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Education in emergency: Action research on online teaching and learning practice in a

Bhutanese school during the COVID-19 pandemic

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Abstract

Countries around the world were disrupted because of COVID-19 in the year 2020. All sorts of lives were affected and Bhutan too was not spared. Education system in Bhutan had to come-up with different strategies to cater the learning needs of the students. There was no option other than using online teaching and learning mode amid the lockdowns and closure of the schools. The mode was a novice concept to most teachers. Thus, we explored strategies a teacher could use to teach online and students' opinion on it using mixed method approach. We designed a strategy to teach students on online mode. The strategy focused on inclusion of salient features of online teaching and learning. These features aligned to creating constructive and collaborative learning environment, timely support, quality tools, effective assessment strategy and timely feedbacks. The intervention strategy was implemented for eight months. At the end of the academic year, a survey questionnaire was administered to 56 students of classes six and seven. To further gain insights into the practices, semi-structured interviews were employed with five students and the teacher practitioner maintained a journal for every online lesson. Responses from the survey showed that salient features could be created in an online mode of teaching and learning. However, technological issues, students' inability to manage time, inadequate technical knowledge and hundred percent student participation were identified as some of the challenges.

Keywords:

action research, online teaching and learning, COVID-19 pandemic, Bhutanese School, 21st century skills

Introduction

COVID-19 has created a pandemic across the globe. Bhutan withnessed its first case on 5th March, 2020. Since then, as a precautionary and preventive measure, all the educational institutions in the nation remained closed starting 19th March, 2020 with the directives from the Prime Minister's Office although schools in three dzongkhags (Paro, Punakha and Thimphu) remained closed since 6th March, 2020. This disruption showed that Bhutan's education system was in emergency. COOPI (2018) defines Education in Emergency (EiE) as "set of project activities that allow structured learning to continue in situations of emergency, crisis or long-term instability" (p. 6).

According to Royal Education Council (REC), Ministry of Education (MoE), and Bhutan Council for School Examination and Assessment (BCSEA), (2020), during the emergency period, schools were expected to educate students using adapted curriculum and assessment with the support from various stakeholders. Amid the COVID-19 outbreak, adapted curriculum recommended by REC was used since regular teaching was not feasible.

The guidelines developed by REC, MoE, and BCSEA (2020) were provided based on key stages, which included areas to teach and recommended teaching tools that teacher could use to teach different topics and subjects. Classes PP-XII were divided into five key stages: Key stage I: PP-III; Key stage II: IV-VI; Key stage III: VII-VIII; Key stage IV: IX-X; and Key stage V: XI-XII.

This study specifically focused on class VI and Class VII. These classes were categorized under key stage II nad III respectively. The guideline did not include what aspects to teach for social studies in key stage II. It seemed like the schools did not have to teach and learn the subject. However, the Principal Researcher taught social studies to class VI students to see the feasiblity of techology tools and online teaching and learning during the pandemic.

The guide clearly showed that the students had to engage meaningfully through various online tools such as social media, Google Classroom, Bhutan Broadcasting Service (BBS), and YouTube. Furthermore, the MoE has specifially recommended teachers to use online platforms such as social media for classes PP to III and Google Classroom for students of classes IV to XII. Teachers of all levels were expected to provide activities using lessons delivered on the national television (BBS) too

Amidst the pandemic, online teaching and learning was necessary to have continued teaching and learning for all the students. In such situation, teachers were left with no option but to embrace online mode of teaching and learning despite their limited or no information and communication technology (ICT) knowledg and skills. Teachers had to teach students online using available ICT resources and this action research is mindfully selected and carried out to investigate and implement strategies feasible for teachers to use for effective online teaching and learning mode.

Situational Analysis

With an abrupt lockdown in the nation, everyone was anxious about the mode of teaching and learning to be adopted by the schools. The MoE expected schools to continue teaching and learning despite the lockdown. Hence, all the schools were expected to adopt online teaching and learning method. Online teaching was not an option but a necessity to cater to the needs of progressive education for students. Nevertheless, we observed that there was panic amongst the teachers, since the concept was completely new to them.

A survey questionnaire was catered to 32 teachers of the school but 18 of them responded. The questionnaire intended to explore teacher's prior experiences with and preferences over online teaching. Teachers did not have any prior experiences related to online teaching (83%) although about 67% of them received a professional development program on using Google Classroom from their Information, Communication and Technology (ICT) teacher colleague. All 18 teachers agreed about having challenges while using online teaching for various reasons. They were lacking in terms of ICT knowledge, experiences and resources. In addition, teachers hardly received student's collaboration. These relate to the findings of prior studies carried out in Bhutanese context during the pandemic. (Wangmo et al., 2020; (Chogyal, Wangdi et al., 2021; Pokhrel & Chhetri, 2021)

Both teachers and students had no idea about online mode of teaching and learning. Since the online teaching and learning was completely a new concept for most of the teachers and students, there were arguments related to its accessibility, affordability, policy and pedagogy. Thus, this action research intended to explore practical processes of teaching online and provide suggestions and recommendations for effective ways to use it.

In the midst of this pandemic, the education fraternity was reminded that this is 21st century in which online mode of teaching and learning has become a norm. Sun and Chen (2016) state that online teaching and learning caters to the learning needs of the learners of diverse community, background and experiences. They recommended future researchers to explore systematic implementation of effective instructional practices for online teaching and learning, and whether online lessons improved the academic outcomes of the students.

Literature Review

With the change in education system amid this COVID-19 pandemic, e-learning is the only relevant pedagogy suitable for the paradigm shift. Pokhrel and Chhetri (2021) stated that e-learning tools significantly facilitated teaching and learning during the pandemic when lockdown was a frequent measure to tackle it. "E-learning includes all application of technological solutions to the problem of finding the best match between the needs of a given set of learners with their individual learning demands to learn a given content, using a given set of tools." (Nycz & Cohen, 2007, p. 2). There are different types of e-Learning. One such kind is blended learning. According to Cleveland-Innes and Wilton (2018), blended learning is divided into three models *viz* blended presentation and interaction, blended block model, and fully online. This paper focuses on the third

model which incurs learning fully online with synchronous and asynchronous activities.

Synchronous learning happens in real time with students through web conferencing or webinar tools and applications such as Zoom and Google Meet. Conversely, students learn at their own pace and time from anywhere around the world in asynchronous learning. Students are provided with materials online and they follow accordingly. Deadlines are provided for structure or support, however it could be loose or strict (Cleveland-Innes & Wilton, 2018).

Use of online strategies such as blended learning have advantages. They cater to the needs of the students with diverse learning styles and experiences, enhance their information and communication technology knowledge, also promotes multidisciplinary and trans-disciplinary strategies (Capone et al, 2017). In addition, it promotes students to collaborate virtually in pursuit on intellectual endeavor, increases learning flexibility from anywhere and anytime, promotes interaction amongst students and with their teacher, enhances improved learning activities and engagement, and develops digital learning skills to become virtual citizens (Cleveland-Innes & Wilton, 2018)

Nevertheless, there are some challenges in e-Learning. Few studies reported that e-learnings are more expensive than traditional method which would hinder some students to access the internet and own a technology. There are other disadvantages like burdening students to be more self-disciplined and motivated, increased workload for both students and teacher, and higher rate of dropouts and low achievers since students who do not get involved in the virtual community may feel lonely, low self-esteem and isolation. (Connolly & Stansfield, 2007; Chogyal et al., 2021; Pokhrel & Chhetri, 2021; and Wangdi et al., 2021)

Despite the challenges, avoidance and ignorance of use of technologies is inevitable. For instance, Trilling and Fadel (2009) stated three sets of 21st century knowledge and skills needed for the students as shown below:

- Learning and Innovation Skills: Critical thinking and problem solving, Communicating and collaboration, Creativity and innovation
- Information, Media, and Technology Skills
- Life and Career Skills

Due to the dearth of literature in the Bhutanese context, it cannot be ascertained if Bhutaese schools students also face similar issues. However, a few researches at the higher education level in the Bhutanese context suggest similar issues such as poor Internet connectivity and limited pedagogical and technological knowledge and skills. More than 80% of the higher education faculty participants showed the need for professional development program on blended learning and ICT skills (Choden & Sherab (2019). Similar to the teaching faculty at the university level, preservice teachers were found to have inadequate knowledge on technology despite the information and technology modules they have completed during the four year course (Sherab, et al., 2022). Studies carried out by Kado et al. (2020) and Wangdi et al. (2021) in the schools showed that the schools in Bhutan used Google Classroom to teach online during the pandemic. These studies explored the effectiveness of Google Classroom and student's perspective on online teaching and learning respectively. They found that Google Classroom was useful as virtual learning platform, however, students preferred social media over it. Bhutanese students did not find online learning interesting. Moreover, they were distracted by the online games.

Sherab, et al. (2022) stated an unceratinity of Bhutanese teacher's technological knowledge and skills due to limited empirical evidences. Thus, they recommended the future researchers to examine Bhutanese teacher's online teaching experiences during the pandemic since all the teachers had to undergo online teaching and learning. In accordance to this recommendation, the authors of this study explored a teacher's online experience during the pandemic. Moreover, limited prior studies as presented above have shown that Bhutanese teachers and students are in need of professional development program on educational technologies and ICT. Therefore, this action research was intended to explore the type of online teaching and learning strategies teachers

could employ in making the online teaching and learning effective.

Research Questions

The study intended to answer the following research questions:

- 1. How could a teacher foster constructive and collaborative online learning environment?
- 2. What are the strengths and challenges of teaching and learning online?
- 3. Which online mode of teaching and learning (synchronous or asynchronous) is preferred by the students?
- **4.** How could a teacher teach and assess online effectively?

Methodology

This action research employed a mixed method approach (Cooksey & McDonald, 2019). Survey questionnaire, semi-structured interviews and teacher's reflective journey were administered to collect data. Survey questionnaire was based on principles of using technologies effectively as shown in the book edited by Buzzetto-Hollywood (2007). The book showed significant components of using online mode for teaching and learning. Thus 63-item survey questionnaire was developed to explore whether the teacher had administered all these features in the online teaching through her students' perspective. These items were categorized into seven broad categories:

Table 1: Category of items

Table 1. Catego	ny or items	
S1.	Category	Number
No.		of items
1	Technology for constructive teaching and learning.	13
2	Use of vtools (voice, video and virtual) during online teaching and learning.	7
3	Viable of support for students and collaboration during online teaching and learning.	10
4	Feedback and assessment mechanism for online learning.	15
5	Students' opinion on synchronous and asynchronous lessons.	2
6	Students' preference amongst social media and Google Classroom for online learning.	7
7	Challenges of online teaching and learning.	8

The respondents for survey questionnaire were students (n=56) from classes six (n=24) and seven (n=32). The survey questionnaire was designed to understand whether online teaching and learning could be implemented effectively for the students. Semi-structured interviews with five purposefully selected students (two girls and three boys) were administered to learn about their experience of learning through online. In addition, the principal researcher maintained a lesson log and a journal reflecting on every online lesson.

Baseline data were collected solely to understand students' background and the kind of device they used for the online teaching and learning during the pandemic. A total of 92 students of classes six and seven responded to the survey. The data showed that most students were of ages 12 years (49%) and 13 years (25%). Almost 50 percent of them came from a family whose parents were civil servants.

Students used three forms of devices and details is shown in Table 2 below:

Table 2: Different types of devices used by the students for online learning

Type of	Number of	Percentage
devices	students	
Smart Phone	79	85.87%

Laptop	1	1.09%
Desktop	1	1.09%
Tablet	11	11.96%

This showed that majority (almost 86%) of the students used mobile phones for their online learning, therefore, we developed strategies that suited the learning through smart phones.

Intervention Phase

We designed approaches to teach online. In doing so, the online lessons featured the concepts of developing constructive learning environment to enhance e-learning (Connolly & Stansfield, 2007), the role of interaction on e-learning (Sweat-Guy, 2007), video, voice, and virtual collaboration: The 3 V's of asynchronous education (Girard, et al., 2007) and supporting students on their e-journey (Goldsmith & Strachan, 2007).

Intervention phase started in March and ended in November. It was carried out for about eight months excluding a month of vacation in August. The principal researcher had a day each in a week to teach her subject to students of class seven (Tuesdays) and class six (Thursdays). She planned and executed her lessons with her critical friends (co-authors). They are experts in the field of technology and education, thus rendered all the necessary supports and guided the teacher. Moreover, they conducted synchronous online lessons with the students for a few times.

The principal researcher taught all the prescibed topics of English subject for class seven students and all the topics in social studies subject for class six students. Infact, the teacher taught some extra topics like blogging, poetry recitation and booktalks.

Intervention Strategies

In order to implement online teaching and learning, and investigate its effectiveness and guide this study, we used the features of practices mentioned in the book, "Principles of Effective Online Teaching" by Buzzetto-More (2007). Also, we have mindfully adapted the content of the prescribed syallbus and texts to suit the current study and followed strategies as shown below:

Developed constructive learning environment to enhance e-learning

Students were involved in active learning process in which they constructed new ideas or concepts based on their current or prior knowledge. As advised by Connolly and Stansfield (2007), the teacher:

- provided activities that allowed students to develop their analytical and problem-solving skills. Further, allowed students to relate the learning with the real world outside the learning context.
- motivated students to take accountability for their learning and being mindful about their knowledge construction process.

Developed collaborative online learning community

Challenging though, it was essential to create collaborative online learning community since it enhanced students' learning. It motivates students to complete the course and learn independently (Guy, 2006). Following activities were implemented to enhance collaborative learning community:

- Students posted their introductory message about themselves.
- Introduced a team activity that did not grade or judge them.
- Used ice-breakers. For example, student gave three answers to three interesting questions about themselves and then others had to guess what those questions were and the original author lets them know if they were right or wrong.
- Allowed students to develop collaborative learning and working goals in teams.

Assessment and Feedback:

Connolly and Stansfield (2007) and Girard, et al., (2007) recommended immediate and perosnalized feedback for students after completing their assignments. They suggested voice feedback so that the students would know there was a real person on the end of the Ethernet. In line to this, assessment and feedback mechanism for this study was carried out accordingly as shown below:

- Provided feedback that allowed students to reflect and evaluate their own learning.
- While providing feedback, teacher moved from general to specific by describing strengths and weaknesses.
- Prepared and provided rubrics for most activities to touch on each of the elements expected to achieve and observe.
- Commented on areas that needed future attention.
- Personalized the comments by mentioning students' names.

Tools for online teaching and learning:

Teacher conducted both synchronous and asynchronous online teaching and learning. Teacher and students participated in learning activities at the same time in asynchronous online lessons. On the other hand, in asynchronous online teaching and learning, teacher and students participated in learning activities at different schedules. In order to conduct the classes in both cases effectively, Girard, et al. (2007) suggested three vtools- Video, Voice, and Virtual Team Collaboration.

Following tools were used for this study since they had vtool features:

- Video
- Camtasia
- Google Classroom
- Google Meet
- Phone calls
- Chats

The lessons imparted through videos considered three key elements- quality, accessibility, and technology. In terms of quality, the video lessons were short (certainly less than 15 minutes) with subject name and title stated clearly. Teacher planned the video and practiced it thoroughly. In regard to accessibility, teacher ensured that the lessons were accessible to students despite the Internet connectivity issue. In some places internet connection was slow, for them the teacher uploaded a file that required low speed. For instance, use of Camtasia with low weighing file.

Support mechanism for students:

It is important that the teacher provides support to students at all stages of learning. Aligning to Goldsmith and Strachan (2007), following support were provided at different stages of online learning:

- Starting point:
 - Helped begin using login IDs and passwords.
 - Made students feel welcomed and be part of the learning community by familiarizing with Google Classroom and people whom to contact for support.

- Invited learners to share their expectations.
- Discussed and set time for lessons to be uploaded.
- Started with simple task first by posting simple messages by both teacher and students.

ii. Along the way:

- Provided both formal and informal checkpoints regularly by sending messages, emails, and phone calls to check and ask how their studies were going.
- Provided clear assessment criteria.
- Catered e-learning according to student's conveniences which was flexible and open.

iii. At the end:

- Kept the online teaching and learning continued with renewed energy and skills by providing support and encouragement.
- Provided regular checkpoints to ensure students were on the right track.
- Completed the academic year positively by meeting virtually at the end in November.

Findings

The participants for this study responded to self-designed survey questionnaire based on a five-point Likert type scale ranging from 1- strongly disagree, 2- disagree, 3-Neither agree nor disagree, 4- agree and 5- strongly agree. The 63-item survey questionnaire was analyzed using SPSS to generate mean and standard deviation. Interview data and journal entries were later triangulated and merged with survey themes. Pseudonyms S1, S2, S3, S4 and S5 are used to hide student interviewees' identity. The key findings from the data are shown in the following sections.

Technology for constructive teaching and learning

There were 13 items to determine whether online learning enhanced constructive learning environment for the students. To this, students agreed that online teaching and learning enhanced constructive learning experiences (M= 3.61; SD=0.36). To specify on minor characteristics of constructive learning experiences, students agreed that the lessons and assignments given online gave them new ideas (M=4.04; SD=0.58) and the activities were related to real-life situations (M=3.86; S=0.65).

Further, online learning enabled students to think critically (M=4.05; SD= 0.70), to engage meaningfully (M=3.43; SD=0.85) and to reflect and learn in accordance to their learning styles (M=3.89; SD=0.56). Most importantly, students were able to learn the content of the subject (M=4.00; SD=0.51) and explore technologies (M=4.16; SD=0.73) through online learning.

Qualitative data indicated that students could learn meaningfully from online lessons. For instance, one student (S1) stated:

I found English lessons interesting since I understood them. We did different types of questions and activities. Teacher taught with video lessons, PPTs and presentations. Teacher also taught us many new things like blogging, quizzes, etc.

Teacher's lesson log and journal showed that most topics could be taught online. For instance, before teaching the story, she gave the title on the announcement page of the Google Classroom, and made students provide answers in the comment section. All students were able to see one another's answers. Then, she provided the video lesson using Camtasia. Students watched it and along with that, tasks were given to perform. She also had sent separate files in Google Classroom that consisted PPT slides, notes and assignment questions. Assignments checked all skills:

knowledge, comprehension, application, analysis, evaluation and synthesis.

Use of vtools during online teaching and learning

Seven items investigated use of effective features and use of vtools. Students strongly agreed (M=4.45; SD=0.60) that video lessons were used to teach the concepts and content of the lessons. They also strongly agreed that the video lessons were of less than 20 minutes (M=4.43; SD=0.57). Video lessons given online by the teacher were comprehensible (M=3.80; SD=0.88) and, clear and audible (M=3.96; SD=0.79). Students were able to watch the video lessons given by the teacher online (M=3.33; SD=0.84). A student (S2) said in her semi-structured interview that she liked when her teacher sent video lessons not just tasks because she was able to understand more from the video lessons.

Further, qualitative data showed that the video lessons sent by the teacher were helpful and easy to access. For instance, S4 said, "I found the video lessons interesting because we haven't come across this in the school." Another student (S3) said:

I was not able to open attachments for other subjects since they were heavy. But the files given by the English teacher was accessible easily. English lessons were easier to open because it needed less storage and files were smaller. We could see and do our work at minimal cost. The video lesson cost less.

Viability of support for students and collaboration through online learning

Ten items explored student support and collaborations during online learning. Students strongly agreed that they received the support required from their teacher in operating and using the Google Classroom (M=4.27; SD=0.65). Apart from operation of the online system, students knew whom to consult if they encountered any sort of challenges during online learning (M=4.02; SD=0.84). Also, students knew the timing of the subjects (M=4.14; SD=0.70) and due dates of their online assignments (M=4.23; SD=0.66).

Students agreed that online learning gave them opportunities to interact with their friends (M=3.82; SD=0.97) and teachers (M=3.80; SD=0.72). Students did agree that they had to meet with their friends online and do their assignments together though the responses varied amongst the respondents (M=3.73; SD=1.05). However, they neither agreed nor disagreed about having a group amongst themselves to discuss on the assignments (M=3.07; SD=1.36).

Qualitative data indicated that students did have interaction with their friends and teacher mostly to clarify their doubts. According to S3, "I interact with my friends. We ask help from each other when we are struck with our assignments. We clarify our doubts." Similarly, S2 confirmed, "If we had doubts, we asked our friends first, then only we ask our teacher."

Feedback and assessment mechanism for online learning

Fifteen items explored the feasibility of effective feedback and assessment mechanism in online teaching and learning. The findings indicate that students mostly received written feedback not through voice recordings. Students strongly agreed that they received written feedback on their assignment (M=4.27; SD=0.62) but neither agreed nor disagreed upon receiving voice feedback on the assignments. Entries from the teacher's journal showed that the teacher made phone calls only to those students who did not send their assignments.

Students agreed that the teacher gave positive feedback (M=3.88; SD=0.76) which encouraged them to work harder and improve their future assignments (M=4.07; SD=0.58). Findings from the qualitative data aligned with the survey finding. According to S1, "English teacher stated on right and wrong responses and this helped me to improve my works and learnings." Student preferred to have feedbacks given on all the assignments. S4 stated, "Teacher give some feedbacks in Google Classroom. Detailed feedback is given to some works but not on all."

In line to assessment, students knew which assignments were assessed (M=4.05; SD=0.59) and how they were assessed (M=3.77; SD=0.83). They also agreed that the teacher gave comprehensible rubrics (M=4.11; SD= 0.53). Moreover, students were able to evaluate their own works (M=3.75; SD=0.92). The usefulness of the assessment was also captured in the statements of

different students as shown below:

"I found the assessment done by the teacher useful. It showed how we were doing. Looking at the marks we could improve." (S4); "the scores made us work harder and do better in our next assignment." (S2); and "It (assessment) encouraged students who do not perform online to do their works." (S1)

Through teacher's journal, it was evident that quizzes and feedback could be collected conveniently using Google Docs/ Google Sheet to check students' understanding. She has used them frequently in her lessons. Also, rubrics could be given with clear descriptions for the assignments which were assessed

Another journal entry of the teacher showed that students and their parents took into consideration when scores were given and if that determined student's promotion to next class level. "Most parents and students were seen coming to school and solving issues like clarifying doubts and opening of Google Docs. They were worried about the scores since they were informed that a student will be promoted based on his/her assignments submitted online." (Dated September 24, 2020)

Participant's opinion on synchronous and asynchronous lessons

Two items were catered to determine students' preference over different online learning modes. Students agreed that they liked synchronous lesson where they met their teacher face-to-face online (M=3.64; SD=0.86). This was also confirmed by many students during the semi-structured interviews. For instance, S4 said, "I liked the lessons where I met my teacher face-to-face online. I liked it because I could clarify my doubts with my teachers and friends." Another student had a different reason for liking synchronous lessons. "I prefer Google Meet because I understand the lesson better when I have my teacher face-to-face online. It is like the teacher is teaching us in the classroom. Also, we can clarify our doubts immediately" (S2).

In contrast, teacher's reflection in the journal clearly stated that many students did not turn up for synchronous sessions. Amongst 55 and 48 students, highest number of participation was 24 and 14 students respectively. There was an entry in teacher's journal with the statement, "Around 14/48 students participated in Google Meet. Interesting interaction is possible." (Dated: 15/4/2020)

They neither agreed nor disagreed about liking asynchronous lessons though responses deviated. (M=2.64; SD=1.09). In regard to asynchronous online lessons, S1 claimed:

I liked the video lessons that could be watched without having my teacher face-to-face online. These lessons needed good Internet connection, therefore it was expensive. Some of us could not afford the cost of the Internet. Comparatively, video lessons cost less and did not need Internet with high speed. If we had doubt, we were able to clarify it through private comment section.

Participant's preference amongst social media and Google Classroom for online learning.

Seven items investigated students' preferences amongst the platforms for online learning- social media and Google Classroom. Most students disagreed upon liking social media (WeChat) over Google Classroom for online learning (M=2.50 SD=1.18).

Students agreed that Google Classroom was easy to use (M=4.13; SD=0.85), enabled them to learn what their teacher taught (M=3.82; SD=0.97) and it enhanced their technological knowledge (M=4.00; SD=0.79). Findings from the qualitative data confirmed that it was easier for the students to use the Google Classroom. Initially, a student had problem using Google Classroom (S3). She said, "In the beginning it (online lesson) was difficult because Google Classroom was new but with time, I found it easy to use." One of the entries in teacher's journal showed that social media is convenient to remind students about their work and to ask about their work progress but not to teach. Moreover, when students submitted work on social media, it was found difficult to keep track of their works and to assess.

In regard to social media, students neither agreed nor disagreed that it was easy to use (M=3.39; SD=1.04), enabled to learn the lessons (M=3.07; SD=1.04) and enhanced technological knowledge (M=3.09; SD=1.01). In the beginning, class six students did not have Google account so the teacher

used WeChat to send lessons. She could not use it to send long video lessons. She had to record them multiple times and video was not clear too. On March 26, 2020, in her journal she commented, "Could not load lengthy lessons. Had to send in short clips. The video was not clear."

Challenges of online teaching and learning

There were eight items to explore the challenges of online teaching and learning. Students agreed that the access to Internet was expensive (M=3.71; SD=1.04). A student said the same in a semi-structured interview, "I found the lessons (online) bit expensive because of the Internet cost" (S1). Nevertheless, they were able to afford it (M=3.64; SD=0.92) and owned their own devices for online learning (M=3.75; SD=1.16).

Other challenge faced by the students could have been time management issue. S2 said, "I had difficulties managing time for my online lessons since I was watching television most of the time." And the other student was distracted by his games on phone. He said, "To be honest...I didn't write my assignments. I always felt like playing PUBG when I was with my phone. I was carried away by the game and hardly got time to do my assignments and watch video lessons." In contrary, S1 and S3 did not have issue with time management for their online lessons. Both never failed to submit their assignments and attended synchronous lessons. In addition, S3 said, "My parents kept reminding about my online lessons."

Other findings from semi-structured interview and teacher's journal showed that both teacher and students faced technical problems. S2 complained, "Some quizzes were not able to open. I couldn't either choose or write answers." And the teacher stated following statements in her journal:

"Most students did not learn from the video since I used YouTube video. They did not show time calculation work correctly so got to teach again." (Dated: 27/8/2020)

"Lack of knowledge hindered to solve students' challenges so asked the co-author for assistance. He conducted an online class for me. He taught students about blogging and how to create it." (Dated September 1, 2020)

Students disagreed upon feeling neglected by their teacher (M=2.14; SD=0.96) and other students (M=2.43; SD=0.99) online. They refused of feeling lonely (M=2.36 SD=1.01), not being able to comprehend the lessons (M=2.30; SD=0.81) and feeling of dropping the schools (M=1.84; SD=1.06) because of the online learning mode.

Teacher's journal entry stated, "constant reminder is required for some students to write their assignments. Despite all the phone calls, most failed to submit their assignments. So, need to make a call to their parents." (Dated June 4, 2020)

Discussion and conclusion

MoE (2019) stated that Bhutan envisions at enhancing ICT integrated teaching and learning resources and ICT-competency of the teachers and students. This pandemic was a milestone in the Bhutanese education system where schools began to adopt online teaching and learning and gave teachers an opportunity to explore and integrate ICT. Both teachers and students used different ICT tools and online strategies to teach and learn.

In line to Sun and Chen (2016), the findings of this study showed that, in order to have an effective online teaching and learning, organized content, collaboration and support for students were found vital. Above all, teacher plays a crucial role in executing effective online lessons. Technologies do not fully replace teacher. Teacher has to design lessons and assignments, motivate students, respond to and evaluate students' works. Hence, professional development and teamwork should be a continuous process to help the teachers with their newly acquired technology skills (Harris, et al., 2016). The findings from this study corroborates with the earlier findings of Choden and Sherab, (2019) and Sherab, et al, (2022) that there is a genuine need for professional development programs related to technogy and ICT.

Similar to the school teachers in Indonesia (Rasmitadila, et al., 2020), Bhutanese teachers used different technologies and tools to teach during the pandemic. Common tools used were Google Classroom, social media such as WeChat, WhatsApp and Messenger self-created video lessons,

worksheets, YouTube, and Google Forms. The study with Indonesian teachers did not specify the kind of software used for creating video lesson, but the teacher for this study used Camtasia. It was found helpful in presenting the lesson and minimizing the file size which at the end helped learners to access the tool.

Both synchronous and asynchronous mode of online learning could be significant to cater to needs of different learners. In concurrent to Kado, et al. (2020), this study showed that Google Classroom has significant features to carry out both synchronous and asynchronous activities. Students of this study evidently indicated their own choices over the two. Some preferred synchronous and other asynchronous aligning to pros and cons of respective modes. Cleveland-Innes and Wilton (2018) posit synchronous learning is advantageous for immediate feedback system and adjustments to skill and knowledge, and brainstorming. Nevertheless, it demands advance technical infrastructure and skill of teachers and students.

Asynchronous learning is advantageous for students to have flexible learning environment, they get time to research and reflect on their lessons to respond thoughtfully and elaboratively. Nevertheless, in an asynchronous learning environment, students might feel isolated since there is a lack of connection amongst the students or with the teacher (Cleveland-Innes and Wilton, 2018). Thus, as advised by Bao (2020) a combination of both with careful planning of activities is recommended.

Constructive learning environment could be implemented in online mode of education. Online lessons could incorporate activities that enhance skills such as critical thinking, analytical thinking and problem-solving. In addition, collaborative teaching and learning is stated vital for online mode and it could be incorporated through interactions amongst students, and teacher-students. These skills and strategy are necessary for 21st century. Moreover, prior studies posit these features significant for online mode of teaching and learning (Bao, 2020; He, et al., 2014; Sun & Chen 2016).

He, et al. (2014) found retaining students in online courses challenging. The student attrition rates increased by 10 to 20% for studying online. Although this study showed that the students did not have an intention of leaving their learning, teacher did face difficult time in having 100% participation from the students. In Bhutanese context, students take their learning seriously when their works are assessed. They worry mostly about promotion and detention. Therefore, in order to retain students in online courses, it is essential to take proactive actions such as developing timely pedagogical interventions, effective early warning system, and provide formative grade feedback (He et al., 2014).

Online mode offered flexible learning environment and time for students to learn. On the other hand, learners faced challenges in dealing with technical difficulties as found earlier by Dhawan(2020) Similarly, Bhutanese students faced difficulties operating technologies initially, nevertheless, gradually they adapted to the novice mode of online mode learning. Also, they had issues managing time and having distractions online such as playing games. This indicated that students did not lack knowledge on technology operations rather it was the issue of lack of self-discipline and good learning environment at home (Bao, 2020).

A report on education in emergency during the pandemic in Bhutan (Education Monitoring Division, 2021) showed that parents at home needed education on managing time and guiding children during the pandemic. Not just parents but this study showed that students too needed an education on time management so they are not distracted by games while studying online. Moreover, such education might help them in disciplining themselves and becoming responsible for their own learning.

Recommendations

With the evolution of digital technologies, it is evident that schools in Bhutan embrace different forms of e-Learning. Teachers need to be updated with different kinds of technologies that could be used effectively for teaching online rather than being dependent on traditional classroom mode.

They have to be proactive and keep learning continuously for students despite any sort of crisis that would make regular schooling impossible. Therefore, teachers need to work extra hard and acquire adequate technological knowledge.

On the other hand, online teaching and learning could be successfully implemented in Bhutanese context if both students and teachers put in the same effort. Students too need to cooperate with their teacher and manage their time for online learning. Also, parental support is vital in providing all the necessary support both morally and financially. If all these factors came together, online mode of education system could achieve the goals of catering to the learnings of the students.

Similar to the findings of DeCoito and Estaiteyeh (2022), this study indicated feasibility of traditional mode of assessment such as written and verbal feedback, and quizzes in online teaching. These modes hardly suffice the required components for assessment 'as' and 'for' learning. Therefore, there is a need of effective assessment strategies and techniques for online teaching and learning in future studies. This would help not only the Bhutanese teachers but also teachers worldwide. In addition, future researchers could duplicate the intervention strategies with controlled and treatment groups to investigate the effectiveness of online mode of teaching and learning. They could also experiment with subjects other than social studies and English.

Limitations of the study

This action research was designed to try out a self-designed intervention strategies based upon concept of scholars to teach online. Like any other studies, this research too has its own limitations. The study is about one teacher's practice administered with her class six and seven students. Findings could be biased and would not be wise to generalize. Moreover, this study did not have tools that could infer causal impact.

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Enhancing Grade VIII Students' Grammar Achievement in Tenses through Gamifications

and Peer tutoring: An Action Research

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Abstract

This study examined the impact of gamifications and peer tutoring on grade VIII students' English grammar achievement in tenses. The sample consisted of 53 students (26 in control and 27 in experimental group). Grammar achievement test and open ended survey questionnaire were used to gather the data. Descriptive statistics and independent-samples t-test were used to analyze the data. A t-test analysis for the pretests showed that there were no significant differences in students grammar learning prior to remediation for both the experimental and control groups (p=0.883 > 0.05). However, the posttest result analysis indicated a significant difference between the groups in favor of the experimental group (p=0.000<0.05). Thus, it is commendable that teachers should design suitable materials and apply innovative approaches such gamifications and peer tutoring to teach grammar lessons so as to meet the needs of learners.

Keywords: English grammar, peer tutoring, gamifications, achievement

1.0 Introduction

The teaching of grammar as an outstanding part of the language plays a central role in language learning and acquisition. Grammar is an important component to learn as it relates to four skills. Students need to know the elements or components of language such as vocabulary, pronunciation and grammar in order to have a good command of the English language. Structure or grammar is one of the fundamental aspects that must be learned by students as it allows them to speak and write well. So, grammar is one of the most important parts to be mastered by the students learning English. Nunan (2003) defined grammar as "a set of rules specifying the correct ordering of words at the sentence level" (p. 8). In a traditional and simple view, it has been defined as "the rules by which words change their forms and are combined into sentences" (Richards & Rodgers, 2001, p. 705). Azar (2007) stated that without grammar, we only have individual words, sounds, pictures, and body expressions to communicate meaning, and grammar as an essential component of language learning is the wearing that creates the fabric.

In Bhutan, English is learnt as a second language (ESL) and teaching grammar in Bhutan has been considered central to the teaching and learning of languages since the inception of western

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education. English grammar is taught in schools, colleges and universities for students at the various levels of the academic ladder to be able to communicate effectively; especially in written English. However, Learning English is not easy for Bhutanese students as English is not their mother language. One of the difficulties that they generally face is the grammar or the language rules. According to the report, grammar was taught in bits and pieces using manuals, sight words, pictures, flashcards, drawings and real objects to teach grammatical items till class VI. From class VI till VIII, grammar was never taught separately, but in integration with English and other subjects. A few examples from the texts would be selected and sketchy explanation would be provided. From class IX to XII, grammar teaching further deteriorated, without any grammar textbooks (Gajmeer & Maxwell, 2009, p.29). Tashi (2018) claims that the performance of Bhutanese students in English is relatively poor and this affected their overall academic result. Students tend to produce many grammatical errors while they write essays and do other academic work. Further, grammar has proven to be a difficult component to grasp due to its inherent complexity.

Games and peer tutoring are one of the stimulating classroom activities for young learners to learn a language in general and grammar in particular, as they are fun, engaging and motivating the students to participate in classroom activities. Yu (2005) studied the effects of games on the acquisition of some grammatical features of German as a second language. She concluded that games as teaching-learning strategies were fun and created a non-threatening learning environment that encouraged interactions between students and teachers, enhanced communication and teamwork, encouraged active participation and enabled students to demonstrate and apply previously or newly acquired knowledge and skills. Palaming (2016) conducted a study on Peer-Tutoring: An Effective Approach in Teaching English Grammar and found out that Peer-tutoring greatly improved the performance of the students in the test. Further, he assert that peer-tutoring should be used as a strategy to enhance the collaborative learning of the students.

Further, Saricoban and Metin (2000) stated that through well-planned games, learners can practice and internalize vocabulary, grammar and structure extensively. Play and competition that are provided by games enhance the motivation of the students and reduce their stress. This will help them to acquire certain essential language skills.

Therefore, this study in particular seeks to investigate the effectiveness of gamifications and peer tutoring in enhancing the tesnse competency of grade eight students in Bhutanese context.

Objective

- To examine the effectiveness of gamifications and peer tutoring in teaching-learning of tenses.
- To study the students' opinion about gamifications and peer tutoring strategies.

3.0 Reconnaissance

In order to execute this action research, the researcher adopted the steps proposed by Maxwell (2003) which involved situational analysis, competence and literature review. These three components provide an overview of the realities of the situations, competences of the people involved, and link it with the review of literature.

3.1 Situational Analysis

Grammar is one of the components of English that is taught to every language learner. It has an important role in understanding the English language. Without a good knowledge of grammar, students will have many difficulties in constructing sentences and expressing ideas for communication activities. But if they have good grammar, they will confidently speak and write English and they will also be able to use the language correctly and clearly. However, many students failed to obtain the required grammar competency owing to many factors. Mosha (2014) claims that students' infrequent use of English language at school and home, large class size, teachers' responsibilities, poor conducive teaching and learning environment in the classrooms, limited home support environment and poverty were contributing factors responsible for deterioration of English language.

Similarly, during the 14 years of teaching experiences in different parts of Bhutan teaching various subjects such as English, Social studies, Value educations and media studies, I have observed that majority of the students in eastern part of Bhutan relatively performed low in English language compared to other subjects. This issue has become more apparent and demands greater attention after teaching English to class eight students and having witnessed their midterm examination performance especially in grammar. If this issue is left unattended, I foresee bigger repercussions in the lives of students and teachers. A good knowledge of grammar helps learners to make sentences clear enough to understand. Azar (2007) asserts that "without grammar, we would have only individual words or sounds, pictures, and body expressions to communicate meaning. Grammar is the weaving that creates the fabric"(p.2). Further, Le Tourneau (2001) states that one's knowledge of grammar is most helpful at the stages of revising and editing sentences because grammar is concerned with the units of sentences. Quagie (2011) emphasizes the importance of teaching English grammar in schools and colleges and points out that there is the need to intensify

the teaching of English grammar in schools and colleges. Some studies have found out that constructivists' approach to the teaching of grammar has led to significant improvement in the performance of learners. Khlid and Azeem (2012) in a study compared the teaching of grammar based on the constructivists' approach to a teaching method that followed the traditional approach and found out that learners who were taught using the constructivists' approach performed better on a test that was administered.

Thus, the researcher felt the need to identify the problems of low performing students and conduct English remediation activities to enhance grammar competency in tenses.

3.2 Competence

3.2.1 The Reseacher

The researcher pursued Bachelor's Degree in Education from Samtse College of Education in English and primary subjects. Later obtained Master's Degree in Education from India. The researcher has studied Educational research module as a part of Master's Degree course. Further, the researcher has also facilitated school and Dzongkhag levels Action Research workshops. The author has publications both at national and international journals.

3.2.2 The Critical friend

To avoid rsearch biases and misterpretation in the study, this study was accompanied by the critical friend. Besides, having a substantial research background and numerous publications, the critical friend has enough research knowledge to critique my research in many possible ways.

3.3 Literature Review

In this section, concepts and literature related to the study are presented in order to convey the theoretical background of the study. The study shares the results of previous studies that are closely related to the present study.

3.3.1 Grammar

The teaching of grammar occupies a central place in the teaching and learning of a language. The spoken and written form of each language must conform to the word order rules of that language. Stern (2001) points out that the teaching of English started with the teaching of grammar rules. The teaching of grammar therefore occupies a central part in the teaching and learning of English as a Second Language. The teaching of grammar therefore forms the main focus of

teaching English. For example, Flores (2010:99) points out that "language teaching in the Philippine secondary education is synonymous to grammar" and "it is a common observation that in the elementary and secondary levels of the Philippine educational system, the teaching of grammar is the bulk of the instruction, if not the focus".

Moreover, Le Tourneau (2001) states that one's knowledge of grammar is most helpful at the stages of revising and editing sentences because grammar is concerned with the units of sentences. Long (2007) argues that subject-verb agreement is a relevant grammatical skill for effective communication and standard written English.

Nedomova (2007, p.17) argues that "young learners are not able to pay their attention for more than 10-20 minutes and after that they start to be bored and tired." Especially when grammar teaching is too dependent on rules and memorization, they start to lose their interest and motivation. Teachers know that young learners like being physically active as they learn by doing. Moreover, they are imaginative and creative and they learn without being aware of it. Besides, young learners use their previous experience, knowledge, several skills, and abilities which help the teacher present the new information by enabling children to practice the new knowledge on top of their previous knowledge (Nedomova, 2007, p. 28).

3.3.2 Gamifications

Gaming is a characteristic of human nature; hence it can be claimed that the history of gaming goes back to the beginning of the history of human being (Demirbilek, Yilmaz, & Tamer, 2010). A lot of research has been done over the past decade to examine the role of games in learning English. The majority of these studies examined the effect of games on vocabulary learning and achievement, while a few examined the effects of games on grammar learning.

In a study, Eskandari et al (2014) investigated the effect of using games on the grammar of Iranian young learners of English. The results showed that the participants of the experimental group outperformed the control group significantly. In another study, Jalali and Dousti (2012) evaluated the effect of computer games on grammar and vocabulary gaining. The results demonstrated that computer games were not able to enhance grammar and vocabulary attainment on the part of the students.

Al-Jarrah et al. (2019) stated that "games help the teacher to create contexts in which the language is useful and meaningful" (p. 14). Games were particularly useful in grammar learning because they provided a mechanism that gave students an incentive to go on practicing a structure beyond the point where they would normally tire of repeating it.

Luong (2009) and Al-Jarrah, Talafhah, and Al-Jarrah(2019) studied the application of games in

grammar review lessons for sixth graders. The study surveyed eight teachers and 225 students from three high schools and included an experimental project with 82 students during three months. The results showed a dramatic improvement in students' grammatical knowledge, demonstrated in both written test scores and oral performance.

Rahmani (2020) confirmed that gamification is indeed beneficial for students in the English class. It appears to be the solution for an unsuccessful and passive learning environment as it is beneficial to assist teachers in creating a more exciting and meaningful learning experience for students. Further, Luu and Nguyen (2012) found games helpful in easing difficulties and making the teaching and learning experience more exciting.

3.3.3 Peer tutoring

Peer teaching has been reported to benefit both tutors and tutees. With peer tutoring, tutees may understand the subject matter better because there are more opportunities to respond, more time-ontask and practice with the academic content, and more accessible feedback (Bowman-Perrott, deMarín, Mahadevan, & Etchells, 2016; Mynard & Almarzouqi, 2006).

Sutresna and Wijayanti (2020) found out that learning through peer tutors is effective in improving student learning in class and has an impact on improving students' academic and non-academic achievement. Palaming (2016) conducted a study on Peer-Tutoring: An Effective Approach in Teaching English Grammar and found out that Peer-tutoring greatly improved the performance of the students in the test. Further, he assert that peer-tutoring should be used as a strategy to enhance the collaborative learning of the students.

Marwa and Said (2015) claim that peer tutoring has a strong positive impact on English self-concept and peer tutoring programs benefit not only the tutees but also the tutors.

Based on the above literature, it can be concluded that games and peer tutoring have great pedagogical value and bring many benefits to language teachers when used in foreign language teaching. The review of the studies on language games and peer tutoring shows that they are crucial for teaching and learning foreign languages in a wide range of fields.

4.0 Overarching Research Question

How Can I Improve Grade VIII Students' English Grammar Achievement in Tenses through Gamifications and Peer tutoring?

4.1 Sub Questions

- 1. What is the mean achievement score of students in an tenses before the remediation activities?
- 2. Do educational games and peer tutoring help in enhancing students' tenses proficiency?
- 3. Are there any significant differences in the tenses achievement of students before and after remediation?

5.0 Methodology

The researcher employed mixed method approach in this study. The pre-test and post-test were used to collect quantitative data in order to determine the learning achievement, while open-ended interview was conducted for collecting qualitative data on students' views about the use of gamification and peer tutoring.

5.1 Sample

The study used a convenience sampling technique. The total sample size consisted of 53 participants (26 in control and 27 in experimental group) class eight students of Autsho Central School, Lhuentse.

5.2 Research Instrument

In this study, two instruments were used to collect the data namely subject achievement tests (pretest and post-test), and open-ended interviews. The teacher researchers used self-develop instruments both for subject achievement test and open-ended interview. The subject achievement test (pre-test) was conducted before the implementation of the interventions to establish the baseline knowledge of the students while the post-test was conducted to assess how much students have learned after the interventions. The open-ended interview was conducted to gather students' views about integration of cooperative learning strategies in the mathematics classes.

5.3 Reliability

To check the reliability of the achievement test, the researcher conducted a pilot test with a different group in the same research school. The Kuder-Richardson formula (KR-20) was applied to find out the reliability coefficient of the subject achievement test .The result showed a score of 0.84, which was an indication that the test items were reliable.

5.4 Data Analysis techniques

The study employed descriptive and inferential analysis techniques in representing the research findings. The pre and post data collected were analyzed using Statistical Package for Social Science (22.0 version) software and the findings are presented in mean, standard deviation and t-test.

6.0 Implementation of Intervention Strategies

Interventions are the activities that researchers implement on an on-going basis in order to meet the objectives. There are many approaches or methods which can be adopted in remedial teaching and for this particular study following intervention strategies were implemented for five consecutive weeks.

6.1 Teaching basic tenses using games: Most of the basic tenses were taught using context and gamifications during the remedial classes. Moreover, practice opportunities were provided to students with meaningful mechanical and communicative drill activities to avoid rote learning. Varied games such as *storyboard game*, *swap chairs*, *truth or lie and grid on the board* were used to teach various tenses at different occasions. The particular game activity on tenses was conducted for an hour and the class met twice in a week. These games were selected and implemented in the intervention phase to practice verb tenses and make lessons more lively, child friendly and to provide hands-on practices.

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6.2 Learning tenses from Peer: Peer tutoring is an inexpensive option that can benefit everyone involved. It aids in the improvement of students' learning attitudes and foster more personalized learning experiences. In this process, the entire class was ranked by ability. The student with the best grades was paired with the student at the bottom of the scale. Pairing was effectively maintained throughout the intervention period. In the pair, one student acted as a tutee and the other as a tutor, swapping their roles in the middle of the session. The researcher explained to the students how they would solve the tasks in pairs. Students were given a set of instructions for students to follow when working in pairs. They were given a script to focus on while interacting with each other. The peer tutoring activity was done right after the gamifications to supplement students learning on tenses for 30 minutes.

7.0 Results and Interpretations

The pretest and posttest were administered to both the experimental and the control group with an aim to make a comparative analysis on the students' learning achievement in tenses before and after the implementation of intervention strategies. A statistical analysis for the mean score of pretest and posttest for both experimental and control groups were compared using t-tests as revealed below;

Table 1 revealed that the pre-test mean of control group was 39.42 and experimental group was 40.21. It was observed that there was not much difference in the mean score. Further, it was ascertained by the 2-tailed test as the obtained value (.883) was greater than the significant level .05

(p>0.05), indicating that there was no significant difference between the pre-test means of the two groups. Thus, the finding indicated that the two groups had equal learning abilities in tenses prior to the implementation of interventions.

Table 1 Pretest mean scores of the Control and Experimental Group

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			9	1		
	Co					
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a					-	
m	Ex		4		0	
m	per		0	8		
a	im				1	8
r	ent	2	2	7	4	8
	al	7	1	7	9	3

^{*}Significant level at 0.05

The posttest (Table 2) was conducted to compare if the implementations of remedial intervention strategies (Gamifications and peer tutoring) have a significant impact on students' learning of

English grammar as compared to the conventional lecture method. Table 2 disclosed that the post-test mean of the control group was 41.5 and experimental group 51.48 respectively. Moreover, using an alpha level of .05, the independent-samples t-test revealed a statistically significant difference as the calculated value (.000) was lesser than p< .05 as shown in Table 2. Thus, the result signifies that using educational games and peer tutoring in the process of teaching grammar can definitely increase grammar learning as well overall academic achievement of the students. The finding agreed with Rahmani (2020), who confirmed that gamification is indeed beneficial for students in the English class. It appears to be the solution for an unsuccessful and passive learning environment as it is beneficial to assist teachers in creating a more exciting and meaningful learning experience for students.

Table 2 Posttest mean scores of the Control and Experimental Group

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a	Со				4	
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ent		4	9	
al		8		

^{*}Significant level at 0.05

7.1 Students' opinion about remedial Gamifications and Peer tutoring

Students' views about remedial instructions were collected through open ended survey questionnaires after the interventions. Following points are some of the common excerpt;

Student 1: I personally feel that remedial lessons on English grammar was helpful. It helped me understand the basic grammar topics in a fun ways.

Student 8: Grammar lessons through games has helped me to understand difficult topics in an easier ways. It has also build my confidence and I have learnt to trust my teachers and friends.

Student 13: This English remedial class has given me room to spend free time effectively and also gained confident to share my doubts.

Student 17: I came to know that grammar lessons can be better understood through games rather memorizing bundles of rules.

Student 21: I am self-motivated and ready to spend more time in learning English language in future.

Student 24: After attending the English remedial classes, I have learnt that peers can be our great teachers.

8.0 Discussions

The results of the present study justified that incorporation of educational games help students learn English grammar more effectively as they provide students with an authentic environment to learn and practice in a stimulating ways. The result aline with Hamzah and Dourado (2010) who claims that students who practiced grammar with games felt more motivated and enthusiastic in what they were doing. They also suggested that the use of games in teaching and learning of grammar be actively promoted as a successful way of acquiring grammatical competence.

On the other hand, the findings revealed that practicing of peer tutoring as one of remedial instructions also assisted students in learning English grammar in an effective and friendly environment. The result thus agreed with Sutresna and Wijayanti's (2020) assertation that "Learning through peer tutors is effective in improving students learning in class and has an impact on improving students' academic and non-academic achievement." Further, the result also consented with Marwa and Said (2015), who claims that peer tutoring has a strong positive impact on English self-concept and peer tutoring programs benefit not only the tutees but also the tutors.

Further, students claimed that grammar topics can be better understood through games rather memorizing bundles of rules as it created fun and motivated the learners. This finding is line with the study conducted by Rahmani (2020), who confirmed that gamification is indeed beneficial for students in the English class. It appears to be the solution for an unsuccessful and passive learning environment as it is beneficial to assist teachers in creating a more exciting and meaningful learning experience for students. Thus, it is commendable that teachers should design suitable materials and apply some stimulating approaches such gamifications and peer tutoring to teach grammar lessons so as to meet the diverse needs of the learners.

Limitation

The findings of this AR are limited to only the grade eight students of Autsho central school, Lhuentse. This study was carried out on a small scale and used a limited participants within a short period. Therefore, its finding may not be used to generalize the impact of gamifications and peer tutoring in ehancing grammar achievement in tenses on a larger scale. Thus, replication of same strategies to teach grammar lessons to rest of the learners in the schools of Bhutan may not be appropriate.

Conclusion

This study investigated the impact of gamifications and peer tutoring on grade VIII students' English grammar achievement in tenses using the pre-test-post-test research design. The data gathered from achievement test and open ended survey questionnaire were analyzed using descriptive statistics and independent-samples t-test. The results showed that the experimental group who were taught tenses using games and peer tutoring performed better than the control group. The activities designed in tenses and delivered using the said interventions have further excited the students to explore, engaged and encouraged the students to clarify their thoughts, correct their errors and re-evaluate their existing preconceptions. Learners need to be involved in activities that allow them to understand the rules of English grammar so that they can apply them in sentence construction. Students' critical skills are sharpened as a result of correcting their own sentences and that of their peers because they must consider why their sentences work or do not work effectively. The process of engaging with grammar then becomes both critical and practical for students.

All in all, gamifications and peer tutoring as remediation instructions played a critical role in the teaching and learning process of grammar lessons as they assisted to create a more engaging, and

encouraging learning atmosphere in teaching and learning grammar, making it easier for students to learn from their remedial experiences. In future, the study could be conducted to investigate the effectiveness of gamifications and peer tutoring in teaching other grammar topics and other subjects to expand the findings and its generalizability.

Acknowledgement

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Enhancing Grade VIII Students' Grammar Achievement in Tenses through Gamifications

and Peer tutoring: An Action Research

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Abstract

This study examined the impact of gamifications and peer tutoring on grade VIII students' English grammar achievement in tenses. The sample consisted of 53 students (26 in control and 27 in experimental group). Grammar achievement test and open ended survey questionnaire were used to gather the data.. Descriptive statistics and independent-samples t-test were used to analyze the data. A t-test analysis for the pretests showed that there were no significant differences in students grammar learning prior to remediation for both the experimental and control groups (p=0.883>0.05). However, the posttest result analysis indicated a significant difference between the groups in favor of the experimental group (p=0.000<0.05). Thus, it is commendable that teachers should design suitable materials and apply innovative approaches such gamifications and peer tutoring to teach grammar lessons so as to meet the needs of learners.

Keywords: English grammar ,peer tutoring, gamifications, achievement

1.0 Introduction

The teaching of grammar as an outstanding part of the language plays a central role in language learning and acquisition. Grammar is an important component to learn as it relates to four skills. Students need to know the elements or components of language such as vocabulary, pronunciation and grammar in order to have a good command of the English language. Structure or grammar is one of the fundamental aspects that must be learned by students as it allows them to speak and write well. So, grammar is one of the most important parts to be mastered by the students learning English. Nunan (2003) defined grammar as "a set of rules specifying the correct ordering of words at the sentence level" (p. 8). In a traditional and simple view, it has been defined as "the rules by which words change their forms and are combined into sentences" (Richards & Rodgers, 2001, p. 705). Azar (2007) stated that without grammar, we only have individual words, sounds, pictures, and body expressions to communicate meaning, and grammar as an essential component of language learning is the wearing that creates the fabric.

In Bhutan, English is learnt as a second language (ESL) and teaching grammar in Bhutan has been considered central to the teaching and learning of languages since the inception of western

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education. English grammar is taught in schools, colleges and universities for students at the various levels of the academic ladder to be able to communicate effectively; especially in written English. However, Learning English is not easy for Bhutanese students as English is not their mother language. One of the difficulties that they generally face is the grammar or the language rules. According to the report, grammar was taught in bits and pieces using manuals, sight words, pictures, flashcards, drawings and real objects to teach grammatical items till class VI. From class VI till VIII, grammar was never taught separately, but in integration with English and other subjects. A few examples from the texts would be selected and sketchy explanation would be provided. From class IX to XII, grammar teaching further deteriorated, without any grammar textbooks (Gajmeer & Maxwell, 2009, p.29). Tashi (2018) claims that the performance of Bhutanese students in English is relatively poor and this affected their overall academic result. Students tend to produce many grammatical errors while they write essays and do other academic work. Further, grammar has proven to be a difficult component to grasp due to its inherent complexity.

Games and peer tutoring are one of the stimulating classroom activities for young learners to learn a language in general and grammar in particular, as they are fun, engaging and motivating the students to participate in classroom activities. Yu (2005) studied the effects of games on the acquisition of some grammatical features of German as a second language. She concluded that games as teaching-learning strategies were fun and created a non-threatening learning environment that encouraged interactions between students and teachers, enhanced communication and teamwork, encouraged active participation and enabled students to demonstrate and apply previously or newly acquired knowledge and skills. Palaming (2016) conducted a study on Peer-Tutoring: An Effective Approach in Teaching English Grammar and found out that Peer-tutoring greatly improved the performance of the students in the test. Further, he assert that peer-tutoring should be used as a strategy to enhance the collaborative learning of the students.

Further, Saricoban and Metin (2000) stated that through well-planned games, learners can practice and internalize vocabulary, grammar and structure extensively. Play and competition that are provided by games enhance the motivation of the students and reduce their stress. This will help them to acquire certain essential language skills.

Therefore, this study in particular seeks to investigate the effectiveness of gamifications and peer tutoring in enhancing the tesnse competency of grade eight students in Bhutanese context.

Objective

- To examine the effectiveness of gamifications and peer tutoring in teaching-learning of tenses.
- To study the students' opinion about gamifications and peer tutoring strategies.

3.0 Reconnaissance

In order to execute this action research, the researcher adopted the steps proposed by Maxwell (2003) which involved situational analysis, competence and literature review. These three components provide an overview of the realities of the situations, competences of the people involved, and link it with the review of literature.

3.1 Situational Analysis

Grammar is one of the components of English that is taught to every language learner. It has an important role in understanding the English language. Without a good knowledge of grammar, students will have many difficulties in constructing sentences and expressing ideas for communication activities. But if they have good grammar, they will confidently speak and write English and they will also be able to use the language correctly and clearly. However, many students failed to obtain the required grammar competency owing to many factors. Mosha (2014) claims that students' infrequent use of English language at school and home, large class size, teachers' responsibilities, poor conducive teaching and learning environment in the classrooms, limited home support environment and poverty were contributing factors responsible for deterioration of English language.

Similarly, during the 14 years of teaching experiences in different parts of Bhutan teaching various subjects such as English, Social studies, Value educations and media studies, I have observed that majority of the students in eastern part of Bhutan relatively performed low in English language compared to other subjects. This issue has become more apparent and demands greater attention after teaching English to class eight students and having witnessed their midterm examination performance especially in grammar. If this issue is left unattended, I foresee bigger repercussions in the lives of students and teachers. A good knowledge of grammar helps learners to make sentences clear enough to understand. Azar (2007) asserts that "without grammar, we would have only individual words or sounds, pictures, and body expressions to communicate meaning. Grammar is the weaving that creates the fabric"(p.2). Further, Le Tourneau (2001) states that one's knowledge of grammar is most helpful at the stages of revising and editing sentences because grammar is concerned with the units of sentences. Quagie (2011) emphasizes the importance of teaching English grammar in schools and colleges and points out that there is the need to intensify

the teaching of English grammar in schools and colleges. Some studies have found out that constructivists' approach to the teaching of grammar has led to significant improvement in the performance of learners. Khlid and Azeem (2012) in a study compared the teaching of grammar based on the constructivists' approach to a teaching method that followed the traditional approach and found out that learners who were taught using the constructivists' approach performed better on a test that was administered.

Thus, the researcher felt the need to identify the problems of low performing students and conduct English remediation activities to enhance grammar competency in tenses.

3.2 Competence

3.2.1 The Reseacher

The researcher pursued Bachelor's Degree in Education from Samtse College of Education in English and primary subjects. Later obtained Master's Degree in Education from India. The researcher has studied Educational research module as a part of Master's Degree course. Further, the researcher has also facilitated school and Dzongkhag levels Action Research workshops. The author has publications both at national and international journals.

3.2.2 The Critical friend

To avoid rsearch biases and misterpretation in the study, this study was accompanied by the critical friend. Besides, having a substantial research background and numerous publications, the critical friend has enough research knowledge to critique my research in many possible ways.

3.3 Literature Review

In this section, concepts and literature related to the study are presented in order to convey the theoretical background of the study. The study shares the results of previous studies that are closely related to the present study.

3.3.1 Grammar

The teaching of grammar occupies a central place in the teaching and learning of a language. The spoken and written form of each language must conform to the word order rules of that language. Stern (2001) points out that the teaching of English started with the teaching of grammar rules. The teaching of grammar therefore occupies a central part in the teaching and learning of English as a Second Language. The teaching of grammar therefore forms the main focus of

teaching English. For example, Flores (2010:99) points out that "language teaching in the Philippine secondary education is synonymous to grammar" and "it is a common observation that in the elementary and secondary levels of the Philippine educational system, the teaching of grammar is the bulk of the instruction, if not the focus".

Moreover, Le Tourneau (2001) states that one's knowledge of grammar is most helpful at the stages of revising and editing sentences because grammar is concerned with the units of sentences. Long (2007) argues that subject-verb agreement is a relevant grammatical skill for effective communication and standard written English.

Nedomova (2007, p.17) argues that "young learners are not able to pay their attention for more than 10-20 minutes and after that they start to be bored and tired." Especially when grammar teaching is too dependent on rules and memorization, they start to lose their interest and motivation. Teachers know that young learners like being physically active as they learn by doing. Moreover, they are imaginative and creative and they learn without being aware of it. Besides, young learners use their previous experience, knowledge, several skills, and abilities which help the teacher present the new information by enabling children to practice the new knowledge on top of their previous knowledge (Nedomova, 2007, p. 28).

3.3.2 Gamifications

Gaming is a characteristic of human nature; hence it can be claimed that the history of gaming goes back to the beginning of the history of human being (Demirbilek, Yilmaz, & Tamer, 2010). A lot of research has been done over the past decade to examine the role of games in learning English. The majority of these studies examined the effect of games on vocabulary learning and achievement, while a few examined the effects of games on grammar learning.

In a study, Eskandari et al (2014) investigated the effect of using games on the grammar of Iranian young learners of English. The results showed that the participants of the experimental group outperformed the control group significantly. In another study, Jalali and Dousti (2012) evaluated the effect of computer games on grammar and vocabulary gaining. The results demonstrated that computer games were not able to enhance grammar and vocabulary attainment on the part of the students.

Al-Jarrah et al. (2019) stated that "games help the teacher to create contexts in which the language is useful and meaningful" (p. 14). Games were particularly useful in grammar learning because they provided a mechanism that gave students an incentive to go on practicing a structure beyond the point where they would normally tire of repeating it.

Luong (2009) and Al-Jarrah, Talafhah, and Al-Jarrah(2019) studied the application of games in

grammar review lessons for sixth graders. The study surveyed eight teachers and 225 students from three high schools and included an experimental project with 82 students during three months. The results showed a dramatic improvement in students' grammatical knowledge, demonstrated in both written test scores and oral performance.

Rahmani (2020) confirmed that gamification is indeed beneficial for students in the English class. It appears to be the solution for an unsuccessful and passive learning environment as it is beneficial to assist teachers in creating a more exciting and meaningful learning experience for students. Further, Luu and Nguyen (2012) found games helpful in easing difficulties and making the teaching and learning experience more exciting.

3.3.3 Peer tutoring

Peer teaching has been reported to benefit both tutors and tutees. With peer tutoring, tutees may understand the subject matter better because there are more opportunities to respond, more time-on-task and practice with the academic content, and more accessible feedback (Bowman-Perrott, deMarín, Mahadevan, & Etchells, 2016; Mynard & Almarzougi, 2006).

Sutresna and Wijayanti (2020) found out that learning through peer tutors is effective in improving student learning in class and has an impact on improving students' academic and non-academic achievement. Palaming (2016) conducted a study on Peer-Tutoring: An Effective Approach in Teaching English Grammar and found out that Peer-tutoring greatly improved the performance of the students in the test. Further, he assert that peer-tutoring should be used as a strategy to enhance the collaborative learning of the students.

Marwa and Said (2015) claim that peer tutoring has a strong positive impact on English self-concept and peer tutoring programs benefit not only the tutees but also the tutors.

Based on the above literature, it can be concluded that games and peer tutoring have great pedagogical value and bring many benefits to language teachers when used in foreign language teaching. The review of the studies on language games and peer tutoring shows that they are crucial for teaching and learning foreign languages in a wide range of fields.

4.0 Overarching Research Question

How Can I Improve Grade VIII Students' English Grammar Achievement in Tenses through Gamifications and Peer tutoring?

4.1 Sub Questions

- 4. What is the mean achievement score of students in an tenses before the remediation activities?
- 5. Do educational games and peer tutoring help in enhancing students' tenses proficiency?

6. Are there any significant differences in the tenses achievement of students before and after remediation?

5.0 Methodology

The researcher employed mixed method approach in this study. The pre-test and post-test were used to collect quantitative data in order to determine the learning achievement, while open-ended interview was conducted for collecting qualitative data on students' views about the use of gamification and peer tutoring.

5.1 Sample

The study used a convenience sampling technique. The total sample size consisted of 53 participants (26 in control and 27 in experimental group) class eight students of Autsho Central School, Lhuentse.

5.2 Research Instrument

In this study, two instruments were used to collect the data namely subject achievement tests (pretest and post-test), and open-ended interviews. The teacher researchers used self-develop instruments both for subject achievement test and open-ended interview. The subject achievement test (pre-test) was conducted before the implementation of the interventions to establish the baseline knowledge of the students while the post-test was conducted to assess how much students have learned after the interventions. The open-ended interview was conducted to gather students' views about integration of cooperative learning strategies in the mathematics classes.

5.3 Reliability

To check the reliability of the achievement test, the researcher conducted a pilot test with a different group in the same research school. The Kuder-Richardson formula (KR-20) was applied to find out the reliability coefficient of the subject achievement test .The result showed a score of 0.84, which was an indication that the test items were reliable.

5.4 Data Analysis techniques

The study employed descriptive and inferential analysis techniques in representing the research findings. The pre and post data collected were analyzed using Statistical Package for Social Science (22.0 version) software and the findings are presented in mean, standard deviation and t-test.

6.0 Implementation of Intervention Strategies

Interventions are the activities that researchers implement on an on-going basis in order to meet the

objectives. There are many approaches or methods which can be adopted in remedial teaching and for this particular study following intervention strategies were implemented for five consecutive weeks.

6.1 Teaching basic tenses using games: Most of the basic tenses were taught using context and gamifications during the remedial classes. Moreover, practice opportunities were provided to students with meaningful mechanical and communicative drill activities to avoid rote learning. Varied games such as *storyboard game*, *swap chairs*, *truth or lie and grid on the board* were used to teach various tenses at different occasions. The particular game activity on tenses was conducted for an hour and the class met twice in a week. These games were selected and implemented in the intervention phase to practice verb tenses and make lessons more lively, child friendly and to provide hands-on practices.

b.

6.2 Learning tenses from Peer: Peer tutoring is an inexpensive option that can benefit everyone involved. It aids in the improvement of students' learning attitudes and foster more personalized learning experiences. In this process, the entire class was ranked by ability. The student with the best grades was paired with the student at the bottom of the scale. Pairing was effectively maintained throughout the intervention period. In the pair, one student acted as a tutee and the other as a tutor, swapping their roles in the middle of the session. The researcher explained to the students how they would solve the tasks in pairs. Students were given a set of instructions for students to follow when working in pairs. They were given a script to focus on while interacting with each other. The peer tutoring activity was done right after the gamifications to supplement students learning on tenses for 30 minutes.

7.0 Results and Interpretations

The pretest and posttest were administered to both the experimental and the control group with an aim to make a comparative analysis on the students' learning achievement in tenses before and after the implementation of intervention strategies. A statistical analysis for the mean score of pretest and posttest for both experimental and control groups were compared using t-tests as revealed below;

Table 1 revealed that the pre-test mean of control group was 39.42 and experimental group was 40.21. It was observed that there was not much difference in the mean score. Further, it was ascertained by the 2-tailed test as the obtained value (.883) was greater than the significant level .05 (p>0.05), indicating that there was no significant difference between the pre-test means of the two groups. Thus, the finding indicated that the two groups had equal learning abilities in tenses prior to

Table 1 Pretest mean scores of the Control and Experimental Group

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^{*}Significant level at 0.05

The posttest (Table 2) was conducted to compare if the implementations of remedial intervention strategies (Gamifications and peer tutoring) have a significant impact on students' learning of English grammar as compared to the conventional lecture method. Table 2 disclosed that the posttest mean of the control group was 41.5 and experimental group 51.48 respectively. Moreover,

using an alpha level of .05, the independent-samples t-test revealed a statistically significant difference as the calculated value (.000) was lesser than p< .05 as shown in Table 2. Thus, the result signifies that using educational games and peer tutoring in the process of teaching grammar can definitely increase grammar learning as well overall academic achievement of the students. The finding agreed with Rahmani (2020), who confirmed that gamification is indeed beneficial for students in the English class. It appears to be the solution for an unsuccessful and passive learning environment as it is beneficial to assist teachers in creating a more exciting and meaningful learning experience for students.

Table 2 Posttest mean scores of the Control and Experimental Group

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7.1 Students' opinion about remedial Gamifications and Peer tutoring

Students' views about remedial instructions were collected through open ended survey questionnaires after the interventions. Following points are some of the common excerpt;

Student 1: I personally feel that remedial lessons on English grammar was helpful. It helped me understand the basic grammar topics in a fun ways.

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Student 8: Grammar lessons through games has helped me to understand difficult topics in an easier ways. It has also build my confidence and I have learnt to trust my teachers and friends.

Student 13: This English remedial class has given me room to spend free time effectively and also gained confident to share my doubts.

Student 17: I came to know that grammar lessons can be better understood through games rather memorizing bundles of rules.

Student 21: I am self-motivated and ready to spend more time in learning English language in future.

Student 24: After attending the English remedial classes, I have learnt that peers can be our great teachers.

8.0 Discussions

The results of the present study justified that incorporation of educational games help students learn English grammar more effectively as they provide students with an authentic environment to learn and practice in a stimulating ways. The result aline with Hamzah and Dourado (2010) who claims that students who practiced grammar with games felt more motivated and enthusiastic in what they were doing. They also suggested that the use of games in teaching and learning of grammar be actively promoted as a successful way of acquiring grammatical competence.

On the other hand, the findings revealed that practicing of peer tutoring as one of remedial instructions also assisted students in learning English grammar in an effective and friendly environment. The result thus agreed with Sutresna and Wijayanti's (2020) assertation that "Learning through peer tutors is effective in improving students learning in class and has an impact on improving students' academic and non-academic achievement." Further, the result also consented with Marwa and Said (2015), who claims that peer tutoring has a strong positive impact on English self-concept and peer tutoring programs benefit not only the tutees but also the tutors. Further, students claimed that grammar topics can be better understood through games rather memorizing bundles of rules as it created fun and motivated the learners. This finding is line with

^{*}Significant level at 0.05

the study conducted by Rahmani (2020), who confirmed that gamification is indeed beneficial for students in the English class. It appears to be the solution for an unsuccessful and passive learning environment as it is beneficial to assist teachers in creating a more exciting and meaningful learning experience for students. Thus, it is commendable that teachers should design suitable materials and apply some stimulating approaches such gamifications and peer tutoring to teach grammar lessons so as to meet the diverse needs of the learners.

Limitation

The findings of this AR are limited to only the grade eight students of Autsho central school, Lhuentse. This study was carried out on a small scale and used a limited participants within a short period. Therefore, its finding may not be used to generalize the impact of gamifications and peer tutoring in ehancing grammar achievement in tenses on a larger scale. Thus, replication of same strategies to teach grammar lessons to rest of the learners in the schools of Bhutan may not be appropriate.

Conclusion

This study investigated the impact of gamifications and peer tutoring on grade VIII students' English grammar achievement in tenses using the pre-test-post-test research design. The data gathered from achievement test and open ended survey questionnaire were analyzed using descriptive statistics and independent-samples t-test. The results showed that the experimental group who were taught tenses using games and peer tutoring performed better than the control group. The activities designed in tenses and delivered using the said interventions have further excited the students to explore, engaged and encouraged the students to clarify their thoughts, correct their errors and re-evaluate their existing preconceptions. Learners need to be involved in activities that allow them to understand the rules of English grammar so that they can apply them in sentence construction. Students' critical skills are sharpened as a result of correcting their own sentences and that of their peers because they must consider why their sentences work or do not work effectively. The process of engaging with grammar then becomes both critical and practical for students.

All in all, gamifications and peer tutoring as remediation instructions played a critical role in the teaching and learning process of grammar lessons as they assisted to create a more engaging, and encouraging learning atmosphere in teaching and learning grammar, making it easier for students to learn from their remedial experiences. In future, the study could be conducted to investigate the effectiveness of gamifications and peer tutoring in teaching other grammar topics and other subjects to expand the findings and its generalizability.

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