and providing insights on transition education. Documents were reviewed after data collection process was completely over. Hence, all the data were triangulated (Merriam and Tisdell, 2016) to ensure the reliability and validity of the study. The data were sorted out and categorized to form different sub-themes. Similar sub-themes were grouped under one major theme. Thus, the study incorporated the data obtained from multiple sources (Creswell and Poth, 2018); and major themes were generated through category formation. Finally, rigorous interpretation and analysis of the data was carried out to find meaningful results.

**Results**

Challenges in national laws and policies regarding education persisted in post-school transition of the students. Management activities are the tools to translate legal provisions practically into reality; but there are problems in this regard. Some other challenges in this connection are presented below.

1) **Lack of legal provision**

Nepal has formulated Disability Act 2017, and Inclusive Education Policy 2017, Equity Strategy 2014, and many other laws related to the rights of people with disabilities. Most of the laws ensure accessibility and equality in opportunities of education; but these are silent on how high school students with disabilities will be managed in the world of job in post-school life. The
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constitution of Nepal has ensured receiving education for the students with all types of disabilities; but there is no provision that can guarantee employment during post-school period. Therefore, clear legal guidelines are needed for schools to plan post-school transition for their students.

One of the headteachers stated:

_Obviously, we are facing the deficit of necessary policies and technical guidelines for post-school transition planning. Personally, I’m also in favour of providing necessary skills and knowledge for students with disabilities for their post-school life but we need to have clear policies and guiding documents for planning and providing post-school transition education_ [Head Teacher of School A].

Unless there are guiding documents and policies, schools and teachers alone cannot plan for post school life because of knowledge deficit, lack of physical infrastructure and other related services needed for providing transition education. Therefore, policies are the pioneering factors which lead to the development of other supportive documents and human resources.

2) Lack of IEP

Individualized Education Plan (IEP) is the blueprint for schools to educate students mainly in special schools. IEPs are the legal and binding documents for schools to know the strengths and weaknesses, intervention strategies, and plan for the future life of students. The special schools of Nepal have no proper IEPs because there are no systematic efforts and adequate expertise in preparing IEPs. Regarding preparation of IEP, one of the head teachers stated:

_It is not that we have no IEP; we have it, but its perfection may be questionable because we have no specialized IEP team to prepare it. We have not received proper training to prepare it either from government or from other private organizations. We would like to appeal to the concerned parties to provide us the expertise service in preparing actual IEPs incorporating transition planning for our students_ [Head Teacher of School A].

IEPs generally consist of planning for post-school transition of an individual student considering his/her strengths, weaknesses, and interests. Transition
Planning in IEPs should take into consideration the student’s post school life in terms of independent living, pursuing a career, or their higher studies.

3) **Lack of managerial competency**

Management is a process of achieving best result out of the limited resource available for any organization. Schools of Nepal are often criticized for their poor managerial competencies in mobilizing resources. A strong and efficient school management can make big difference in the life of the students with disabilities. In this regard, one of the head teachers opined:

> I believe that apart from many other challenges in school, lack of managerial competency is one of the major challenges for post school transition of the students. My school needs good leadership for better outcome for transition planning. Present school leader probably does not know about the necessity and preparation of post-school transition planning [Head Teacher of School C].

The above statement clearly explains that school leaders either do not have adequate managerial competencies or are reluctant in improving the school situation. In many cases, despite having adequate training and authority, head teachers’ managerial competencies are not at satisfactory level. Regarding this, one of the education experts said, it is imperative to provide transition related training to the head teachers of the schools [Expert 2]. Therefore, school administration should be aware about how successful transition planning of students with physical disabilities can be made.

4) **Lack of post-school transition provision in curriculum**

In the high school curricula of Nepalese schools, schools generally assume that planning for post school transition is not their area of execution. Therefore, schools are free even to prepare twenty percent of local curricular contents where schools can manage planning for transition. Regarding this, one of the education experts opined, it is necessary to reform school curriculum to include this issue. Making post-school transition plan has already been delayed in Nepal [Expert 3].

From the above statement, the scenario is clear that the curricula for high school students with physical disabilities need adjustment in providing transition education.
5) **Lack of school infrastructures**

Good physical infrastructure is an essential condition when students with disability in post-school life wish to go to the world of job or to lead independent lives. Schools also need good infrastructures to translate their post-school transition planning into practice. In many cases, schools are willing to prepare and implement post-school transition planning; but they are not able to arrange necessary amenities for the students with physical disabilities. Regarding this, one of the head teachers said, *it is the most striking subject for me, but I am unable to undertake any new planning for the sake of students due to the lack of infrastructures* [Head Teacher of School C].

Another reality also persists that school managements are also unable to show competency in planning and executing of transition education. Another head teacher opined, *schools should enhance their administrative and managerial capacities to develop school infrastructure* [Head Teacher of School B]. In this regard, developing school infrastructures is essential to plan post-school transition for the students with physical disabilities.

6) **Poverty of the people**

One of the widespread problems limiting access to the minimum level of services for all kinds of people in the society is poverty. Approximately, one-third of the population is living below the poverty line in the country. Amongst them, the people with disabilities are the most marginalized segment of the society deprived from many human rights. In this connection, one of the head teachers said:

*Many parents are so poor that they do not have enough time to think about their children’s future. Their entire efforts are for their hand to mouth. Government should launch poverty reduction programmes so that parents could think out of the box from their poverty.* [Head Teacher of School B]

Many people use their entire efforts to manage their household problems including the hand to mouth problem. School education and future transition of their children usually becomes their lowest priority. The vicious cycle of poverty is creating chaos in their lives; therefore, an essential step from the authority is required to uplift the parents of the students with special needs from their never-ending poverty.
7) Lack of awareness

Any new ideas or thoughts to be implemented successfully in society or organizations requires awareness of the stakeholders. Many good ideas that could have brought change in society may go unnoticed due to the lack of awareness of the people. In the same vein, in public, the need, importance, and process of post-school transition planning is a new concept and difficult to comprehend. Not much attention has been paid by the government in the educational policies. For instance, in the Inclusive Education Policy 2017, lack of such attention is noticed. In this regard, one of the experts said:

It is a new concept in the education system of Nepal and a much-neglected issue needed to be addressed by the government as soon as possible. The education policies in special education need to be revised; and this issue should be addressed for the sake of students with disabilities who are leaving school and going to the world of work or higher education. The role of parents is vital in this regard, from transition planning to their implementation. So, they should be made aware first; and later we can discuss the framework of the contents regarding transition education to be taught [Expert 4].

Thus, the government needs to address this new idea in policies as well in school curricula to help students for smooth transition into post school life.

Similarly, one of the head teachers opined:

First, education policies should address the issue. Second, schools need adequate resources and trained human resources to teach vocational skills. The vital aspect of this issue is the awareness of parents. Parents should be prepared and ready to co-operate the school to implement post-school transition planning and programs [Head Teacher of School A].

Obviously, parents are the inevitable stakeholders of the entire education system. In special education, their roles are much more in every step of planning and decision making for the students with special needs. In this sense, parents have to be well informed, and aware about the actions and activities undertaken by the school for the sake of the students' future wellbeing.
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Discussion

Effective post-school transition has been a critical issue in Nepal since there are no specialized provisions, policies, and laws. In the entire history of special education, post-school transition for the students with physical disabilities has not been discussed as part of special education. Therefore, there are very few literatures available in the field of transition in education. However, the study has revealed some important challenges regarding post-school transition planning in Nepal.

Education policy documents are very important for understanding transition. In this regard, policy is an essential tool to conceptualize the affecting structures and practices available to the young students (Billett and others, 2010). There has been a huge lack in the necessary provisions for educational policies and laws. Unless the policies make the ways to plan for such students, the effect of disabilities cannot be reduced in their post school lives. Their assimilation in the society, career, and independent living are heavily compromised to such extent that their entire efforts of learning, knowledge, and skills may go into vain. In this regard, developing self-determination and self-advocacy is essential but challenging to the related educational institutions (National Centre on Secondary Education and Transition, 2004). Because of inappropriate acknowledgement by the policies, students ‘at risk’ may have limited access to resources that can best support them. Therefore, policies ensure the rights of the people and provide tremendous opportunities for students with physical disabilities.

IEPs are the most important documents in this regard, which are lacking in schools in preparing the students for transition. National Centre on Secondary Education and Transition (2004) stated that these IEPs simply include how the students with disabilities are oriented towards self-reflection and self-advocacy about their rights and how to be successful in the post-school period. Therefore, studentsshould be kept in the central position to make necessary decision for their future trajectory. IEPs not only provide directions for the students about their post-school life, but also ensure them to learn the necessary vocational and pre-vocational skills.

School Sector Development Plan (SSDP) 2016-2023 of Nepal stated that secondary education is aimed to make students ready for work or transition to higher education. For this, there are the needs of strong institutional links in the school for facilitating transition (Ministry of Education, 2016). Schools in Nepal are often criticized for undergoing poor managerial
practices and weaker utilization of resources. Furthermore, schools also lack the enabling environment (Human Rights Watch, 2011) due to the absence of minimum level of infrastructures and support services. Head teachers in schools are responsible for overall management, monitoring, and taking responsibilities in schools, developing future plans of the students either in the form of IEP or another. Unfortunately, schools are found with no concrete transition planning for the students with disabilities.

The school curriculums of Nepal are focused mainly on building the future career for general students. Many students with disabilities who study the same curriculum cannot prepare themselves for the post-school transition situation because these curriculums do not provide adequate skills and experiences for post-school life. According to National Curriculum Framework for school education, the curriculums contain some work-based skills, employment oriented education targeting the future life of students. However, comprehensive transition planning targeting the students with physical disabilities are lacking (Curriculum Development Centre, 2010). In a nutshell, there is no formal curriculum that involves systematic planning for post-school transition for the students with physical disabilities in Nepal. Only few vocational activities are done in some schools targeting their future livelihood of students.

Schools' overall educational system is driven by the fuel of financial or economic proposition. Schools' sustained financial situation have great effect on creating better school environment and making new plans for students' wellbeing (Bangser, 2008). Nepal's annual budget for school stands between 16 to 19.5% of the total budget of the government of Nepal (UNESCO, 2016). In this context, the budget allocated for the schools are considered inadequate for improving school's situation. The growing number of students in Nepal has created challenge to manage the necessary services and physical infrastructures (Research Centre for Educational Innovation and Development, 2006). In this connection, there is serious lack of economic and other resources to provide the required services to the students with physical and other disabilities in Nepal.

Another challenge for post school transition is related to poverty. The wealthy parents have access and linkageto the opportunities of higher education or employment; but poor families cannot afford to do that. Sirsch (2003) stated that personal factors along with socioeconomic status and gender are some predictive factors which are viewed as threat to the
transition of students in secondary level. Similarly, due to the poverty of family, children are deprived of adequate learning opportunities, learning materials, texts, and other vital aspects. Study revealed that higher cost of schooling and poverty are the factors to impact the educational achievement of students with disabilities (Wagle, 2012). This is more relevant in the case of students with special needs.

Public awareness allows people to cope with the changing situation for individual and social well-being. Imparting knowledge in some specific subject helps people to think critically. The study revealed that students and parents are mostly unaware about the potentialities and necessary skills and knowledge needed for post-school transition. Therefore, it is important for the students and parents to be aware of decision making and self-advocacy skills during transition process (Bangser, 2008). Government, schools, and educators have roles for awareness of the parents about their changing roles, responsibilities, and relationships for transition of their children to post-school life (Traum and others, 2016). In sum, students, school staffs and parents need to be aware about the planning and implementation of post-school transition to higher study, job world or self-dependent life for students with special needs.

Conclusion and implications

Effective post-school transition of students is one of the vital issues specifically in the field of special education. In the special schools of Nepal, neither the formal curriculum includes transition education nor do the standard IEPs incorporate transition planning for the students with disabilities. School administrators, teachers, head teachers, and even parents are less aware about this issue. In this regard, the study enunciated that there are no concrete legal provisions to support post-school transition of the students with disabilities. Similarly, schools' managerial aspects are too weak to make relevant transition planning. Additionally, preparation of standard IEPs is the most essential aspect of transitional planning which is considered the most vital document for post-school transition. But IEPs prepared by the schools contain no space for post-school transition planning. Also, the formal curricula also do not adequately cover the issue of post-school transition since they include some pre-vocational training without any organized contents. Lack of financial provision leading to poor and disability-unfriendly infrastructures of the schools are other challenging factors. Apart from these, poverty of the people comes as a major factor...
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influencing educational efficiency of schools contributing to the ineffective preparation of the students to take the challenges of their upcoming post-school lives. In addition, the low level of awareness of the people, especially families of the students with special needs has huge impact on making and implementing such transition plans.

This study involves entirely a new educational issue in the field of special education in the context of Nepal. This descriptive research raises several opportunities for further research, both in terms of the understanding the concept of transition education and revealing the challenges of planning and implementing transition education in the country. First and the foremost implication is that it provides an insight to develop awareness among the school family, community and society. As mentioned above, there is no any systematic and organized study about transition education in the field of special education till the date in Nepal. So, this study would be useful to identify the challenges of post-school transition and provide effective ways of empowering children with disabilities in their post-school life. Similarly, this study will also provide effective guidelines to the parents, teachers, and educators regarding the importance and ways of preparing transition plan and their implementation for the children with disabilities. Likewise, this study will be fruitful in enhancing collaboration among parents, teachers, higher education institutions, etc. to provide them comfort in their post-school life. Finally, this study will also be supportive for the education policy makers to develop specific and appropriate plans, policies, and programmes, regarding post-school transition.

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Graduate Level Students’ Techniques and Difficulties in Proving Theorems of Abstract Algebra

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Abstract
This paper has discussed different techniques of proving theorems of abstract algebra adopted by the students of graduate level followed by their difficulties revealed over there. For, three graduate students from the classroom of Master’s degree level in mathematics education of Tribhuvan University were selected by using purposive sampling technique. The difficulties as experienced by students were explored through interviews with the help of interview guidelines; and their responses were recorded by using mobile phone. These recorded responses were transcribed and analyzed by using general inductive approach. The findings reveal that students have felt more difficulty in the indirect approaches of proofs in comparison to direct approaches while learning theorems in abstract algebra. The major difficulties as they experienced are in the selection of appropriate techniques of proofs, connection of previous concepts for logical arguments in proofs and construction of examples and counter examples of the concepts related to theorems. These difficulties are expected to be reduced if the teacher of abstract algebra course in higher mathematics education focuses on conceptual understanding and critical thinking for their students’ learning.

Keywords: Abstract algebra, direct proofs, indirect proofs, axiomatic approach, induction approach, students’ difficulties

Introduction
Abstract algebra is one of the mathematics courses in higher education which is more theoretical in nature. Algebra is the subject area of mathematics that studies algebraic structures such as groups, rings, fields, modules, vector spaces, and algebras (Ernst, 2016, p. 4). These broad
algebraic structures include several definitions, examples, counter examples, proofs of statements, and other problem exercises related to concepts. The students who are learning abstract algebra courses in higher education are expected to have the capabilities of memorizing facts, definitions, and logic; using known facts and principles into new situation; constructing examples and counter examples of each abstract structure, and proving algebraic statements (Citation).

However, as Fry and others (2009) pointed out, “learning is not a single thing; it may involve mastering abstract principles, understanding proofs, remembering factual information, acquiring methods, techniques and approaches, recognition, reasoning, debating ideas, or developing behavior appropriate to specific situation; it is about change” (p. 8). These explanations are emphasizing that learning is the whole cognitive process and involves behavioral skills for graduate students to get mastery in abstract principles, facts and axioms in abstract algebra. This definition of learning equally reflects the learning of abstract algebra in higher education where students need to learn proofs of abstract algebra in higher education where

Proving statements (theorems), lemma, propositions and corollaries accurately is an important skill required for the graduate students to learn abstract algebra where theorems are considered tools that make new and productive applications of mathematics possible (Judson and Beezer, 2015). In advanced mathematics courses in universities all over the world, students’ construction and understanding mathematical proof is emphasized (Guler, 2016,). Thus, proving theorems are fundamental tasks to learn concepts in abstract algebra. Proof has many facets, for example, it is evidence in society, induction in science and deduction in mathematics (Nardi and Iannone, 2006); the importance of proof beyond a university degree is mentioned as: “it is eventually about using reason in everyday life” (Stefanowicz, 2014, p. 33).

But, how students are conceptualizing and experiencing proofs in abstract algebra at graduate level is the concern of this study. There are varieties of approaches of proofs that can be used to prove the theorems in abstract algebra. Lalonde (2013) stated four types of proofs of theorems in mathematics which are direct proofs, proof by contradiction, mathematical induction and proof by contrapositive. These techniques of proofs are also equally applicable in proving theorems in abstract algebra. That is why
understanding proof techniques becomes essential for graduate students to learn the concepts in abstract algebra.

Moreover, it is expected that the students who are studying abstract algebra course in higher education need to have several cognitive and behavioral skills to prove the theorems. However, it is experienced that students have fraught of difficulties in proving theorems in this course. Algebraic arguments are highly valued by students but difficult to produce or understand (Nardi and Iannone, 2006); students have some common difficulties when learning new concepts because they have poor knowledge of mathematical quantifiers, lack of ability to select appropriate proof techniques, and inability to understand given hypothesis (Judson and Beezer, 2015). Also, students need to have different formulations of certain mathematical concepts to prove the mathematical statements (Lalonde, 2013).

Proving theorems in abstract algebra requires both conceptual and procedural knowledge, but improving the conceptual knowledge of students helps to increase the procedural knowledge in learning algebra (Booth and Koedinger, 2008). The pre-requisites like the concepts of numbers, ratios, proportions, order of operations, symbolism, equations, and functions are helpful to develop the conceptual knowledge in algebra, but lack of such pre-requisites among students even at higher level creates difficulties in learning (Welder, 2006). Thus, the students having sufficient conceptual knowledge in abstract algebra are expected to have fewer difficulties in selecting appropriate techniques of proving theorems.

Using examples in proving theorems of abstract algebra are expected to help the development of abstract concepts in higher mathematics learning (Judson and Beezer, 2015). They argued that using examples means giving insight into existing theorems and fostering intuitions as to what new theorem might be true; and they further stated that applications, examples, and proofs are tightly interconnected. Explaining examples, non-examples either alone or in combination of them is beneficial to improve conceptual understanding (Booth and others, 2013). Hence, how graduate students were conceptualizing and learning proof techniques and what difficulties they were encountering and experiencing while proving the theorems in abstract algebra were intended to document.
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Objectives of the Study

This research intended to explain the techniques of proofs that are implemented in proving theorems and to explore the difficulties experienced by graduate students while proving theorems in abstract algebra.

Review of Relevant Literature

Mathematical proof is absolute, which means that once a theorem is proved it is proved forever (Stefanowicz, 2014). Proof is nothing more than a convincing argument about the accuracy of a statement (Judson and Beezer, 2015), as a sequence of logical statements, one implying another, which gives an explanation of why a given statement is true (Stefanowicz, 2014). Moreover, theorem is a justified assertion that some statement of the form $P \rightarrow Q$ is true and a proof is the argument that justifies the truth of the theorem where $P$ is given and $Q$ needs to be proved (Donaldson and Pantano, 2015). There are little differences among the varieties of algebraic statements all of which require proof. Judson and Beezer (2015, p.2) have beautifully explained their distinction as:

*If we can prove a statement true, then the statement is called a proposition. A proposition of major importance is called a theorem. Sometimes instead of proving a theorem or proposition all at once, we break the proof down into modules; that is, we prove several supporting propositions, which are called lemmas, and use results of these propositions to prove the main result. If we can prove a proposition or a theorem, we will often, with very little effort, be able to derive other related propositions called corollaries.*

This description shows that there is logical difference between propositions, theorems, lemmas and corollaries in abstract algebra. However, these statements are similar in the sense of proofs because each of them needs to be justified by logical arguments.

But, the selected students are in confusion to explain these differences. One student stated as: “In my opinion, theorems, proposition, lemmas and corollaries are the same thing. I cannot describe the difference of them. All of them require proofs which are equally important for me”. Similarly, next student opined as “I heard the differences between theorems, corollaries, lemmas and proposition, but became confused to describe their distinction”.

These experiences of students indicate that students, even at graduate level, have great doubt to make distinction among theorems, propositions, lemmas
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...and corollaries. However, all the selected students agreed that all of those statements require proofs in abstract algebra.

Lalonde (2013) stated four types of proof techniques in mathematics: direct proofs, proof by contrapositive (or indirect proofs), mathematical induction and proof by contradiction (pp. 137-148). The direct method is more logically straightforward (Donaldson and Pantano, 2015) where we start with the hypothesis and make a chain of logical deduction to eventually prove the given proof (Lalonde, 2013). Also, contrapositive, and the contradiction arguments are quicker and more self-contained, but they require a deeper familiarity with logic (Donaldson and Pantano, 2015, p. 22).

**Direct proof**

It is a more popular and frequently used technique of proofs in abstract algebra. It assumes a given hypothesis or any known statement, and then logically deduces conclusion (Stefanowicz, 2014). To prove the theorems in the form if $P$ then $Q$, we can use this technique of proofs. According to Donaldson and Pantano (2015), we assume $P$ and logically deduce $Q$ in direct method of proof (p. 20). Likewise, argument is constructed using a series of simple statements, where each one should follow directly from previous one (Stefanowicz, 2014). Here, we follow hypothesis by supporting other true statements without missing any steps or gap in reasoning, but can use axioms or previously established theorems (ibid.). The following example displays the use of this technique in graduate abstract algebra.

Consider a theorem: *Every cyclic group is abelian*. Here, we may assume $G$ is a cyclic group and prove $G$ is cyclic (??) logically with the sequence of supporting true statements where one implies another from starting to ending. Since $G$ is cyclic group, then there exists an element $x$ in $G$ such that every element of $G$ can be expressed as some integer power of $x$ which is due to by definition of cyclic group. Let $a$ and $b$ be any two elements of $G$ then there exists integers $m$ and $n$ such that $a = x^m$ and $b = x^n$. Hence $a \ast b = x^m \ast x^n = x^{m+n} = x^n \ast x^m$ (the set of integers is commutative under addition) $= x^n \ast x^m = b \ast a$ where $\ast$ is the binary operation in $G$. Hence, $G$ is an abelian group.

The above proof in abstract algebra indicates that the hypothesis given in theorems is supported by series of valid arguments. These arguments are the definitions and already established facts. This direct method of proof is also called the formal deduction of proof in mathematics. The valid logics from starting to ending are justified by several axioms one after another.
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**Indirect proof**

This technique assumes the hypothesis together with the negation of a conclusion to reach the contradictory statement. It is often equivalent to proof by contrapositive, though it is subtly different (Stefanowicz, 2014, p. 11). Regarding the proof by contradiction technique, Donaldson and Pantano (2015) stated that for proving the theorem in the form if \( P \) then \( Q \), we assume that \( P \) and not \( Q \) is true and deduce the contradiction on \( P \) (p. 20). The contradiction on \( P \) implies that our assumption is wrong and thus the conclusion of the theorem is true.

If we wish to prove the product of two primitive polynomials is primitive (Gauss lemma, Hungerford, 1974, p. 162) then we have to use indirect method of proof as follows. Here, the hypothesis is not explicitly stated, but students need to be familiar with the definition of primitive polynomials. To prove this theorem, assume the product of two primitive polynomial \( f(x) = a_0 + a_1x + \ldots + a_nx^n \) and \( g(x) = b_0 + b_1x + b_2x^2 + \ldots + b_mx^m \) is not primitive where \( f(x) g(x) = c_0 + c_1x + c_2x^2 + \ldots + c_{m+n}x^{m+n} \), with \( c_k = a_kb_0 + a_{k-1}b_1 + \ldots + a_0b_k \) for all \( k \). Since \( c(f) \) is a unit then \( p \nmid c(f) \), whence there is a least integer \( s \) such that \( p \nmid a_i \) for \( i < s \) and \( p \nmid a_s \). Similarly, there is a least integer \( t \) such that \( p \mid b_j \) for \( j < t \) and \( p \nmid b_t \). Since \( p \mid c_{s+t} = a_{s+t}b_0 + \ldots + a_{s+t-1}b_{t-1} + a_{s+t}b_t + a_{s-1}b_{t+1} + \ldots + a_0b_{s+t} \). Then \( p \) must divide \( a_s b_t \). Since \( p \) is a prime element in the ring \( R \), then \( p \) must divide either \( a_s \) or \( p \) divide \( b_t \) both of which are the contradiction. Hence our assumption is wrong which proves the product of \( f(x) \) and \( g(x) \) must be primitive.

This example justifies that indirect proof also follows the sequence of logical and convincing arguments but its starting point is different from the direct method of proofs.

**Axiomatic approach of proof**

Axiomatic approach is one of the familiar approaches in proving theorems in geometry, which is equally valuable in proving theorems in abstract algebra. This approach of proving is based on the axioms of certain domain of mathematics. Morash (1987) stated that students are introduced to mathematics as a deductive science through plane geometry where we began with the set of axioms to prove the theorems, where theorems are deduced by
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means of proof with series of statements whereby their validity is based on an axiom or previously proved theorem (p. 149). Judson and Beezer (2015) explained:

In axiomatic approach of proof, we take a collection of objects S with definitions and assume some rules, called axioms, about their structures; and using these axioms (requiring consistent) for S we wish to derive other information about S by using logical arguments (p.1).

If we wish to prove “if x + y = x + z then y = z for all x, y, z belongs to ring R”, then we have the following procedures of axiomatic techniques. \( x + y = y + z \) implies \((- x) + (x + y) = (- x) + (x + z)\) (by the existence of additive inverse in \( R \)) \( \Rightarrow ((- x) + x) + y = ((- x) + x) + z \) (by associativity of addition) \( \Rightarrow (x + (- x)) + y = (x + (- x)) + z \) (by the commutativity of addition) \( \Rightarrow 0 + y = 0 + z \) (by existence of additive inverse) \( \Rightarrow y = z \) (0 is additive identity).

This technique of proof also indicates that it is a direct method of proof in which each statement is supported by certain axioms and known results in ring theory. Based on such reasons we can reach the conclusion of the theorem. This technique is generally used to test the certain structural properties in justifying algebraic statements and to establish the truth of examples and counter examples in abstract algebra. There are several problems in abstract algebra which require such axiomatic approaches to proof as to prove group, ring, field etc.

Induction approach

This is also a familiar approach to prove theorems in abstract algebra. This method of proof is referred to as principle of mathematical induction. In mathematical induction “we assume \( p(n) \) be an infinite collection of statements with \( n \in N \); prove \( p(1) \) is true; assume the theorem is true for \( n = k \), that is \( p(k) \) is true; and prove \( p(k + 1) \) is also true for all \( k \) in \( N \), then conclude \( p(n) \) is true for all \( n \) in \( N \) (Stefanowicz, 2014, p. 20).

This method of proof can be used to prove Sylow’s first theorem in group theory which states: “Let \( G \) be a group of order \( p^n \), with \( n \geq 1, \) \( p \) prime, and \( (p, m) = 1 \). Then \( G \) contains a subgroup of order \( p^i \) for each \( 1 \leq i \leq n \) and every subgroup of \( G \) of order \( p^i \) \( (i < n) \) is normal in some subgroup of order \( p^{i+1} \)” (Hungerford, 1974).

For \( n = 1 \), we have \( |G| = pm \) and \( p \) is a prime then by Cauchy’s theorem \( G \) contains an element ‘\( a \)’ of order \( p \), and therefore a subgroup \( <a> \) of order \( p \).
Hence the theorem is true for \( n = 1 \). Now assume \( n > 1 \) and \( H \) is a subgroup of \( G \) of order \( p^i \) \( (1 \leq i < n) \), then \([G: H] = \frac{\mid G \mid}{\mid H \mid} = \frac{p^n}{p^i} = p^{n-i}\) implies \( p \mid [G: H] \) and \( H \) is normal subgroup of \( G \), then \( N_G(H) \neq H \). Also \( 1 < \mid N_G(H)/ H \mid = \mid N_G(H): H \mid \equiv [G: H] \equiv 0(\text{mod } p) \). Hence \( p \) divides \( \mid N_G(H)/ H \mid \) and so \( N_G(H)/ H \) contains a subgroup of order \( p \) by Cauchy theorem. Since the subgroup of \( N_G(H)/ H \) is of the form \( H_i/ H \) where \( H_i \) is the subgroup of \( G \) containing \( H \). Since \( H \) is normal subgroup of \( N_G(H) \), \( H \) is necessarily normal in \( H_i \). Finally, \( \mid H_i \mid = \mid H/ (H_i/ H) \mid = p^i p = p^{i+1} \). Thus \( H_i \) is a subgroup of \( G \) of order \( p^{i+1} \). Hence the theorem is true for \( n = i + 1 \) if it is true for \( n = i \). So by induction theorem is true for every \( n \).

Here, induction is used in combination with the formal deduction approach. There are several arguments as in direct and indirect proofs together with the process of induction. However, the major approach is mathematical induction in this proof.

**Contrapositive approach**

Here, we show the contrapositive statement is true and then conclude the given conditional is true. That is, we assume \( \sim Q \) and deduce \( \sim P \) to prove the statements in the form \( P \rightarrow Q \) (Donaldson and Pantano, 2015, p. 20). This method is like a sub-method of contradiction, but the argument begins with \( \sim Q \) and establishes \( \sim P \). One example of using such approach is as follows.

**Theorem:** If \( R \) is a unique factorization domain with quotient field \( F \) and \( f(x) \) is a primitive polynomial of positive degree in \( R[x] \), then \( f(x) \) is irreducible in \( F[x] \) if \( f(x) \), is irreducible in \( R[x] \). **Proof:** Suppose \( f(x) \) is not irreducible in \( F[x] \) then \( f(x) = g(x)h(x) \) with \( g \) and \( h \) having positive degrees. Then we can show \( g = (a/b) \) \( g_2 \) where \( g_2 \in R[x] \) is primitive polynomial with \( \deg g = \deg g_2 \) and \( a, b \in R \). Similarly, we get \( h = (c/d) \) \( h_2 \) where \( h_2 \) is primitive in \( R[x] \) with \( \deg h = \deg h_2 \) and \( c, d \in R \). Hence, we get \( (bd)f = acg_2h_2 \); and since \( f \) and \( g_2h_2 \) are primitive, it implies \( bd \) and \( ac \) are associates in \( R \). Thus, \( f \) and \( g_2h_2 \) are associates in \( R[x] \) which implies that \( f(x) \) is not irreducible in \( R[x] \), which is a contradiction. Hence, by contrapositive method we prove the theorem.

**Proving theorem by counter example**

Using examples and counter examples in proving theorems in abstract algebra are like using concrete materials in teaching and learning school mathematics. Examples can help students to develop insights in proving
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approaches of the theorems. A theorem cannot be proved by examples; however, the standard way to show that a statement is not a theorem is to provide a counter example (Judson and Beezer, 2015, p. 3).

For example, every prime ideal is not a maximal ideal in the commutative ring with identity can be proved by providing counter example. That is, in the ring of integers Z, the zero ideal (0) is prime which is not maximal ideal because there are infinitely many ideals, in particular 2Z in between (0) and Z. This counter example justifies (0) is not maximal ideal in Z. Similarly, every nilpotent group is solvable but every solvable group is not nilpotent can be verified by showing the symmetric group $S_3$ is not nilpotent.

Finally, Donaldson and Pantano (2015) pointed out that the direct method has the advantage of being easy to follow logically. The contrapositive method has its advantage when it is difficult to work directly with proposition $P \rightarrow Q$, especially if one or both involve the non-existence of something. Hence, in proving theorems in abstract algebra we generally use the formal deduction approach. However, the use of other techniques of proofs including mathematical induction are equally applicable.

Methodology

I believe in interpretivist research paradigm which considers relativist ontology, subjective epistemology and qualitative methodology (Guba and Lincoln, 2005). That is, reality is contextual for which both knower and known involve in the construction of new knowledge by applying the qualitative process of research. Under these philosophical assumptions, I used descriptive case study and applied inductive process of research (Gillham, 2000). I selected three case students purposively from the mathematics classroom of Master’s level. The purpose of selection was to include the experiences of low level, average and above average students.

I prepared semi-structured interview guidelines on the basis of objectives and then conducted face to face in-depth interviews. I explained the purpose of my study to students before taking interviews and assured them the information is used only for research which helped them to express their experiences freely. I took interviews individually and recorded their explanations by using mobile phone. I analyzed the information and interpreted the result by using the general inductive approach as described by Thomas (2006).
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Results and Discussion

Writing proofs is the essence of mathematics studies, in particular of abstract algebra. Generally, at university level, there is dependence on lecture with explanation in which every word will be defined, notations are clearly presented and each theorem is proved (Stefanowicz, 2014, p. 10). However, understanding proofs in abstract algebra is a taxing job for students even at graduate level. This section describes what common difficulties are experienced by graduate students while learning proofs in abstract algebra.

The interviews conducted among the students revealed the fact that students have felt difficulties in selecting appropriate techniques of proof. Selecting a method of proof is often a matter of taste (Donaldson and Pantano, 2015). One student stated:

I am unable to select appropriate methods of proof even I know the hypothesis and conclusion of the theorem, always confusing on: where to start proof? Which method is suitable? Why is this method in the book? But coping teachers’ idea and try to memorize techniques. If I need to prove new statements from the exercise, I cannot select suitable proof techniques.

The other student expressed his experiences as: I am enjoying learning proof techniques by direct methods but it is difficult to understand indirect methods of proof in abstract algebra.

These responses indicate that students have felt difficulties in choosing appropriate techniques of proofs. Their experiences also reveal that direct proof techniques are easy for conceptual learning in abstract algebra. Similarly, third student stated,

I am always confusing on how to start proof of the theorem and where to start it, sometime proof starts from definition of known concepts, sometime by hypothesis like direct method and sometime indirect techniques such as in Gauss lemma, but choosing indirect methods of proof is more difficult for me.

Likewise, other students experienced as: We feel comfortable to use axiomatic approach in proving theorems but if we forget some axioms required for the proof then we stop there, cannot do anything further. They further opined: There is mixture of induction with axiomatic and formal...
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**deduction approach in proving theorems in abstract algebra which creates difficulty in selecting and proving theorems.**

These responses of graduate students show that they are enjoying in axiomatic and direct approaches of proofs, but are unable to explain which method they need to select and use in proving theorems which is due to the mixture of several approaches in proving the same theorems in abstract algebra.

Moreover, connecting previous concepts like definitions, theorems and axioms are necessary arguments in proving theorem of abstract algebra. For such things, graduate students have several experiences including the following.

**In each type of proofs in abstract algebra, we are unable to connect basic facts while proving theorem, due to which we are trying to memorize teachers’ proofs together with definitions. Similarly, they further opined that we have several difficulties to connect previous axioms, facts and logic to prove theorem like: every cyclic group is abelian...for example we need to memorize definitions of cyclic group, abelian group, binary operation and commutativity property in the set of integers... how connect these thing to get conclusion are the difficult aspects.**

These responses display that students have felt difficulty in connecting previous concepts in logical arguments while proving theorems. They are just trying to memorize proofs provided by teachers rather than understand the meaning and arguments in the proofs.

Also, constructing examples and counter examples besides proving any theorem is an important learning skill for graduate students. One student opined: 
*If I know example then easy for conceptual and procedural understanding in proofs of theorem, but difficult to construct example and counter example. Next student responded, I am completely unable to construct counter examples of the algebraic concepts and theorems even I know the proof of the theorem.*

These views indicate that students have felt comfortable to learn theorem if they can construct the examples and counter examples of the theorem. But their experiences indicate that constructing examples and counter examples is very difficult for them while learning proofs in the theorems.
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Judson and Beezer (2015) pointed out that students often make some common mistakes when they are first learning how to prove theorem and to use different methods of proofs. These common difficulties are due to lack of appropriately conceptualizing mathematical quantifier, trying to prove theorem only by examples, assuming hypothesis which is not explicitly stated in the theorem, and being unable to select appropriate method of proofs. That is why, in indirect techniques of proof, students need strong foundation of mathematical language like quantifier and strong conceptual understanding. According to Donaldson and Pantano (2015), indirect proofs require a deeper familiarity with logic, so due to lack of such concepts of logic students at graduate level have faced difficulties in proving theorem by indirect techniques. However, direct technique of proof is easiest one because it does not require knowledge of any special techniques, it is hard to find a starting point to the proof of theorems (Stefanowicz, 2014).

Conclusion

Proving theorems is one of the major objectives of graduate students in abstract algebra. There are several techniques of proofs including direct methods and axiomatic approaches; indirect approaches like method of contradiction, method of contrapositive; and mathematical induction. There are fundamental differences in such proof techniques in abstract algebra, however, they have some common characteristics which consider proof as a logically justified argument where every statement in the argument is supported by previous one until reaching at the ending process. The experiences of graduate students have indicated that direct methods are easier than indirect methods of proofs. The common difficulties of graduate students while learning proofs in abstract algebra are emerging due to lack of capability in selection of appropriate techniques of proofs, being unable to connect previous concepts for the logical arguments in proofs and lack of capability in constructing examples and counter examples of the concepts related to theorem. These difficulties can be reduced if the teachers in higher education focus on conceptual understanding and critical thinking for their students’ learning.
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References


Challenges Faced by Teachers in Teaching English at Basic Level

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Abstract

Teaching English as a foreign language can be a challenging job in non-English speaking countries like Nepal, particularly when English is taught as a subject. In consideration of English as an international language in Nepal, this study explored the challenges faced by English language teachers in teaching English at basic level public school education in Dhangadhi Sub-Metropolitan City of Kailali district of Nepal. Using a phenomenological design under qualitative research, the study included four English language teachers selected through non-random, purposive sampling technique. Semi-structured interviews were used to collect information from the participants, and then the data were analysed and discussed thematically in line with the research questions. As the results revealed, the key challenge concerned large class sizes, particularly when the students came from poor economic family backgrounds, those who also had a poor English language base with low vocabulary achievement. Managing larger classes, recruiting more teachers having English language proficiency and managing infrastructures along with extending class hour can be its implications. Exposing students to English forms the base.

Keywords: English language teaching, large class sizes, English base, multilingual classrooms, English medium

Introduction

English has been taught as a foreign language in Nepal since the 1950s. Teachers who teach English at the basic level are non-English speaking teachers and the learners come from various indigenous language backgrounds. In Nepal, the current school education system includes from Kindergarten to grade 12. As stated in National Education Policy (NEP, 2019), the school education has been divided into four levels: Early Childhood Education (pre-primary level), Primary Education (grades 1 to 5),
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Basic Education (grades 1 to 8), and Secondary Education (grades 9 to 12). English teachers who teach at the basic level face certain problems in the context of Nepal. In this context, this study aims at exploring the challenges and problems in English language teaching and learning faced by the English language teachers at Basic Level in Dhangadhi Sub-Metropolitan City of Kaialai district of Far Western Province, Nepal.

As a global language, English has now become the language of education, business, science and technology, conferences, academics, entertainment, and politics. Due to this fact, the demand for English language teaching and learning in ‘expanding-circle’ (Kachru, 1997) countries like Nepal, China, and Thailand has increased dramatically in the last few years and will continue to do so. However, very little has been known about English language teaching in these ‘expanding-circle’ countries (Floris, 2013). This gap directs the study of exploring the challenges faced by the teachers of English in teaching English in their classes in those countries.

English, being an international language, English language teaching (ELT) has become an important part of teaching in Nepal. Almost all sorts of people from all backgrounds want to learn English. Its acquisition can guarantee the availability of opportunities to employment, travelling, higher education, and even better life (Crystal, 2003). Students come from different language backgrounds and abilities to the class. English is the foreign language to almost all students. English learners in Nepal do not have enough exposure to ELT opportunities. Rather, it is exercised in a limited form in academic, technical and public affairs in the nation (Bista, 2011).

Teaching English as a foreign language is a challenging task in developing countries in general and in Nepal in particular (Akbari, 2015). English has been included in the curriculum of Nepal’s schools and universities and there is a considerable attention to this language in the society. Due to the shortcomings of the formal ELT programmes at schools to fulfill the practical needs of the learners on the one hand, and the need for learning English to satisfy the communicative needs on the other, an increasing number of ELT institutes have been emerged throughout the country.

English is the most dominant language in the world and has been growing as a global language (Crystal, 2003). As Aryal, Short, Fan and Kember (2016) remark, “The use and importance of ELT is increasing worldwide, in developed as well as developing countries” (p.142). As Brown (2018) opines, “The teaching of English is a feature of policies and practices in
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education systems around the world” (p.15). English is given much importance in the education system in non-English speaking countries.

English has been made a compulsory subject from School level to Bachelor’s level in the curriculum of Nepal. Private schools teach all the content subjects in English. However, in public schools, English is taught as a subject. Recently, some public schools have adopted the English medium of instruction (EMI) in their schools considering that learning English is a key skill for students to develop in order to access further education, training and employment (Brown, 2018; Saud, 2020; Sah and Li, 2018). English has become inevitable for academic, communicative and practical purposes. It is the only language to gain knowledge in the field of science and technology, commerce, law, religion, and so on. Many books, newspapers, magazines and journals are also being published in English throughout the world including Nepal. Many institutions in cities teach the English language to those who want to learn it for their academic, professional or career development purposes. All these facts prove the importance and growth of English in Nepal. As such, English as an international lingua franca is extremely important in non-English speaking countries like Nepal.

Despite all these facts, being Nepal a multi-ethnic and multilingual country, teachers face problems in the classroom. In this context, this study was taken up for investigating the challenges faced by teachers in teaching English at basic level school education. Since English language teachers face certain problems and challenges in teaching English at the basic level in the context of government schools, this study is quite significant for policy makers, language planners, administrators and teachers.

The main aim of this study was to explore the challenges faced by the basic level teachers in teaching English in their classrooms of public school education in Dhangadhi Sub-Metropolitan City, Dhangahdi, Kailali. The study also explored how the English teachers addressed the challenges they faced.

Research questions

This study was guided by the following research questions:

1. What are the challenges faced by the basic level English teachers in teaching English in their classrooms?
2. How do they perceive such challenges they encounter in teaching English at basic level?
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3. How do they address such challenges faced locally at the basic level?

Literature review

The literature on teaching English to young learners has identified a number of pressing challenges. One is that English is often introduced as a compulsory subject at primary school without due consideration of who will teach it. In some countries, a severe shortage of trained primary school teachers of English is reported (Hu, 2005; Nunan, 2003). Teachers may therefore find themselves teaching English either without adequate training in teaching young learners in general or in teaching English to young learners in particular. The situation is especially acute in poor or rural areas (Copland, Garton, and Burns, 2014).

Many studies have been conducted on the challenges faced by teachers while teaching English. Rasheed, Zeeshan and Zaidi (2017) explored the challenges faced by the secondary school female teachers while teaching the English language in their multilingual classrooms in Pakistan. They found that teaching English language in a multilingual context is an enormous challenge for the English teachers due to linguistic diversity in the classrooms. Similarly, Behroozi and Amoozegar (2013) investigated obstacles that teachers encounter in teaching English language in secondary schools in Iran. The findings showed that apart from external limitations such as insufficient teaching times and limited teaching resources, English language teachers are disappointed by their low proficiency in speaking English and using technology during teaching times. Moreover, teachers showed willingness to receive training in how to plan and perform their teaching more effective and motivate students' engagement in class activity; also teachers seek effective approach for teaching English. Similarly, Anjaneyulu (2015) studied the problems faced by the teachers in teaching English language in government schools in Telangana State, India. He found that the problems were related to school facilities, instructional resources and background of the teachers.

Recognising teaching English as an international language (EIL) in Nepal (Saud, 2020) as a theoretical framework, this study investigated the challenges faced by the English teachers in teaching English at the basic level public school education in Dhangadhi Sub-Metropolitan City of Kailali district in Far Western Province, Nepal, using a phenomenological design of qualitative research method. As English has been taken as a foreign language
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in Nepal (Shrestha, 1983; Bista, 2011; Saud, 2020), it has been taught as a compulsory subject at schools.

In Nepal, little research has been carried out in this particular field. No researcher (to my knowledge) has tried to explore the challenges faced by teachers in teaching English at basic level in Nepal. Therefore, the present study aimed at exploring the challenges faced by the English language teachers at basic level in the context of Nepal, especially in Dhangadhi Sub-metropolitan City of Kailali district in Far Western Province.

Methods and procedures

This section includes the methods and procedures employed for the study, discussing under the headings of ‘research design’, ‘study context and participants’, ‘data collection tool,’ ‘data collection and analysis procedure.’

Research design

This study followed a phenomenological qualitative research method to examine information regarding the perceived challenges faced by basic level English language teachers while teaching English to learners in their local contexts. Phenomenology in qualitative research focuses on the lived experiences of individuals of the phenomenon, event or situation (Creswell, 2013). A phenomenological study explores the experiences of the people of a phenomenon and thus helps to understand the meanings of their lived experiences. In this sense, this study captured the phenomenon of English language teachers’ experiences regarding the challenges of teaching English at basic level.

Study context and participants

This study was conducted in Dhangadhi Sub-Metropolitan City, a multilingual city with people from various parts of the country. Originally, this place was the habitat of the ethnic Rana people. But with urbanization, various groups of people have been settling down in this city which is also the headquarters of Kailali district. The schools from where I selected the participants were multilingual government-aided schools.

For this study, four teachers were selected through the non-random purposive sampling technique and they were interviewed following the semi-structured interview method. Out of the four English teachers, two were female teachers and two male teachers, ranging in age from 30 to 50. They
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were all native speakers of Nepali language, teaching English at the basic level government multilingual schools. The teachers participating in the study were informed about the aims before, after and during the research process. The participants were affirmed to be volunteers in the study.

The participants’ names have been kept secret. They have been coded as T1, T2, T3 and T4. T1 (female) had the experience of teaching English for seven years and had master’s degree. T2 (male) had the experience of more than 16 years and had bachelor’s degree. T3 (female) experienced the teaching for only three years and had bachelor’s degree. T4 (male) had long experience, more than 26 years, of teaching English mainly at the primary level (up to grade 5 only).

Data collection tool

The data collection instrument included the semi-structured interviews. The background questions were asked to interrogate the English teachers about their qualification, age and teaching experiences. The participants were asked to express their experiences regarding the challenges of teaching English at the basic level, and how they addressed such problems.

Data collection and analysis procedures

In data collection, the informants were asked to express their experiences regarding the challenges of teaching English at the basic level. All the information was collected by the researcher. Then the interviews were transcribed, coded, analysed and interpreted in line with the research questions.

Results and discussion

After the transcription and coding of the information collected from the participant teachers, the three themes have been developed based on the research questions. So the following section deals with these themes with discussion.

Challenges of teaching English

English teachers teaching at the basic level in Nepalese public schools face various challenges and problems, especially in the multilingual classrooms where students come from various economic, linguistic, social and cultural backgrounds. Such challenges can be varied in relation to the students,
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teachers, and the facilities in the school or in the locality. The challenges in teaching English faced by the teachers at the basic level where this study was conducted are mostly related to large class sizes, including poor base, low exposure, preferences of Nepali medium of instruction and reluctant to participate in activities as informed by the participants.

The classes at the basic level in public schools are very crowded, with more than sixty students in one class. Because of the crowded classes, English teachers are unable to pay attention to all the students and conduct interactive activities. In this regard, T1 says, “Teaching English in Nepal in government schools is too difficult. … we have large classes. In my school also, there is a large size class…in one class, there are 76 students. I face classroom management challenge.” As she says, there were 76 students in one class. It is the condition of government schools in Nepal where one teacher has to teach English with crowded classes. It is then creating problems for the teachers in classroom management and conduct student centred activities. All participants claimed the large class size as the main problem as T3 confessed that there were 80 students in her class. To quote T2, “There are more than 60 students in one class, we can’t care individually, we can’t check homework.” The large class size is creating the English teachers problem to teach focusing the students and caring them all. Thus, large class size is a challenging problem for the English teachers at basic level.

T2 and T2 remarked that the students had a poor English language base. To quote T2, “Students have no base, no vocabulary power and weak grammar knowledge.” Similarly, T3 viewed, “Students have no word power; they don’t understand if we teach only in English. If we only teach in English, they say, we don’t like this teacher. Weak don’t understand, there is lack of base.” Thus, two teachers complained that students lack vocabulary power which is in line with Songbatumis' (2017) study. The main reason is low exposure of English in the class as T3 confessed that if they taught only in English, students would not understand and complain that they didn’t understand. Because of this, teachers had to teach in Nepali language.

The participants also expressed that students did not understand if they taught only in English. T2 remarked that she used 75% English and 25% Nepali during the 45 minute class time. As T3 confessed if she taught only in English, students would say they didn’t like her, so she was forced to speak in Nepali.
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T4 viewed that since class time was only 45 minute, it was not sufficient to develop English for the students. Again within that time they had to speak in Nepali as students preferred to be taught in Nepali rather than in English. According to T1, “They take English as a burden…only one subject… so they only target how to pass the exam”. In public schools, students have to learn all subjects in the national official language that is Nepali and they become habituated to it. So they feel difficulty in English. In this regard, as T4 viewed, “only one subject to learn in English, others in Nepali. So students are habitual in Nepali, but not in English as only 45 minute class time.” What we can infer from these expressions is that the 45 minute class time is not sufficient to do student centred different activities in the class. Students have preferences of the Nepali medium instruction over English as they have to study only one English as a subject.

Most of the students do not want to take part in learning activities like interaction, discussion, asking question, and writing activities. As T1 expressed “Students remain silent, they…don’t react in our questions also…they don’t want to involve in activities…they don’t want to speak. They don’t want to write also.” It seems students are passive learners; they depend on teacher’s spoon-feeding. This is what Freire (1970) calls banking model of education. T3 said, “Rana-Tharu students are there…they ask in Nepali but only few, only talented [ones] ask, others silent”. Thus, students remain silent in the class and do not ask questions, nor do they involve in the interactive activities. As a result, they become poor in English.

Almost all the students come from their own home language backgrounds other than English. They use their own mother tongues at their home and school, they speak Nepali as a lingua franca. So they do not practise English either at home or in the school premise. Moreover, they prefer Nepali medium in the class. Then it creates them problem for learning English effectively. In this context, T2 said, “All speak Nepali though they have their own mother tongues.” T4 also expressed similar views, “different mother tongue students come to school. At home they practise their language, but at school, they can’t understand English….practice is less.” Students are unwilling to use English because of which they cannot understand English well in the class. As effective learning depends on much more practise that the behaviourists believe, lack of practising English by the students is a problem for them to learn better.

T1 also expressed that there were not sufficient materials to teach English effectively, and T2 had a similar view, while T3 complained that there were
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no sufficient teachers, so there were large classes to be taught by only a few teachers. T4 said that he only used the textbook as the material. It means English teachers do not usually use any other materials to teach English.

In this way, English teachers have been facing challenges while teaching English. In fact, a large class size is beyond teachers’ responsibility. This problem needs to be addressed by the government by managing more classes and employing or hiring more teachers. Other problems can be addressed by the teachers themselves and it depends on their artistry of teaching and other classroom techniques.

Participants’ perceptions on the challenges

Varying perceptions had been held by the participants regarding the challenges in teaching English at the basic level by the teachers. As T1 confessed, “All the teachers in Nepal face such problems, I think,” while T2 viewed that it was due to the lack of preparation from all sides. T4 opined that there should be more period time as only 45 minute was not sufficient. He further viewed that, for more exposure, other subjects such as Maths and Science should also be taught in English.

T3 viewed that teachers need to tackle the problems by providing extra classes for English. T1 focused on using the multi-media for teaching English and that there should be no use of Nepali in the class so that the students could be habituated in English and take interest in it. It is because even Nepali is the second language for most of the students who come from various ethnic language backgrounds. So, it would not make any difference whether to teach in English or Nepali for them (my observation).

Almost all the four participants viewed the challenges of teaching English at the basic level in public schools as normal. Most of the students in those public schools come from poor economic-background families as rich and middle class children go to private English medium schools. Large class sizes, poor infrastructures and poor management of the public schools along with insufficient manpower create problems in effective teaching of English. So, the participants were hopeful that all these would be changed and the condition of the government-aided public schools would be improved.

Addressing the challenges

The challenges of teaching English can be addressed to some extent by adopting certain strategies. The participants viewed that they were adopting
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certain ways to address the challenges. Below is what the four participants expressed:

T1: I try to speak in very simple English…also explain in Nepali…use materials myself.

T2: I focus on basic things, extra coaching classes to form foundation for…weak ones, lack proficiency in English…some students are better in learning.

T3: I take extra class... I ask talented to help weak ones….rotation class in seating…allstudents are equal for teachers.

T4: Creative work should be focused…textbook should be revised soon. There are old, not sufficient exercises in the book. Technology should be used to motivate students, to encourage them. I have experienced so.

Thus, the participants have their own ways of addressing the challenges in teaching English. As students have poor English, speaking in simple English can be one of the ways that T1 used to do. Moreover, the use of the teaching learning materials like videos is a better solution.

Not all students are weak in learning English. Some students can be very talented and creative even if they come from the poor economic background. This is what T2 said, and T3 expressed that she used to ask the talented ones to help the weak students in the class. It can be considered as an effective strategy as the learners can learn better from their peers in a friendly and hesitation-free way. T2 and T3, as they expressed, used to take extra classes focusing on the basic things in which the learners had difficulties in learning English.

Arranging extra classes for the weak ones can also be a better way to make all the learners learn better and improve their learning.

T4 expressed his opinion about the students’ English. As he opined, focus should be paid to creative work and the textbooks need to be revised timely by adding varieties of exercises relevant and interesting to the learners so that they can be motivated to do the task and exercises given in the books. Using technology in teaching English can be motivating to the students as T4 viewed.
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Conclusion

Teaching English as a foreign language, particularly as a subject, in Nepal can be a challenging job. This study investigated the challenges faced by the English teachers in teaching English at the basic level public school education in Dhangadhi Sub-Metropolitan City of Kailali district. I discussed the results under three themes including the challenges of teaching English, perceptions on the challenges and addressing the challenges in line with the research questions. As the study has shown, the central challenge concerns large class sizes, particularly when the students come from the families with poor economic background in the public schools. Large class size creates various problems including lack of individual care, checking homework, involving students in interaction, etc. Though such challenges and problems can be normal due to large class sizes and the weak base of the learners, it is necessary that English teachers use different strategies to tackle them. It depends on the teacher’s artistry and will to address the challenges of teaching English more effectively.

This study has some wider implications for the concerned authorities. The implications are associated with managing larger classes with smaller ones in size in terms of the number of students, recruiting more teachers having English language proficiency and managing infrastructures along with extending class time as 45 minute is a very short time to teach English. Exposing students to English through English speaking environment in the class with peers and teachers along with the use of audio and audio-video materials can be another implication to form their English base and make their vocabulary power stronger and rich.

This study has the limitation that it was only conducted in one of the cities in Nepal taking the views from only four English language teachers teaching at basic level. As the study has shown, students have a very weak English base. Exploring the causes of weak base of the students at basic level can be a further direction of future research.

References

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**Challenges Faced by Teachers in Teaching English at Basic Level**


Teacher Preparedness and Practices of Inquiry Based Instruction in School Science

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Abstract
The study was carried out with the purpose to dig out science teachers’ perspectives and practices of inquiry based science instruction at basic level of institutional and community schools in Kathmandu district. Furthermore, teacher preparedness, school facilities, administrative support and mechanism to support students’ learning through inquiry based instruction were evaluated. A quantitative survey design was applied to collect data from randomly selected 36 science teachers teaching science at grade eight in the selected schools. Data were collected using pretested questionnaire containing Likert scale type items and open ended questions. Teacher, student, curriculum and school-related factors were found as major affecting factors in practice of inquiry based instruction in schools. Science teachers concerned more about facility related issues rather than pedagogical practices. Some factors including teachers’ low level of confidence, inadequate knowledge and little experience in conducting inquiry based instruction, insufficient school facilities and resources, tight curriculum demanding little inquiry were identified which hindered the implementation of inquiry based approach in science instruction. Moreover, traditional teaching practices, over emphasis on exam are additional factors hindering the practice of inquiry based teaching. It is recommended that inquiry approach should be incorporated in student teaching, science curriculum framing, science teacher professional development programs, classroom management and student evaluation.

Keywords: Attitude, confidence, inquiry, instruction, perspective
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Background of study

In Nepal, after signatory commitment to Education for All: DAKAR Framework of Action -2000, reform in education policies, execution of number of programmes and projects in education sector resulted in tremendous progress in the expansion of school education, increasing enrolment, school infrastructure development, teacher training and decentralized management practice by delegation of school management responsibility from ministry level to community. Despite efforts, students’ performance and quality of education is below satisfactory level (Department of Education, 2010; Education Review Office, 2018). Some posing challenges to the effectiveness and quality of education are unsatisfactory achievement, poor absorptive capacity of students in higher education and their inability to achieve full success in external competitions, and so on (Department of Education, 2010). An over reliance on teachers and duplicating hand-outs is likely to decrease interest, motivation and engagement in science (Wellington, 2000).

Our classroom practice has a poor track record in managing child centered inquiry based science instruction (ERO, 2015). Classroom instruction is being criticized for being lecture dominated, predominantly recitation of textbook content and delivery of factual information, emphasizing rote memorization, less activity and under pressure to finish an over-loaded course for completion of exam with higher score within limited time frame: the supposed supreme measure of success. National Assessment of Student’s Achievement (NASA) study carried out by Education Review Office (ERO) presents poor learning achievement in science with national average of 41 in the year 2013 for grade eight. Reports constantly showing Science stand along with Mathematics and English as three major subjects in which students’ pass rate and average achievement is low for many years (Education Review Office [ERO], 2015; Education Review Office [ERO], 2018; Mahtema and Bista, 2006). In addition, NASA 2013 and 2017 studies revealed that student science achievement scores in grade eight remained low and going down over the years instead of improvement (ERO, 2015).

As NASA study 2013 posits, the root cause behind the downfall of achievement score and low achievement is due to low enquiry in subject matters; and it demands further enquiry to get into the root cause of fact (ERO, 2015). Center for Educational Human Resource Development [CEHRD], 2018 data showed low number of SEE graduates taking science
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as major subject at +2 level (15 percent in 2018/19) and higher studies. Many students after completion of grade 12 get shifted to the non-science stream.

One of the main objectives of school science curriculum is to develop the basic knowledge of scientific concepts, principles and laws; impart the skills of observation and inquiry; and develop competence in applying knowledge and skills for the solution of problems in daily life. Science educators are constantly advocating that science should be taught in the way of scientific inquiry. Empirical literatures suggested that inquiry based instruction is more effective than traditional instruction and contribute to students’ understanding of the nature of science (Backus, 2005), helps in development of thinking, problem solving and skills of scientific process (Crawford, 2000; Hofstein and others, 2004), increase motivation in science learning (Tuan and others, 2005), develop positive attitude towards science learning and laboratories (Holfstein and others, 2001) and increase science learning outcome. Bruce suggested five steps of inquiry based learning as ask, investigate, create, discuss and reflect – through which students can explore the meaningful answers to their own question and come up with meaningful solution (as cited in Sahin, 2013).

Learning science through inquiry is a constructive practice that can cover minds-on and hands-on activities and leads towards meaningful learning and help to solve life related problems, asking open-ended questions, using critical, reflective and creative thinking skills and perceiving the inquiry process as a good method of learning science (Osborne, 2014; Tobin and Tippins, 1993). Children may have pre-conceptions (alternative frameworks), and may have developed different knowledge, and understanding, possess different abilities, skills and learning style that they bring to the science classroom (Wellington, 2000, p. 128). Being child centered approach, inquiry based instruction addresses all the mentioned aspects of the students. In this approach, teacher is the facilitator and role model of inquiry process. Teacher facilitates in creating learning environment, arranges major facilities, encourages and helps students to develop their sense of inquiry. Inquiry is “a step beyond science as process, more than learning about observation, inferences, and experimentation” (National Research Council, 1996, p. 105).

For basic level science teaching, inquiry based teaching can be integrated within the different concepts in science curriculum as a whole. The learners
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can be engaged with asking different types of questions and later on can be provided with conducting inquiry project individually or as collaborative work. Inquiry based integrated science not only covers the content but also involves the process of science through which students understand the world around them. What types of contents students should know, be able to understand, and how they learn within various grade levels is crucial in inquiry based science instruction. The approach does not limit itself around content delivery but goes further to develop science process skills and attitudes for further scientific inquiry. Teacher’s role in inquiry based science is setting the learning environment, motivating them for inquiry process, giving respect for students' knowledge and ability, listening and asking reflective questions, giving regular meaningful and constructive feedback, promoting the interaction of children with material and resources, providing them with access to alternative ideas, monitoring progress, engaging students in investigation and making inquiry into events in the classroom and outside classroom (Harlen, 2000).

If teachers want to create inquiry situation in classroom they need to create meaningful opportunities for students to interact with each other, include problem-solving, and encourage collaboration and positive competition. The starting motivation for this study has been to empirically and conceptually examine the present situation of teaching learning practices in science classroom especially looking on inquiry based Instruction. In this context, the focus of this study is to find the current efforts and mechanisms adopted by the school to improve students’ learning through improving the functioning of school.

This study was carried out with the purpose to examine science teachers’ perspective, experiences, preparedness and practices of inquiry based science teaching at basic level in Kathmandu. This study concentrated on finding the “requirement and practice gap” and providing key implications for school improvement. Furthermore, it investigated the community of practice and produced information on school infrastructure and facilities, school support for inquiry based science instruction. Information regarding students was analyzed on the basis of the responses of participants in Kathmandu. The study addresses the gaps by providing nuanced data on inquiry based teaching learning of science and finds the factors related to it – informing the areas where meaningful and relevant changes are required in Nepalese schools.
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Methodology

In total 36 schools including 25 communities and 11 institutional schools in Kathmandu were selected by simple randomization. One science teacher per sample school was selected as respondents. The selected schools were following the same curriculum designed by Curriculum Development Center and operating under educational act and rules-regulations of the country, although they differ in terms of governance as community schools and institutional schools. Each teacher was informed about the study and consent was taken for their participation. All the required ethical and methodological considerations were maintained.

Survey tool was designed by the author to solicit information about science teachers’ perspectives, experiences and practices, as well as school support to encourage inquiry based science teaching. Data were collected using valid and reliable tools. Validity was ensured by expert judgment, while reliability was maintained by calculating Cronbach’s alpha value and selected after factorial analysis through piloting. The Statistical Package for the Social Sciences (SPSS) version 20 was used to code and tabulate scores and perform the analysis. Quantitative data were analyzed statistically using descriptive statistics including percentage, weighted mean, the standard deviation (SD) and the estimated error of the mean (SEM) to present the data and explain the results of statistical analysis. Survey items were categorized under different themes and concepts, when combined, formed statistically significant patterns. The data were used to determine the characteristics and factors regarding the variables considered. Qualitative data were managed and discussed under different themes triangulating them against quantitative data. Privacy, trustworthiness and authenticity of data were maintained in taking the consent of participants as well as in data coding and analysis.

Results and discussion

The study found some crucial factors affecting learning outcomes in science in the study schools. It is worthwhile to present the findings under different subheadings as follows.

Teachers’ perspective on curricular and socio-cultural aspects of inquiry based teaching-learning

Teachers’ perceptions towards curricular and social aspects of teaching-learning of science using inquiry approach were evaluated by using five-
Teacher Preparedness and Practices of Inquiry Based Instruction in School Science

point Likert type scale. For decision making, weighted mean was categorized as – if weighted mean is up to 3 it was considered as not positive response (NP) while if weighted mean is above 3 the response was considered as positive (P).

<p>| Table 1: Curriculum aspect and socio-cultural aspect of inquiry based science instruction |</p>
<table>
<thead>
<tr>
<th>Variables (Indicators)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Std. Deviation</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curricular aspect (4)</td>
<td>40</td>
<td>2.93</td>
<td>.08</td>
<td>.53</td>
<td>NP</td>
</tr>
<tr>
<td>Socio-cultural aspect (4)</td>
<td>40</td>
<td>3.58</td>
<td>.09</td>
<td>.59</td>
<td>P</td>
</tr>
</tbody>
</table>

Teachers’ perspective about school science curriculum of Nepal dealing with inquiry based approach is not positive with weighted mean below 3 (M= 2.93, SD = 0.53, SE = 0.08). They agreed that science curriculum is text-driven emphasizing passive reading of content over meaningful activity, demanding little inquiry (M = 3.27) and detached from inquiring science in day to day activities. They agreed that school science curricula need improvement for facilitating inquiry based teaching learning emphasizing the hands on and minds on activities (M = 4.16). School science should be connected to daily life activities comprising minds on and hands on activities and enabling them to come up with solutions to their day to day problems.

Teachers’ perception was found positive towards social aspect of inquiry based science instruction, on average (M = 3.58, SD = 0.59, SE= 0.09). Above 59 % teachers agreed that science can be taught connecting to socio-cultural context where cultural and ethical diversity are potential sources of knowledge. More than 69.2% teachers support the statement that ethnic diversity can contribute in collaborative inquiry in science such that “different ethnic groups can contribute to each other's productivity with different skills” (Virginia, 2017, p. 293).
Teacher Preparedness and Practices of Inquiry Based Instruction in School Science

Students’ aspect of inquiry based science instruction

The table below will depict the students’ aspects of inquiry based science instruction.

<table>
<thead>
<tr>
<th>Variable (Indicators)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ capacity and habit of inquiry (5)</td>
<td>36</td>
<td>2.89</td>
<td>.10</td>
<td>.65</td>
</tr>
<tr>
<td>Students’ motivation and interest (4)</td>
<td>36</td>
<td>3.34</td>
<td>.10</td>
<td>.63</td>
</tr>
</tbody>
</table>

Science teachers were found unsatisfied with students’ habit of inquiry science. They argue that few students have the capacity for sound independent judgment (M = 2.65) and habit of exploring possible alternatives in science; and low proportion of students come ready to learn science with eagerness. On the other hand, majority of students complete their assignment on time (M = 4.19). Overall, they were moderately satisfied with students’ capacity of learning science by inquiry (M = 3.08). Teachers reflected lower level of satisfaction from students’ motivation and interest in learning science. The lower level of motivation and interest in science is associated with ongoing conventional teacher-centered methods (Avraamidou and Osborne, 2009). Inquiry based science education is the need of today’s science class which significantly enhances students’ interest in science (Koksal and Berberoglu, 2012). To increase students’ interest, curiosity and motivation in learning science, they must be provided with opportunities for exploring the best alternatives through independent judgment.

Teachers pointed disparities among students’ achievement in science due to socio-economic status, ethnicity (particularly children from Tamang community perform poor and pay low attention and lack interest in learning), language and previous academic records.
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School support and instructional practice

School support covers school facilities and administrative support for inquiry based science instruction. The Likert data were analyzed statistically using percentage weighted mean, standard error of mean and standard error.

Table 3: School support and instruction practices for inquiry based science instruction

<table>
<thead>
<tr>
<th>Variable (Indicators)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Support (4)</td>
<td>36</td>
<td>2.58</td>
<td>.15</td>
<td>.94</td>
</tr>
<tr>
<td>Instructional Practice (5)</td>
<td>36</td>
<td>2.96</td>
<td>.09</td>
<td>.58</td>
</tr>
</tbody>
</table>

Teachers’ view about school support (M = 2.58, SD = 0.94, SE = 0.15) for inquiry based instruction is not positive but more dispersed. Respondent teachers (55.11%) argued that they are not provided with sufficient teaching-learning materials, majority of the schools have science laboratory but inadequate laboratory materials. Carefully managed classroom with adequacy of ICT and other required resources is the demand of modern teaching-learning. Limited access to ICT facilities and no immediate technical support (when and where needed) for ICT during science instruction is a major problem highlighted by the participant teachers. In eight schools, classrooms are under surveillance system so as to control students’ behavior and monitor the classroom activities but no projection facility for instruction. Four schools have projection facilities in seminar hall which are rarely used for instructional purpose.

Majority of the respondent teachers (89.25 percent) argued as classroom setting is traditional, congested, there is low flexibility as classrooms are covered completely by desk-benches/ table-chairs; and there is no open space and facilities for conducting demonstration and inquiry activities. Teachers were found positive towards their administration but showed dissatisfaction over more instructional load per day (4-8 periods per day). Some teachers mentioned that their head teachers are reluctant to purchase laboratory materials and instructional materials due to cost issue and considered science like other theoretical subjects. It was found that there is minimal formal sharing sessions, no peer tutoring and peer observation practices with the purpose of instructional improvement.
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Respondent teachers opined that in science instruction inquiry approach was applied to a minimum (M = 2.98, SD = 0.58, SE = 0.09). Teachers (36.52%) pointed out that they have tight classroom routine (4-7 periods per day) and do not have enough leisure time to plan and conduct science activities such as inquiring science in the community, inquiring science by outclass activities, inquiring science with fun. Classroom instruction is going routinely as marked by ranging from teacher centered (more dominant approach) to child-centered (minimal) or sometimes within the continuum of mixed approaches. Delivery of textbook based factual information, emphasis on memorization of terms and facts, teachers’ and students’ orientation towards achievement in terms of exam scores, were found higher rather than understanding the concepts of science. Science teachers generally find it difficult to manage inquiry based approach (Cheung, 2007). Many researchers (Juuti, and others, 2010; Beerenwinkel and Borlin, 2014; Kang and Keinonen, 2016) reported that inquiry based science instruction is underdeveloped as a consequence of the constant use of more traditional teaching methods, while science educators are emphasizing on use of inquiry approach in science and students also want inquiry based science education. Therefore, focus is needed to be given on instructional management by the schools in order to bring change in ongoing science classroom practices.

Teachers’ perspective and practice of inquiry based science

Data were analyzed for finding the teacher’s attitude, their preparedness and confidence by using statistics like mean, standard error of mean and standard deviation.

<table>
<thead>
<tr>
<th>Variable (Indicators)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher attitude (4)</td>
<td>40</td>
<td>3.43</td>
<td>.11</td>
<td>.72</td>
</tr>
<tr>
<td>Teacher preparedness (3)</td>
<td>40</td>
<td>3.04</td>
<td>.10</td>
<td>.63</td>
</tr>
<tr>
<td>Teacher confidence (4)</td>
<td>40</td>
<td>2.59</td>
<td>.08</td>
<td>.50</td>
</tr>
</tbody>
</table>

Teacher attitude (M = 3.43, SD = 0.72, SE = 0.11) was found satisfactory with overall average above 3. Data depicts that teachers were moderately prepared (M = 3.04, SD = 0.63) and showed poor confidence (M = 2.59, SD
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in implementing inquiry based instruction. Most of the teachers were found convinced that inquiry based instruction best suits for school level science. They argued that students can be benefitted by inquiry based instruction as it provides engaged, creative and challenging learning opportunities. They opined as inquiry based approach provides opportunities for learning by pace, sharing of ideas, provides sustainable knowledge through better understanding of scientific concepts, connect school science to day to day science, increase students’ motivation, curiosity, interest and engagement; develop science process skills, habit of critical thinking and creative thinking and develop scientific attitude, and so on. Though they think inquiry based instruction is important for science instruction, they have a lack of explicit knowledge and idea of implementing it. Majority of teachers have the perception that inquiry based instruction is time consuming, requires specific facilities and arrangement, demands more talented mind, and it is difficult in implementation in the classrooms which are diverse in terms of students’ socio-economic status and learning ability. About 65 percent teachers’ responses lie in neutral level reflecting some confusions about the appropriate way and process of conducting inquiry approach in classroom instruction.

Almost 46 percent selected science teachers agreed that they have little knowledge and experience of teaching science by inquiry. 39.5 percent teachers (from science and technology background) have never learnt about inquiry approach in academic and training courses. There were 46.2 percent teachers (mostly from education stream) learnt inquiry based approach in university courses (in Bachelor or master or both); and rest of the teachers learnt little about inquiry based approach in teacher training courses. Respondent science teachers showed hesitation to use scientific inquiry in their classrooms. The data suggested that teachers need extensive training for changing them from deductive orientation to inductive inquiry approach.

This study has also revealed some school, teacher and student related factors associated with inquiry based science instruction that line up with the findings of international researchers such as low level of teachers’ confidence and competence in using inquiry instruction in science; inadequate school facilities, insufficient school resources, tight curricula; inadequate professional training, professional science knowledge, etc. – in consonance with a few earlier studies (Ramnarain, 2016, Yoon and others, 2011; Harwood and others, 2006; Kang and Keinonen, 2016; Davis, 2003). This study suggests that teacher professional development course and
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training in science education should combine an explicit focus on process of conducting inquiry based instruction in order to achieve the goal of quality teaching-learning in science (Van Aalderen-Smeets and others, 2017; Van Aalderen-Smeets, and Walma van der Molen, 2015).

All possible child centered methods are compatible with inquiry approach to teaching science. This flexibility gives benefit to students of all levels whether they are lower or higher achievers. Low achiever students may be further disadvantaged by using poorly designed inquiry based instruction, so it is important that inquiry based instruction are carefully designed and ensured to cover all kinds of cognitive knowledge and skills.

Conclusion

The study anticipated that teachers have positive attitude and good perception towards inquiry based science teaching. Teachers exhibited moderate to high curiosity, interest and intrinsic motivation in their practices; but they have substantially little knowledge, experience and confidence in adopting inquiry based science. Therefore, teacher training courses should be designed focusing on inquiry approach. Furthermore, majority of them did not get opportunity to learn inquiry approach in academic studies and trainings. Some important factors for poor inquiry process were identified as teachers’ low level of confidence, inadequate knowledge and little experience in conducting inquiry based instruction; insufficient school facilities and resources, and tight curriculum demanding little inquiry.

Results of this study indicated that teachers’ levels of readiness confidence and intrinsic motivation were moderate. This research therefore recommends to incorporate inquiry based science in teacher preparation courses emphasizing practical aspect of inquiry based science instruction to make the instructions context driven and prepare students’ criticality towards concepts of science education. To improve student’s learning outcome, school reform program, teacher training, curriculum reform, textbook revision, increasing library and laboratory facilities and developing infrastructure are the interventions needed to increase the quality of learning science at school level. Nepalese classrooms are traditional in nature. To implement inquiry based instruction, classroom setting and facilities need to be improved, classroom should have some available free space and flexible seating arrangement and must be equipped with projection facilities, online training
and delivery instruction to enhance ICT skills. Encouraging comprehensive and critical thinking and giving choice in learning were found to work effectively in inquiry based science learning. Science teaching must include minds on and hands on activities through open and guided inquiry approach. School science curriculum should focus on science process skills and should be designed in integrated way of linking modern science and science inside home and in locality that could help to solve day to day problems and to develop scientific temper and attitude. If school system does not function well, teacher effort and service delivery cannot be expected. The studies showed managing physical resources alone will not be enough to improve learning outcomes in Nepalese schools. Instead, planned way of instructional practice is required in which inquiry approach in integral part.

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Analyzing the Educational Attainment of People in Nepal from Gender Perspective

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Abstract

Education is a key tool for human civilization but many people are deprived of it and do not have equal chance to achieve it from gender point of view in society, though everyone has an equal right to get it. In this context, this study tries to explore the literacy status, educational attainment. The major concern of preparing this article was to study this issue extracting the data from two immediate past censuses of Nepal and analysing them by using the Microsoft Excel programme. Humanities and Arts, Business and Administration, Education, Science, and Social and Behavioural Science are supposed to be more selected subjects of study for both males and females at the national level. More gender gap in terms of literacy and level of education seems to occur though the level of education increases in all provinces.

Keywords: Literacy status, educational attainment, major fields, gender, census

Introduction

Education is considered as one of the key factors associated with human civilization; and the educational status of the population signifies people’s well-being and quality of life. It is the gateway for all kinds of development opportunities (Gurung, 2014). Education is a key indicator and important component of human development for enhancing capabilities and expanding people's choices which lead to a creative, long and healthy life (Haq, 2005; Pande, 2006; Sen, 2002). Education functions as a powerful agent of social
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transformation and empowers people, and helps to foster cognitive development skills and capacity to perform as full human beings and live with self-respect and dignity (Banu, 2016).

All the people are supposed to have an equal chance of quality of education to capture the desirable sustainable development of a nation. Nevertheless, there is no equal access to education in all the regions regardless of groups like age, gender and other characteristics (Mehrotra and Kapoor, 2009). Recognizing this situation, many international commitments and declarations made significant efforts to narrow down the existing gap between male and female population in education (Somani, 2017). Giving serious attention, the Dakar conference 2000 has also committed to ensure universal access to basic education of high quality. The commitment to gender equality in the Dakar framework for action included in Goal 2: to ensure equality among all children, particularly girls, by 2015 (Hoppers, 2006; Somani, 2017). Similarly, MDGs and SDGs aim to ‘achieve universal primary education’ and ‘ensure inclusive and equitable quality education, and promote lifelong learning opportunities for all’ (UNESCO, 2018a, 2018b; United Nations, n.d.). Nepal has also committed to achieve the goals and targets in the successive year periodic plans, annual programmes and budgets (Baral and others, 2017; National Planning Commission, 2016).

People are facing many challenges to get equality and quality in education because of social, cultural and economic factors in the world (UNESCO, 2019). CBS shows that the female population outnumbered the male in Nepal. The common global perspective is that educating girls values the overall development of society (Somani, 2017), encourages them to face challenges (Bhat, 2015), and makes them able to take the right decisions in different circumstances. It is a universal truth that education and work of mothers is an important input for the progress of an individual, society, and nation (Ara, 2012). Moreover, women education helps not only in the development of half of the human resources, but also improves the quality of life at home and outside (Noreen and Khalid, 2012; Suguna, 2011).

CBS showed remarkable achievements of both the male and female population in the field of education over the years. Female literacy has notably increased in the past decades. However, disparities continue to exist across sex and different regions (CBS, 2014; Khanal, 2018). Overall literacy rate has increased to 67 percent in 2011 from 54 percent in 2001. The male literacy rate exceeded the rate of females by 18 percent. The increasing rates
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were 75 percent for males and 57 percent for females in the census year 2011. More gender gap (23%) was found in the literacy rate between male and female in the census 2001 (GC and Shrestha, 2014). Similarly, Nepal Demographic and Health Survey 2016 showed that 89 percent of the male population are literate as compared to 69 percent of female among 15-49 years age group (Ministry of Health Nepal and others, 2017). It exhibited that 71 percent males and 50 percent females were able to have secondary or higher education. The data showed that female are still lagging behind to get equal opportunity of education compared to the males, even though the country has legally committed to provide equal rights to get education in Nepal (Nepal Ministry of Education and UNESCO, 2015).

The Global Partnership for Education (2020) found that in the education sector, for example, the gender gap remains wider in science and technology. This report suggests that girls need to be trained to participate in national development. They remain underrepresented in scientific and technological training. In Senegal for example, though girls account for more than 50 percent of higher education students, they have nominal participation in the area of scientific and technological training.

Gender equality advocates for rights, resources, opportunities and protection equally to the girls and boys. But the male-dominated power structures in society limits the females’ rights, well-being, and opportunities (United Nations, 2017). Nepal has predominantly been a patriarchal society where women generally occupy inferior position and subordinate to men in virtually every aspect of life (Bhattarai, 2014). UNESCO (2015) highlights education as the basic human right; and gender equality is fundamental to its full realization. Gender discrimination in education is a kind of violation of their rights (Global Campaign for Education, 2012). Thus, the educational status of population in terms of gender needs to be critically analyzed to identify their educational position in society. In this context, this study tries to analyze the educational achievement (literacy rate, educational attainment, and major fields of study) by sex covering all the provinces of Nepal according to the data from CBS (2002; 2012) relating its findings with Bourdieu’s theory of cultural and social reproduction.

Theoretical explanation

The findings of the study are analyzed based on Bourdieu’s “cultural and social reproduction” theory which explains that educational institutions are
functioning to produce and reproduce the existing cultural and social aspects (Bourdieu and Passeron, 1990). Bourdieu noted that capital (cultural, social, and economic), habitus, and field all work together to generate practices, or social action (Gao, 2011). Cultural capital, according to Bourdieu (1986), is knowledge, skills, education, experiences, and/or connections a person possesses through the course of life that do or do not enable success. He mentions that it can exist in three forms: the embodied, objectified, and the institutionalized. According to him, social capital represents a person’s entirety of social relations and one’s network of actual or potential resources that can be legitimized by the family, group or class membership.

Capital and habitus of the people play a dominant role in society in producing and reproducing cultural and social practices. Bourdieu explained the study in different disciplines (e.g. education, language, science, and art) which influence the educational achievement and occupational levels. He added that all these studies have the relationships among class, power, and culture and fundamental to social stratification and intergenerational inequality as well (Gao, 2011).

According to Bourdieu, habitus is a set of attitudes and values which encompasses socially imbedded habits, skills, and dispositions. It focuses on our ways of acting, feeling, thinking, and being (Sullivan, 2002). Bourdieu defines habitus as “structured and structuring structure”. It is “structured” by one’s past and present circumstances, such as family background and educational experiences. It is “structuring” in that one’s habitus helps to shape one’s present and future practices. It is a “structure” in that it is systematically ordered rather than being haphazard. This “structure” embraces a system of dispositions that generate perceptions, appreciations, and practices (Maton, 2008).

Following Bourdieu, hierarchical classification between male and female that occurs in society results in power imbalance, domination, and symbolic violence in action (Krais and William, 2000). Women in many contexts including Nepal bear a subordinate position that can be seen in many sectors, namely economic, political, social and cultural life of each society (Baker, 1999; Shrestha and Gartoulla, 2015). So far as education is concerned, Gao (2011) argues that society is divided into dominant and dominated groups. In Nepalese society, male occupies a higher level compared to female concerning educational opportunity.
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METHODOLOGY

This study is based on secondary data presented with a descriptive approach. The data were adapted from the CBS (2002), (Table 11: Population 6 years of age and over by literacy status, age, and sex for regions) and CBS (2012) (Table 25: Population aged 5 years and above by literacy status, Table 26: Literate population aged 5 years and above by educational attainment, Table 27: Population above SLC --National examination of grade 10 passed by major fields of study). Districts were selected province-wise, and the related data (literacy, educational attainment, and major fields of the study) were calculated by each district in all the provinces by sex. The essential data were calculated using Microsoft Excel. The data have been analyzed and discussed under three themes as follows.

Result and discussion

Literacy status

The 2001 and 2011 censuses defined literate person in terms of having the ability to read and write in any language with understanding and do simple arithmetic calculations. Literacy was measured for the population of 6 years and above in the census of 2001 and 5 years and above in the 2011 census (GC and Shrestha, 2014). The overall literacy rate is in increasing trend in Nepal. The literacy rate was increased by about 23 percent from 2001 to 2011 census.

The percentage change in the literacy rate of women shown in the two censuses is higher than men, however it failed to eradicate the gender gap (Hill and King, 1995). The female literacy rate of Province two, Sudurpaschim, and Karnali provinces remained below the national level. However, the change in percentage seems to be the highest in these provinces in the case of female, and similar case is found in male in the Karnali and the Sudurpashim Provinces. The serious remarkable issue is that substantial gap appears between male and female in literacy rate in Province two. The data show similar situations in all the provinces. Despite the fact that education is a universal human right, female faced barriers to equal participation in education (UNESCO, 2018a).
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Table 1
Percent distribution of literacy rate by sex, 2001-2011

<table>
<thead>
<tr>
<th>Provinces</th>
<th>Census years</th>
<th>Percent change (2001-2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Male</td>
</tr>
<tr>
<td>1</td>
<td>58.3</td>
<td>68.5</td>
</tr>
<tr>
<td>2</td>
<td>40.9</td>
<td>52.6</td>
</tr>
<tr>
<td>Bagmati</td>
<td>62.1</td>
<td>72.8</td>
</tr>
<tr>
<td>Gandaki</td>
<td>60.1</td>
<td>71.5</td>
</tr>
<tr>
<td>Lumbini</td>
<td>53.8</td>
<td>64.6</td>
</tr>
<tr>
<td>Karnali</td>
<td>47.6</td>
<td>60.5</td>
</tr>
<tr>
<td>Sudurpashim</td>
<td>48.2</td>
<td>64.1</td>
</tr>
<tr>
<td>Nepal</td>
<td>53.7</td>
<td>65.1</td>
</tr>
</tbody>
</table>

Adapted from CBS (2002; 2012)

The data reveal the fact that the literacy rate of people in Province two, Karnali, and Sudurpashim Provinces need to be increased to meet the commitment of SDG 4 which aims to ‘ensure inclusive and equitable quality education for all’ and eliminate ‘gender disparities in education’ (United Nations, n.d.). And girls’ education needs to be focused because the lower level of education on female can have a negative impact on district-level GDP per capita and the nation’s prosperity (Dahal, 2011).

The scenario in the literacy gap between male and female may prevail in the theory of cultural reproduction developed by French sociologist Pierre Bourdieu. According to this theory, the educational system is operated by the dominant class, and they transmit their norms and values from person to person or society to society. He mentioned though the power relations that are not implied in a formal definition of communication, educational institutions and pedagogic action tries to impose instilling of their knowledge or values upon the dominated class. He regards it as a kind of symbolic violence (Bourdieu and Passeron, 1990). This theory seems to be realistic in the context of Nepal. Though the government and non-government organizations have been making efforts for education for all regardless of
Educational attainment

This section focuses on the level of the educational achieved from beginning to post graduation including non-formal education among the literate people from gender perspective. More females attained the school up to lower secondary level but their percentage is decreasing as the level of education increased in comparison to the males in Nepal.

Among the literate people in Nepal, around two-fifth of population completed primary education, one-fifth of them completed lower secondary level. Similarly, about one-tenth completed secondary level, and SLC and equivalent each. All provinces have more or less similar situation in terms of ratio. The completed level of education of beginners and primary level is comparatively higher in female than male especially in Province two, Karnali Province and Sudurpashim Province. However, more gap between male and female in these provinces exists in the higher level of education in comparison to the other provinces. It might have occurred due to the early marriage of girls which is the cause of drop-out or lack of participation in educational attainment (UNFPA, 2017).

Only nominal number of people (2.8%) seem to have attained the graduation and post-graduation level and above (1.0%) in Nepal. The people of Bagmati Province were able to achieve the result higher than the average national result in the graduate equivalent and above levels. But SLC graduates from province 1, Bagmati, and Gandaki Provinces have achieved higher result than the national average results (Table 2). Among the results on average, the females' achievement seemed poorer compared to males the causes of which might be the drop out of girls during the study at higher level in education. This condition may lead the women to continue to face the challenges from taking advantages in various opportunities in society (UNESCO, 2018a). Other causes of this situation may be the burden of household work for the females (Khanal, 2018; Sabates and others, 2010) and the belief that there is less value in educating girls in comparison to the boys (Rueckert, 2019).

The situation of educational attainment of male and female population at different levels between at the national level and provinces can be linked with Bourdieu’s theory of ‘social reproduction’ relating the ‘habitus’ and
Analyzing the Educational Attainment of People in Nepal from Gender Perspective

‘field’. According to his theory, habitus encompasses socially imbedded skills and dispositions. Supporting this theory, the gap between male and female from beginners to postgraduate and equivalent and above among particular provinces prevails the continuation of the habitus of male-dominated embodied ideology and result appeared in the field (society). The rooted social and cultural norms and values and the practices of gender socialization in the society are associated with the poor achievement of education for girls compared with the male population in various provinces. The result of education attainment reveals the reproduction of social structures and systems.

Table 2
Sex-wise distribution of literate persons by completed level of educational attainment, 2011

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<th>Primary (1-5)</th>
<th>Lower secondary (6-8)</th>
<th>Secondary (9-10)</th>
<th>S.L.C. and equivalent</th>
<th>Intermediate &amp; equivalent</th>
<th>Graduate and equivalent</th>
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Analyzing the Educational Attainment of People in Nepal from Gender Perspective

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### Analyzing the Educational Attainment of People in Nepal from Gender Perspective

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*Source: CBS (2012)*

### Major fields of study

Social and Behavioral Science, Business and Administration, Humanities and Arts, Education, and Science seem to be the major fields of the study of both males and females at the national level in order and it appeared to be similar in the provincial level as well. The good news is that the involvement of females at higher level of education is increasing in comparison to the past years in Nepal (Table 1). The data (Table 3) show higher preference to the health sector by the females in comparison to the males is in all provinces. Health is studied by 3.4 percent female and 1.9 percent male at the national level. Females have higher participation in the Karnali Province and Sudurpashim Province than in others in this subject.
Analyzing the Educational Attainment of People in Nepal from Gender Perspective

Business and Administration, Science, Engineering, Manufacturing and Construction, Law, Mathematics and Statistics, Agriculture, Forestry and Fishery, and Computing are especially male preferred subjects in Nepal. Prakasam and others (2019) and Sahoo and Klasen (2018) clearly showed gender polarization between humanities (female preferred) and science, medicine, engineering, and other professional courses (male preferred).

The choice of the major fields of the study is influenced by various circumstances including access to college in the home town, confirmation of security condition outside home, cost bearing capacity of parents and their willingness to invest, and tradition to choose the major subject by sex (Karki, 2014), job market in the country, etc. The Engineering stream is chosen mainly in Bagmati Province and Province two; and Mathematics is studied by more people in Province two, Gandaki, Karnali, and Sudurpashim provinces. Higher attraction of males in the subjects like mathematics, engineering and science in Province two may be the reason of receiving more amount of dowry as studied by Karki (2014) and Mahato (2016). They showed a positive relationship between education and dowry demand where doctors, engineers and bankers are given more dowry in comparison to the people in other jobs.

The findings of the study are supported by Bourdieu’s concept of cultural and social reproduction in education. The selection of the subjects to be studied seems to be influenced by the cultural tradition, and social norms and practices in particular places; as a result, resource persons as manpower are produced and reproduced as indirectly guided by the culture and society. The involvement rate of females in various technical and professional subjects is poorer compared to the males in most subjects. It can cause power imbalance and domination in terms of gender in society. Bourdieu termed this situation as “symbolic violence”.

Table 3
Percent distribution of population at SLC level and above by major field of study by sex, 2011

<table>
<thead>
<tr>
<th>Areas</th>
<th>Humanities and Arts</th>
<th>Business and Administration</th>
<th>Education</th>
<th>Science</th>
<th>Health</th>
<th>Engineering, Manufacturing &amp; Construction</th>
<th>Law</th>
<th>Social &amp; Behavioral Science</th>
<th>Mathematics &amp; Statistics</th>
<th>Agriculture, Forestry &amp; Fishery</th>
<th>Computing</th>
<th>Journalism &amp; Information</th>
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Bagmati Province
Analyzing the Educational Attainment of People in Nepal from Gender Perspective

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Adapted from CBS (2012)
Analyzing the Educational Attainment of People in Nepal from Gender Perspective

Conclusion

Though Nepal has made significant progress in education over the last twenty years, women yet are unable to enjoy the same opportunities in education as men. The achievement of a higher level of education like Post Graduate Equivalent and above seems lower compared with the achievement of lower-grades education for both males and females in Nepal. It may be the result of peoples’ higher priority to employment and improving economic status than getting higher level of education. Only a few number of females completed higher level of education in comparison to the males.

The gender gap in education seems highly challenging in the case of women’s empowerment and their quality of life. It has not only become an individual issue but also a nation’s socio-economic prosperity. Gender gap, especially in higher education, may be caused by females’ reproductive role and household work, which has compelled them to spend more time in these fields. There can be a penalized condition if females get a higher level of education, especially in the Terai regions where they are compelled to give more dowry for their grooms with a higher level of education.

Although the gender gap between males and females has been improved in comparison to previous censuses in many geographical areas, the change does not seem to have been significant. Hence, the gender-related barriers experienced in achieving higher level education are further intensive areas to explore for ensuring inclusive and equitable quality of education and promoting lifelong learning opportunities for all – which is linked to one of the important aims of SDGs. To overcome the existing gap, allocation, and implementation of gender-responsive programmes can be recommended.

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Factors Influencing Head Teacher's Leadership: A Case of Community School in Kathmandu Valley

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Abstract
This study aimed to explore the factors influencing leadership of head teacher. For this purpose, interpretative phenomenology was employed. Five head teachers having more than ten years' experience in different community secondary schools of Kathmandu valley were selected as participants for their lived experience and perception through purposive sampling. Information was collected through participants by in-depth interviews and semi-structured questionnaire to draw the perception and experience of the participants. In interviews, we attempted to interpret respondents' explanations, experiences, struggles, and evidences related to head teacher. Interviews were transcribed as verbatim and coded to generate themes. Themes were analyzed with reference to the essence of transformative leadership theory to reach in conclusion. The study finding showed that size of organization, level of interaction, decision making skill, problem solving skills, and team efforts are influencing factors for effective leadership. Head teacher’s leadership can be positively influenced in small organization but professional development of staffs can be negatively impacted. Frequent collaboration among stakeholders and interpersonal relationship among staff influences the leadership of head teacher positively. The tactful leadership skills for problem solving inspired the head teacher to strengthen the capacity of the organization along with team effort. Thus, the leadership of head teacher in community school needs to be sensitized to apply appropriate size based on stakeholder. The intensity of collaboration is required to be maintained with the principles of rich communication and team effort.
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Keywords: size of organization, level of interaction, decision making, team effort, problem solving skill

Introduction

In the long journey of teaching experience, we struggled more in community schools as well as institutional schools located in various places in this country. In this journey, we experienced varieties of circumstances like bulging in and bulging out. In this journey, we interacted with many factors for coping with challenges towards creating a better learning environment. In the context of struggle, we observed many cases about the behavior of head teachers with respect to leadership, management, and organizational behavior leading to the motivation of workers in the work place. In observation, we found diverse nature of head teachers to influence the overall aspect of organization. A couple of years ago, we got the opportunity to visit community school of different regions. We found various situations in school led by different perspectives. In those schools, we also observed teacher professional development not running smoothly. Teachers were using traditional methods and strategies. School behavior was guided by conventional thought and vision. It seemed that student learning outcomes were degrading and student behavior was not shaped according to the demand of time and society.

The traditional methods of leadership could not face the challenges evolved in the global society. The various factors are associated to hinder the effectiveness of leadership and management in community schools (Ndaipa, 2016). Along with the essence of leadership, the individual is required to enrich personality and self-development associated with experience. The major activities for this include leading competency, vision for goal achievement, inspiration, and empowering to overcome the challenges (Tuytens and Devos, 2010). Leadership challenges act differently in various organizations.

Every institution is crucial place for coming generation from where they are horned. The head teacher in each school plays vital role for grooming, growth, and satisfaction to face the challenge of sustaining the objectives of school. Leadership in school is a procedure of motivating and supervising the staff to work with passion for the sake of education goal (Afshari et al., 2012). Leadership plays an important role in the growth and endurance of school. Due to larger impact on the achievement of educational objectives,
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effective leadership in school can impart valuable guidelines and suggestive feedback to move in the right direction. (Louis et al., 2010, as cited in Sehar and Alwi, 2019). In the context of Nepal, leadership activity is not guided by system and legal framework. There are various factors that jeopardize the decision-making process and managerial aspects. The administrative action and leadership style are not functioning smoothly on the basis of reality and contemporary demand of institution. In such a scenario, institutions are functions without any vision and goal-oriented mission; as a result goal achievement is found lagging behind the expectation (Alvunger, 2015).

Need for conducting research is realized in the area of factors influencing effective leadership for the betterment of learning outcomes. So, this study confines to its way out in exploring the factors that affect school leadership. The research is confined to analyze the situation and context of leadership strategies in the community school. So, it contributes to adopt meaningful leadership style that leads the community school for betterment of learning outcome and creation of sound environment to achieve organizational goal.

Objective

The study presented hereby had the aim of exploring the factors that influence effective leadership in community school.

Transformational leadership as a theoretical underpinning

Transformational leadership is one of the attributes of head teacher who can direct the school to the new level of development with eminent innovation. The head teacher needs to create effective environment in school, inspiring the stakeholders towards the advancement of school. Transformative leadership copes with challenges of practical problem (Yang, 2013). Moreover, transformative leadership asserts the head teacher’s vision in school development through home-school collaboration and partnership. Such a leadership is based on the stakeholders’ actual situation, school occasions, fact and finding with solution.

The components of transformative leadership employed in school include: building shared vision, forming new ideas, gaining credence, sharing power, experiencing success. Transformative leaders have a model of integrity and fairness, set clear goals, have high expectations, encourage others, provide support and recognition. The elements of transformational leaderships are individualized consideration, intellectual stimulation, inspirational
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motivation, idealized influence (Tuytens and Devos, 2010). A transformative leader motivates and renovates individual followers so that they develop a new level of concern about their human condition and, sometimes, the condition of humanity at large (Yang, 2013).

Transformative leadership is the ability to visualize new social genuineness and communicate this successfully with others. Each organization has one fixed leader, and depending on the organization’s size remain a number of senior followers (who will be leaders to others), another layer of followers, etc. Transformational leaders are directed towards greater profit to the organization. Transformative leadership focuses the quality of interactive associations within an organization. It is important in determining successful leadership as a particular skills and traits of school leader (Tuytens and Devos, 2010). Transformative leadership is characterized by its activist agenda and its intervening promise to social justice, equality and a democratic society. Identifying the socially constructed nature of society, some exhibit greater power than others in the organization.

Interpretative phenomenology as a research design

In a phenomenological study, the researcher needs to be the primary instrument of inquiry where researcher's lived experiences, assumptions and biases are recognized (Schulz, and Rubel, 2011). The researcher's assumptions and biases include: head teacher’s leadership is influenced by the size of organization, level of decision making, personality of staff, problem solving skill and team effort. Both researchers have the experience of teaching at school level for a long time and at present both are involved in teaching at university level whereby they have involved, cooperated and coordinated with head teachers when they have experienced and perceived the factors influencing head teacher’s leadership (Yang, 2013). This experience and engagement in teaching profession makes it easy to construct mutually meaningful relationship with the participant. However, maintaining the doctrine of phenomenology, the researchers have made effort to cover the assumptions and experiences of participants.

Head teachers having the work experience of more than ten years in community secondary school in Kathmandu valley are taken as participants for collecting their lived experience, assumption and perceptions. Participants were taken from the large school (size based on students and teachers), medium size school and small size school. Five participants were
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included who were involved in sharing their experiences of being a school head teacher. Purposive sampling technique was used in which 5 head teachers (R1, R2, R3, R4 and R5) were selected from the community schools in Kathmandu Valley.

Information and data for the study were collected through five individual head teachers, using in-depth interviews and semi-structures questionnaire. Interviews were administered to seek the respondents' explanations, experiences and struggles in their work as head teachers. Interviewed responses were transcribed and coded to generate the themes and similar themes were categorized under the main theme of the study. The main theme was compared and connected with transformative leadership theory and relevant literature to generate the conclusion.

Result and discussion

In this section, results from the data are presented and discussed considering their connection with theory and practice in the contemporary situation of Nepal, as presented below. The themes below are the influencing factors as identified from the study of data.

Size of organization

The size of any organization determines the efficiency of management skill of its chairperson. This affects to the quality of leadership – whether the transactional leadership style is fruitful or not in the prosperity of organization. Human resource management, internal resource allocation and motivation of worker of organization are the emergent functions of organization. In a large school, number of teachers, students, various models of education system, parent school collaboration, and teacher- administration partnership are the factors that are responsible for pioneering organization. In this context one of the participants R1 expressed:

I feel it's easy to coordinate and cooperate for overall development of school with parents. Moreover, there will be rich engagement, inspiration, guidance, coordination and cooperation with teachers and students. But knowledge creation, professional development and specialization in any discipline are deviated from the mainstream; and suffocation occurs in managing different aspects within school due to the lack of participation.
The above statement shows that in a school of small size the leadership will be easy. But a small size school makes leaders more limited and they cannot mobilize the resources due to their restricted availability and limited number of faculties and students as well. With this situation, the department and other resource centres have not been established efficiently and with smooth management. The attitude of stakeholders towards the small size institution is deviated from the central concern of responsibility. In this reference, open dialogue among the stakeholders is required to maintain for the assistance of effective leader. In relation to transformative leaders focused on their staff's carrier and job enrichment (Sehar and Alwi, 2019), Transformational leadership stresses rich interpersonal relationships within an organization. From the perspective of transformative leader, it will be easy to manage good relationship with teachers, staffs and other stakeholders; but there will be problem for job enrichment and career growth. In this issue, a teacher participant R2 agreed with R1 and stated:

However, in small organizations the head teacher may feel easier to manage the school but regarding of professional development of teachers and overall development of students the scope is narrowing down beyond the expectation which ultimately affects the all-round development of school.

The statement shows that in a school of small size, the head teacher can make rich engagement and deep attachment with their stakeholders for effective leadership, but the situation of professionalism and institutionalism becomes poor. In the same issue another teacher participant R3 asserted:

In my school the students and teachers are comparatively more in number than the legal provision. Student-teacher ratio is higher than the standard of nation. I am feeling uneasy to cover every day information about teachers, students, staffs and parents as well. Moreover, I am realizing it troublesome to manage administrative and managerial activities.

In the above assertion, R 3 agrees with R1 and R2, and feels difficulties to manage and maintain coordination with his school staffs, teachers and
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students for effective management and leadership. In a large sized school (having large number of teachers, students and departments) work efficiency cannot be achieved smoothly due to the complex integration of the parameters. It shows there is weak and negative correlation between size and effectiveness of the leadership of school head teachers (Abdul and Nina, 2015). The transformative leadership involves the parameters such as mentoring, fairness, justice, empowerment and guidance. As the number of members increases in the school family, the head teacher is required to consider different aspects to raise effectiveness of leadership; and subsequently the head teacher must be more sensitive in larger school than smaller (Winingsih and Sulistiono, 2020). In this connection, another participant R4 stated:

In the large size school, departmentalization and formalization are created to enrich the speed of school. As the size of organization is increased, the systemic effort is increased in school efficiently and smoothly.

This statement shows that the large size school can play vital role in the effective development of the school. The whole structure of the school can be structuralized along with necessary department; and school leading policy can be reformed strictly for the promotion of school development. All the activities guided by the specific rules and regulations lead the school in a better way (Alvunger, 2015). In a school of small size, the aforesaid situations prevail due to the strong dedication of school leadership. Therefore, it is clear that large size school is required to cope with many obstacles in the line of effective school management and leadership. However, there may be the opportunity to set up effective leadership strategy for advancement and enhancement of schools.

Level of interaction

Frequent interaction within the organization makes the school environment sound and goal oriented. It is an essential factor to create better surrounding within and out of school in a leading organization towards bringing a good result. Inter and intra relationship creates sustainable attitude towards organization. Regular interaction in and between faculties and students explores the new idea and vision for the welfare of school as well as learners. The triangular relationship among students, teacher and parents
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adds essential blocks for the quality enhancement and strengthens the development of education enormously (Trisno and Nurdianto, 2015). The collaborative effort of parents, teacher and school administration energizes school for school development. In favor of this assertion, other participant R1 asserted:

In my school interaction among stakeholders seems to be fragmented. The interaction of teachers with the administration is lagging far behind. The cooperation and coordination activities within the faculty members are very poor that has resulted in the impediment of smooth leadership. Family-school collaboration is not progressing in expected manner in my school. In such situations my leadership is has not been as I expected.

The above statement shows that frequent interaction between the head teacher and stakeholders is essential for the trustworthy environment among each other which leads towards prosperity of school. The principles of effective collaboration and coordination are needed among all teaching and non-teaching staffs to achieve the expected goals of school (Day and Sammons, 2014). Higher level of interaction leads to higher level of trust among each other. So, continuous interaction is required for enhancing the quality of leadership. In this issue another participant R2 asserted:

Positive interaction creates synergy for goal achievement; and negative interaction creates demotivation for both the head teacher and stakeholders. Positive interaction supports to minimize the misunderstanding among each other and becomes helpful for conflict resolution. In the same way, negative interaction creates confusion and anxiety that severely affects the efficiency and productivity of leadership.

The above statement highlights that good relationship and interaction between the leader and stakeholders are needed in school. Meaningful interaction motivates the leader for attaining the targeted goals whereas negative interaction creates misunderstanding and confusion which negatively affects institutional development (Huong, 2020).
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Level of decision making

Decision making as a characteristic of the head teacher is one of the essential traits to run the school. In all aspects of academic and non-academic environment all the stakeholders do not know how to disclose their views and ideas. In such a context, the head teacher should take decision himself for the upcoming progress of school without making any delay (Sehar and Alwi, 2019). The head teacher’s self-decision becomes one of the prominent factors for glorious momentum of school progress. In favor of this premise one of the participants R3 asserted:

Decision from the local authority, school management committee, is mandatory for me whereas teachers' associations and students' club's decision are considerable. Advice from the senior teachers are considered in priority rather than that from junior teachers. Permanent and local staffs’ voice becomes more important than that of temporary staff or outsiders.

The above statement shows head teachers are responsible and accountable for implementation of decision made by local authorities and school management committee. But pressures from student's club and teachers' associations are on the way of implementation. Behavior towards the senior, local and permanent staffs and teachers are more important than that towards the juniors, outsider, and temporary staffs and teacher (Muijs and Harris, 2006). In the same issue another participant R4 stated: "Strategic decisions get more priorities than operational decisions. Effective leadership needs to be treated with operational and strategic decision for the development of school. Poor implementation of decisions makes the teachers, staffs and students demotivated in day to day duties and their performance level goes down. In this sense, leadership needs to address and respect the voice and suggestions of stakeholders.

Personality of staffs

It is significant to understand how the personality characteristic is related to the personal behavior (Adams and Gamage, 2008). Personality of staffs is considered as the major characteristic of the individuals that configures the holistic form for socialization in the organization. It focusses on individual’s inner and outer performance. The interpersonal characteristics of working
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staff play vital role in the overall development of school. In this issue participant R3 stated:

Effective communication skill of staff, mutual interaction between stakeholders, dedication to the institution, devotion towards school are the essential characteristics to set up admirable environment in school. Excellent personality of organization member inspires the head teacher for running ahead in the line of development.

Teachers have different interest, abilities and characteristics that can affect the whole performance of school directly or indirectly (Sehar and Alwi, 2019). The personality factors of teacher and head teacher can play role to enhance students’ efficiency. In the same issue another participant R4 stated:

The quality of staff in the workplace enriches the performances of organizations. The interpersonal relationship, socio emotional reciprocity, subject specification, dynamic characteristic of educator, dedication, devotion of the organization are the leading characteristics for running ahead.

By this statement, it is known that personality is very much essential factor that influences the performance and behavior. This factor plays important role in guiding a school towards achieving the expected goals.

Problem solving skill

The capacity to manage problems in sensitive manner after the identification of issues in the organization is considered to be the problem-solving skill. To cope with the challenges appeared in school, the head teacher needs to have a lot of views, ideas, perceptions and abstraction. Every organization is immersed with numerous problems such as academic achievement, student's dropout, irregularities of teachers, misconceptions about teaching profession and so on. Effective and efficient skills for problem solving are the foundation for achieving better result of school (Yusof and others, 2017). School leadership is an interactive social process among teachers, students and the community. The head teacher is responsible to find the answer to every problem rooted in school. So, school leader is responsible for solving problems on the basis of strategies, pattern setting, monitoring or controlling and dialogue. In this issue the participant R2 stated:

In a school there are numerous problems such as professional problems, attitudinal problems, social and cultural problems. The
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school can’t run in the runway of development. Problems are to be solved after proper identification of coping strategy within the school.

The statement above has mentioned that effective problem-solving skills are very much essential for the promotion of school. In the ways of problem solving, attitudinal, social, political, economic barriers are required to be identified; and authentic solution is needed to be extracted with the mutual collaboration within the organization (Zeinabadi and Rastegarpour, 2010). With the reference of transformative leadership theory, problem evolved in a school are to be solved by linking leadership style of the head teacher with the situations around him/her. Regarding this issue another participant R4 stated:

In my long experience of working as the school head teacher, I am familiar and well known with the problems rooted in school. In this regard I have many ideas to cope with the challenges around the school. I can face academic problems with the mutual understanding of stakeholders; but I can feel it uneasy to solve non-academic problems influenced by socio-cultural and political causes.

In the above statement it is clear that experienced teachers can solve problems effectively with their greater effort and devotion; but newcomers or persons with little experience cannot solve the problem based on their efforts. So, the problems that have been experienced and well-known in the root can be easy to resolve but unknown problems rooted in schools are quite difficult to manage. In this sense, problem identification is the important aspect for the leader which is important for the prosperity of school. A transformative leader needs to solve the problem as soon as possible for enriching the school (Shouppe and Pate, 2010). Every transformative leader focuses on solving the problem of the school effectively, whether they are academic or non-academic. Non-academic problems like formation of school management committee, parent-teacher association are problematic because of unexpected factors in the school. And sometimes it may be the challenge in selecting teacher representative in school management committee and parent teacher association. In such type of problem, the head teacher needs to perform tactful leadership style to overcome the challenges.
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Teaming effort

Team management effort needs to be appropriate for leading any organization in effective ways. Teaming perspective highlights common effort with equal responsibility for energizing the organization (Samuel, 2012). The overall achievement of school becomes the essence of common effort, and so head teachers' responsibility is to lead the team with great patience. In this regard, one of the participants R1 stated:

In my school all the teacher staffs and students are more supportive, and they always get ready to perform their assigned roles and duties. Regarding the parents' involvement in schools, they take ownership and accountability for the development of school. These all activities carried out by the school's stakeholders really inspired me and made me more dedicated and accountable.

The above statement points out that the success of any organization depends on the mutual efforts of all stakeholders associated with the organization. If all the members of organization or school are responsible to energize the leading mechanism, the leader becomes successful; otherwise he/she may fall in pit, then the leader and the organization cannot navigate in a particular direction of allocated goals. It is clear that team effort is essential component for the betterment of schools (Crisci and others, 2019). Team work initiates the developmental path of organization and frames the overall mechanism in successful track. In the same issue another participant R3 emphasized that in the context of actively functional team effort among teachers and stakeholders, the leadership of head teacher becomes easier and easier. Otherwise, in the context of the team work not functioning in the right manner, the head teacher needs to exercise adequately and forcefully. To some extent, it may transform into unsuccessful tenure. This assertion concludes that team work and leadership are significantly correlated.

Conclusion

Institutional behavior is shaped by several factors that support to grasp success in the academic pathways. The head teacher is required to lead the school through regular interactions with the inner and outer stakeholders. Whatever the size of organization, small or large, systemic reformation is
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essential for the welfare of school. The personality of staffs within the school represents the qualitative image of expected outcomes. The dimension of good personality enhances the mobility of school to create greater speed by inspiring the stakeholders. Remarkable personality of the head teacher motivates home lives to be dedicated and alerted for the organization with huge patience. The mutual collaboration and partnership with the stakeholders makes the leadership more effective and profitable for the advancement of school. Interpersonal relationship among staffs influences positively towards the success of head teacher’s leadership. Diplomatic leadership skills for the shake of problem solving makes the head teacher more elegant and constructive to increase the capacity by means of mutual cooperation and sharing of genuine thought in the organization. The frequency of collaboration needs to be managed by adopting the principle of effective communication and collaboration along with the support of team effort. Head teacher is required to be self-motivated to take tactful decisions in the favor of organization – whether the other stakeholders are getting ready or not. After identification of a problem in school, the head teacher can seek the solution by creating discourse with stakeholders.

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Parents’, Students’ and Teachers’
Understanding of Sexuality Education

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Abstract

School-based sexuality education is regarded as an effective way to increase young people’s understanding of sexually transmitted infections including human immunodeficiency virus infection, unintended pregnancies, abortion, violence, infertility, gender, sexual orientation, etc. This article identifies different perspectives of comprehensive sexuality education in our school's strategy of teaching sexuality education especially from parents, students and teachers, and to identify the need for CSE in the Nepalese context. This paper has used primary data of qualitative nature. The data were collected from a school's students where twenty students from grade nine, ten mothers of the students, and three HPE teachers from different schools were selected for study purpose. The collected data were analyzed following thematic approach. Based on the study, the curriculum was not found sufficient for providing sexuality education. Topics related to human rights, gender equality, and sexual and gender diversity were not addressed sufficiently. The teaching method was found to be heavily lecture-based, while the class environment was not comfortable for many students. Data show that providing school-based comprehensive sexuality education can be challenging. Teachers need adequate training to revise their sexual attitude and biases, highlight gender and sexual rights, and promote instruction that makes use of students' critical thinking skills.

Keywords: Parents, teachers, health education, sexuality education, adolescence, students

Introduction

Education is the foundation of social transformation and behavior change (Castles, 2001; Chakraborty Saikat and others, 2018). Sexuality education is the most important aspect of human life. Adequate provision of sexuality
Parents’, Students’ and Teachers’ Understanding of Sexuality Education

education can have an impact on an individual’s position. Providing sexual and reproductive health education can help reduce sexually related diseases (Glasier and others, 2006). Adolescence is characterized by thoughtful emotional and behavioral disturbances that make them reluctant to discuss sexuality (Hughes Nathan and others, 2020). Adolescents are shy about asking questions related to sexuality and reproductive health in the classroom and at home due to cultural barriers and obstacles which creates many problems in their adulthood (Farahani, 2020; Pokharel, 2020; Pokharel, 2019. In particular, girls suffer more than boys due to barriers and obstacles in the community in Nepal (Shrestha and others, 2013). Adolescence is a unique stage of human development, but traditional health indicators often ignore the areas specified for adolescence (Cryer-Coupet and others, 2020; Singh and others, 2021).

Adolescents spend most of their time in school. Adolescents experience psychological and emotional problems as they grow and develop (Odgers and Jensen, 2020). Such problems are not easily detected by teachers and parents. If not taken care of in time, it can lead to various complications such as anxiety, depression, hyperactivity, substance abuse, educational difficulties, and suicide commitment (Merrell, 2008; Michelson and others, 2020). Sexuality education provided by the school has become an important subject that helps to get rid of various problems (Xiong and others, 2020; Stein and others, 2018). In the process of growing up, adolescents gradually gain knowledge about the human body, attitude to it, type of its values, its intimate relationships (Pokharel, 2020; Larson and others, 2002). When adolescents look for answers to sexual-related curiosity, they are not satisfied with school and family. They have been forced to seek answers via the internet, magazines, and websites (Jones and Biddlecom, 2011). In this study process, it can be detrimental if they are chosen incorrectly. Therefore, age-appropriate sexuality education is important for children for their healthy and successful life.

There are many developmental stages in human life. According to the World Health Organization (WHO), adolescence is the period of 10-19 age group. This is a period of change; and it is a sensitive time when they can also develop unhealthy habits that create many problems in their adult life (Smit and others, 2020). In particular, this is neither the period of childhood nor adulthood; so it is a transitional phase. Adolescence is an important period of physical, psychological, cognitive, and emotional development as well as sexual and reproductive maturity (Assari, 2020). Lack of positive decision-
making can lead to adolescents attempting suicide because adolescence is a transitional period and is fraught with major changes in their physical, mental and emotional conditions. Adolescence is further divided into two more sub-stages, which are early adolescence and late adolescence. The age of early adolescence starts between ten to fourteen years and later adolescence from fifteen to nineteen years (Liang and others, 2008; Curtis, 2015; Lehalle, 2020). Therefore, school plays a pivotal role in providing sexuality education to adolescents.

Comprehensive Sexuality Education (CSE) is an essential way to educate young people about their rights and sexual health. It also focuses on improving public health and contributes to sustainable development (Boonstra, 2015; Francis, 2010). However, UNFPA's operational guidance for CSE, 2014 explains CSE as, ‘A rights-based and gender-focused approach to sexuality education for young people, whether they are in school or out of school’. Based on this definition, school is the most important place for gaining knowledge about sexuality (MoH, 2014).

In the context of Nepal, Curriculum Development Centre (Ministry of Education) 2005 says that in grades 6-8 (students in the age of 11-13 years), health, population and environment subjects are taught at the lower secondary level, and the secondary level (grades 9-10, students in the age of 14-15 years) (Acharya and others, 2018). The term ‘sexual and reproductive health’ (SRH) is limited to reproductive health and sexual health only, but not introduced explicitly. Going through the curriculum we can see that the materials are not operated from the perspective of information or rights, but it is only driven “as a curriculum of health education”. In Nepali society, like in other Asian countries, it is forbidden to talk about sex and sexuality (Adhikari and Tamang, 2009). SRH is always overlooked as a narrow perspective, as school based sexuality education remains a challenging matter (Roudsari and others, 2013). So it is even more challenging for young people to talk, explore, and learn. It seems equally challenging for children, teachers, and parents to talk about sex and sexuality and to hear from both sides (Regmi and others, 2008; Elliott, 2012). Lack of interaction between teachers and students, inability of teachers to deliver the curriculum properly, and lack of communication between parents are the reasons as to why students cannot learn sexuality education. There have been no positive changes in the behavior of the adolescents (Acharya and others, 2019; Aviles and others, 2006). The purpose of sexuality education programs, especially for young people and children, is not only to raise awareness about sexual
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behavior and sexual abuse but also to help prepare them for happier sex life. Therefore, the broader objective of all sex-oriented educational programs is to improve and promote the health of students (Sanjakdar and others, 2015).

Adolescence itself forms the basis of adulthood. Maturity without good information and reliable skills makes the journey of life difficult. That's why sex education is needed to make this journey easier, more secure, and healthier for young people around the world (Piaget, 1972). In the context of Nepal, the educational context of CSE in institutional or community schools is narrow, which is deadly for adolescents.

Even though many initiatives have been taken informally in sexuality education, it has not reached the group of adolescents, as proved by the number of mothers under the age of 18 (MoH, 2014). Students are not able to learn according to the curriculum due to ineffective teaching. Lack of teaching skills, various socio-cultural values, myths, superstitions is creating barrier to the process of learning and teaching sexuality education (Francis, 2010; Pokharel and others, 2006; Shrestha and others, 2013). So, Teaching is the best way to connect teachers and students but teaching sexuality education has been affected by embarrassment, myths, superstitions, taboos, misconceptions, and socio-cultural beliefs.

This study finds out the understanding of parents, students, and teachers regarding school-based sexuality education, and attempts to identify the need for CSE for adolescents in the Nepalese context. This study hopes to address the gaps in the literature and focuses on parents’ understanding of sexuality education and current needs, elucidates students' perceptions, and even reflects the teacher's experiences. Therefore all three aspects of the experience of teachers, students, and parents have been explored and detailed.

Methodology

The researcher chose a private school for selecting the students. Twenty students from grade nine participated in an interview. Ten parents (all mothers) were interviewed on their understanding of sexuality education. Three HPE teachers from three different schools were selected for in-depth interview. One was a female teacher and the other two were males.

The researcher prepared three different semi-structured interview guidelines for teachers, students, and parents. All interviews were transcribed and 4
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themes were created. Thematic analysis was performed to identify patterns or themes within the qualitative data (Clarke and Braun, 2014).

As sexuality education is a sensitive matter, approval was sought from the Nepal Health Research Council.

Results

The analysis identified four main themes from the data, as discussed below.

- Parents' views on school-based sexuality education
- Taboo and myth as the obstacles to teaching and learning sexuality education
- Sources of students’ knowledge about sex education
- Need and importance of sex education

Parents emphasize that sexuality education should be given before the onset of puberty. As they stressed, children are better informed than the parent generation regarding sexual content because of adolescents' internet access. If sexuality education had been plentiful in school, interest in unwanted material would not have increased and such unsafe sexual activity would not have occurred. When asked about sexuality education, a mother's statement below shows that she knew nothing about it, but it was a much-needed education for her children because myths and taboos still rule society.

"I have no idea about this matter; my daughter also rarely shares these matters with me. It is a very important and essential need for adolescence. Today they understand sexuality education through various new technologies".

These words indicate that for socio-cultural reasons and superstitions, parents do not openly discuss their children's sex and sexuality. Teachers say that young people are more interested in sexuality, even in their body changes. Adolescents are forced to look at the Internet because they cannot learn sexuality education according to the curriculum from the school. A teacher said that he was ashamed to teach reproductive health in the classroom, especially the sexual content.

"Our culture, values, and beliefs are not conducive to teaching adolescents and it is a barrier to learning sexuality education. We know that young people have a
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curiosity about sex and sexuality, but social and cultural reasons also do not allow us to talking openly. Even parents tend to think of school as a responsibility. I also feel that my cheeks and ears were red when I have to be taught about male and female reproductive organs. So adolescents may be looking for their curiosity on the website". (Male teacher)

This sentence suggests that the school curriculum is the main source of knowledge about sexuality education. When a teacher delivers the content according to curriculum rubrics, students will learn appropriately. If they learn properly from school, they will not need to depend on other sources. Instead of the curriculum sources, their sources of learning sexuality education are, friends, the internet, and the websites. Since school is unable to deliver adequate knowledge, adolescents are compelled to seek sexual information from outside resources like these.

“Sexuality education started in grade six and we got general information about sex and sexuality; like adolescence, sexuality education, reproductive organs, adolescence and development of change, etc. I got a lot of information from the school's curriculum and peers. I have been watching websites if I feel any curiosity about any subject in detail” (Student)

Although the teacher said that he would not only use the lecture method to teach sexuality content but other methods as well like poster, pamphlet, audio-visual materials, etc., only lecture method was used according to the student.

“He has used the lecture method to teach and before finishing the class he used to ask some questions for evaluation."(Student)

These words indicate that they received information about sexuality education from the school's curriculum. They also said the course would be sufficient if only what was in the curriculum was easily achieved. He said that for general curiosity, we should search for internet websites ourselves. That they are not satisfied with the information they get from the school and can be seen from the fact that they are forced to use the internet.
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"I've learned about sexuality education and violence, gender-based violence, and sexual harassment from the school curriculum. I have also known about the complications of pregnancy, duration, and delivery. I think this course is inadequate for us because of the general information we have to search for the internet and website‖ (Student).

There is still the existence of taboos, myths, embarrassment, and superstitions in our society about sexuality. So, people cannot speak openly about sexuality. There is still a narrow mindset in the society. People think that sexuality education is an education just to teach about sexual intercourse. Especially, menstrual taboos with social-cultural aspects among Nepalese society generally create confusion among adolescent girls who have the first experience of menstruation. Discrimination exists between boys and girls, and especially girls are victimized more than boys from this.

“Yes, how can a parent teach such a thing? They will learn by themselves later. Who taught us? The responsibility of teaching sexuality education is still with the school. Our children spend most of their time in school‖ (Mother).

The participants agreed that as everyone needs to have positive thoughts, girls should be equally empowered through school curricula and teaching. It has been repeatedly advocated that educating a girl child is educating the whole family, while educating a male child is educating just one person. It shows the need and importance of educating children in various aspects of sexuality; but there is a lack of skill to deliver the content of delicate (sensitive) matters.

“Adolescents should be educated about sexuality education. It helps them to be empowered. If they are educated about sex and sexuality, they can understand violence, harassment, and assault. It helps them easily share their sexual problems with their parents, friends, and siblings. I have a son and a daughter. The daughter always shares about the basic events and activities that take place at school but my son rarely tells. Even if a mother teaches her son something, it will be difficult‖ (Mother.)
These words suggest that every parent should know that sexuality education is important. Only they are latent; and they feel the need for a helpdesk, mailbox technique to address adolescents' queries. It's not easy to share curiosity with family, friends, siblings and so much has been learned from the internet.

"Human life needs to acquire knowledge that minimizes negativity in society. In that too, sexuality education is indispensible for us. We need to create an environment where we can interact easily. Helpdesks or the mailbox technique should be kept in every school to collect adolescents’ curiosities. Hygiene, physical and environmental health is taught but these studies do not provide adequate knowledge of internal sexuality education and sexual health". (Student)

The researcher started asking questions about teachers' qualifications because the literature shows that anyone teaches health education without training and proficiency. The researcher found one teacher from a population background and another from health education background. The teachers said that the preparation before entering class would be completely updated, but did not have the opportunity of training. They agreed that lack of sexuality education may lead to bad incidents every day. They also said that sexuality education is the weapon to prevent such bad incidents. Many things seemed to be the same for teachers including preparation, use of teaching materials, student participation, etc. It was found that a female teacher was more liberal than a male teacher.

"My students are also curious about sexual and reproductive health. I prepare my classes from various sources like books, journals, internet, etc. Usually, I use lecture method in classroom, but sometimes I also use demonstrations including poster, pamphlets, etc. Society is facing many challenges due to acid attack, rape, and harassment during adolescence. This education is highly recommended for adolescents but the government is preparing to remove it from our curriculum without any recognition; this is not a good thing, we should try to rebel against this move. Health education has kept a very small chapter in our curriculum. This means CSE is
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keeping a narrow path, which is a basic human need.”
(both teachers)

Thus, although the teacher tries to show that he is perfect, there is a lack of training. The student's verbatim and the teacher’s verbatim do not match. Other teaching materials do not seem to fit. The teaching process seems to be heavily based on lecture methods.

One more thing said by the male teacher differently is noticed in this statement: "I've been teaching for five years and I haven't found it easy to study as an adolescent." (Male teacher) This sentence indicates that there is no adequate training and counseling for teachers in sexuality education. Therefore, teachers are feeling shy even after five years of teaching; and the curriculum has not reached the students properly. Therefore, the behavior of adolescents does not change as expected. From parents’ point of view, the following statement draws particular attention:

"As parents, we are also concerned. Sexuality education given in school is not complete. So the behavior of our children does not show that they are learning this thing from school. Instead, it would be more effective to use NGOs in schools. Schools should also formulate strict policies regarding the provision of sex education. There should also be an orientation programme for parents as well. Government or NGOs should provide adequate training for teachers” (mothers).

In this way, parents are concerned about adolescents' sexual behavior. Parents are not getting complete satisfaction from the sexuality education given by the school. There have been no changes in the child's behavior that should have occurred after learning. There seems to be an argument that schools should have a strict policy on sexuality education.

Discussion

As found in the study, students argue that sexuality education should be given before puberty because young people are affected by globalization and access to the Internet whereby their curiosity about sex and sex-related contents has increased. This requires the guidance of a teacher. The girls who get good nutrition start menstruating at the age of 10-11 years. Therefore, sexuality should be taught before the onset of puberty so that
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adolescents get right information before they the start menstrual cycle. The fact that sex education should be taught before the onset of puberty is linked to the findings of a study by Pound and others (2016). Sexual information obtained by adolescents online is a matter of concern for parents and school teachers. Due to globalization and the growing influence of modern culture, traditional values and cultural aspects are major factors affecting sexuality education in many Nepali youths (Acharya and others, 2019). If no effective sexuality education programme is designed, developed and implemented in time, this internet learning of young people can become a risk factor for unsafe sexual practices. Pound and others (2016) noted that young people use the Internet to find sexually explicit materials and to obtain pornographic sites. It promotes sexual exploitation and violence.

Sexuality education cannot be implemented in developed and developing countries in the similar manner. UNESCO (2009) mentioned that school management plays an important role in implementing programmes. Similarly, leadership and management help in the full implementation of sexuality education and address the needs of the adolescents (Acharya and others, 2019). Strategies such as strengthening policies, providing sexuality education by trained teachers, parental involvement, training parents, respect for sexuality, sexual orientation, promoting gender equality, are also useful for implementing effective sexuality education in schools. Similarly, the role of teacher is most important in the classroom; and teachers must be committed to teaching more sensitive issues including sexuality related matters of curriculum in schools (Xiong and others, 2020).

In Nepal, sexuality education policy is not practically implemented in the classroom. Teacher Guides of sexuality education have been made; but they are not found in practice. That is why students are not able to learn well from sexuality education. The distribution of sexuality education is inadequate (Measor and others, 2012). Parents play a pivotal role in young people's sexual health attitudes and behaviors. However, this does not seem easy for Nepali parents. They feel reluctant to talk to their children about SRH issues due to social and cultural factors (Acharya and others, 2019). However, this study found that mothers were more likely to discuss sex and sexuality with their children than their fathers. Previous studies have also found that mothers feel more comfortable in discussing sexual health information with their children than fathers in the Chinese context (Liu and others, 2011).

Most mother participants also emphasized the need for the school to work with outside agencies in partnership with non-governmental organizations
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(NGOs) and School Management Committees (SMCs) to improve the effectiveness of school sexuality education programmes. There is little research into sexuality education in schools. This is the subject of investigation because society, family, and nation feel the lack of sexuality education, directly or indirectly.

Conclusion

SE has been considered the most important subject for youths/adolescents, mothers, teachers and students; so, it should cover all its key concepts in the curriculum; and it can help to replace a negative approach to teaching and learning sexuality. Understanding the importance of sexuality education should be relevant, and appropriate with clear progressive pathways that allow students to learn critically. All teachers teaching sexuality education should be given appropriate training that helps break myths and superstitious beliefs towards sexuality education. CSE programmes should be delivered by well-trained and supportive teachers which will be very helpful for adolescents. Schools and policymakers also need to develop partnerships. People from the local community should also be included in the programme for advice. This will make it easier for parents involved in the design and delivery of sexuality education programmes. Teachers should use not only lecture method in sexuality education but also make use of teaching strategies like the use of media, stories, the relevant websites, informal discussions, etc. Since mothers can easily communicate with their children, the government should provide proper orientation about sexuality education for mothers. Teacher training is the most important weapon to reduce the societal myths and taboos. It creates a comfortable platform for parents, teachers and students in teaching, learning and implementing sexuality education easily. Despite knowing how much this education is needed in Nepali society, proper situation has not yet been established due to various myths. After all, youths are the pillars of the country. Their health promotion is in the hands of the country's curriculum policymakers.

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Impact of Micro-finance on Educational Change of Women

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Abstract
Women cooperatives have been established to provide the poor women with the financial support in order to transform their socio-economic status. The present study has attempted to find out the educational changes among the client women in the study area after the intervention of women cooperatives. This study had adopted descriptive and analytical research design and mixed method – whereby the client women of Women Cooperative Society Limited, Thankot Branch were taken as population and 62 of them were sampled for data were collection. The primary data were collected through a set of questionnaires, and for secondary data, different documents of WCS’s central branch and Thankot branch, Central Bureau of Statistics, Ministry, research reports, relevant books and journals were consulted. From the study it was found that socio-economic status of poor women was changed through WCS micro-finance programme. The result also showed that saving and income were increased to 17.74 percent and 10.72 respectively. Education and literacy level of households are changed by 35% and 8% respectively.

Keywords: Micro-finance, educational change, efficacy, collateral free credit

Background
Nepal is a developing country having the population of 26,494,504 – with 1,36,45,463 are females and 1,28,49,041 males. From economic point of view, 25.16 percent people are below the poverty line (CBS, 2011). Although female population is more than male population, female participation is less than male in decision making process. Out of the poor section of population, four-fifth are either self-employed in agricultural sector, or engaged as agricultural labourers with or without tenancy (CBS,
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2016). The only important asset which the poor possess is unskilled labour force to sell their toil at extremely low wage.

Women play active role as decision-makers and as participants in most of the works related to rural development. They also take the responsibility for fetching water, collecting firewood, grass for domestic animals, carrying grains to the mills for grinding, planting and harvesting etc. in the rural areas in particular. They are mostly engaged in unproductive activities (CBS, 2011).

In Nepal, there is a persistent rise in gender gap, a large number of people are still illiterate and most of them are females. To minimize the gender inequality, different kinds of financial organizations such as Grameen Bikas Bank (GBB), Women Co-operative Society Ltd (WCS) etc. have been established – which have supported the poor women through micro credit without collateral taking the concept of Muhammad Yunus who was declared as the father of micro-finance (and felicitated with the Nobel Peace Award in 2006).

The WCS Ltd, a cooperative financing Organization promoted by 28 women promoters, was established in 1995 under the Cooperative Act 1992. The main objective is to provide micro credit and collateral free credit to the poor women and bring them into development mainstream micro-finance programme. WCS has tried to reduce poverty through women empowerment by raising their economic and educational status. According to the achievement report of WCS, it has gained success in uplifting the economic status of poor women (WCS, 2018). The present study attempts to find out the changes of the education of poor women after the intervention of women cooperatives in the study area.

Statement of problem

The issues related to poverty and its impact on development are serious in the least developed countries (LDCs) like Nepal. Nearly two-third of the population is engaged in agricultural sector in the country, which is the backbone of development in the least developed countries. But, due to the lack of irrigation, fertilizers and agricultural credit, productivity has been declining in this sector, and people are in difficulty to maintain the household expenses. In Nepal, most people are facing the vital problem of poverty.

WCS concerns particularly with the participation of poor women in economic activities. In Nepal, 25.2% people are poverty stricken and
surviving in miserable condition (CBS, 2011). Poverty eradication was one of the objectives of the eighth five year plan (1992-1997), ninth-five year plan (1997-2002), tenth five year plan (2002-2007) and three year interim plan (2007-2010); but poverty reduction indicators have not shown hopeful results as we expect.

WCS provides loan to the poor women without collateral. However, illiterate Nepalese women in particular may not know how to handle a big amount of loan. If the loan is misused, it will become a burden and the progress of WCS will decline. Thus, whether the loan provided to the target group by WCS is effectively utilized towards transforming the status of women is one of the concerns for exploration.

**Objective of the study**

The study aimed to identify the impact of WCS on the personal and household life of cooperative members. Particularly, the study aimed to analyze the educational changes among the client women in the study area.

**Review of Literature**

Cooperatives as the engine of economic development of the country can accumulate the scattered money and mobilize such capital to the needy persons. In this context, economists and planners have raised the voice that cooperatives can provide micro-credit in better and more effective model to reduce the poverty of people; thus micro-credit supports to increase their income, and can be supportive for bringing changes in their education. In this context, the government of Nepal specially focused on poverty alleviation of the economically deprived group: women, Dalit, Janajatis, conflict affected people etc., and self-employment fund was provided to them (Ministry of Finance, 2014).

The main aim of WCS (1995) is bringing most of the rural women in active participation. Most of the women have participated in WCS programme to become economically capable by handling the household level saving. They have also participated in other programmes like fortnightly meeting, loan proposal, repayment, compulsory deposit. Previous works done in this area have contributed to the socio-economic and other transformations of clients after the intervention of micro finance. Some of the relevant previous works are discussed here.
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Sharma (1996) stated that in the decade of seventies the overall rural development programmes like Sajha Campaign, the Area Development Programme including a number of rural development programmes such as District Development Programme and the Integrated Rural Development Programme (IRDP) were initiated. But all these past efforts have turned out to be ineffective to uplift the living standard of the poor people because the concerned small and marginal farmers are inefficient, tradition bound, illiterate, irresponsible to economic opportunities, and unwilling to adopt new ideas or information. Under such circumstances the benefits of development were largely driven by the relatively better sector. Thus, the gap between large and small farmers continued to be wider and the poor became poorer, and the number of poverty ridden people continued to increase.

Likewise, the contribution of Yunus (1997) is remarkable in the field of micro-finance, mainly for poor women’s economic promotion. In his study ‘A Bank for the Poor’, Yunus declares that the provision of micro-finance is one of best means of emancipating the needy women from poverty. Such financial support improves their economic condition. His study concluded that the intervention of microfinance was able to alleviate poverty, end inequality and gender discrimination in Bangladesh.

Dogarawa (2005) conducted a research to investigate the ways in which co-operatives can act as the agents towards sustainable community development. Descriptive survey method was used in this study; and the findings showed that co-operatives have been rapidly increasing and working successfully by facilitating job creation, economic growth and social development. The researcher mentioned that cooperatives must continuously achieve two interrelated goals which are: (i) to enhance viability and improve the ability to serve its members; and (ii) to remain an economically viable, innovative and competitive enterprise. The study also proved that cooperatives provide an economic boost to the community.

In the context of Nepal, Shrestha (2007) completed a study to find out the role of Small Finance Cooperative Limited (SFCL) and describe the root causes of the problems in it. As found by the study, SFCLs were playing significant role to promote the financial performance of the stakeholder members by providing credit facilities. Further, SFCLs were also assisting them through training, social and community development facilities.

Khumawala (2009) stated that microfinance movement has spread in several countries in an unprecedented effort to reduce poverty. Ensuring that the
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doors of capital, opportunity and knowledge are allowed to be opened for the poorest sections of population is a challenging task. He also focused that existing microfinance firms should be mobilized to add the education programmes like children scholarship programme. These types of programmes increase capital regulating of self small industries.

Tesfay and Tadele (2013) conducted a research entitled “The role of cooperatives in promoting socio-economic empowerment of women” in the south-eastern zone of Ethiopia. The study in particular aimed to identify women’s economic participation in cooperatives and to assess the role of cooperatives in social empowerment of women. The findings revealed that women participation in the cooperative was very limited. More than eighty percent respondents were involved in farm activity, however, only five percent were found to have been engaged in paid work. Among the total population, ninety percent of the respondents were found to have joined their cooperatives to access financial sources and improve their bargaining power. The study also showed that women members have improved their income, livestock holidays, autonomous decision making and spending power after joining the cooperatives, however, their regularity was limited.

In a survey done by Amin and Uddin (2014) conducted to identify the problems and prospects of cooperative societies in Bangladesh, 100 community members were randomly selected from 500 cooperatives in Sadar South Upazila of Comilla district. The findings showed that the cooperatives have to play significant role for sustainable community development. However, the study also saw some barriers such as lack of efficiency in management, illiteracy, lack of trust, nepotism and corruption due to which the cooperatives have not been effectively running in Bangladesh.

Shrestha (2014) researched on agricultural development of community people through co-operatives – with a view to find out the impact of co-operatives on socio-economic sectors of stakeholder women, whereby it was found that the impact of co-operatives was positive in the study area. After launching the co-operative programme, significant impacts were observed among community people. The financial activities related to agriculture were found rapid in the presence of co-operatives. Women were found most effective agents for mobilization of resources.

As Hadi and others (2015) stated, there was good reason to combine education with microcredit for poverty alleviation in the poor communities of the developing world, including Indonesia. Poverty is dangerous, and it deprives
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people from their right to education, good health, freedom of speech, democracy, financial services; and, of course, to knowledge enhancement. These factors are much crucial to living a better life. If we plan and well integrate within the microcredit services, education can serve a lot towards poverty alleviation. Their study stated how education and microfinance had been used in combination to alleviate poverty in Indonesia.

Maharjan (2016) in a research entitled “Impacts of cooperatives in Nepal: A case study of Kirtipur Multipurpose Cooperative Limited” aimed to find out the patterns of loan distribution and its economic impact among the borrowers. The study was conducted using mix method design; and data were collected using secondary sources, for example financial and annual reports of the cooperatives. It showed that the cooperative was able to provide business loan, higher purchase loan, construction loan, and home loan. It shows that the roles of cooperatives in the study area were important and significant to change the economic status of borrowers although there had been some internal and managerial drawbacks of the cooperative, mainly in loan distribution patterns.

The study conducted by Haque and others (2019) in the context of Malaysia adopted mixed method based on primary data – which found that microcredit has contributed to empowerment in all categories of economic issues. It has supported to generate income activities, create self-employment opportunities and to achieve other forms of economic access in women. It showed that the role of microfinance was significant in the economic empowerment of women.

The aforementioned studies in the review of related literature have mostly emphasized income increment and poverty reduction, though some of them have discussed the relationship between micro-finance and educational change as the contribution of microfinance. After the study of these attempts, the need for statistical study was realized on relation between educational change and microfinance, with a view to see the impacts of microfinance on education in an explicit way. In this connection, the study reported in this paper attempted to present the changes in education using statistical information explicitly.

Methodology

This study employed a descriptive analytical research design with mixed method which included qualitative and quantitative methods. The study aimed at identifying the impact of WCS micro-finance on educational change among the WCS members. For this, 62 client women were
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randomly selected out of 112 total members of the cooperative (WCS, Thankot Branch). The study used both primary and secondary sources for data collection. A set of questionnaire was prepared and administered among the sample population to collect primary data. I also participated in the group meeting while filling up the questionnaires. Authentic books, reports, articles, unpublished reports were studied for secondary data. The collected responses from the informants were analyzed using simple statistical tool (e.g. percentile).

Analysis of data

The WCS lies in the central part of Nepal, Kathmandu. Here, the study stated literacy and educational changes – seeing how far the income is reflected upon education. The responses of informants were analyzed and interpreted statistically by demonstrating the data in tables and percentage.

This study highlights the educational changes of the borrowers and their households after the intervention of WCS micro-credit programme. The progress of any micro-credit programme depends on members’ saving and actual loan distribution. This sort of transformation in income and the change in education of the borrowers and their households have been discussed.

Loan amount of WCS

WCS loan amount and its disbursement has been studied here. The study has tried to analyze loan disbursement by considering the amount of loan and number of borrowers. WCS collected saving from the income of its members and disbursed the fund among the needy women.

The total loan amount borrowed by the clients was Rs 1698861/- and average loan amount was Rs 27401.98 only. Here, WCS disbursed small amount of loan but impact was greater; and the financial support to women through this loan helped in increasing the members’ income which in turn changed their educational status.

Income condition of members and their households

The study has discussed the average income of the borrowers and their households as well as their percentage changed after the intervention of WCS micro-finance programme. Similarly, the study has also shown the average monthly saving of the households and their percentage changed after the same intervention.
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Table 1
Average income and saving of the borrowers and borrowers’ households

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<th>Income Condition</th>
<th>Before Micro-finance Programme</th>
<th>After Micro-finance Programme</th>
<th>Change in Percentage</th>
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<tr>
<td>Average monthly income of the borrowers</td>
<td>Rs. 7772.73</td>
<td>Rs. 10196.43</td>
<td>31.18%</td>
</tr>
<tr>
<td>Average monthly income of the households</td>
<td>Rs. 38287.78</td>
<td>Rs. 42392.16</td>
<td>10.72%</td>
</tr>
<tr>
<td>Average monthly saving of the households</td>
<td>Rs. 11196.43</td>
<td>Rs. 13183.64</td>
<td>17.74%</td>
</tr>
</tbody>
</table>

Source: Field survey, 2020

As shown in table, the average monthly income of borrowers was Rs 7772.73 before loan, and it was Rs. 10196.43 after loan. Thus, after borrowing loan, income of the borrowers has increased by 31.18 percent per month. The table shows that average monthly income of the household was Rs 38287.78 before loan which was increased to Rs 42392.16 after loan. It shows that after borrowing loan, monthly income of the household has increased by 10.72 percent per month. The table shows that average monthly saving of the household was Rs 11196.43 before loan, and after loan it was Rs 13183.64. It reveals that after borrowing loan, the saving of a household has increased by 17.74 percent per month.

Educational condition

In the context of Nepal, women in large population are poor, uneducated and engaged in agricultural and household sector. In the study area also, women were poor and uneducated; and most women were involved in traditional farming and labour before the intervention of WCS micro-finance programme. So, the study focused on literacy and educational status of the borrowers before and after borrowing loan from WCS. Here, the researcher categorized educated and uneducated women taking into account the educational qualification of School Leaving Certificate (SLC) or equivalent.
Impact of Micro-finance on Educational Change of Women

– whereby the borrowers having SLC were considered as educated and those who have not received the certificate of SLC were considered as uneducated.

Table 2
Educational status of the sample borrowers

<table>
<thead>
<tr>
<th>Status of clients</th>
<th>Before loan</th>
<th>After loan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>Educated</td>
<td>22</td>
<td>35.48</td>
</tr>
<tr>
<td>Uneducated</td>
<td>40</td>
<td>64.52</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: The field survey, 2020

Table 2 presents that majority of the sample borrowers (64.52 percent) were uneducated and 35.48 percent of them were educated before borrowing loan. It shows that a few clients' educational status was found to have been changed through the impact of WCS loan intervention. The table also shows that the number of uneducated borrowers was found decreased and educated borrowers were increased through WCS loan programme. It also proves that about 70.97 percent borrowers were educated and 29.03 percent remained uneducated after WCS loan intervention.

Literacy condition of the borrowers

Women in majority are illiterate and uneducated in Nepal. They are dominated by social structure and male-headed society. Here, the researcher has described literacy change in women as demonstrated by the field data to find out their literacy before and after the intervention of WCS micro-finance programme. Although there was no system to directly draw loan for literacy programme, the increment of income has indirectly influenced change in education, thus income has become the cause of increase in literacy.
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Table 3
Literacy condition of the borrowers

<table>
<thead>
<tr>
<th></th>
<th>Before Loan</th>
<th></th>
<th>After Loan</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>Read/write</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literate</td>
<td>46</td>
<td>74.19</td>
<td>51</td>
<td>82.26</td>
</tr>
<tr>
<td>Illiterate</td>
<td>11</td>
<td>17.74</td>
<td>7</td>
<td>11.29</td>
</tr>
<tr>
<td>Not stated</td>
<td>5</td>
<td>8.06</td>
<td>4</td>
<td>6.45</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100</td>
<td>62</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: The field survey, 2020

The literate borrowers were able to read and write name only. The table has demonstrated that about 74.19 percent borrowers were literate and 17.74 were illiterate and 8.06 percent did not give literacy data before borrowing loan. It has also shown that 82.26 percent borrowers were literate and 11.29 percent were illiterate after intervention of WCS programme, while 6.45 percent borrowers did not state about their literacy status. In the field, the borrowers were found involved in literacy classes through government agency. Though WCS itself did not start literacy classes, it encouraged the members to join the literacy classes and provided scholarship to the children of the members who joined these classes.

Findings and discussion

The analysis in the previous section shows that the borrowers’ income was remarkably changed after borrowing loan. Similarly, the household income had also changed after borrowing the loan. The households’ saving was positively changed.

This study proved that borrowers’ education and literacy status were found changed through the WCS loan programme. The change has indicated that WCS micro-finance programme had more efficacy. Similarly, the borrowers’ literacy has been changed positively. In this way, the WCS small loan had greater impact. In this study, the respondents who were able to write their name and address were considered as the literate ones and those who had passed SLC and above level as educated.
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From the field survey and calculation, it was found that loan amount, income, saving, literacy and education have increased through the WCS micro finance programme. In this way, it is understood that WCS micro-credit programme has contributed much to minimize poverty, earn education and bring the poor women into development mainstream. This finding is also supports the results of the previous studies mentioned above in review of literature.

The study of Sharma (1996) proved that all past efforts have turned out to be ineffective to uplift the living standard of the poorest people. The gap between rich farmers and poor farmers had continued to be wider, but this study proved that borrowers of loan from WCS succeeded to collect saving; and they utilized the money for appropriate purpose such as education.

Conclusion

WCS has been successful to reduce the level of poverty among the targeted women through micro-credit programme. It has helped to generate income that has been used to increase the level of their education. They have been somehow empowered through the intervention of WCS finance credit programme. Women were idle in general in the study area but now after the WCS's intervention, they have become productive and earning members of the family. The attitude of society and family towards women has been changed, thus women are not regarded as idle persons. Education has helped to increase skills and empowered them. On the other hand, when people are able to earn money, they can use their income to increase education.

References


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Impact of Micro-finance on Educational Change of Women


Role of Head Teacher in School Management: A Case of High School in China

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Abstract

Head teachers (HTs) have a crucial role in school leadership as well as in education policy agendas internationally. School leadership plays a key role in improving school outcomes as well as the school environment by motivating teachers. This study was carried out considering the major roles of the HT in making school programmes effective in Chinese context. Data were collected through interviews with students and teachers; review of books, reports, journals, and various publications with a view to explore the role of HT. The school website (in Chinese language translated to English) was also studied for information. The study revealed that HT is the most senior teacher and leader of a school, responsible for the education of all pupils, management of staff, and for school policy making. There is a positive moderate relationship between the leadership style and students’ academic performance in high school. This study has also established that the leadership that is instrumental towards school improvement is of ‘distributed’ kind of leadership; and the coordinated and collaborative efforts of the HT, teachers, students, parents, community leaders, district administrator and others becomes instrumental in ensuring the quality of education in school.

Keywords: Head teacher, leadership, students, education, performance

Introduction

China has the largest education system in the world, excluding graduate education institutions. China’s education system is not only immense but also diverse. County-level governments have primary responsibility of the governing and delivery of school education (National Centre for Education Development Research, 2008, cited in OECD 2016a).
Pre-school education in China is not compulsory, and many pre-schools are privately owned. Following the completion of compulsory education, students are given the choice to continue with senior secondary education. In China, there are five types of senior secondary schools: general senior secondary, technical or specialized secondary, adult secondary, vocational secondary, and crafts schools. In 2014, secondary vocational schools accounted for a little less than 22% of total senior secondary school enrolment in China (UNESCO Institute for Statistics (UIS), 2016, cited in OECD. (2016a). The senior secondary education is not part of compulsory education in China (National Bureau of Statistics of China, 2015, Cited in OECD 2016a).

China’s central treasury and local treasuries contribute to education funding. As for the qualification certificates for teachers in pre-school, primary school and junior secondary schools, they are issued by county-level governments. The educational administrative departments in the upper-level issues qualification certificates for teachers in senior secondary school (OECD 2016a). In 2014, the Ministry of Education implemented the National Training Programme for Primary and Secondary School Principals. Teachers in China are ranked by professional grades. Special-Grade Teacher is also a title for primary and secondary teachers (OECD 2016a). Currently, the Ministry of Education (MOE) has set four areas of priority: (1) rural, remote, poor and minority areas; (2) primary education in rural areas, vocational education and pre-school education; (3) subsidies for students from poor families; and (4) building a high-quality team of teachers.

In China, education is also considered as an essential element of patriotism, collectivism and socialism as well as in ideals, ethics, discipline, legality, national defense and ethnic unity. According to education doctrine in China, the whole society shall respect teachers (Ministry of Education China, 2009). China has implemented the Outline of China’s National Plan for Medium and Long-term Education Reform and Development (2010-2020). The plan has clearly mentioned about building a vast contingent of quality teachers, promoting professional ethics among teachers, raising teachers’ professional efficiency and streamlining administration over teachers (UNESCO, 2010).

To attract more teachers, China has developed teaching as a more desirable and respected profession. With the tradition of respecting and honoring teachers, September 10 has been officially celebrated as the Teacher’s Day, recognized by the Chinese Government in 1985 (Hong, 2019)
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Following the Teachers Law of October 1993 regarding the qualification certificates for teachers in pre-school, primary school and junior secondary school, schools and other educational institutions should progressively adopt a system where teachers are recruited using employment contracts. Every pre-school, public primary, secondary and vocational school teacher has to re-register for his or her qualification certificate every five years (Ministry of Education, 2013, Cited in OECD, 2016a).

The HT needs time, capacity and support to focus on the practices most likely to improve student learning, and also should play an important role in cooperating with teachers and developing teachers’ quality. The HT has to be able to adapt the teaching programmes to the local needs, promote teamwork among teachers and engage himself/herself in teacher monitoring, evaluation and professional activities.

According to Cheng (1997), depending on the types of school effectiveness and the models of school management, various conceptual possibilities and dilemmas exist in monitoring school effectiveness. Cheng has identified eight different models of school effectiveness – namely goal model, resource-input model, process model, satisfaction model, legitimacy model, ineffectiveness model, organizational learning model and total quality management model (Cheng, 1997).

Chengdu No.7 High School was established in 1905 and was given the status of “Key Secondary School of Sichuan Province” in 1978. (Chengdu No.7 High School, 2018). It was the first high school in Sichuan that was elected to be the key high school in China. This high school is considered as the top high school in Sichuan Province and is well known across the country for its high-quality education and good academic performance. It is one of the four "National Model High schools" in China. It was honored by China’s Education Ministry as a “National-level Model High School” in 2000 (Chengdu No.7 High School, 2018).

The research reported in this article, therefore, aims to explore school effectiveness focused on the leadership roles of the HT in Chengdu No.7 High School. The research was conducted so that the findings from the case study of Chengdu No.7 High School related to school operation and the learning environment would be useful to transfer the positive learnings in Nepali schools.
Objectives of the study

Specifically, the objectives of this research are as follows:

a) To analyze the various roles performed by the HT of the Chengdu No.7 High School to run effective school programme;

b) To provide recommendations to further strengthen the performance of the HT of Chengdu No.7 High School in school management; and

c) To draw implications for the effective role of HT in Nepal.

Conceptual framework

The conceptual framework of the study was considered based on six key roles of HTs which included school related factors, students’ personal factors, students’ home related factors, relationship with teachers, schools' financial management and community relationship – as depicted in the figure below.

Figure 1: Conceptual framework

This framework shows the contextual factors that govern the entire school effectiveness and therefore the role of HT on the whole.

Literature review

According to Herman and Herman (1993, p. 92), “School Based Management (SBM) is an essential dimension of school improvement and among various factors, the leadership role of the school principal is widely
regarded as the primary factor contributing to a successful relationship between SBM and school improvement” (as cited in Botha, 2006). Mosoge and Van der Westhuizen (1998) opine that school principal has to play key role to exercise leadership in various roles in a school, in the forms of “visionary leadership, transformational leadership and mentor leadership” (referred to by Botha, 2006). More specifically, school management includes professional personnel who are responsible for school management or administration. (OECD, 2016b).

Broadly speaking, aspects of school management include management of a school in terms of managing the material equipment; management of school plan; management of human resources. In addition, school management includes management of ideas and principles such as organization of ideas and principles into school system, curriculum, time schedule, norms of achievement, co-curricular activities. Besides, the objective of school management involves the embodiment of a spirit and of an ideal progress of the school (OECD, 2016b).

In school performance, quality of leadership is the dominant factor (Schwatz and Mehta, 2014; and Crawfurd, 2017, cited in Wolfenden and others, 2018). Pont and others (2008), based on an OECD study of school leadership around the world, revealed that many countries have moved towards decentralization, making schools more autonomous in their decision making and holding them more accountable for results. Management of teachers requires great amount of skillful control and guidance of teachers in order to achieve the schools’ desired outcomes. MOE recognizes that the HT plays an important role in leadership and management that determines the effectiveness of the school (Ministry of Education, Nairobi, 1999, Cited in Kitavi, 2014).

Katz (2001) defines teacher leaders as the teachers who are leaders and lead within and beyond the classroom, identify with and contribute to a community of teacher learners and leaders, and influence others towards improved educational practice (cited in Kitavi, 2014). Opposite to this view Boles and Troen (1994) have mentioned that teacher leadership is a form of collective leadership in which teachers develop expertise by working collaboratively (cited in Kitavi, 2014).

In quite different ways, a Dalin (1994) suggested four discernible and discrete dimensions of teacher leadership role which included the translation of the principles of school improvement, teacher leader focusing on
participatory leadership, mediating role and forging close relationship with individual teachers through which mutual learning takes place (cited in Kitavi, 2014).

Vroom (1979) defines leadership in terms of achieving the objectives of the organization (cited in Kitavi, 2014). Lewin’s studies identified different leadership styles. According to Lewin, three major styles of leadership are autocratic or authoritarian, democratic (participative) and laissez-faire (ibid.). In a study authoritative leadership style was found to have a significant effect on school (Iqba, 2005, cited in Kitavi, 2014). A democratic style was reported to have significant effect on having higher test scores than an authoritarian or laissez faire (Valesky, 1992 cited in Kitavi, 2014). On the other hand, in Ugandan schools, Nsubuga (2009) revealed that the democratic or consultative form of leadership was the best (cited in Kitavi, 2014). The findings of the study showed that no single leadership style was used in schools everywhere. Although the democratic style was mostly preferred, it was found that depending on situations in schools, leaders tend to use the different leadership styles and at times used other styles of leadership. It was established that where the democratic style of leadership was practiced, the school was likely to achieve good overall school performance (Kitavi, 2014).

Pointing towards the impact of democratic leadership style of the HT, Ngugi (2006) observed that HTs who used democratic leadership style posted high exam results (cited in Kinyanjui and Orodho, 2014). However, no significant relationship was revealed to show the difference between the autocratic leadership style and academic performance in public secondary schools in Maragua district, Kenya (cited in Kinyanjui and Orodho, 2014). Similarly, Onyango (2008) found good academic performance in Kenya Certificate of Secondary Education (KCSE) as revealed by the schools whose HTs were practicing a combination of autocratic (task-oriented behaviour) and democratic leaders (relationship-oriented behavior) (cited in Kinyanjui and Orodho, 2014).

Kitavi (2014) in a study revealed that a strong relationship was established between Kenya Certificate of Primary Education (KCPE) performance and the HT’s leadership styles, whereby it was established that school performance and in particular students’ academic excellence in primary schools is positively related to the democratic leadership style employed by school HTs (Kitavi, 2014). Daniel and others (2016) also found a significant
positive relationship between democratic leadership and academic performance of primary schools in Tinderet Sub County of Kenya.

In a study in the context of Nepal, (CERID, 2004) HTs were found to be exclusively active in mobilizing local community and local donor representatives for fund raising for school improvement. Unlike in most public schools, management in these successful schools has been found to be actively engaged in various self-initiated activities without much regard to the government-supported programmes and activities. This study revealed that the determination and self-initiatives are fundamental to maintain school enrollment, education quality and for collecting funds for school improvement (CERID, 2004).

Ngugi (2006) observed that HTs who followed democratic leadership style yielded higher exam results. But no significant relationship was found between the autocratic leadership style and academic performance in public secondary schools in Maragua Sub County, Kenya (cited in Kitavi, 2014).

Research methodology

The study design adopted to address the research objectives was qualitative. The primary data were collected from Chengdu, Chengdu Number 7 High School and its surrounding areas using personal interview. As a secondary source, the review of previous research reports, policy documents of the government and various papers, journals, and articles published by the related professional organizations and media were used. The school website (in the Chinese language translated to English) was also studied for information. The ‘do no harm’ principle, confidentiality and voluntary approach with the informed consent from the respondents (Chinese students and teachers) were followed in a participatory manner during data collection.

Results and discussion

The study revealed that Chengdu No 7 High School gets funding from the government to run the school, to manage the infrastructures and to pay for the school teachers. The curriculum is decided by a group of teachers. Government funding includes the entire cost of running school. The school has made the provision of scholarship for the best students in the class.

To evaluate the teacher's teaching, another teacher or a leader attends the class while the teacher is teaching. The HT leads school and provides various types of support to the teachers in the professional tasks. There is a
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provision for the School Management Committee Dean or professional teachers who know about the rules and activate them. They play active role of coordination with the Head Teacher. The school organizes meeting with parents during the "open day” with the purpose of enhancing the quality of school programmes.

The responsible person from the government supervises the school activities to ensure the quality of education and the performance of the school. The students demonstrating outstanding performance get scholarship in top universities in the country like the Peking University and Tsinghua University. Often the students get support from the desk mates. Coordinated and collaborative efforts of the HT, teachers, students, parents, community leaders, district administrator and others have been instrumental in ensuring quality education in Chengdu No 7 High School.

The HT is the most senior teacher and leader of a school, responsible for the education of all pupils, management of staff, and for school policy making. The entire role of the HT is reflected in educational leadership, programmes, learning outcomes, student welfare, staff welfare, physical development and management, financial resource management, and school and community partnerships.

Based on the interview with the teacher and students regarding the role played by the HT in Chengdu No.7 High School’s management, in view of the effective school, it was seen that the HT has three roles which include: leading and managing the school, ensuring the achievement of excellent educational standards, and promoting and safeguarding the welfare of students. The HT’s role can thus be categorized into three categories: Firstly, culture and vision; secondly, leadership and management, teaching-learning, curriculum and standards; and thirdly communication and consultation.

Across OECD countries, school leadership has become a priority in education policy (Pont and others, 2008). Furthermore, Leithwood (2007) and Bush (2013) mentioned that successful school leaders make use of a mix of leadership models, and are responsive to context - i.e. school goals, school organizational structure and culture (as cited in UNESCO, 2014). Instructional leadership is particularly useful in guiding teaching and learning.

According to Heck and Hallinger, 1999 and Stewart 2006, transformational leadership focuses on vision, inspiration and relationship for the purpose of improving teachers’ working environment and pupils’ learning (Stewart,
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2006; and Robison and others, 2006, cited in UNESCO, 2014), while the instructional model focuses on the instructional leadership. A study of different models of school leadership in England mentioned traditional models, managed models, multi-agency models, federated models, and system leadership models (Pont and others, 2008). Hope (2002) appreciates that the head teacher’s role is more central (cited in Mpaata and Zaid, 2018; Mwesiga and Okendo, 2015). They have emphasized that a successful school leadership rests on the nature of leaders that is observed in communication, ability, knowledge, skills, behaviors, flexibility, and personality traits, among others.

According to UNESCO (2009), though head teachers can delegate authority to teachers for daily activities, they have crucial role to lead, ensuring togetherness of other staffs in various tasks like parents’ meeting, involving them in school activities and staff in implementing school policy. Franz (1999) has indicated the rising complexity of roles and tasks of head teachers in western industrial societies. Having school autonomy, schools have to deal with financial management and staff development and instructional leadership and administration. Franz has emphasized that due to growing autonomy, the quality development and evaluation pose an additional challenge to school heads. This requires the Head teacher towards having a systemic perspective for their professional development needed for overall development of school system.

Broadly, it can be said that there are three models linked to different concepts of the school that are, in turn, dependent on the organization of education system. The first model is that the HTs need no qualification other than those required for teachers and that they may return to teaching. Such a return is most unusual in secondary education (UNESCO, 2009). The second model is the separation of the functions of teacher and HT. In Germany, HTs are trained for administration and management, while in the USA; there is no formal requirement for HTs to have taught. (UNESCO, 2009). The third model believes in different fields of action of the management team; accordingly, the members of the team divide their roles – some take the responsibility of management and others perform teaching.

The major educational policy trends observed around the world place the school at the heart of reforms (UNESCO, 2009). The overall management that guides the development of school’s physical infrastructure, improvement in access to education, and education quality rests on the HTs’ leadership, characteristics, supervision and monitoring. The HTs should have
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good relationship with the school teachers, School Management Committees, parents and the local communities. There should be good relationship between HT’s leadership and students' learning achievement, student regularity, school teachers' attendance, and enrolment pattern.

This study showed that there was a strong relationship between leadership styles and pupils’ performance in Chengdu No 7 High School. In other words, academic performance in school was explained by the prevailing style of leadership. Leadership style may be a strong factor accounting for further explanation in terms of higher academic performance of pupils in the Chengdu No.7 High School. This study, however, did not reveal the views on autocratic leadership and laissez faire leadership style of the head teacher. This study also showed a positive moderate relationship between most school teachers, performance of the teachers and students, and overall reputation of the school.

The study showed that leadership is critical in the performance of the school as a whole. It was apparent from the study that the HT supervises the activities in the school closely; the HT guides and counsels the teachers, and interacts freely with teachers. There was presence of environment conducive for improved overall school performance.

The role of HT in Chengdu No.7 High School are:

a) promoting a culture of encouragement, support and challenge in order to achieve students’ full potential and the highest possible educational standards

b) shaping the vision of the school by mobilizing parents, school teachers and the support staff

c) translating the vision into objectives and operational plans and promoting creativity, innovation and the use of appropriate new technologies

Other roles fulfilled by the HTs included mobilizing all staffs to achieve the highest professional standards; building a collaborative learning culture within the school and building effective learning communities; managing the school finance; effectively working closely with relevant government authority; and ensuring the job descriptions and performance management for all staffs and teachers. The HTs as an academic leader inspires and engages all pupils; ensuring a consistent and continuous school-wide focus
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on students’ assessment and achievement for outstanding standards of learning and teaching at all times.

The roles of public relation and collaboration included building effective relationship with all stakeholders through excellent communication and interpersonal skills, co-coordinating the school’s work, and regularly and effectively communicating the progress of every student’s learning to their parents. This study clearly indicated a need for facilitating HT's leadership styles to show a direct relationship with pupils’ academic performance and involve teachers and parents in matters of students’ performance. The HTs, however, should be trained in areas of management so that the teachers can also view them as active leaders, mangers and facilitators.

As part of this study, it was observed that there are evolving leadership roles of the HT internationally. This has obvious implication for China in general and specific to Chengdu High School No7. The HT can delegate a large share of the daily tasks of organizing the teaching duties and managing the school logistics, their overall responsibility leads them to intervene on many fronts:

- Meeting parents, noting their opinions and involving them in the school;
- Motivating teachers and other staff involved in education and ensuring that they work together;
- Interpreting the supervisory authorities’ policy and explaining it to all;
- Organizing the assessment of pupils’ performance;
- Motivating teacher teams to involve everyone in improving the school

With distribution of functions and a great variety of combinations, many people can best be utilized to make the management function more effective

Conclusions and recommendations

It is obvious that quality of school programmes and education has been ensured by funding from the government to run the school, support the infrastructure and pay the school teachers and provision for scholarship for the best students in the class – as found in Chengdu No. 7 High School. To evaluate the teacher's teaching, the capacity building of the teachers through
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a teacher or a leader attending the class could be a positive step. The provision of prizes to motivate the students to perform well and the scheme for students’ scholarship in top universities for the students with good score is very praiseworthy step for their enhanced learning.

There is a need for exploring whether the HTs’ responsibilities could be changed based on various types of leadership styles to relate it with students' academic performance in Chengdu No. 7 High School. The HT should involve teachers in school administration, which could enhance participatory leadership and hence contribute towards better academic performance. A study on teachers' perception of the HTs and their leadership style as well as their own job performance should also be conducted. It would be a positive lesson to bring back home that the school curriculum should be developed in consultation with a group of teachers and students. The leadership should explore ways of raising the level of overall student performance and narrowing the gap in the performance among students. Based on the present study, further research may be conducted on the roles of HTs in Nepal to explore the relationship between their level of motivation and school’s performance especially students’ learning, and the effect of other HT-related factors on students’ performance.

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LIST OF ABBREVIATION AND ACRONYMS

CERID Research Centre for Educational Innovation and Development
DEO District Education Office
HT Head Teacher
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KCPE  Kenya Certificate of Primary Education
KCSE  Kenya Certificate of Secondary Education
MOE   Ministry of Education
OECD  Organization of Economic Cooperation and Development
RPs   Resource Persons
SMC   School Management Committee
UNESCO  United Nations Educational Scientific and Cultural Organization
Abstract

The coronavirus pandemic has had a profound impact on education. Higher education institutions including public campuses have followed the recourse of online learning as an alternate to the face-to-face learning to minimize this impact and keep the students engaged during the pandemic. This paper discusses the changing scenario of delivering education in higher educational institutions in Nepal. The purpose of this study was to explore teachers’ perceptions on online teaching. It also tried to identify the challenges and opportunities of online teaching in public campuses of Nepal. The study adopted a qualitative research design. Three faculty members of three different campuses from Rupandehi were taken as research participants purposively. The main finding was that the faculty members are ready to adopt online teaching to mitigate the learning loss of the students due to COVID 19. But there are some challenges for conducting online classes like unwillingness of campuses to implement the online classes, lack of physical infrastructures, lack of clear policy, and limited motivating factors for faculty members and students.

Keywords: Online teaching, public campus, COVID 19, faculty, perception

Introduction

COVID-19 pandemic has a massive impact on global human life; and it has traumatized the education sector as well. Dhawan (2020) states that several areas were affected worldwide and there was a fear of losing the entire year, semester or even more in the coming future. Various schools, colleges, and universities have discontinued face-to-face teaching. Educational institutions have been struggling to find better options to deal with this challenging situation. These circumstances make us realize that careful planning is an urgent need for academic institutions (Rieley, 2020).
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Being a faculty member of a public campus, I realized that the students of these campuses are lagging behind in education due to the announcement of lockdown during this pandemic. Public campuses were in dilemma regarding the continuation of their teaching-learning activities in the beginning days of the pandemic. Later, government authorities and universities of Nepal realized the alternative ways of learning and tried to mitigate the learning loss of students by means of virtual and online teaching and learning. Acharya and others (2020) state that because of the closure of educational institutions for a considerably long period, education was changed dramatically; and it led to the notable rise of online learning whereby teaching and learning are undertaken remotely and in the digital platforms. Higher education faculties in the public campuses are being asked to teach online (Dhawan, 2020, p. 2). It is important to consider their perspectives on teaching adults in a computer-mediated environment. One way to understand how faculty members experience online teaching is by studying online teaching situations, using faculty members’ reconstructed experiences, and elaborating the meaning that they assign to those experiences. Typically, online teaching involves the use of the internet to access learning materials; to interact with the content, instructor, and other learners; and to obtain support during the learning process (Ally, 2004, p. 5).

Online learning is catalyzing a pedagogical shift of our teaching and learning. Stern (2016) illustrates that there is a shift away from top-down lecturing and changing from the “sage on the stage” to “the guide on the side” (p. 2). It provides opportunities to access and share information more easily. It provides a mechanism for equal opportunity among students and teachers. It develops digital literacy skills that are increasingly required in contemporary society and workplace environments. Online teaching and learning cover a wide set of applications and processes, such as web-based learning, computer-based learning, virtual classrooms, and digital collaboration.

Transformative learning theory was developed by Jack Mezirow in the late 1900s. It provided a rich framework to analyze teachers’ learning processes while teaching online. This learning theory has evolved ‘into a comprehensive and complex description of how learners construct, validate, and reformulate the meaning of their experience’ (as cited in Baran and others, 2011). The unexpected, unplanned, and sudden shift to online learning caused by COVID-19 has certainly been an experience that has led to cognitive difference as our expectations from education have been
challenged. Instead of escaping away from this crisis, there was the suggestion for ‘embracing’ COVID-19 and the resulting situation as an opportunity for transformative event that will lead to innovation in education (Kitchenham, 2008).

The founder of experiential education theory was John Dewey. From experiential education perspective, the goal of education is to develop students’ ability to transform experiences into new knowledge through reflection (Dewey, 1960; Kolb, 1984). The COVID-19 pandemic is proving to be a constructive disruptor, giving an opportunity for restructuring the conventional, classroom based educational system. The rapid transition to online education has not only benefited public campus teachers and students but also has created a momentum of continued education for practicing higher education in Nepal.

Self-determination theory highlights the importance of humans' evolved inner resources for personality development and behavioral self-regulation (Ryan and Deci, 2000). It explains the necessary context in which students are motivated to learn. According to this theory, motivation for learning occurs when three basic human needs are met, which are relatedness, autonomy, and competence.

**Impact of COVID 19 in Higher Education and Public Campuses in Nepal**

The alarming spread of the virus caused havoc in the educational system forcing the educational institutions to shut down. As a consequence of the lockdown, schools and universities in Nepal were temporarily closed for about eight months. As of the third week of September 2020, UNESCO (2020) estimated that nearly nine million (8,796,624) students in Nepal are affected due to school/university closures in response to the pandemic. 31% students of higher education have been studying in public campuses (UGC, 2020). Higher education institutions have been trying to change the mode of face-to-face education towards online learning. Public institutions have faced difficulty in adopting the updated technologies to implement online education.

Public campuses are directed, constituted and funded by community people, and are obliged to follow the rules and regulations of the university they are affiliated to along with the instructions of Ministry of Education. They are financed and governed by the community and are not institutionalized for profit motive. They receive very small amount of financial support. Students
of these institutions and their curricular and non-curricular activities are badly affected by COVID 19. These campuses were built for face-to-face teaching-learning practices, having no infrastructure, and preparedness for online classes. Faculties and students were not mentally and technically prepared for online mode of teaching; and the internet facility, the most important requirement of online classes, is hardly reliable. Under such circumstances, online teaching in Nepal is more than challenging. UGC, as the initiative to address the unprecedented impact of Covid-19 on regular academic activities of universities and higher education institutions, issued the guidelines for facilitating alternative mode of learning in higher education in July 2020. (UGC, 2020). It has created both opportunities and challenges in higher educational institutions of Nepal. They have, thus, tried to respond proactively to this disturbance through radical change in education with virtual or online learning.

Though public campuses have resorted to online learning activities to keep the students engaged during the pandemic, there are challenges to conduct online learning activities due to the lack of tools required to connect and engage teachers and students online. The challenge is complemented by the fact that a large section of students resides in the remote areas that lack basic internet connectivity. Even those who have access to the internet may not know how to make proper use of it. In this connection, there are crucial questions such as: How could it be effective in the places where people have to climb up trees to access mobile networks? How can online classes be effective?

On the other hand, public educational institutions suffering from financial problem have completely shut their activities for not having access to e-learning solutions. Some public campuses have started online classes by using Microsoft Teams and others have been using Zoom and Google meets. However, there are some critical questions related to the quality of internet service to all students and teachers. More precisely, the question is: Are the teachers well equipped and trained enough to run the virtual classes effectively? Are all students able to use this opportunity of distance learning?

Understanding the perception of faculties towards online education is necessary so that their concerns can be addressed properly. Some researchers have studied faculty readiness for online teaching. Lack of research was realized on how online teaching has been perceived by the faculties of public campuses in the local setting. Development of online education is still
underway among in public campuses. So I chose this study to determine the perception of faculty members towards online education in public campuses during the outbreak of COVID-19.

The present study

Considering the questions just presented, I realized the necessity to find out the perception of faculties and challenges of online classes during COVID-19 in public campuses. In the same way, I also felt the necessity to find the challenges and opportunities of online teaching during COVID19 and the necessary steps to be adopted for the betterment of online teaching and learning. The objective of this study was to make exploration on these crucial issues.

This study has attempted to find out the perception of faculties regarding online teaching. It tried to explore the public campus teachers' challenges and opportunities to implement ICTs in teaching and learning. The study was limited to the selected public campuses of Rupandehi district. The research participants were three faculty members of three different public campuses. Interview guideline questions were used for data collection; and responses were collected through messenger and zoom. Due to lockdown, virtual methods were followed for data collection.

In this study, I have tried to bring into light the major opportunities and challenges of online teaching and learning. The findings of the study are considered to be of great significance to different stakeholders for several reasons. This study is expected to bring out the physical, social, psychological, and technological conditions of online learning. The findings of this study may also contribute to the benefit for the higher education institutions like public campuses by providing significant insights into the online teaching by enabling them to support and prepare their programmes better for the days to come.

Methodology

This study was based on a qualitative research design. I used a phenomenological study method that studies the process or record of research into the development of a particular person, group, or situation over a period of time Creswell (2014). Smith (2004) defines phenomenology in terms of the study of structures of consciousness as experienced from the first-person point of view. The research site was Rupandehi district of Nepal. The participants of the study were three faculty members of the different
public campuses of Rupandehi district. For locating the research participants, first of all, I listed out all the public campuses of Rupandehi district. After that, I selected three campuses purposively. Finally, I interviewed the selected participants. I collected the data by conducting in-depth interviews of the participants using unstructured guideline questions. My questions were directed to the participants' experiences, feelings, beliefs and convictions on the theme in question. In the study, the participants' real names have not been disclosed as per the research ethics.

The experience of three faculty members was explored in depth. A small number of participants was considered sufficient as it was a rigorous analysis of exploratory nature (Daniel, 2012). I analyzed the collected data descriptively developing themes on the basis of the responses of the participants.

Results and discussion

The themes generated from data collected for research purpose are presented and discussed as given below.

Faculty perception of online teaching

Since the COVID-19 pandemic has disturbed the normal lifestyle of people across the world, the virtual world has come to the fore for rescue. Students and teachers of public campuses have to struggle while getting into these online platforms. Singh (2020) states that online education has emerged as an alternative to ordinary face-to-face classes. But most of the public campuses are lacking the basic technological devices to conduct online education. In this regard respondent 'A' said 'I am using only free Zoom applications which have limited time; due to this many classes of mine can't be completed, the campus doesn't provide any support for online teaching'. This statement shows that there is a problem of managing devices and software for online classes in public campuses. Sapkota (2020) states that access to technical infrastructure, competence, and pedagogies for online learning was found to be the major challenges faced by the institution between the shifts of teaching methods. In this case participant 'B' said

‘… online education is one of the important education methods today, there are ambiguity and disagreement about what to teach, how to teach, the workload of faculty and students, the teaching environment, and the issues of educational equity'.

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His statement gives emphasis on managing the basic devices and preparing the guidelines for online teaching. How to effectively educate students online is the most important consideration during COVID 19. Switching from a traditional face-to-face classroom to a computer-based online or virtual classroom makes the teaching experience entirely different for faculty members. Conducting teaching-learning activities from their resistance may not be appropriate; in the beginning he/she has to create a favorable environment for the online teaching-learning activities. Respondent 'C' said:

' I'm not proactive about using computers and its different applications; for that I need the support of my staff but it is difficult to get help from them because of social distancing. It is better to manage ICT training which can be fruitful for conducting the online classes effectively'.

This statement shows the real picture and perception of faculty members about online teaching in public campuses. They are not competent in using computer technology. In this regard, even UNESCO is aware that transitioning to online learning at educational institutions is a very difficult and highly complex undertaking for education systems, even in the best of circumstances; but it stresses that it has become a necessity (UNESCO, 2020). Pandey (2020) illustrates that to consolidate and strengthen the education system, four key factors must be considered: schools’ readiness for conducting ICT classes, faculty member's readiness for conducting ICT classes, students’ equitable readiness for ICT-assisted classes, and home environment readiness for ICT classes. Online education at public campuses has increased exponentially after the Covid-19 outbreak. There has been an overnight shift of normal classrooms into e-classrooms; that is, faculty members have shifted their entire pedagogical approach to tackle new educational conditions and adapt to the changing situations. Adopting online teaching and learning is beneficial in accelerating learning, and it has reinforced students of public campuses and faculty members in the comfort of home during the global crisis.

Alternatives ways of teaching and learning

The novel coronavirus has forced all the education systems to find alternative paths of teaching, learning, and evaluation. Participant 'A' said:

I have been conducting my classes by applying internet technology to teach during a pandemic situation. I think it is the best alternative
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way to replace face-to-face classes with online teaching and learning’.

From this statement we know that for some teachers the use of technology in teaching and learning is the best solution to replace the traditional education system. Higher education institutions and concerned authorities need to focus on how the education system can be made operational in the time of pandemic. One of the alternative paths can be a full-fledged ICT-based education that can work as the immediate and long-term alternative to combat the Covid-19 and similar pandemics in the future. Other respondents have similar views on the alternative ways of teaching and learning during social distancing. They said that online learning through Zoom is the best alternative for this situation. 'In the beginning days I used Facebook messenger to provide notes, homework, and assignments' said participant 'C'. It proves that faculty members are worried about their student's education so they have been searching for alternatives to the conventional face-to-face learning during the lockdown. So the faculty members are ready to adopt online teaching to mitigate the learning loss of the students due to COVID 19. They perceive virtual and online learning as the most important alternative to survive education system in the period of social distancing. Online learning is the combination of contents and instructional methods delivered by the media devices facilitated through a computer intended to build knowledge and skills linked to individual learning goals and organizational performance (Singh, 2016).

Employing technology for minimizing learning loss

It is obvious that the faculty members of public campuses have used the online learning system as a tool to help their students learn beyond the usual face-to-face model in the classroom. Participant 'B' said: 'It is impossible to meet students physically and teach them in classrooms these days; so teaching through technology is beneficial for them'. This statement highlights the use of technology to minimize the learning loss of students during the COVID 19 pandemic. Universities and campuses have not been able to follow their academic calendar since students and the staff and faculty cannot continue their academic programmes such as running classes and taking exams in normal physical classrooms. Nepal’s educational institutions, including campuses and universities, have been managing their programmes and organizing classes through alternative e-learning platforms (UGC 2020).
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All respondents believe that online learning is the most important way for minimizing the learning loss of students. So, public campuses should be proactively encouraged to embrace online education system by introducing virtual classes – ensuring learning opportunity for all the students throughout the country. During this hard time, the concern is not about whether online teaching-learning methods can provide quality education; it is rather how academic institutions will be able to adopt online learning in such a massive manner (Carey, 2020). Faculty members enjoy online classes because of the opportunity of being connected with technology for teaching, collecting teaching materials, sharing such materials to students, and connecting with international resource persons.

Challenges

Even though online classes are the better alternatives for mitigating the learning loss of students during lockdown, there are limitations of following such a strategy in real situations. In this concern, participant 'A' said:

'Most of the students do not attend the class due to the lack of internet and devices, some of them show less interest because exams and sessions have become uncertain, and the big problem is the irregular power supply and slow internet'.

As poor internet connectivity and unstable power supply are common problems, several students have to participate in online teaching-learning without reliable internet access and power supply. Another challenge of online teaching is turning students into passive observers rather than active participants. The students joining the class and listening to their teacher there may not be in two-way communication. The next challenge of online teaching is staying connected with students. In any online classroom, much of the learning is completed asynchronously and students often feel disconnected with their teachers, as well as their friends. It can be difficult for teachers to teach online when they struggle to devise how students are comprehending the course content, and whether they are participating in learning experiences.

As participant 'B' claimed: 'The major challenge is less attendance of students due to internet access problems. Most of them join through mobile data that is costly to them'. This statement claimed that many of the students join their classes through their mobile phones which may not fulfill all the teaching objectives like presentations. Mobile data packages in Nepal are
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comparatively expensive which discourages students to search the materials through the internet. Participant 'C' has faced the same problem, as he said 'there is the problem of a power cut, no network, slow internet; due to these students have to join and rejoin again and again'. This statement commented that the unstable power supply stresses the students as well as faculty members. The students join the class late, disconnect and reconnect the classes frequently because of the poor strength of the internet and frequent power cut. Due to this, there may not be good collaboration between teachers and students. It is one of the most difficult things to achieve when students are not physically present together.

Even though online teaching-learning is a new perspective with exciting possibilities, it is not without limitations. Online learning has many limitations ranging from learners’ issues, educators’ issues and content issues. It has a limitation for institutions to engage students and make them participate in teaching-learning process, for faculty members to move from offline mode to online mode involving changes in teaching methodology and managing time. With these considerations, the quality of online teaching-learning programmes is a real challenge for public campuses in Nepal.

Opportunities

Online education gave an opportunity for emotional and moral support to both the students and faculty members to stay connected during the pandemic. With the appropriate availability of technology, online learning can be advantageous and effective in numerous ways since it can offer a lot of content, interactions, flexibility and reinforcements. The online learning environment fosters additional learning experiences whereby learners can interact, collaborate, and take ownership of their own learning at their own pace and time (Ali, 2020). Hence, ICT immersed lessons provide a motivating and encouraging learning environment for our students and; it also leads to self-directed learning. Learners can keep themselves engaged from any place using any device such as mobile phone, laptop or desktop computer as per their convenience. In this concern, all three participants argued that the lockdown has positively provided an opportunity for learning through online communication. When there is a shift from a teacher-controlled environment to a more learner controlled environment, the role of educator becomes more of a facilitator, and minimal scaffolding may be required (Geng and others, 2019). Likewise Martin and others (2019) reported that educational institutions were modifying online lessons due to
the recent outbreak of coronavirus (COVID-19). So, online distance teaching-learning has become a good alternative tool if accessible to everyone. It offers courses and lessons to students who are unable to be physically present in a traditional classroom or do not have the time to attend classes physically. Bary (2020) noted that the case of coronavirus is a huge opportunity for online education due to the closure of schools and colleges. In the same way, my participants also argued that great opportunities are provided by this pandemic for the transformation of the entire system of higher education.

Conclusions

My reflection revealed that the perception of faculty members towards online education is positive; and they want to transform traditional face-to-face teaching-learning activities to virtual online learning. They perceive it as the opportunity to expand the horizon of their knowledge for enhancement in the personal and professional growth. They considered online teaching as an opportunity for their development and as a strong tool to connect the students in a virtual classroom who are otherwise dispersed geographically. Facing challenges, they have got this as a great online teaching experiment. Most of the public campuses have no experience of conducting online classes; and teachers do not seem to have adequate skills for running online classes as they have neither been trained to do the job nor had they been involved in online teaching before this emergency. Increase in the number of absent students, ineffective class delivery and the disturbance of the internet, electricity and other barriers related to the personal computer, smart phone or other devices are the common challenges of online teaching in public campuses.

There must be appropriate technological infrastructure to conduct online teaching. More emphasis should be given on clear institutional policy regarding the regulation of examination. Campuses should be provided with authentic online programmes such as Microsoft Teams and various educational softwares to make classes effective. Institutional email Id should be provided to the students and faculty members of public campuses. There must be a clear stipulation by the government and concerning authority like UGC in their educational policies regarding the online and distance learning programmes. There must be concern about the standards for quality control, development of e-resources, and e-content delivery. Most important thing is
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that there must be the availability of affordable internet connection, and appropriate electronic devices.

References


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