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Enhancing Class XI students learning of Economics Using Peer and Self-Assessments

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Abstract

Assessment is the engine that drives learning and can track the student's progress. Peer and self-assessments are essential aspect of 'assessment as learning' within formative assessment. This action research explores the effectiveness of peer and self-assessments in enhancing Class XI students learning Economics. All 80 students (XI Commerce and XI Arts) participated in the action research. The quantitative data collected through an aptitude test was analyzed using Microsoft Excel for frequencies and percentages. Qualitative data collected through journaling and FGD were analyzed using themes and subthemes. Reflection formed an integral part of the two cycles of implementing the intervention strategies. The study revealed that peer and self-assessments provide opportunity for students to assess their peers' and their own performance. It also serves to assess the progress made by the students. Therefore, the study recommends teachers to include peer and self-assessment in their student assessment process. However, carrying out peer and self-assessments can be a bit challenging for teachers due to the work load, large class size, wide syllabus coverage, exam oriented curriculum, and student competency in assessment practice.

Keywords: Peer assessment, self-assessment, students, learning

Introduction

Globally assessment is one of the topical issues in the sphere of education and Bhutanese education system is no exception. Education is a learning cycle without an end. In recent times, many schools have undergone significant transformation in their pedagogy and assessment practices. However, in Bhutan teachers are thought of as a source of knowledge. As a result, the learning process is dominated by teacher centered approach both at the primary and secondary education levels (Sherub, 2012). The students passively listen and teacher disseminate the information. Teacher centered and textbook-based learning was not meaningful, and considered obsolete in a globalized society. Rapidly changing socio-economic, political and technology often make textbooks and articles outdated soon after its publication. On the contrary, constructionist learning design is centered on the idea that learning is a process of making something that makes sense in real life (Lillejord et al., 2018).

The quality of classroom instruction and assessment practice determine the quality of education and engagement of students. The use of poor classroom instruction and assessment with teacher centered approaches can deteriorate the quality of education (iDiscoveri Education & Royal Education Council, 2009). For example, a teacher might have many years' experience, but the experience would mean insignificant in the learning process if the teacher keeps repeating the same thing without bringing innovation and change in pedagogical practices (Boris, 2020).

Dechencholing Higher Secondary School, as one of the 22 schools implementing the Bhutan Baccalaureate (BB) education believes assessment as the engine that drives student learning. The use of Peer Assessment and Self-Assessment techniques are frequently used in the BB education. The learning approach of BB recognizes that each individual possesses a unique and budding system of knowing and actualizing

Literature Review

Assessment is a fundamental component of learning since the time of Socrates (Wiggins, 1999). The term assessment is derived from Latin word "assidere'" meaning "to sit beside" (McTighe & Ferrara, 1994). Rogers (2003) outlined that the goal of democratic education is to assist students to become individuals. Involving learners to assess other works and assess their own works deepen their learning (Race, 2010). Peer and Self-Assessment are important aspects of assessment for learning practice and they inform teachers on what worked and what needs more effort. Assessing other's works or their own work can help students develop their understanding of learning objectives and success criteria. The various research has shown that the students who were taught through peer and self-assessment make more progress when they are actively involved in their own learning and assessment (Ndoye, 2017). Logan (2009) explored how peer and self-assessment enhances teaching-learning effectiveness. The study revealed that the peer and self-assessment have positive effect on student learning through self-confidence and reflecting thinking.

Peer assessment is a formative as well as can be summative assessment of learners by other learners. According to Reinholz (2015, p.1) peer assessment is "a set of activities through which individuals make judgment about the work of others". With peer assessment, students will not have to wait for their teachers to give feedback on their work. Students can get fellow students to give feedback about one's work. Peer feedback increases opportunity to get feedback and apply the assessment criteria to assess progress and improve work. It helps both the feedback giver and the receiver to continuously monitor work quality and thereby produce better quality work.

Self-assessment is a formative assessment of students by themselves. Self-assessment becomes more meaningful with clear criteria by which students can assess themselves. Once the students are clear with criteria, they can continuously assess their own performance and make improvement. Bourke and Mentis (2011, p. 859) define self-assessment as a process where "students are directed to assess their performance against pre-determined standard criteria ... [and] involves the students in goal setting and more informal, dynamic self- regulation and self-reflection". Self-assessment allows students assess their own performance given a criterion. Self-assessment helps the students know the extent of their abilities and work to improve upon them without the need of a performance appraiser. It promotes students become a critique of self, self-reflective and take ownership of learning. Self-assessment is advantageous because it does not require a student to wait for someone to assess and provide feedback, but can cross-reference one's work with the intended outcomes and continuously keep improving it.

Both the peer and self-assessment practices among the students can promote a belief and motivation to control and direct their own learning and focus necessary efforts for learning achievements. Peer and self-assessment consist of continuous, time saving revision and improvement of one's performance. Under peer and self-assessment students assess each other and themselves, thus reducing too much dependency on teachers to give feedback. Students take greater responsibility for their own learning with assessment criteria and reflections. Peer and self-assessment have the potential to enhance lifelong learning practice and also equip students with necessary skills for peer and self-assessment with objectivity. The definition outline that the peer and self-assessment help to promote learning through a sense of internal responsibility for their own learning (Yorke & Longden, 2004).

The peer and self-assessment on learning has attracted the attention of researchers. The prior research on assessment in general, as well as peer and self-assessment, on driving student learning (Cheng & Warren, 2005; De Grez, Valcke, & Roozen, 2012; Kearney, 2013; Rust, Price, & O'Donovan, 2003. Similarly, Winne (2003) found that peer and self- assessments reinforce a self-regulated learning atmosphere. Similarly, Logan (2009) found that peer assessment gives a better understanding for

students on assessment criteria and leads to deeper learning. Peer and self-assessment makes students more critical and reflective about their task. According to Boud (1989) both peer and self-assessment emphasis on the development of student autonomy. As a result, students are able to plan and manage their own journey of learning, or process of becoming lifelong learner.

In the study by De Grez, Valcke, and Roozen (2012) there is a significant learning gains for students as a result of being engaged in peer and self-assessment. Planas Llado et al. (2013) found that peer assessment gives a higher level of motivation, sense of confidence and engagement and change attitude of students. Topping (1998) state that peer assessment has positive effects in terms of achievement and learning among students.

The reviews on self- assessment (Boud & Falchikov, 1989; Falchikov & Boud, 1989) found students take more responsibility for their learning. Dochy, Segers, and Sluijsmans (1999) reviewed 63 studies and surfaced positive findings of self-assessment. Students obtaining a higher percentage of scores beside engaging students in independent learning. Self- assessment promote problem solving, self-reflection, and ownership of learning against criteria related to a learning goal.

Bourke and Mentis (2011) found that self-assessment foster student involvement in learning and provide appropriate learning opportunities to all students. Self-assessment engages the student as an active participant in own learning rather than waiting for others to intervene. There are various examples of peer and self-assessments such as discussion, anonymous feedback, journal, learning and response logs, observation, sharing with another pair and online quizzes and poll. Struyven, Dochy, and Janssens (2002) argue that peer and self-assessment brings deeper learning when peer and self-assessment are not used as summative tasks or to assign a grade. When peer and self-assessment are used as formative, it fosters conducive environment to engage students in their own learning. Formative assessment actively engaged students in learning. Students become aware of learning gaps and address gaps by finding more resources. Peer and self-assessments are part of modern human resource management practice.

The literature review on peer and self-assessment promote learning, problem solving and critical thinking gains, it is very important for teacher to understand the ways in which students think about peer and self-assessment help them learn. The peer and self-assessments is theoretically strong, that emphasis students constructing knowledge within a formative learning environment. With peer and self-assessment, learning is more fully integrated with assessment. Ideally, students should grow up using peer and of self- assessment throughout their life and thereby create an earning society.

The independent learning and the ability to take responsibility for own learning does not happen automatically. Therefore, according to Cohen et.al (2010) under the peer and self-assessment teachers need to support and create avenues such as teacher: (i) plan peer and self-assessment opportunities through pair and share opportunities, (ii) explain the intended learning outcome behind each tasks, (iii) provide criteria to assess work, (iv) train learner to asses work of peers and their own work, (v) use appropriate language, (vi) discuss and reflect on problem solving strategies and evaluating approaches, (vii) constantly encourage learner self-reflection on learning, (viii) guide learner to identify their next steps, (ix) provide examples of work that do/do not meet the criteria.

Situational Analysis

Poor performance of students in Economics in the Bhutan Higher Secondary Education Certificate examination is a serious concern for teachers of Economics (Dorji, 2021; Dorji, 2019). This poor performance has forced students to opt for other optional subjects such as Media Studies, Environmental Science, and Agricultural Studies. Students find easier to comprehend and score good marks in these

optional subjects although these subjects have poor ability rating for higher education admission in the colleges in Bhutan. Some schools have stopped offering economics at all because students' low scores affect the average (Dorji, 2021; Rinzin, 2019) and ranking of the schools. The MoE Notification/ Circular No. MoE/DCPD/SS-Eco (16) 2021-2022 (Subject: Economics to be a mandatory subject from 2023 Academic Year), dated September 25, 2022, notified all schools that economics will be a mandatory subject for classes IX to XII from the academic year 2023.

As an Economics teacher, my teaching-learning process was more of teacher centered approach with a concentration on covering the syllabus. I often use unit tests and unannounced class tests to find out the learning level of students. I have seen that these assessment practices do not impact much on students' learning progress let alone bringing improvement scores in the tests. Thus, I realized that I need to revisit my assessment practices to enhance student learning. My motivation to review my assessment practice is as a result of the shift towards competency-based assessment at the national.

The Bhutan Professional Standards for Teachers, 2019 entrusts the use of formative assessment strategies by teachers. In 2021, the Ministry of Education replaced the summative assessment for Pre-Primary to class III with pure formative assessment to assess students. An individual student portfolio containing learning progress, work sample, personal traits, intervention etc. are maintained by teachers to evaluate students learning and progress (Ministry of Education, 2020b).
Therefore, there is already a better understanding of the use of formative assessment to drive learning in students.

The development of effective peer and self-assessment can take time and effort. It is to fill such a gap in Bhutanese school that the current study intends to explore academic performance and student perceptions of the ways and means through which self and peer assessment can help support and enhance learning. The action research can provide evidence in terms of peer and self-assessments. This action research uses Peer and Self-Assessment strategies to enhance learning, empower students to take ownership of learning, enhance collaborative approach for mutual support and self-reflection in class XI students of Dechencholing Higher Secondary School. Peer assessment activities bind students together into a learning community into make a lifelong learner. Peer and Self-Assessments have emerged as formative assessment for teaching-learning process in many other countries as it empowers students autonomous lifelong learning (NCERT, n.d.) and not just learn to answer questions. Students are central in both peer and self- assessment.

Objective

Through this action research I want to understand the use of Peer and Self-Assessment strategies in promoting learning by understanding in students through a two-cycle practice of the use of these assessment strategies in teaching Economics in Class XI in Dechencholing Higher Secondary School. Specifically, I want to achieve the following objectives:

1. enhance my understanding of the use Peer and Self-Assessment strategies to support learning Economics;
2. use Peer and Self-Assessment strategies with class XI Economics students;
3. improve my practice of the use of Peer and Self-Assessment strategies in enhancing students learning, based on the students' experiences and feedback.
4. surface challenges arising using the peer and self-assessment in the Bhutanese classroom.

Research Question

Can the use of Peer and Self-Assessment strategies improve learning of Economics among class XI students?

Competence
This action research is the collaborative effort of all Economics teachers of Dechencholing Higher Secondary School. The teachers attended a three-day workshop on action research organized by the school and supported technically by the then Royal Education Council and the Thimphu Thromde Education Sector in 2019. The researchers will be referring the 'Guide to Action Research: Enhancing Professional Practice of Teachers in Bhutan' by Royal Education Council in 2019 to carry out this action research.

Critical Friend
The Head of Business Studies Department and Vice Principal were the critical friends. They have both studied action research during their Master's Degree. Due to having fewer teaching periods, they will be able to support the researchers.

Methods
The action research is exploratory in nature and used mixed method approach through use of an aptitude test, journaling and focus group discussion.

The data was collected through pretest and post-test through the use of aptitude test towards peer and self-assessment strategies.

In the duration of three weeks, the interventions were implemented twice, each cycle well integrated with reflection on the success and challenges of the peer and self-assessment strategies used.

Population and sample
All 80 students of class XI Commerce and XI Arts in Dechencholing HSS under Thimphu Thromde participated in the action research.

Data Collection Tools
i. Pretest and Posttest
Aptitude test
After the implementation of the three -week intervention program, aptitude test was conducted on June 17, 2022 to evaluate the effects of the interventions (peer and self-assessment). The aptitude test consists of 5-Point Likert Scale (5=Strongly Agree, 4=Agree, 3=Neutral, 2= Strongly Disagree, 1= Disagree) administered to each student.

Intervention
Informed by the literature review, a mix of peer and self-assessment strategies such as

i) observation and feedback,
ii) use of criteria for task assessment,
iii) discussion using relevant Round Robin, RoundTable, Think Pair Share,
iv) anonymous feedback,
v) sharing with another pair, and
vi) journaling will be used with students for three weeks.

Economics lessons marked with tasks and activities were taught using the aforementioned peer and self-assessment strategies for the Economics period for a stipulated duration of 50 minutes from Monday to Friday.

ii. Journaling

A record of the peer and self-assessment strategies used in each 50- minute lesson was recorded in the form of a journal. According to the Choeda et. al (2018) journaling serves as an event reminder during the analytical and evaluative phases of action research. Students' journals were reviewed to understand their experience and accordingly the upcoming peer and self-assessment strategies were planned and implemented. Journaling helped the researchers to engage in reflective thinking and generate further questions (Bybee, Powell & Trowbridge 2008) based on the review of students' journal.

iii. Focus Group Discussion (FGD)

Three FGD were held with randomly selected students in groups of five students each for both class XI Commerce and XI Arts. The FGD helped understand the impact of the peer and self-assessment strategies in improving students' attitude towards Economics and learning. The FGD also revealed the effectiveness of the strategies used during the three-week intervention programme.

Data Analysis

A descriptive analysis of the data collected through aptitude tests 1 were carried out using Microsoft Excel for frequencies and percentages and comparison of results for effectiveness of the intervention strategies. The results were presented in the form of tables and figures.

Qualitative data collected through journaling and FGD were analyzed by using coding to identify themes and subthemes. The findings were presented in the form of descriptions. To authenticate the results and findings the data collected through pretest and post-test, journaling and FGD were triangulated.

Refection were carried throughout the two cycles of the implementation of the intervention strategies. The reflection process was useful in strengthening the understanding and use of the peer and self-assessment strategies employed.

Ethical Clearance

Ethical Clearance was sought from the school management. Students of Class XI Commerce and XI Arts were briefed on the Ethics and Integrity of the Action Research and were assured of no obligation to be part of the research or of any implication in case some of them did not want to participate. All students agreed to be part of the action research.

Findings

According to Dorji's (2020) study, there is an absence of authentic assessment in the Bhutanese secondary education. Peer and self- assessments and other forms of formative assessments are rarely practiced. The assessment was used directly for the promotion of students to higher classes. The students' journals revealed that the students were not aware of peer and self-assessment. On further probing, only 3 percent of students shared that only one teacher in their past middle secondary school gave task to carry out self-correction with limited guidance, instruction and rubrics.

After the intervention program, the total mean for all items in the aptitude test was 3.8 out of 5 as depicted in Table 1. Most of the student participants chose 'agree' for almost all the items. In terms of; self-assessment is helpful when there is a criteria/ rubric, and peer assessment is easy to carry out when there is a criteria/ rubric, the results was 'strongly agree'. This reveals that the students' level on aptitude test 1 towards intervention program falls in the (agree) category on the Likert scale. The students had a positive opinion towards the peer and self-assessment.

Table 1

Summary of Aptitude Test

SN	Item	Mean	SD	Rating	%
1	I know what peer assessment is.	3.6	1.2	Agree	71
2	I know what self-assessment is.	3.6	1.2	Agree	71
3	I know how to carry out peer assessment.	3.6	1.1	Agree	72
4	I know how to carry out self-assessment.	3.6	1.2	Agree	71
5	I have experience of using peer assessment.	3.8	1	Agree	76
6	I have experience of using self-assessment.	3.7	1	Agree	74
7	I am honest when I use self-assessment.	3.8	1.2	Agree	77
8	I am honest when I use peer assessment to assess peers.	4.4	0.6	Strongly Agree	80
9	Self-assessment is helpful when there is a criteria/ rubric.	4.1	0.9	Strongly Agree	82
10	Peer assessment is easy to carry out when there is a criteria/ rubric.	4.2	0.8	Strongly Agree	84
11	Self and peer assessments help me become responsible for my learning and that of my peers.	3.5	1.2	Agree	71
12	I prefer self and peer assessment to teacher assessment.	3.6	1.0	Agree	72
13	Through self and peer assessments I have become more reflective of my learning.	3.9	0.8	Agree	78
	Total Mean for all items	3.8	1.0	Agree	75.3

While discussing on peer and self-assessment on criteria/ rubrics, all student participants share that it is easy to carry peer and self-assessment when there is a criteria/ rubric. However, students are often unfamiliar with marking criteria. On further probing, students prefer verbal feedback on peer assessment. The verbal feedback works better than written feedback. Evaluation and suggestion are often given in verbal according to the students' journal. According to Race (2010) when students used peer and self-assessment criteria framed by themselves, students take ownership of the need to learn and ownership would be at its best.

Peer and self-assessment consist of revision and improvement. Students become lifelong learner in assessing and providing feedback to others, and also equips them with necessary skills for peer and self-assessment. The FGD revealed that peer and self-assessment provide an avenue and opportunities to engaged more, and help each other on the homework and classwork. After the peer and self-assessment, students gain more knowledge about the concepts or the lesson. According to FGD, student participants shared that the peer and self-assessment promote the sense of ownership and responsibility towards their own learning. With responsibility, learning is enhanced and students become more enthusiastic about the learning.

The peer assessment is considered as a valuable opportunity and helped the students to identify their errors from different lens. One student said, "Before I used to think that my assignment or homework were perfect and right. However, after peer assessment, I found my peer gave constructive feedback on my work. It clarifies doubts for me that I was not sure about it". The peer comments could pinpoint unclear parts in the question and answer. Another student remarked that, "even though I do not completely understand the economic concept discussed in the classroom. however, during the peer and self- assessment I could use others feedbacks, suggestion and explanation to understand economic concept.

The journaling revealed that peer and self-assessment helped students learn better and in return it help

students to evaluate their homework and assignment. The requirement, expectation and evaluative skills are needed to address the learning gaps.

After the peer assessment, students find easier to identify their strength and weaknesses in their own task and can make necessary changes. Some of the observation in journal were that peer and self-assessment allowed students to know their strength and weaknesses. Three student participants said "If we miss answer or discussion in the task, we would go back to our work and revise it again".

During FGD three student participants also said that "I know my strength and weakness during the peer and self-assessment". One students said, I am embarrassed to ask question or clarify doubts or get help from the teacher. During peer and self-assessment, I try to clarify doubts with peers. As a result, I become more critical and active students. The remaining student participants did not disagree but were neutral. After the peer and self-assessment, some students are found more critical of the work than teacher would be.

During FGD, student participants shared that peer assessment helped students in promoting collaboration. Collaboration benefits all students, as well as supports all peers in their learning. According to my critical friend, some students take more responsibility for their own learning and also for the learning of peers. With learning responsibility, students become active and thus prepare students to become a lifelong learner. It also provides a better avenue for understanding and practice economics content, concepts and skills.

Beside the advantages, although peer and self-assessment has number of issues. During FGD student participants shared that many students have limited ability and confidence to assesses their peer tasks and they fear about peer criticism. One student participant shared that "I face difficulty to evaluate my peer work effectively. Sometime my feedback was damaging". Two students said that good peer relationship and friendlier peer provide outstanding feedback. Students are not skilled enough to evaluate peer tasks. The absence of teacher input to the evaluation process lead to misinformation about peer and self-assessment.

The critical friend and researcher observed that only few students were internally inconsistent and lenient. Such students believe that the assessment is the job of the teacher and fail to use feedback. Some students do not take assessment process seriously. During FGD, one student participant complains that peer and self-assessment required hard work. The students have to think and make good judgements, and that it's tiring. I'm bushed at the end of a marking session. Some believe students markers are unfair or inaccurate.

Reflection

While using the peer and self-assessment a teacher needs to model the assessment process and explain the purpose. I demonstrated how to give constructive and actionable feedback and comments both verbally and through markings. I showed a few examples of work from unknown students and sources. I noticed that this allowed the students to get accustomed to the process before they were assigned to evaluate and comment on the works of their classmates. I observed that by showing examples of work without or with criteria can help students understand fully what is required and the different approaches of achieving success. The whole class marking was used for discussion and sharing.

Critical friends and I observed that the peer and self-assessment required time and effort. Initially, students faced difficulty while some were bored, and others demanded more time. Once embedded into learning, peer and self-assessments motivate students to move forward in learning. After peer and self-

assessment, students needed to be given sufficient opportunity and time to make improvements. As the intervention progressed, students initiated efforts to acquire knowledge and skill without relying much on teachers and peers.

It was observed that peer assessment should be introduced early for students to get used to and understand the purpose and benefits fully. When students were comfortable with the peer assessment purpose and process, then the teacher and students could move to using self-assessment. Having assessed the peers' work, students often find it easier to identify their weaknesses, and make improvements. Some students talk to one another, discuss over their works to make changes and improvement in their respective works. I also found that using peer and self-assessment saves time for the teacher in carrying out assessment of students works. Students were able to provide feedback that their classmates found were useful in improving their work. In many cases marking accuracy was often questioned. This however should not be an issue as students can request the teacher if they are not happy with the marking. The use of rubrics and other guidelines should also be useful to minimize discrepancies with peer and self-assessment.

I doubt whether results from peer and self-assessment could be used for important decision makings such as certification, pass/fail, or placement purposes. Under such mechanism collaboration with peers, feedback, a supportive learning environment is required. The desire to seek feedback depend on the supportive learning environment, academic culture and the ability of the student to collaborate and support each other. In this AR, peer and self-assessment was prepared and implemented as formative assessment to enhance learning and not to grade. There was no grade involved in this process. As a result, many students were found less motivated to learn and complete their task as they were not graded.

There is limited peer feedback in the noted book such as very good and excellent. Some students were reported as feedbacks are not helping peers in accepting criticisms. Sometime it created misunderstanding and became too personal. Students compared their tasks with others and become demotivated. There were also cases, where student got a lot of feedback but failed to incorporate in the learning process. Many students did not seem to take notice of the peer feedback and made much less use of it while some made good use of the feedback they received.

Like the old adage 'you can take a horse to water but you can't make it drink' there were some students who were inconsistent in completing the task on time. The students knew that no high-stake decisions were going to be made based on their peer and self-assessment.

The language proficiency, lack of training in peer and self-assessment was the main barrier on the accuracy of peer and self-assessment. The students seem to value instant oral feedback. Awareness and enough practice in the peer and self-assessment would help students make better reviews of their peers and self.

Other potential challenges to the successful implementation of peer and self-assessment were time constraints, lack of confidence to assess accurately. On occasional instances, some students fail to return the reviewed task by the specified timeline due to unavoidable circumstances, or where students were absent during the instruction hours. The applying of peer and self-assessment in complex problem-solving is more challenging for the students.

Peer and self-assessment would be easier with the use of technology in the classroom. However, due to limited technology resources in school, the use of technology was limited. Technology not only include

the use of computer and phone, but it also includes a variety of resources- audio visual, video clips, TV programme, machine and equipment.

Therefore, as a researcher I felt that it is important that students understand that learning journey is different for different students. It is also important for students to admit their weakness without risk to their self-esteem. According to Topping *et al., (*2000) peer assessment is an arrangement for peers to consider the level, value, worth, quality or successfulness of the products or outcomes of learning of others of similar status. Sometime peer and self-assessment in larger class size led to poor planning and classroom management.

However, I would like to share my experiences of peer and self-assessment with faculty and staff. I hope other teachers might gain further insights by observing their peers or visiting schools where it is being successfully practiced.

Conclusion

Based on the analysis of the findings and reflection of the action research, I conclude that peer and self-assessment is one way to assess the progress of students learning. It provides opportunity for students to assess their peers and their own performance. It equips students to be an autonomous and reflective leaner who can track and assess peers and their own development. The insights I have gained from this research encourages me to include peer and self-assessment in teaching Economics. While using the peer and self-assessment I demonstrated how to give constructive and actionable feedbacks.

Peer and self-assessment requires a classroom culture where errors and constructive feedback are valued and encouraged. The students act as critical friends, critiquing the work of each other purposefully. The student also supports and challenges peers and facilitates their future success. It was important for the teacher to show the students that mistakes can happen and can be corrected too. It is also crucial for students to understand what will be examined and how it will be assessed. By carefully observing and providing students with constructive feedback, teachers can play a significant part in their academic success. For the students who need it most, teachers must give the required scaffolding.

Monitoring and assessing for teacher is quite challenging for teachers due to limited availability of resources, increase work load, larger class size, syllabus coverage, test and existence of exam oriented curriculum, heavy teaching session and workload, student ability level and interest. Too often, examinations are used as assessment to assess the progress of a student. However, it would be important if teachers want to place peer and self- assessment in learning process for holistic learning.

Limitation of the AR

Since the intervention program was only for three weeks with small number of participants in one higher secondary school, the Action Research could not provide better understanding on peer and self-assessment. The effective use of peer and self-assessment take time and effort.

References

Boris, O. O. (2020). Effects of problem solving teaching strategy on secondary school students' academic performance in Chemistry in Ondo State, Nigeria. *International Journal of Research and Analytical Reviews*, *7*(2), 74-80.

Boud, D. (1989) The role of self-assessment in student grading. *Assessment & Evaluation in Higher Education*, 14(1), 20-30.

Boud, D., & Falchikov, N. (1989). Quantitative studies of student self-assessment in higher education: a critical analysis of findings. *Higher Education*, *18*(5), 529–549.

Bourke, R., & Mentis, M. (2011). Self-assessment as a process for inclusion. *International Journal of Inclusive Education, 17*(8), 854-867.

Bybee, R.D., Powell, J.C., & Trowbridge, L.W. (2008). *Teaching Secondary School Science*: Strategies for Developing Scientific Literacy (9th ed.). USA: Upper Saddle Pearson Prentice Hall.

Choeda, Drukpa, P., Yuden, Dukpa, P., Chuki, S. (2018). *A guide to action research: Enhancing professional practice of teachers in Bhutan*. Paro, Bhutan: Royal Education Council.

Cohen, L., Manion, L., Morrison, K., & Wyse, D. (2010). *A guide to Teaching Practice (5th ed.)*. Madison Avenue, New York: Routledge.

De Grez, L., Valcke, M., & Roozen, I. (2012). How effective are self- and peer assessment of oral presentation skills compared with teachers' assessments? *Active Learning in Higher Education, 13*(2), 129–142.

Dochy, F., Segers, M., & Sluijsmans, D. (1999). The use of self-, peer and co-assessment in higher education: A review.
http://www.tandfonline.com/doi/abs/10.1080/0307507991233137993 5?src=recsys#.VOGj7S5UMsI

Dorji, T. (2021). The Effect of Simulation Games in Improving Grade XII Students' Academic Performance in Economics: An Action Research. *Educational Innovation and Practice- A Biannual Journal of Samtse College of Education, 5(1), 17-35.*

Dorji, T. (2019). Using mnemonic method to improve student's ability to remember economics concepts: An action research. *Bhutan Journal of Research and Development, 8*(1), 47-58.

Falchikov, N., & Boud, D. (1989). Student self- assessment in higher education: A meta- analysis. *Review of Educational Research, 59*(4), 395–430.

Gross National Happiness Commission. (2018). *Twelfth Five Year Plan 2018-2023: Volume II Central Plans*. Thimphu, Bhutan: Gross National Happiness Commission.

iDiscoveri Education & Royal Education Council. (2009). *The quality of school education in Bhutan: Reality and opportunities*. Thimphu, Bhutan: Royal Education Council.

Kearney, S. (2013). Improving engagement: The use of "authentic self-and peer-assessment for learning" to enhance the student learning experience. *Assessment & Evaluation in Higher Education, 38*(7), 875–891.

Lillejord, S., Borte, K., Nesje, K., & Ruud, E. (2018). Learning and teaching with technology in higher education- a systematic review. Oslo: Knowledge Centre for Education.

Logan, E. (2009). Self and peer assessment in action. *Practioner Research in Higher Education, 3*(1), 29–35.

McTighe, J. & Ferrara, S. (1994). *Assessing learning in the classroom*. Washington, D.C: National Educational Association.

Ministry of Education. (2020a). *Bhutan Professional Standards for Teachers*. Thimphu, Bhutan: Ministry of Education.

Ministry of Education. (2020b). *34th Education Policy Guidelines and Instructions*. Policy and Planning Division, Royal Government of Bhutan. Thimphu, Bhutan: Ministry of Education.

Ministry of Education. (2021). Implementation Manual: *Bhutan Professional Standards for Teachers*. Thimphu, Bhutan: Ministry of Education.

National Research Council. (2001). *Knowing what students know: The science and design of educational assessment.* Washington, DC: National Academy Press.

NCERT. (n.d.). *Teaching Economics in India; A teacher's handbook*. Delhi, India: NCERT.

Ndoye, A. (2017). Peer/Self-Assessment and Student Learning. *International Journal of Teaching and Learning in Higher Education,* 29(2), 255-269.

Planas Llado, A., Soley, L. F., Fraguell Sansbello, R. M., Pujolras, G. A., Planella, J. P., Roura-Pascual, N., & Moreno, L. M. (2013). Student perceptions of peer assessment: An

interdisciplinary study. *Assessment & Evaluation in Higher Education*, *39*(5), 592–610.

Phu-Ampai, S., & Tshring. (2018). Effects of Using Rubrics on the Learning Achievement of Students in Educational Assessment and Evaluation. *EIP Educational Innovation and Practice: a biannual journal of Samtse College of Education*, 3(1), 75-88.

Race, P. (2010). *Making Learning Happen*. Singapore: Sage.

Reinholz, D. (2016). The assessment cycle: A model for learning through peer assessment. *Assessment & Evaluation in Higher Education, 41*(2), 301-315.

Rinzin, Y. C. (2019, January 30). Students perform poorly in Commerce and Economics subjects. *Kuensel-Bhutan's National Paper*, p.2.

Rogers, C. R. (2003) *Client-Centered Therapy*. London, UK: Constable and Robinson.

Rust, C., Price, M., & O'Donovan, B. (2003). Improving students' learning by developing their understanding of assessment criteria and processes. *Assessment & Evaluation in Higher Education*, *28*(2), 147–164.

Sherub, K. (2012). Strategies for encouraging behavioural and cognitive engagement of pre- service student-teachers in Bhutan: an action research case study. *Educational Action Research,* 21(2), 164-184.

Sherab, K., & Dorji, P. (2013). Bhutanese Teachers' Pedagogical Orientation in the Primary Classes: A Factor on Quality of Education. Journal of International Society for Teacher Education 17 (1), 18–28.

Stiggins, R.J. (2001). The unfulfilled promise of classroom assessment. *Educational Measurement: Issues and Practice*, 20(3), 5-15.

Struyven, K., Dochy, F., & Janssens, S. (2002). *Students' perceptions about assessment in higher education: A review*. Paper presented at the Joint Northumbria/Earli SIG Assessment and Evaluation Conference: Learning communities and assessment cultures, University of Northumbria, Newcastle.

Topping, K. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*, *68*(3), 249–276.

Topping, K. J., Smith, E. F., Swanson, I., & Elliot, A. (2000) Formative peer assessment of academic writing between postgraduate students. *Assessment and Evaluation in Higher Education,* 25(2) 150–169.

Wiggins, G. (1999). *Assessing student performance: Exploring the purpose and limits of testing*. San Francisco, USA: Jossey-Bass.

Winne, P. H. (2003). Students' calibration of knowledge and learning processes: Implications for designing powerful software learning environments. *International Journal of Educational Research*, *41*(6), 466–488.

Yorke, M., & Longden, B. (2004). *Retention and student success in higher education.* Maidenhead, UK: Open University Press.

འབྲིང་རིམ་བར་མའི་སློབ་ཕྲུག་ནང་འཚོད་ཀྱི་རྩོང་ཁ་ལུ་སྤྱོད་བ།

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ཞིབ་འཚོལ་བཅུད་དོན། (Abstract)

རྒྱལ་ཁབ་རང་དབང་གི་ངོ་རྟགས་སྟོན་ཚུགས་པའི་ ཁྱད་ཆོས་ཐུན་མོང་མ་ཡིན་པ་ལེ་ཤ་ཡོད་པའི་གྲས་ལས་ གཅིགཔ་འདི་ རྒྱལ་ཡོངས་ཀྱི་སྐད་ཡིག་འདི་ཨིན། དེ་རེས་ནང་ས་པར་ རྒྱལ་ཁབ་ཀྱི་དཔལ་འབྱོར་གོང་འཕེལ་དང་ མི་སྡེའི་གནས་སྐབས་ཀྱི་འགྱུར་བ་ལུ་བརྟེན་ སྐད་ཡིག་ཐོ་ཡིག་ཚད་ཡོད་ཀྱི་ཨིན། དེ་རེས་ནང་ས་པར་ རྒྱལ་ཁབ་ཀྱི་དཔལ་འབྱོར་གོང་འཕེལ་དང་ མི་སྡེའི་གནས་སྐྱངས་ཀྱི་འགྱུར་བ་ལུ་བརྟེན་ སྐད་སྒོལ་དང་སྐད་ཡིག་ལག་ལེན་ལུ་ བཙུ་མཐོ་ཞེན་སུ་འགྱོ་དོ་ཡོད་པའི་ མཐོང་སྣང་གི་བསམ་འཆར་ འདུ་མིན་སྣ་ཚོགས་ བཀོད་མི་ལེ་ཤ་མཐོན་མ་ཨིན་མས།

གནད་དོན་དེ་ལུ་གཞི་བཞག་སྟེ་ ན་གཞོན་ཚུ་གིས་ རྒྱལ་ཡོངས་ཀྱི་སྐད་ཡིག་རྩོང་ཁ་འདི་ལུ་ སྒྲུ་བ་དང་དང་འདོད་ གཅེས་འབྱུག་གཅུག་ལྟ་ནི་དོན་ལས་ **འབྲིང་རིམ་བར་མའི་སློབ་ཕྲུག་ནང་འཚོད་ཀྱི་རྩོང་ཁ་ལུ་སྤྱོད་བ་** ཟེར་བའི་དོན་ཚན་གྱི་ཐོག་ལུ་ ཞིབ་འཚོལ་ཅིག་འབད་དེ་ཡོད།

འདི་ནང་ ཞིབ་འཚོལ་འབད་དགོ་པའི་ཁྲངས་དང་ དམིགས་དོན་ གནད་དོན་དང་ དཀའ་ངལ་གསལ་བཤད་ ལས་དོན་དང་ ཞིབ་འཚོལ་གྱི་དྲི་བ་ཚུ་བཀོད་དེ་ཡོད། རྒྱལ་ཁབ་རང་དབང་རང་བཅན་གྱི་ ངོ་རྟགས་ངོ་མ་ཅིག་ རྩོང་ཁའི་སྐད་ཡིག་འདི་ཨིནམ་ ལས་ དེ་དང་འབྲེལ་བའི་དཀའ་ངལ་དང་ གཉེན་ལེན་ཚུ་ ངོས་འཛིན་འབད་དེ་ འབྲུག་གི་སྐད་ཡིག་རྩོང་ཁའི་ མི་ཉམས་གོང་ འཕེལ་གཏོང་ནིའི་ ཐབས་ལམ་ཚུ་འཚོལ་ཏེ་ བདག་འཛིན་འཐབ་ནི་ལུ་ རྒྱབ་སྐྱོར་ཕྱལ་ཚུགས་པའི་རེ་བ་བསྒོད་དེ་ གནས་སྟུད་བསྡུ་ལེན་ འབད་ཡོད་པ་ཨིན།

མ་འོངས་པ་ནང་ གནད་དོན་འདི་གི་ཐོག་ལུ་ ཞིབ་འཚོལ་རྒྱ་སྐྱེམ་སྒེ་འབད་མི་རེ་འཐོན་པ་ཅིན་ དེ་རེས་ངཔིས་ རྣམ་རྟོག་གི་ས་ གོན་ཙམ་ཅིག་སྒེ་ ཞིབ་འཚོལ་གྱི་ཐབས་ལམ་ཚུ་རྩོང་ཁའི་ཐོག་ལུ་ སྐད་བསྒྱུར་འབད་དེ་བཀོད་ཡོདམི་འདི་གིས་ རྒྱལ་ཡོངས་ཀྱི་ གནས་ཚད་ནང་ ཁྱབ་ཚུགས་པའི་གྲུབ་འབྲས་སྟོན་ནི་ལུ་ ཨན་ཐོགས་འབྱུངཔའི་རེ་བ་ཡོད།

ངོ་སྤྲོད། (Introduction)

རྩོང་ཁའི་བརྟ་གཞུང་གསར་པ་ (๒๐๐๒) ནང་ མི་དབང་མངའ་བདག་རིན་པོ་ཆེ་འབྲུག་རྒྱལ་གསུམ་པའི་སྐབས་ལས་ རྩོང་ཁ་འདི་རྒྱལ་ཡོངས་ཀྱི་ཁ་སྐད་སྦེ་ ཆ་འཛོག་མཛད་དེ་ཡོདཔ་མ་ཚད་ ཁ་ལས་གཏམ་བྱང་མི་འདི་ཡིག་ཐོག་ལུ་འབྲི་དགོ་པའི་ བཀའ་རྒྱ་ཡངཔ་གནང་སྟེ་ཡོདཔ་འབད་བཀོད་དེ་འདུག། དུ་རྒྱང་ རྩོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས་(๒๐๑๑ ནང་ མི་དབང་འབྲུག་རྒྱལ་བཞེ་པ་མཆོག་གིས་ སྤྱི་ལོ་๑๙๔๙ རང་བཟོ་๑๑ པའི་ཚེས་๔ ལུ་ འབྲུག་རྒྱལ་ཁབ་ཀྱི་ རང་དབང་རང་བཙན་གྱི་ངོ་རྟགས་དང་ ལམ་སྲོལ་བཟང་ཐོ་ཚུ་གི་ནང་ལས་ གཅོ་ཐོ་ཅིག་ཤིན་པའི་བཀའ་རྒྱ་ཡངཔ་གནང་སྟེ་ཡོད་ཟེར་བཀོད་དེ་འདུག། དེ་འབདཝ་ལས་བརྟེན་ སྤྱི་ལོ་๑๙๔๘ ལས་ཚུར་ སློབ་གྲྭ་ཚུ་ནང་རྩོང་ཁ་འདི་ཚོས་ཚན་གཅོ་ཐོ་ཅིག་འབད་བཙུགས་ཀྱི་ ལྷབ་སྟོན་འབད་དོ་ཡོདཔ་ཨིན།

དེ་འབདཝ་ལས་ སློབ་ཁྲག་ཚུ་གིས་ འབྲུག་རྒྱལ་ཡོངས་ཀྱི་སྐད་ཡིག་རྩོང་ཁ་འདི་ལུ་ སྤྱི་བ་ག་དེ་སྤྱི་བསྒྱིད་དོ་གཏང་ སྤྱི་བ་ཡོདཔ་དང་མེད་པའི་ཁྱད་པར་ གཅིག་བརྗེན་འབྲུངམ་ཨིན་ན། སྤྱི་བ་དང་དང་འདོད་བསྒྱིད་བཙུག་ནིའི་དོན་ལུ་ ཐབས་ལམ་གཅིག་ལས་ཀ་ཅི་བཟུམ་ར་སྟོན་དགོཔ་ འདུག་གཅད་ རྒྱལ་ཡོངས་སྐད་ཡིག་རྩོང་ཁ་འདི་ལུ་ རྒྱབ་སྐྱོར་འབད་མི་གཏི་ལུ་ སྤྱི་ལོ་ཨིན་ན། ཞེབ་འཚོལ་གྱི་ཐོག་ལས་དབྱེ་བ་དཔྱད་དེ་ མི་དམངས་ལུ་ཡན་ཐོག་ཏན་གྱི་ ཐྲུབ་འབྲས་སྟན་ཞུ་དང་ གོས་འཆར་ཕུལ་ཚུགས་ནིའི་དོན་ལུ་ཨིན།

๑.๔ ཞིབ་འཚོལ་གྱི་དམིགས་ཡུལ། (Research Objective)

དོན་ཚན་འདི་གི་ཐོག་ལུ་ ཞིབ་འཚོལ་འབད་དགོ་པའི་དམིགས་ཡུལ་གཅོ་བོ་ར་ ངར་ཤའི་ལོ་ངོ་བཅུ་ཕྲག་གཉིས་དེ་ཅིག་གི་ཉམས་མྱོང་ལུ་བལྟཔ་ད་ ན་གཞོན་ཚུ་གིས་ ལོ་གཅིག་བ་ལོ་གཅིག་རྩོང་ཁའི་ཆོས་ཚན་ལུ་ སྤྱི་བ་ཞན་ཏེ་འགྱོཔ་སྟེ་ཆོར་དོ་ཡོདཔ་མ་ཚད་ རྩོང་ཁ་འདི་སློབ་པའི་སྐབས་ལུ་ཡང་ ཨིང་སྐད་དང་སློབ་གསེས་ཏེ་སློབ་མི་མ་གཏོགས་ རྩོང་ཁ་ཉག་ཅུང་སློབ་མི་ཉུང་ཤས། འདི་བཟུམ་སྟེ་ར་ ཡིག་ཐོག་ལུ་འབྲིཔ་དང་ཡང་ སྟེབ་སྤྱོར་ཚུ་གི་མེན་གུ་མེན་སྟེ་བྱིས་ཏེ་ རང་གི་སྐད་ཡིག་ལུ་རང་གིས་ བརྩི་མཐོང་མེདཔ་བཟུམ་སྟེ་ཆོར་མི་འདི་ རྒྱུ་རྐྱེན་གཅི་ཐོ་ལས་བརྟེན་ཨིན་ན་ བཏུག་དཔྱད་འབད་དེ་ གཅལ་འཚོད་ཀྱི་ཐྲུབ་འབྲས་ཚུ་ གསལ་བཀོད་འབད་ནིའི་དོན་ལུ་ཨིན།

๗- སློབ་ཁྲག་ཚུ་གིས་རྩོང་ཁ་ འབྲི་ནི་ ལྷག་ནི་ སྐད་ནི་ལུ་ སྤྱོད་ཀྱི་ སྐད་ཡིག་ཐོག་ལས་ ལྷ་ནི།

๘- གཞུང་དང་སྐེད་ཀྱི་ཁ་ཐུག་ལས་ རྩོང་ཁ་ལུ་ རྒྱབ་སྐྱོར་འབད་མི་གཏི་འབད་འདུག་གཅིག་ལྷ་ནི།

ག- རྩོང་ཁ་ལུ་ སློབ་ཡོད་པ་དང་མེད་པའི་ཁྱད་པར་ གཅིག་བརྟེན་འབྲུངམ་ཨིན་ན་ལྟ་ནི།

ང- འཛེལ་ཡོད་དབང་འཛིན་ཚུ་ལུ་ ཞིབ་འཚོལ་གྱི་གླགཁ་འབྲས་སྐུན་ཞུ་ཕུལ་ཚུགས་ནིའི་དོན་ལུ་ཨིན།

དམིགས་ཡུལ་འདི་གླགཁ་ཐབས་ཀྱི་དོན་ལུ་ ཞིབ་འཚོལ་གྱི་དྲི་བ་གཅོ་བོ་ **སྤུ་ན་རྩོངཁག་ནང་འཛོད་ཀྱི་ འབྲིངརིམ་བར་མའི་སློབ་ཕྲུག་ སྤེ་རིམ་༡༠ ཚུ་གིས་ རྩོངཁ་ལུ་སློབ་པ་གཅིག་སྦེ་འདུག་གམ** ? ཞིབ་བའི་ཐོག་ལུ་ ཡན་ལག་གི་དྲི་བ།

༡. ན་གཞོན་ཚུ་གིས་རྩོངཁ་ལུ་སློབ་པ་གཅིག་སྦེ་སྐྱེདཔ་མས ?

༢. རྩོངཁ་ལུ་ཆུབ་སྐྱོར་འབད་མི་གཅིག་སྦེ་འདུག ?

༣. རྩོངཁ་ལུ་སློབ་པ་མ་བསྐྱེད་མི་འདི་གཅིག་ཅི་འབད་ཨིན་ན ? ཞིབ་བའི་དྲི་བ་ཚུ་བཀོད་དེ་ཞིབ་འཚོལ་འབད་ནི།

༡.༣ རྩོམ་བྱིས་བསྒྲུབ་ཞིབ། (Literature review)

རྩོམ་རིགཔ་བསྒྲུབ་ཞིབ་ཀྱི་ངོསྤྲོད།

ཆུལ་ཡོངས་ཀྱི་སྐད་ཡིག་རྩོངཁ་འདི་ གོང་འཕེལ་དང་དུར་ཁྲབ་གཏང་ཐུབ་ཐབས་ཀྱི་ ཐབས་ལམ་ལུ་དམིགས་ཏེ་ སཁས་པ་ཉམས་སྐྱོང་ཅན་ཚུ་གིས་བརྩམས་ཡོད་པའི་ རྩོམ་རིགས་ཚུ་ལུ་ཆུབ་རྟེན་དང་ མི་དམངས་ཀྱིས་བསམ་འཆར་བཀོད་ཡོད་མི་ཚུ་ལུ་ གཞི་བཞག་ཐོག་ལས་ དོན་ཚན་རེ་རེ་བཞིན་དུ་ལུ་ ཆུབ་ཁྲངས་བཀོད་དེ་ཡོད།

དེ་འབདཝ་ལས་ ངེགི་རྩོམ་བྱིས་བསྒྲུབ་ཞིབ་འདི་ ང་བཅས་རའི་ཆུལ་ཡོངས་སྐད་ཡིག་རྩོངཁ་འདི་ལུ་ སློབ་ཕྲུག་ཚུ་གིས་སློབ་པ་དང་དང་འདོད་གཅིག་སྦེ་ཡོད་གཅིག་ དེ་གི་སྐྱོར་ཐབས་གི་ཐབས་ལམ་ཅིར་སྟོན་དགོཔ་འདུག་གི། རྩོངཁའི་ཤེས་ཡོན་གྱི་གནས་ཚད་ལུ་ འགྱུར་བ་དང་གདོང་ལེན་གཅིག་སྦེ་འདུག་གི་དང་། འབྲུག་མི་ཡོངས་ཀྱིས་རྩོངཁ་འདི་ལུ་ཆུབ་སྐྱོར་དང་ ལག་ལེན་གཅིག་སྦེ་འཐབ་དོ་ཡོདཔ་ཨིན་ན། རྩོངཁ་གོང་འཕེལ་དང་དུར་ཁྲབ་གཏང་ཐུབ་ཀྱི་ཐབས་ལམ་ གཅིག་ཅི་ཨིན་ན་ལྟ་ནི། གཞུང་གི་སྲིད་བྱུས་དང་ཐབས་ལམ་ གཅིག་ཅི་བྱེམ་ར་བསྒམས་ཏེ་འདུག་གི་གི་གནད་དོན་ཚུ་ བཅུད་བཏོན་ནི་ལུ་གཞི་བཞག་ཐོག་ལས་ རྩོམ་བྱིས་ཚུ་བསྒྲུབ་ཞིབ་འབད་དེ་ཡོདཔ་ཨིན།

༡. རྩོངཁའི་སྐད་ཡིག་གི་ཆུབ་ཁྲངས་དང་དགོས་པ།

འབྲུག་རྒྱལ་ཁབ་ནང་ ཁ་སྐད་དང་སྐད་རིགས་ལེ་ཤ་ཡོད་པའི་གྲས་ལས་ རྫོང་ཁའི་ རྒྱལ་ཡོངས་ཀྱི་སྐད་ཡིག་སྤྱི་དོས་འཛིན་འབད་དགོ་མི་དེ་ཡང་ འབྲུག་རྒྱལ་ཁབ་ཀྱི་གཞུང་ཁ་རྫོང་ཁའི་ ད་རེས་ནདས་པ་བརྒྱས་བརྒྱས་མེན་པར་ དུས་དང་ཐུག་རྒྱལ་ཁབ་འདི་ནང་ མིའི་འགྲོ་བ་ཚགས་པའི་ནམ་དུས་ལས་རང་ འགྲོ་བ་མིའི་རང་གཤིས་རང་ཚས་ཀྱི་རྒྱུ་མཚན་དང་འབྲེལ་བར་འབྱུང་བའི་ ཤེས་བརྗོད་འདྲུག་པའི་མཚན་ཉིད་དང་ལྡན་པའི་ ཡུལ་སྐད་རྣིངམ་ཅིག་སྤྱི་དར་ཉེ་ཡོད་པ་ལས་བརྟེན་ཞིན་ཟེར་བཀོད་དེ་འདུག (རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས་ ༡༩༥༠) །

རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས་(༢༠༠༠) ནང་ རྫོང་ཁ་འདི་དུས་རབས་༡༣ པའི་ནང་ ཞབས་དྲུང་རིན་པོ་ཆེ་ཞལ་བཞུགས་པའི་བསྣང་ལས་རང་ རྫོང་གཞི་ཁག་ཚུ་ནང་ཤུག་ལྟ་གནང་མི་ཚུ་གིས་ གཞུང་སྐད་འབད་ལག་ལེན་འཐབ་སྟེ་ཡོད་པ་ཞིན། ཞིན་རྒྱུད་སྤྱི་ལོ་ ༡༩༣༡ ཚུན་ ཆོས་སྐད་ནང་མ་གཏོགས་ རྫོང་ཁ་ཉག་གཅོག་ བོག་ལུ་འབྲི་སྟེལ་མ་དང་བས། ཟེར་བཀོད་ནུག ད་རུང་ རྫོང་གོང་འཕེལ་ལྷན་ཚོགས་(༢༠༡༢ ཨོག་༡༣) ནང་ མི་དབང་འབྲུག་རྒྱལ་བཞེ་པ་འཛིགས་མེད་སེང་དབང་ཕྱུག་མཆོག་གིས་ངང་ལུགས་གནམ་ལོ་ ཆུ་མོ་བྱ་ལོ་ ཟླཔ་༤ པའི་ཚེས་༡༠ ལུ་ རྫོང་ཁ་འདི་ འབྲུག་རྒྱལ་ཁབ་ཀྱི་ངོ་རྟགས་ངོ་མ་ཅིག་ཞིན་མ་ལས་ འབྲུག་པའི་མི་ཁྲངས་གཅིག་གིས་ བཅུ་ཀ་ཚུ་ཡང་གནང་སྟེ་ཡོད་པ་འབད་བཀོད་དེ་འདུག

དེ་མ་ཚད་ ཤེས་རིག་གི་སྟོབ་གྲྭའི་རྩ་གཞུང་ནང་ཡང་ རྫོང་ཁའི་ཆོས་ཚན་འདི་ ལྷབ་སྟོན་གྱི་ལས་རིམ་ཅིག་འབད་ཚུད་དེ་ཡོད་པ་ཞིན། དེ་ཡང་ ཤེས་རིག་ལྷན་ཁག(༢༠༡༢ ཨོག ༡༨) ནང་ རྫོང་ཁ་འདི་འབྲུག་གི་སློབ་གྲྭ་ཚམཉམ་གྱི་ནང་ལུ་ བྱོ་གསར་སློབ་རིམ་ལས་ སློབ་རིམ་༡༢ པ་ཚུན་ཚོད་ ཆོས་ཚན་སྦེ་སློབ་སྟོན་འབད་ནི་ཞིན་པའི་ཁར་ སློབ་གྲྭའི་རྩ་གཞུང་ནང་ལུ་ རྫོང་ཁ་འདི་དུས་མ་འོངས་པ་ནང་ཡང་ མི་ཉམས་གོང་འཕེལ་དང་ཉམས་པ་སོར་ཆུད་འབད་དེ་ འབྲུག་མི་དང་སློབ་སྡུག་ཚུ་གིས་ ལྷབ་དགོ་པའི་ ཆོས་ཚན་གཅོ་བོ་ཅིག་སྦེ་བཞག་ནི་ ཞིན་ཟེར་འཁོད་དེ་འདུག དེ་འབདཔ་ལས་རྫོང་ཁ་འདི་ལུ་འབྲུག་མི་ཡོངས་ཀྱིས་ བརྩི་མཐོང་བསྟེད་དེ་ བདག་འཛིན་དང་གོང་འཕེལ་གཏང་དགོས་འདི་ གལ་ཆེ་བའི་གཞི་ངོ་མ་ཅིག་སྦེ་མཐོང་ཞིན་མས།

༢. རྫོང་ཁའི་སྐད་ཡིག་ཡར་རྒྱས་ཀྱི་སྤྱིད་བྱུས།

རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས་(༢༠༡༠ ཨོག་གྲངས་༤༣) ནང་ སྤྱི་ལོ་༡༩༤ ས་འབྲུག་ཟླ་༡༢ ཚེས་༩ ལུ་མི་དབང་འབྲུག་རྒྱལ་ བཞེ་པའི་ཞབས་ལས། རྫོང་ཁ་འདི་ འབྲུག་རྒྱལ་ཁབ་རང་དབང་གི་ངོ་རྟགས་ མེད་ཐབས་མེད་པ་ཅིག་ཞིན་མ་ལས་ གཅ་ར་གིས་

བདག་འཛིན་འབད་དགོ་པའི་བཀའ་ཤོག་ རྩོང་ཁག་ཡོངས་ལུ་གནང་ནུག་ཟེར་ བཀོད་ཡོདཔ་མ་ཚད། དཔལ་འབྱོར་དང་ རིན་ཆེན་མཁའ་འགྲོ་(২০১৩) ནང། གནམ་ལོ་১৮৫০ ལོ་གྲངས་ལས་ རྒྱལ་ཁབ་ནང་ལེགས་ཉེས་ཀྱི་འགྱུར་བ་ མཁྱེགས་དྲགས་འབད་ཐོན་མི་དང་འབྲེལ། གཞུང་གི་ཁ་ཐུག་ལས་ རྒྱལ་ཡོངས་སྐད་ཡིག་དང་ཁྲབ་ཀྱི་ཐབས་ལམ་ཚུ་ཡང་ གནས་སྤྱངས་དང་འཁྱེལ་བའི་ རྩོང་ཁ་གོང་འཕེལ་གཏང་ནི་ལུ་ དམིགས་གཏད་བསྐྱེད་དེ་ སློབ་གྲྭའི་ཤེས་རིག་རྩ་གཞུང་ཚུ་ རྩོང་ཁ་ཉིག་རྒྱུང་གི་ཐོག་ལུ་བཟོ་ཡོདཔ་ལུ། ཡིག་ཚང་ཁག་ཚུ་ནང་ཡང་ གཞུང་གི་ཕྱག་ལྟ་གནང་མི་ཚུ་ ཡིག་འགྱུལ་འབད་བའི་སྐབས་ གཅར་རྩོང་ཁའི་ཐོག་ལུ་ ར་གནང་དགོཔ་འབད་ ཨང་བདག་རྒྱལ་ཡོའི་ཞབས་ལས་ ཡིག་ཚང་བཀའ་རྒྱ་ གནང་ཡོདཔ་འབད་བཀོད་ནུག

ཕུར་པ་(২০১১) ནང་བཀོད་དོཕ་བཟུམ་འབད་བ་ཅིན་ དབྱིན་ལོ་১৮৫২ ལས་ རྩོང་ཁའི་ཆོས་ཚན་འདི་ ཡར་རྒྱས་གཏང་ཐབས་ལུ་སྤུ་རོ་སློབ་དཔོན་སློབ་སྦྱོང་ཁ་ནང་ སློབ་སྟོན་ཐབས་ཤེས་དང་ ཁྲད་རིག་གི་ཤེས་ཡོན་སྦྱང་འབད་ནི་དོ་དམ་ལས་ སློབ་དཔོན་ཚུ་ལུ་ དྲིན་ལོ་མའི་ཤེས་ཚད་ཀྱི་སློབ་སྦྱོང་འབད་ནི་འགོ་བཙུགས་ནུག་ དེ་བཟུམ་སྦེ་ སྤྱི་ལོ་২০০৯ ལས་ རྩོང་ཁ་སློབ་དཔོན་ སློབ་སྟོན་ཁྲད་རིག་གི་སྦྱོང་ཐབརཏ་མེད་མི་ཚུ་ ཐག་རིངཤེས་ཡོན་ནང་བཅའ་མར་གཏོགས་ཏེ་ སློབ་སྟོན་ལམ་ལུགས་གསར་པའི་ཐབས་ཤེས་ཚུ་ལུ་ སྤྱང་བ་འབད་དེ་ཡོདཔ་ཨིན་མས།

སྐལ་བཟང་དབང་ཕྱུག་ ཀུན་གསལ་འཐོན་རིམ་(Jan 31,2014) ནང་ ལྟ་གཡོག་བློན་པོ་གིས་འབད་བ་ཅིན་ སྲིད་བྱུས་ཀྱི་ཐད་ཁར་ ལྷན་རྒྱས་གཞུང་ཆོགས་ཀྱིས་ རྒྱལ་ཡོངས་ལྟ་གཡོག་གི་སྲིད་བྱུས་འདི་ལུ་ ངོས་ལེན་དང་ཆ་འཇོག་གྲུབ་གནད་ཡི་ཟེར་ སྤྱི་ཟླ་১ ཐའི་ཚེས་২৮ ལུ་རྒྱལ་ཡོངས་ཚོགས་སྡེའི་ དྲི་བཀོད་ལས་རིམ་སྐབས་གསལ་ཞུ་འབད་ནུག དེ་ཡང་འཆར་གཞི་১১ ཐའི་ནང་ ན་གཞོན་১,০০০ དེ་ཅིག་ལུ་ སྡེ་ན་འགྲེའི་གཡོག་གི་སྤྱོང་བརྟར་ཚུ་ རྩོང་ཁ་དང་ཨིང་སྐད་གཉིས་ཆར་འི་ཐོག་ལུ་ བྱིན་ཡི་ཟེར་ཨིན་མ་ཚད། སློབ་རིམ་১১དང་১০ ཐའི་ཤེས་ཚད་ཡོད་མི་ན་གཞོན་ཚུ་ དོན་ཁུངས་ཅན་གྱི་ལྟ་ཚུ་གི་ནང་ བཅའ་མར་གཏོགས་བཙུག་ནི་ལུ་ དམིགས་ཏེ་ཨིན་ཟེར་ཨིན་པས།

IP.Adhikari (6thsept.2010) གིས་ རྒྱལ་ཡོངས་ཀྱི་གནས་ཚད་ནང་ སྐབས་ཅིག་འབྲུག་རྒྱལ་ཁབ་ནང་ མི་དབང་འབྲུག་རྒྱལ་བཞེ་ས་མཆོག་གི་བཀའ་དྲིན་ལས། དབྱིན་ལོ་২০০১ ལས་ཚུར་ དམངས་གཙོའི་རིང་ལུགས་ཀྱི་གཞུང་ གསར་པ་གཞི་བཙུགས་ འབད་ཞིནམ་ལས་ཚུར་ ཆེ་མཐོའི་གནས་རིམ་ནང་ལུ་རྩོང་ཁ་འབྲི་ལྷག་གི་ཤེས་ཡོན་འདི་ ཡར་དྲག་སོང་སྟེ་ཡོད་ཟེར་ཨིན་པས། དེ་སྦེ་ གཞུང་

དང་སྐེར་གྱི་ཁ་ཐུག་ལས་ རྩོང་ཁའི་སྐད་ཡིག་ཡར་རྒྱས་ཀྱི་དོན་ལུ་ སྔེད་བྱས་དང་རྒྱབ་སྐྱོར་ཚུ་ འཕྲོ་མཐུད་དེ་ར་གནང་ཡོད་མི་ལུ་བལྟ་བ་ཅིན་ན་གཞོན་ཚུ་གིས་རྩོང་ལྟབ་སྦྱང་འབད་ནི་ལུ་ སེམས་ཤུགས་སྒོམ་སྤེ་ར་བསྐྱེད་ཚུགས་པའི་གཞི་ལུ་བསྒྲུར་ནི་ཨིན་མས།

༣. རྩོང་ཁའི་སྐད་ཡིག་ལུ་དང་ལེན།

མི་སྡེ་སྤྱིར་བཏང་གི་མཐོང་སྣང་དང་ དེ་ལས་གཞན་ཡང་ གཞུང་དང་རྒྱལ་ཁབ་ཀྱི་ཚ་གྱངས་ཡོད་ལུགས་ཚུ་ རྒྱབ་བསྟུགས་དང་གནས་ཚུལ་གསར་ཤོག་ནང་ལས་ཤར་བཀོད་དེ་ཡོད་མི་འདི་ཡིན། བསོད་ནམས་དབང་འདུས་གྱིས་(༢༠༠༤/༠৮/༠༤) ཀྱི་གནས་ཚུལ་ནང་ལུ་བཀོད་དོ་བཟུམ་འབད་བ་ཅིན། ན་གཞོན་ཚུ་གིས་བཤད་མི་ནང་ རྩོང་ཁ་འདི་བརྡ་སྤྲོད་གྱི་རྣམ་གཞག་དང་སྟེབ་སྦྱོང་ཚུ་ གཅེ་བ་ལྟ་ཁག་ཡོད་པའི་ཁབ་བརྡ་སྤྲོད་གྱི་རྣམ་གཞག་དེ་ཚུ་ ལེགས་ཤོམ་སྒེ་མཐར་འཁྱོལ་ཏེ་ མཁས་མཆོག་ལུ་གྱུར་རྒྱུ་ མ་འོངས་པ་ནང་ ལྟ་གཡོག་གི་གོ་སྐབས་ག་ནི་ཡང་མེད་པ་ལས་ ཆོས་རྒྱུགས་ཀྱི་མཐར་འཁྱོལ་སྐྱེགས་ཚད་ བདག་ཉྱན་ནི་གི་དོན་ལུ་མ་གཏོགས་ སྤྲོ་བ་སྒོམ་འབད་ལེན་མི་ཚུགས་པས་ཟེར་ཨིན་པས།

སྨིན་གྲུབ་(༢༠༡༡/༡༡/༢༢) ནང་ “ སྤྱིར་བཏང་གི་མཐོང་སྣང་ལུ་ འཛེལ་ཡོད་མི་ངོམ་ཚུ་གིས་ ཆོས་ཚན་འདི་དང་ འཛེལ་བའི་ ལས་རིམ་ལེ་ཤ་བཙུམས་མི་ལུ་བལྟ་སྟེ་ རྩོང་ཁ་འདི་ ཡར་དྲག་འགྱོ་ཡོདཔ་བཟུམ་མཐོང་རྟུང་ དོན་དོམ་ལུ་ཆོས་ཚན་འདི་ཡིག་ཐོག་ལུ་མ་གཏོགས་ ལག་ལེན་གྱི་ཐད་ལུ་ཡོངས་གྲུགས་རྩ་ལས་མེད།” ཟེར་ཨིན་མས།

རྩོང་ཁ་གོང་འཕེལ་ལྟན་ཚོགས་(༢༠༡༣) ནང་ དེ་སྟེ་ ཐུགས་ཀྱི་ཚ་གྱང་བཞེས་དགོ་མི་འདི་ཡང་ སྤྱི་ལོ་༢༠༡༣ ལུ་ རྩོང་ཁ་གོང་འཕེལ་ལྟན་ཚོགས་ཀྱིས་ ཐིམ་ཐུ་ཁྲོམ་སྟེའི་ནང་ སྐོ་བྱང་དང་བརྟ་བྱང་ཚུ་ནང་ རྩོང་ཁ་ལག་ལེན་གྱི་བརྟག་ཞིབ་འབད་བའི་སྐབས་ལུ། སྐོ་བྱང་ལ་ལུ་སྟེབ་མ་ཚང་མི་དང་ ལ་ལུ་ཡིག་བཟོ་རྩམས་ཀི་ཀི་སྟེབ་བྱིས་ཡོདཔ་མ་ཚད་ མངའ་གྲོས་ར་རྩོང་ཁ་མེད་པར་ ཨིང་ལིཤ་རྒྱུམ་ཅིག་ བྱིས་ཀྱ་ཡོདཔ་ལས་བརྟེན་ཨིན་ཟེར་ཨིན་མས། གནད་དོན་དེ་ལུ་བལྟ་བ་ཅིན་ རྩོང་ཁ་ལས་ཨིང་ལིཤི་ལུ་ སྤྲོ་བ་མང་སུ་བསྐྱེད་དོཔ་བཟུམ་སྟེ་མཐོངམ་ཨིན་མས།

དེ་མ་ཚད་ ན་གཞོན་ཚུ་མཐོ་རིམ་ཤེས་ཚད་ལྟབ་ནི་དང་ལྟ་གཡོག་འཚོལ་ནིའི་དོན་ལུ་ རྩོང་ཁའི་སྐུགས་ཚད་འདི་གིས་ རྒྱབ་

སྐྱོར་མི་འབད་དོ་ཡོད་པ་ལས་ རྩོང་ཁའི་ཤེས་ཚད་ལེགས་ཤོམ་ཡོད་མི་ཚུ་ སེམས་སྐྱོ་སྡུག་སར་མཐོངམ་མ་ཚད་ ཁོང་གིས་རྩོང་ལུ་དེ་ཚུན་ཚོད་སྦྱོ་བ་བསྐྱེད་དེ་ མ་ལྷབ་རྒྱབ་ཀྱི་ཀྱི་གཏང་ནུག་ ཟེར་སྨྲབ་མི་ཡང་ལེ་ཤ་ར་འཐོནམ་ཙིན་མས། གལ་སྲིད་གཅིག་ཤོ་ཐུབ་ཡུ་དེ་ཚུན་ཚོད་སྦྱོ་བ་བསྐྱེད་པ་ཅིན་ མ་འོངས་ལུ་རྒྱལ་ཡོངས་སྐད་ཡིག་རྩོང་འདི་ མར་ཉམས་འགྱོ་སྟེ་ རྒྱང་ཆགས་ཀྱི་སྐད་ཡིག་ཅིག་ལུ་ འགྱུར་ནིའི་ཉེན་ཁཀ་ཡང་མཐོངམ་ཙིན་མས།

སྐལ་བཟང་དབང་ཕྱུག་གིས་ (Jan 8, 2015) ནང་ རྩོང་ཁག་གོང་འཕེལ་ལྷན་ཚོགས་ཀྱི་ དྲུང་ཆེན་བགྲེས་པ་ཤེས་རབ་རྒྱལ་མཚན་དང་ དེ་བ་དྲེས་ལན་འདབ་བའི་སྐབས་ ཁོ་གིས་གསུངས་མི་ནད། “ རྩོང་ཁ་འདི་ལུ་ཁག་ལེད་མི་དེ་ཡང་ ངའཅས་རའི་རྒྱལ་ཁ་གོངམ་ཚུ་གིས་ རྩོང་ཁ་དེ་ལུ་ཁག་ཡོད་ཟེར་མ་གསུངས་པས། ལུ་ཁག་ཡོད་པ་སྤེ་མཐོངམི་དེ་ ལྷབ་སྦྱང་འབད་ས་ར་སློབ་གྲྭ་ཚུ་ནང་ཙིན་རྒྱང་ དེ་ནང་ ཙིར་སྐད་ལུ་ཤུགས་ཆེ་བའི་ཁར་ རྩོང་ཁའི་ཆོས་ཚན་ ཕྱུད་རྩོག་གཅིག་ལས་མེད་པ་ལས་ ཤུགས་བཏོན་ཏེ་མ་ལྷབ་པའི་རྟགས་ཙིན། ན་གཞོན་ཚུ་གིས་ རྩོང་ཁ་ལྷབ་སྦྱང་འབད་ནིའི་ གོ་སྐབས་དང་སྤྱོ་བ་བསྐྱེད་ཚུགས་ནིའི་དོན་ལུ་ ང་བཅས་རའི་སྲིད་ཐྲུས་ཚུ་ནང་ འགྱུར་བ་ འབག་འོང་དགོ་པ་ཡོད།”། ཟེར་གསུངས་ཏེ་འདུག

ཞིབ་འཚོལ་ཐབས་ལམ། (Methodology)

ཞིབ་འཚོལ་ཐབས་ལམ་ཟེར་མི་འདི་ ཞིབ་འཚོལ་པ་གིས་ ཞིབ་འཚོལ་གྱི་དོན་ལུ་ མཁོ་ཆ་བའི་ཞིབ་འཚོལ་གྱི་གནད་དོན་དང་ ཡང་ན་ གནས་སྟུད་ཚུ་བསྡུ་ལེན་འབད་བའི་ ཐབས་ཤེས་ཅིག་ལུ་གོཞུ་ཙིན་ཟེར་ཙིན་མས། Singye Namgyel, 20011-P-83) ནང། མགོན་པོ་རྡོ་རྗེ་ དཔལ་འབྱོར་ རིན་ཆེན་མཁའ་འགྲོ་(೩೦೨೫) གིས་འབད་བ་ཅིན། ཞིབ་འཚོལ་འདི་འབད་བའི་

སྐབས་ལུ་ ཐབས་ལམ་ཁག་གསུམ་ཡོད་པ་འབད་བ་ཨོད་ནུག ངེ་ཡང་ དང་པ་ གྲངས་ཚད་ལྟོན་པའི་ཐབས་ལམ། གཉིས་པ་ ཁུངས་བཅོན་ཐབས་ལམ། གསུམ་པ་ཐབས་ཤེས་སྤེལ་མའི་ཐབས་ལམ་ཚུ་ཙིན་མས།

ངགིས་ ཞིབ་འཚོལ་གྱི་ཐབས་ལམ་ལེ་ཤ་ཡོད་པའི་གྲལ་ལས་ གྲངས་འབྲེལ་ཐབས་ཤེས་འདི་ གདམ་ཁ་རྒྱབ་དགོ་མི་འདི་ ཡང། ངེགི་ ཞིབ་འཚོལ་གྱི་དོན་ཚན་དང་འཁྲིལཡ་ད་ གྲངས་འབྲེལ་གྱི་ཐོག་ལས་ བརྟག་ཞིབ་འབད་དགོ་པ་ཡོད་ནི་ཁེ་གིས་ཙིན། ཐབས་ལམ་འདི་ ཞིབ་འཚོལ་གྱི་ཐབས་ལམ་ཚུ་ལས་ རྐྱེངཤོས་ཅིག་ཙིནམ་ལས་ ལག་ལེན་འཐབ་པའི་སྐབས་ལུ་ སྤྱབས་བདེ་ཏོག་ཏོ་དང་ འཇམ་

ཏུང་ཏུ་ཡོད་པའི་ཁར་ དུས་ཚོད་ཡངས་ལེ་ཤ་མི་འགོངས་ནི་ཞིན་མས།

སྤུ་རོ་ཤེས་རིག་མཐོ་རིམ་སློབ་གྲྭ་(২০১৯) ནང། གྲངས་འབྲེལ་ཐབས་ལམ་ཟེར་མི་འདི་ ཞིབ་འཚོལ་གྱི་གླུབ་འབྲས་དང་བཅུད་ཚུ་གཅོ་བོ་གྱངས་ཁ་ལུ་བརྟེན་ཏེ་ གསལ་སྟོན་འབད་དགོ་ནི་དེ་གིས་ གྲངས་འབྲེལ་ཟེར་སྨྲ་ཞིན་མས། ངགི་ས་ཡང་ སྤུ་ན་ཁ་རྩོང་ཁག་ནང་གི་ སློབ་རིམ་བཅུ་པའི་སློབ་ཕྲུག་ཚུ་ གནས་སྟུད་བསྡུ་ལེན་གྱི་དཔེ་ཚད་འབད་ ལག་ལེན་འཐབ་སྟེ། ཁོང་གིས་ རྩོང་ཁ་ལུ་སློབ་གྲྭ་ག་དེ་སྤྱི་ཡོད་པ་ཞིན་ན་གི་ བརྟག་ཞིབ་འབད་ཞིནམ་ལས། གྲངས་ཁའི་ཐོག་ལས་ སློབ་ཡོད་མི་དང་མེད་མི་གཉིས་ཀྱི་ཁྲད་པར་དང་ ཆུབ་ཁྲངས་ཀྱི་མང་ཉུང་ལུ་བལྟ་སྟེ་ ཞིབ་འཚོལ་གྱི་གླུབ་འབྲས་གསལ་སྟོན་འབད་ནི་ཞིནམ་ལས་ ཐབས་ལམ་འདི་གདམ་ཁ་ཆུབ་ཡོད་པ་ཞིན།

གནས་སྡུད་བསྡུ་ལེན་གྱི་ མཁོ་ཆས། (Data Collection Tools)

གྲངས་འབྲེལ་ཐབས་ཤེས་ཀྱི་མཁོ་ཆས་འདི་ Creswell (2009) དང་འཁྲིལ་བ་ཅིན། དངོས་ཐོག་ལུ་ཡོད་པའི་གྱུབ་མཐའ་ཚུ་ རྣམ་པ་སོ་སོའི་འདོད་པ་ཡོད་མི་དེ་ཚུ་དང་གཅིག་ཁང་ འབྲེལ་བ་འཐབ་ འདྲི་དཔྱད་འབད་དེ་ བརྟག་དཔྱད་འབད་ནི་གི་མཆོ་བསམ་ཡོད་མི་འདི་ཞིནམ་དང་། མཁོ་ཆས་འདི་ལུ་ རྣམ་པ་སོ་སོའི་འདོད་པ་ཡོད་མི་ལེ་ཤྭ་དང་གཅིག་ཁང་ སྤྱ་མངགི་བརྟག་དཔྱད་དང་བརྟག་ཞིབ་འབད་དེ་ ཞིབ་འཚོལ་གྱི་མཇུག་ལུ་ རིག་ཚོད་བཀོད་དགོ་པ་ཞིན་མས།

དེ་འབདཔ་ལས་ ངགིས་གདམ་ཁ་ཆུབ་ཡོད་པའི་གྲངས་འབྲེལ་ཐབས་ཤེས་དེ་ལུ་ མཁོ་ཆས་གཅོ་བོ་ བརྟག་དཔྱད་མཁོ་ཆས་དང་ བརྟག་ཞིབ་མཁོ་ཆས་གཉིས་ལག་ལེན་འཐབ་དགོ་མི་དེ་ཡང། མཁོ་ཆས་དེ་ཚུ་གིས་ རངདངརྣམ་པ་སོ་སོའི་འདོད་པའི་བར་ན་ དེ་ དཔྱད་འབད་ཞིནམ་ལས་འབྲེལ་བ་བཟོ་སྟེ་ ཞིབ་འཚོལ་གྱི་དྲི་བའི་ལན་ཚུ་ འཚོལ་ཐབས་འབད་ནི་དང། རིག་ཚོད་དེ་ཚ་འཛོག་འབད་ནི་ ཡང་ ཅིན་ཚ་མེད་བཟོ་ནི་ལུ་ཕན་ཐབས་འབད་ཡ་ལས། ངགིས་གྲངས་འབྲེལ་ཐབས་ཤེས་ཀྱི་མཁོ་ཆས་གཉིས་པ་ བརྟག་ཞིབ་མཁོ་ཆས་འདི་ལག་ལེན་འཐབ་སྟེ་ མངཚོགས་ལས་དཔེ་ཚད་ལེན་ཞིནམ་ལས། གནས་སྡུད་བསྡུ་ལེན་དང་ གནད་སྡུད་དབྱེ་དཔྱད་འབད་དེ་ གྲངས་ཁའི་ཐོག་ལས་བདེན་ཁྲངས་ཚུ་བཀོད་དེ་ཡོད།

དཔེ་ཚད་ལེན་ཐངས། (Sampling)

ཞིབ་འཚོལ་གྱི་དུས་ཚད་ཟེར་མི་འདི་ མཁས་དབང་མཁོད་པོ་རྟོ་རྗེ་དང་ དཔལ་འབྱོར་ སིན་ཆེན་ཕུན་ཚོགས་(༡༠༧༤) ནང་ལུ་བཀོད་ཡོད་དོ་ བརྒྱམ་སྦྱི་ཅིན། མི་འབོར་སྦྱི་ཁྱབ་ལུ་ཁྱད་ཆོད་པའི་ དུས་ཚད་ལེན་ཐོག་ལས་ བརྟག་ཞིབ་འབད་ནི་དོན་ལུ་ ལག་ལེན་འཐབ་མི་ཅིག་ལུ་སླབ་ཞིན། དེ་འབདཝ་ལས་ སྤྱིར་བཏང་ཞིབ་འཚོལ་དོན་ལུ་ དུས་ཚད་ལེན་ཐངས་ཀྱི་དབྱེ་བ་ལེ་ཤ་ཡོད་པ་ཞིན་རྐྱང་ ཡོངས་གྲགས་ལུ་གཉིས་ཡོད་མི་ལས། ངཀིས་ ཁོ་རིམ་ལྷན་པའི་དུས་ཚད་ལག་ལེན་འཐབ་ཐོག་ལས་ གནས་སྟུད་ཚུ་

བསྟུ་ལེན་འབད་ཡི།

དེའི་ཞིབ་འཚོལ་འདི་ལུ་ དུས་ཚད་ཚུ་ རབ་འབྱུངཔ་ཅིན་ རྒྱལ་ཡོངས་ཀྱི་སྤྱི་ཐུག་ཚུ་དང་ ཇོང་ཁའི་སྤྱི་བ་དཔོན་ དེ་ལས་ ཐམ་ཕྲས་ཤེས་དང་ ལས་ཁུངས་ཁག་གི་འགོ་དཔོན་ཚུ་དགོཔ་ཞིན་རྟུང། ངལ་འཚོ་དང་དུས་ཚོད་ཐོབ་མ་ཚུགས་ལས་བརྟེན་ སྤྱ་ན་ཇོང་ཁག་ནང་འཁོད་ཀྱི་སྤྱི་གཅོ་ བྱེད་ཐུབ་འཕྲིད་རིམ་སྤྱི་བ་གཅིག་ཨིན་རྟུང། དཔའ་སྦི་ས་འཕྲིད་རིམ་སྤྱི་བ་གཅིག་ཨིན། ཁུ་རུ་ཐང་འཕྲིད་རིམ་སྤྱི་བ་གཅིག་ ཁུ་ལས་ཤིང་ཁ་འཕྲིད་རིམ་སྤྱི་བ་གཅིག་ ཚུ་ལས་སྤྱི་ཐུག་ ༡༥ ནི་ གཅིག་ཀྱི་དུས་ཚད་ལེན་འཐབ་སྟེ་ གདམ་འཐུ་འབདཝ་ཞིན་ཁུ་ཚུ་ ཁྱེད་ཚད་ལེན་ཡོདཔ་ཨིན།

ཞིབ་འཚོལ་འབད་ཐངས་ཀྱི་གོ་རིམ། (Procedure)

ན་གཞོན་ཚུ་གིས་ ཇོང་ཁ་ལུ་སྤྱི་བ་དང་དང་འདོད་ ཡོདཔ་དང་ཤེད་པའི་དབྱེ་བ་ཞུ་སྟེ་ གྲུབ་ཆེད་གསལ་རིལ་རིལ་འབད་ འཐོབ་ཚུགས་ནིའི་ དོན་ལུ། གནད་སྟུད་བསྡུ་ལེན་གྱི་དྲི་བ་དང་ ཤོག་ཁྲམ་བཟོ་དགོཔ་ཡོད་མི་ཚུ་བཟོ་སྟེ་ དྲི་ཞོ་དང་སྤྱི་བཀོད་ཆ་ཚང་བའི་དྲི་བ་དྲིས་ལན་ཐོག་ལུ་ དྲི་བཀོད་ལམ་ལུགས་དང་ ཀུན་སྤྱོད་རྣམ་གཞག་ཚུ་ ཚུལ་མཐུན་འབད་ལག་ལེན་འཐབ་སྟེ་ གནས་སྟུད་བསྡུ་ལེན་འབད་དེ་ཡོད།

གནས་སྟུད་བསྡུ་ལེན་མ་འབད་བའི་ཅ་མད་ འབྲུག་རྒྱལ་འཛིན་གཙུག་ལག་སློབ་སྟེ་ སྤ་ངོ་ཤེས་རིག་མཐོ་རིམ་སློབ་གྲྭ་ལས་ གནང་བ་ལེན་ཡི། དེ་ལས་ ངར་འི་སློབ་གྲྭ་ནང་གི་ སློབ་རིམ་བཙུ་པ་ཚུ་ལས་མོ་བཏབ་ཀྱི་ གནས་སྟུད་བསྡུ་ལེན་འབད་དེ་ དྲི་བ་ཚུ་ལེགས་བཅོས་འབད་དགོཔ་ཡོད་ཅིན་ལྷ་ཡི། དེ་གི་ཤུལ་མ་ འབྲེལ་ཡོད་སློབ་གྲྭའི་དབུ་འཛིན་ལས་ གནས་སྟུད་བསྡུ་ལེན་ཆོག་པའི་གནང་བ་ ཡིག་ཐོག་ལུ་ལེན་ཏེ་ཡོད།

ཞིབ་འཚོལ་གྱི་བློ་གཏད་དང་ཚབ་ཞགས། (Research reliability and validity)

ཤེས་རིག་ཞིབ་འཚོལ་ཐབས་ལམ་ ལྷག་དེབ་ (২০১৫) ཤོག་ ২৮ ནང་ལྟ། “ཞིབ་འཚོལ་འབད་མི་དང་ ཞིབ་འཚོལ་ནང་ལུ་བཅའ་མར་གཏོགས་མི་ཚུ་གི་བར་ན་ འབྲེལ་བ་ལེགས་ཤོམ་བཟོ་དགོ བཅའ་མར་གཏོགས་མི་ཚུ་དང་མཉམ་ འབྲེལ་བ་ལེགས་ཤོམ་བཟོ་སྟེ་བཞག་ཚུགས་པ་ཅིན་ ཤུལ་ལས་ཞིབ་འཚོལ་པ་གཞན་གྱི་དོན་ལུ་ཡང་ ཕན་ཐོགས་བྱུང་ཚུགས།” དེ་འབད་ཀི་འདི་གིས་ ཞིབ་འཚོལ་ནང་ལུ་བཅའ་མར་གཏོགས་མི་ཚུ་ལུ་ སྤ་གོང་ལས་ ཞིབ་འཚོལ་གྱི་སྒྲིག་གཞི་དང་ གསང་བ་བཞག་ཐབས་ཚུ་ ཁ་གསལ་འབད་བཤད་དེ་བྱེད་པ་ཅིན་ ཁོང་གིས་ཞིབ་འཚོལ་པ་ལུ་ བློ་གཏད་དང་ཡིད་ཆེས་ཚུ་བསྐྱེད་ཚུགསཔ་ཨིན། ཟེར་བཀོད་དེ་ཡོད་པ་ལས། ངག་གིས་ཡང་ དཔེ་ར་ བཅའ་མར་གཏོགས་མི་ཚུ་ལུ་ ཞིབ་འཚོལ་གྱི་དམིགས་དོན་དང་ སྒྲིག་གཞི་ གསང་བ་ཚུ་གི་སྐོར་ལས་ བཤད་པ་རྐྱབ་སྟེ་བྱེད་ཡི།

གན་སྤྱད་ནང་ལས་ཐོབ་མི་གནས་ཚུལ་ཚུ་ག་ར་ (ཨེསི་པི་ཨེསི་ཨེསི) ལག་ལེན་འཐབ་སྟེ་ འདི་ནང་ལས་ཐོབ་པའི་གནད་དོན་ཚུ་ལུ་ ཕྱོགས་ལྟར་གི་ལྟད་མ་ཞུགས་པར་ རང་བཞིན་གཅིན་མི་འདི་ བཅོས་མིན་དྲང་བདེན་འབད་བཙུགས་ཏེ་ཡོད། གནས་བསྡུད་ཀྱི་ཡིག་ཆ་ཚུ་ཡང་ གསང་བ་འབད་བཞག་ནི་ཨིན་པའི་ཁས་བླངས་དང་ ཤུལ་ལས་ ཉེན་ཁག་ཚུ་གཅིག་རང་ཅི་ཡང་མེད་རུང་ ཞིབ་འཚོལ་པ་རང་གིས་ འབད་གཏང་ནི་ཨིན་པའི་ངོས་ལེན་འབད་ཡོད་པ་ཨིན།

ཞིབ་འཚོལ་གྱི་ཀུན་སྤྱོད་རྣམ་གཞག། (Research Ethics)

སྤུ་ར་ཤེས་རིག་མཐོ་རིམ་སློབ་གྲྭ་ (2014) ནང། “ཞིབ་འཚོལ་གྱི་ཀུན་སྤྱོད་རྣམ་གཞག་ཟེར་མི་འདི་ ཞིབ་འཚོལ་ནང་ལུ་འབད་ཆོགཔ་དང་མ་ཆོག་པའི་ལམ་ལུགས་ཚུ་ཀྱི་སྐོར་ལས་ ལམ་སྟོན་འབད་མི་ལུ་སླབ་ཨིན། ཀུན་སྤྱོད་རྣམ་གཞག་འདི་ ཞིབ་འཚོལ་ནང་ལུ་ཞེད་ཐབས་མེད་པའི་ གཞི་རྟེན་གཅོ་བོ་ཅིག་ཨིན། ཞིབ་འཚོལ་འགོ་བཙུགས་ཏེ་མཇུག་མ་བསྡུ་ཚུན་ཚོད་ ཀུན་སྤྱོད་རྣམ་གཞག་དེ་དང་འཁིལ་ཏེ་འབད་དགོཔ་ཨིན།” ཟེར་བཀོད་དེ་འདུག

དེ་འབད་ཧ་ལས་ངགིས་ ཏེ་མ་རང་ རྩོད་ཁག་དང་སློབ་གྲྭའི་འགོ་དཔོན་ཚུ་ལས་ ཡིག་ཐོག་གི་གནང་བ་ལེན་ནིའི་དོན་ལུ་ ཞིབ་འཚོལ་གྱི་དོན་ཚན་དང་དམིགས་ཡུལ་ དུས་ཚོད་ཚུ་ཁ་གསལ་འབད་བཙུགས་སྟེ་ ཞུ་ཡིག་ཕུལ་ཐོག་ལས་གནང་བ་ལེན་ཡི། དེ་ལས་

དེས་ཚད་ནང་ཚུད་ཡོད་པའི་མི་དོམ་ཚུ་ལུ་ཡང་ ཞིབ་འཚོལ་གྱི་དོན་ཚན་འདི་གི་སྐོར་ལས་ དམིགས་ཡུལ་ དགོས་དོན་ དཀའ་ངལ་དང་ བཅའ་མར་གཏོགས་ཐངས་གྱི་ལམ་ལུགས་ཚུ་ ཁ་གསལ་འབད་གོ་བརྡ་སྤྲོད་དེ་ ཁོང་རའི་བློ་འདོད་ལྟར་དུ་ བཅའ་མར་གཏོགས་ནའི་གོ་སྐབས་ཐུབ་ཡི། གནད་སྡུད་བསྡུ་ལེན་ཚུ་ཡང་ བཅའ་མར་གཏོགས་མི་ མི་དོམ་རེ་བཞིན་དུ་ལས་ གནང་བ་ཐོབ་ཚར་བའི་ཤུལ་ལུ་རྒྱངམ་ཅིག་ འབད་དེ་ཡོད།

ཞིབ་འཚོལ་གྱི་ཚད་འཛིན། (Limitations)

དེ་གི་ཞིབ་འཚོལ་འདི་ སྤུ་ན་ཁ་རྩོང་ཁཐ་ནང་འགོད་ཀྱི་ འབྲིང་རིམ་བར་མའི་སློབ་ཕྲུག་ སློབ་རིམ་བཅུ་པ་ཚུ་རྒྱངམ་ཅིག་ལས་ གནས་སྡུད་ བསྡུ་ལེན་འབད་ཡོདཔ་ལས་ ཐུབ་འབྲས་འདི་གིས་ རྒྱལ་ཡོངས་ལུ་འགའ་མི་ཚུགསཔ་འོང། ཞེན་རྩུང་ ཤུལ་ལས་ དོན་ཚན་འདི་གི་ཐོག་ལུ་ ཞིབ་འཚོལ་རྒྱ་ཆེཞྱེ་སྦེ་འབད་དགོ་པ་ཅིན་ གནས་སྡུད་བསྡུ་ལེན་ཡང་ རྩོང་ཁཐ་ཁཐ་གཅིག་གི་སློབ་ཕྲུག་དང་ཞེ་གཡོགས་ མི་སེང་ཚུ་ལས་ལེན་དགོཔ་འབད་མཐོངམ་ཞིན་མས།

དེ་མ་ཚད་ ཞིབ་འཚོལ་གྱི་ཐབས་ལམ་ཡང་ གྲངས་འབྲེལ་ཐབས་ལམ་གྱི་ཐོག་ལས་ཟེན་པར་ ཁྱངས་བཅོན་གྱི་ཐོག་ལུ་འབད་བ་ཅིན་ གནས་ཚུལ་ཚུ་ རྒྱུ་ཐུངས་དང་བཅས་པ་འབད་ཐོབ་ནི་ཞིན་མ་ལས་ ཞིབ་འཚོལ་གྱི་གྲུབ་འབྲས་འདི་ལུ་ མི་མངས་ཀྱི་ཆ་གནས་དང་ ཡིད་ཆེ་ ཐེབས་བསྒྲིད་ཚུགས་པའི་དགོས་པ་འདུག་ཟེར་ཞུ་ནི་ཞིན།

གྲུབ་འབྲས་སྙན་ཞུ། (Findings)

གནས་སྡུད་བསྡུ་ལེན་འབད་ཡོད་མི་ཚུ་ སྒོག་རིག་ (ཞེས་པི་ཞེས་ཞེས) ནང་བཙུགས་ཀྱ་ དབྱེ་དཔྱད་ཚུལ་མཐུན་སྤྲེ་འབད་ཞིན་ལས་ བཅུད་བསྡུས་ཀྱི་འགྲེལ་བཤད་རྐྱབ་སྟེ་ འདི་ནང་ལས་གཅིན་ཡོད་མི་གྲུབ་འབྲས་ཚུ་ བརྒྱ་ཆ་ནང་ཝབ་ཞིན་ལས་ མིག་ཁྲམ་ནང་བཙུགས་ཀྱ་ གསལ་བཀོད་འབད་ཡོདཔ་ཞིན། ཞིབ་འཚོལ་གྱི་གྲུབ་འབྲས་ཚུ་ བཅོས་མིན་དངས་བའེན་ཞིན་ལས་ གྲུབ་འབྲས་སྙན་ཞུ་འདི་གིས་ མི་དམངས་ལུ་ཐུགས་ཀྱི་དན་གསོ་ ཕུལ་ཚུགས་པའི་ངེ་བ་ཡོད།

གནད་སྡུད་དབྱེ་དཔྱད་ནང་ལུ་ དངཔ་ འགྲེལ་བཤད་དང་ གཉིས་པ་ བཅུད་དོན་ཟེར་ཁག་གཉིས་འབད་ཡོད་མི་འདི་ཡང་

འགྲེལ་བཤད་འདི་ནང་ལས་ མི་ངོམ་རེ་རེ་བཞིན་དུ་གིས་ བསམ་འཆར་ཚུ་ཉོ་ཚུགས་ནི་དང་ བཅུད་དོན་ནང་ལུ་བལྟ་བ་ཅིན་ དོན་ཚན་རེ་རེ་བཞིན་དུ་ལུ་ སྒོང་ཕྱོགས་བརྒྱ་ཆ་གར་ཅིག་གིས་ ངོས་ལེན་འབད་དེ་ཡོདཔ་ཨིན་ན་ ཐིག་ཁམ་ནང་ལུ་བལྟ་སྟེ་ ཉོ་ཚུགསཔ་ཨིན།

གནད་བསྡུད་བཅུད་དོན་གྱི་ཐིག་ཁམ། (Overview)

ཐིག་ཁམ་ ๐๗ ། རྩོད་ཁ་ལུ་སྒོ་བ་ཡོདཔ་དང་མེདཔ། བཅུད་དོན།

ཁྱོད་རྩོད་ཁ་ལུ་སྒོ་བ་གཅེ་སྒེ་ཡོད་ ?	གཤམ་མེད་ས་མེད་ཡོད།	སྒོམ་ཡོད།	ཚ་ཙོ་རེ་ཡོད།	མ་པ་ལས་ར་མེད།
๑_ ཁྱོད་རྩོད་ཁ་ལྟག་ནི་ལུ་སྒོ་བ་གཅེ་སྒེ་ཡོད།	๔๔.๓	๙๐.๐	๓๗.๗	.๐
๒_ ཁྱོད་རྩོད་ཁ་འཕྲི་ནི་ལུ་སྒོ་བ་གཅེ་སྒེ་ཡོད།	๔๐.๐	๔๔.๓	๙๗.๗	๗๐.๐
๓_ ཁྱོད་རྩོག་ཁ་སྨན་ནི་ལུ་སྒོ་བ་གཅེ་སྒེ་ཡོད།	๔๐.๐	๔๔.๓	๙๗.๗	.๐

๑། ཐིག་ཁམ་๑ ཨའི་ འགྲེལ་བཤད།

๑_ རྩོད་ཁ་ལྟག་ནི་ལུ་ སྒོ་བ་གཤམ་མེད་ས་མེད་ཡོད་མི་ མི་ངོམ་ ๘๐ ལས་ ๗๗ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๔๔.๓ དང་

སྒོ་བ་སྒོམ་ཡོད་མི་ ๘๐ ལས་ ๔๙ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๙๐.๐ ।

སྒོ་བ་ཚ་ཙོ་རེ་ཡོད་མི་ ๘๐ ལས་ ๗๘ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๓๗.๗།

སྒོ་བ་མ་པ་ལས་ར་མེད་མི་ .๐ ཨིན་མས།

๒_ རྩོད་ཁ་འཕྲི་ནི་ལུ་ སྒོ་བ་གཤམ་མེད་ས་མེད་ཡོད་མི་ མི་ངོམ་ ๘๐ ལས་ ๗๔ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๔๐.๐ དང་

སྒོ་བ་སྒོམ་ཡོད་མི་ ๘๐ ལས་ ๗๗ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๔๔.๓ ।

སྒོ་བ་ཚ་ཙོ་རེ་ཡོད་མི་ ๘๐ ལས་ ๔๙ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๙๗.๗ ।

སྒོ་བ་མ་པ་ལས་ར་མེད་མི་ ๘๐ ལས་ ๘ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๗๐.๐ ཨིན་མས།

๓_ རྩོད་ཁ་སྨན་ནི་ལུ་སྒོ་བ་ གཤམ་མེད་ས་མེད་ཡོད་མི་ མི་ངོམ་ ๘๐ ལས་ ๓๔ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๔๐.๐ དང་

སྒོ་བ་སྒོམ་ཡོད་མི་ ๘๐ ལས་ ๔๫ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๔๔.๓ ।

སྒོ་བ་ཚ་ཙོ་རེ་ཡོད་མི་ ๘๐ ལས་ ๓ འབད་ཐུབ་དུ་ བརྒྱ་ཆ་% ๙๗.๗ ।

སྒོ་བ་མ་པ་ལས་ར་མེད་མི་ .๐ ཨིན་མས། ཐིག་ཁམ་ ๐๓།

ཐིག་ཁྲམ་༠༢ ། རྩོད་ཁ་ལུ་རྒྱབ་སྐྱོར་འབད་མི་གཏན་སྦྱེ་ཡོདཔ། བརྒྱད་དོན།

རྩོད་ཁ་ལུ་རྒྱབ་སྐྱོར་འབད་མི་གཏན་སྦྱེ་འདུག་ ?	སྡོམ་ཡོདཔ།	ཞ་ཙི་རེ་ཡོདཔ།	མ་ཡ་ལས་མེདཔ།	སླབ་མ་ཤེསཔ།
༡_ གཞུང་གི་ཁ་ཐུག་ལས་རྒྱབ་སྐྱོར་གཏན་སྦྱེ་འདུག	༩༢.༣	༢༢.༣	༣.༣	༣༠.༠
༢_ བདག་སྐྱོང་གི་ཁ་ཐུག་ལས་རྒྱབ་སྐྱོར་གཏན་སྦྱེ་ཡོད།	༩༠.༠	༩༠.༠	༤.༧	༡༣.༣
༣_ སློབ་དཔོན་གི་ཁ་ཐུག་ལས་རྒྱབ་སྐྱོར་གཏན་སྦྱེ་ཡོད།	༤༣.༣	༣༠.༠	༠	༤.༧
༤_ ཚམ་གྱི་ཁ་ཐུག་ལས་རྒྱབ་སྐྱོར་གཏན་སྦྱེ་ཡོད།	༤༧.༧	༣༥.༠	༣.༣	༡༠.༠

༢།) ཐིག་ཁྲམ་༢ པའི་ འགྲེལ་བཤད།

༡_ གཞུང་གི་ཁ་ཐུག་ལས་རྒྱབ་སྐྱོར་སྦྱོམ་ཡོད་ཟེར་མི་ མི་ངོམ་ ༤༠ ལས་ ༢༨ འབདཔ་དང་ བརྒྱ་ཆ% ༩༢.༣ དང་།
ཞ་ཙི་རེ་ཡོད་ཟེར་མི་ ༤༠ ལས་ ༡༧ འབདཔ་དང་ བརྒྱ་ཆ% ༢༢.༣ །
མ་ཡ་ལས་མེད་ཟེར་མི་ ༤༠ ལས་ ༢ འབདཔ་དང་ བརྒྱ་ཆ% ༣.༣ །
སླབ་མི་ཤེས་པས་ཟེར་མི་ ༤༠ ལས་༡༢ འབདཔ་དང་ བརྒྱ་ཆ% ༣༠.༠ ཡིན་མས།

༢_ སློབ་གྲྭའི་ཁ་ཐུག་ལས་ རྒྱབ་སྐྱོར་སྦྱོམ་ཡོད་ཟེར་མི་ མི་ངོམ་ ༤༠ ལས་ ༢༩ འབདཔ་དང་ བརྒྱ་ཆ% ༩༠.༠ དང་།
ཞ་ཙི་རེ་ཡོད་ཟེར་མི་ ༤༠ ལས་ ༢༩ འབདཔ་དང་ བརྒྱ་ཆ% ༩༠.༠ །
མ་ཡ་ལས་མེད་ཟེར་མི་ ༤༠ ལས་ ༤ འབདཔ་དང་ བརྒྱ་ཆ% ༤.༧ །
སླབ་མི་ཤེས་པས་ཟེར་མི་༤༠ ལས་༡ འབདཔ་དང་ བརྒྱ་ཆ% ༢༣.༣ ཡིན་མས།

༣_ སློབ་དཔོན་ཚུ་ཀྱིས་ རྒྱབ་སྐྱོར་སྦྱོམ་ཡོད་ཟེར་མི་ མི་ངོམ་ ༤༠ ལས་ ༣༡ འབདཔ་དང་ བརྒྱ་ཆ% ༤༣.༣ དང་།
ཞ་ཙི་རེ་ཡོད་ཟེར་མི་ ༤༠ ལས་ ༡༡ འབདཔ་དང་ བརྒྱ་ཆ% ༣༠.༠ །
མ་ཡ་ལས་མེད་ཟེར་མི་ ༠ །
སླབ་མི་ཤེས་པས་ཟེར་མི་ ༤༠ ལས་ ༤ འབདཔ་དང་ བརྒྱ་ཆ% ༤.༧ ཡིན་མས།

༤_ ཚམ་གྱི་ཁ་ཐུག་ལས་ རྒྱབ་སྐྱོར་སྦྱོམ་ཡོད་ཟེར་ཟེར་མི་ མི་ངོམ་ ༤༠ ལས་ ༣༧ འབདཔ་དང་ བརྒྱ་ཆ% ༤༧.༧ དང་།
ཞ་ཙི་རེ་ཡོད་ཟེར་མི་ ༤༠ ལས་ ༡༧ འབདཔ་དང་ བརྒྱ་ཆ% ༣༥.༠ །
མ་ཡ་ལས་མེད་ཟེར་མི་ ༤༠ ལས་ ༡ འབདཔ་དང་ བརྒྱ་ཆ% ༣.༣ །
སླབ་མི་ཤེས་པས་ཟེར་མི་༤༠ ལས་༤ འབདཔ་དང་ བརྒྱ་ཆ% ༡༠.༠ ཡིན་མས།

ཐིག་ཁྲམ་༣ ། རྩོད་ཁ་ལུ་སྦྱོ་བ་མ་བསྒྲེད་མི་འདི་གཅིག་འབད་ཡིན་ན། བརྒྱད་དོན།

༡༠.༡	རྩོད་ཁ་ནང་རྒྱབ་བརྟེན་ཀྱི་ལྟག་དེབ་ལངམ་མེད་ནི་འདི་གིས་ཡིན་ན།	༡.༧
༡༠.༢	རྩོད་ཁའི་ཤེས་ཡོན་ཡོད་མི་ཚུ་ལུ་ལྟ་གཡོག་གི་གོ་སྐབས་མེད་ནི་འདི་གིས་ཡིན་ན།	༣༠.༠

༡༠.༣	གཞུང་འབྲེལ་གྱི་ཕྱག་ལྟ་ཚུ་མང་ཤོས་ཨིང་སྐད་ནང་གནང་གི་འདི་གིས་ཨེན་ན།	ཀ༣.༣	༣ ཀ
༡༠.༩	རྩོད་ཁ་འདི་ལྟབ་སྤྱད་འབད་བའི་སྐབས་ལུ་ལྟ་ཁག་ཡོད་ནི་འདི་གིས་ཨེན་ན།	༡ཀ.༠	ཐེག་

ཁྲམ་༣ པའི་ འགྲེལ་བཤད།

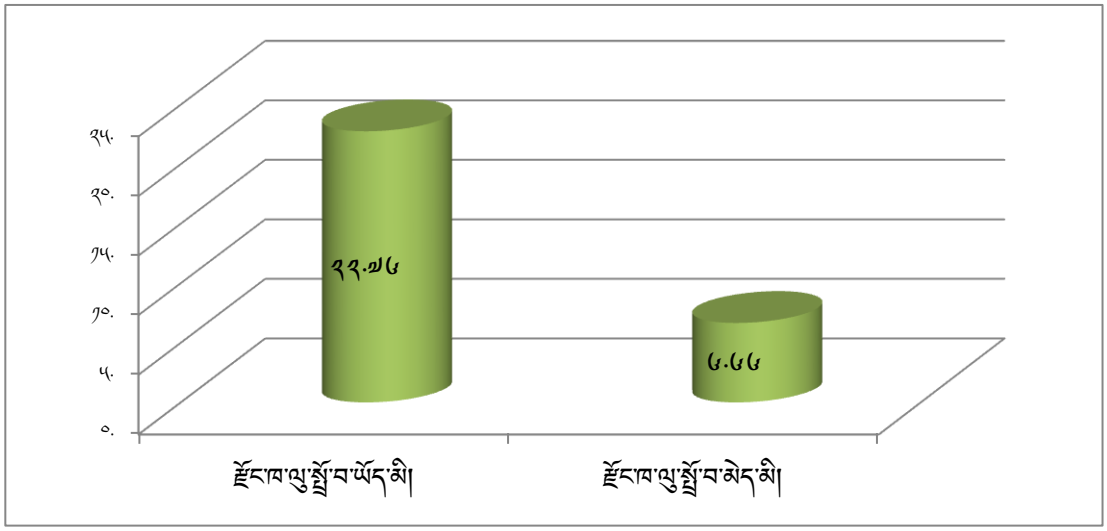
༡_ རྒྱབ་བརྟེན་གྱི་ལྟག་དེབ་ལངམ་མེད་ནི་འདི་གིས་ཨེན་ཟེར་མི་ མི་ངོམ་ ༤༠ ལས་ ༡ འབདཔ་དང་ བརྒྱ་ཆ་%༡.༣ དང། ༢_ ལྟ་གཡོག་གི་ཁོ་སྐབས་མེད་ནི་འདི་གིས་ཨེན་ཟེར་མི་ ༤༠ ལས་ ༡༥ འབདཔ་དང་ བརྒྱ་ཆ་% ༣༠.༠ །

༣_ གཞུང་འབྲེལ་གྱི་ཕྱག་ལྟ་ཚུ་ཨིང་སྐད་ནང་གནང་ནི་འདི་གིས་ཨེན་ཟེར་མི་༤༠ ལས་༢༢ འབདཔ་དང་ བརྒྱ་ཆ% ཀ༣.༣ ।

༤_ ལྟབ་སྤྱད་འབད་བའི་སྐབས་ལྟ་ཁག་ཡོད་ནི་འདི་གིས་ཨེན་ཟེར་མི་༤༠ ལས་༨ འབདཔ་དང་ བརྒྱ་ཆ% ༡ཀ.༠ ཨེན་མས།

གནད་བསྡུད་གསལ་བཀོད་དང་གྲོས་བཤད།

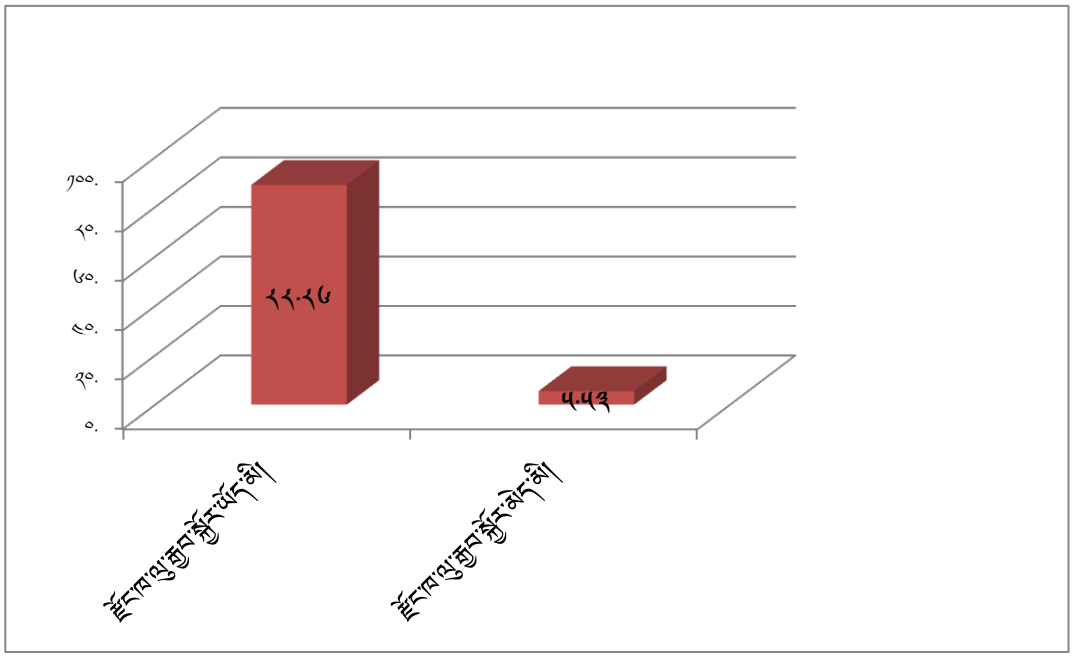
༡ ཀ། རྩོད་ཁ་ལུ་སྤྲོ་བ་ཡོད་པ་དང་མེད་པ།



གོང་གི་ཐེག་ཁྲམ་༡ ནང་ བཀོད་ཡོད་པའི་གནད་སྡུད་དེཚེ་དཔྱད་ཀྱི་གྲུབ་འབྲས་ནང་ལུ་ སྤྲོ་བ་ཟུགཔ་ཡོངས་བསྡོམས་ ༤༠ ཡོད་ས་ལས་ རྩོད་ཁ་ལུ་སྤྲོ་བ་ཡོད་མི་ རྒྱ་ཆ་ ཀཀ.ཚཧ % དང། སྤྲོ་བ་མེད་མི་ རྒྱ་ཆ་ ༤.༤༤ % ཐོན་ཡོདཔ་ལས།

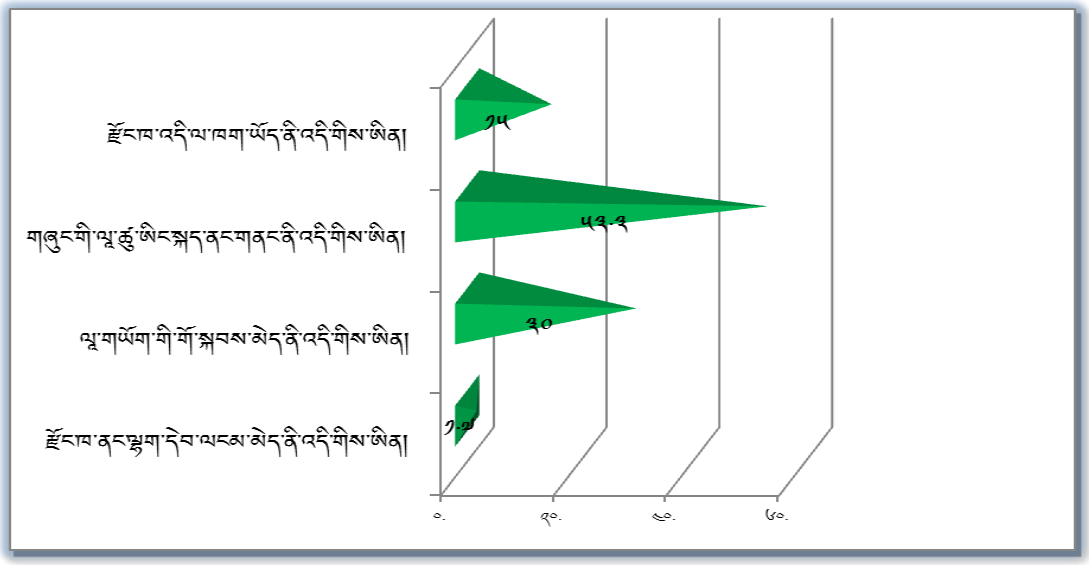
སྐྱབ་འཇུས་འདི་གིས་ དཔལ་འབྱོར་(২০১৫) ནང་ རྩོང་ཁའི་སྐད་ཡིག་བདག་འཛིན་འཐབ་དགོ་ཟེར་མི་ བརྒྱ་ཆ་২৯.২% དང་། བརྒྱ་ཆ་ ৭০% གིས་ རྩོང་ཁའི་སྐད་ཡིག་འདི་ བདག་འཛིན་འཐབ་དགོས་ གཞན་མེད་ས་མེད་ གཡ་ཆེཁ་འབད་བཀོད་དེ་ཡོད་པ་བརྒྱམ་སྟེ་ འབྲུག་མི་མངའ་ཤོས་ཀྱིས་རྩོང་ཁའི་སྐད་ཡིག་འདི་ལུ་ བརྩི་མཐོང་ཡོད་པའི་ཁད་ དེ་ཡིན་ཟེར་ ལྷིར་བཏང་རྩོང་ལུ་སྤྲོ་བ་ཡོད་པ་འབད་མཐོང་ཞིན་མས།

ཇ ། རྩོང་ཁ་ལུ་རྒྱབ་སྐྱོར་འབད་མི་ཁ་དེ་སྤྲེ་ཡོད།



མིག་ཁྲམ་২ ནང་ རྩོང་ཁ་ལུ་རྒྱབ་སྐྱོར་འདུག་ཟེར་མི་ རྒྱ་ཆ ১১.২৬% དང་། རྒྱབ་སྐྱོར་མིན་འདུག་ཟེར་མི་ རྒྱ་ཆ ৭.৭২% མོན་ཡོད་པ་ལས། དཔལ་འབྱོར་དང་ རིན་ཆེན་མཁའ་འགྲོ་(২০১৫) ནང་། རྒྱལ་ཁབ་ནང་ལེགས་ཉེས་ཀྱི་འགྱུར་བ་ མཁྱེགས་དྲགས་འབད་མོན་མི་ དང་འབྲེལ་ གཞུང་གི་ཁ་ཐུག་ལས་རྒྱལ་ཡོངས་སྐད་ཡིག་ དང་ཁྱབ་ཀྱི་ཐབས་ལམ་ཚུ་ཡང་ གནས་སྟངས་དང་འཁྱིལ་བའི་ རྩོང་ཁ་གོང་འཕེལ་གཏད་ནི་ལུ་དམིགས་གཏད་བསྐྱེད་དེ་ ཡིག་ཚང་ཁག་ཚུ་གནང་མི་ཚུ་ཡང་ ཡིག་འགྱལ་འབད་བའི་སྐབས་ རྩོང་ཁའི་ཐོག་ལུ་རང་གནད་དགོས་འབད་ མངའ་བདག་རྒྱལ་པོའི་ཞབས་ལས་བཀའ་རྒྱ་གནང་ཡོད་པ་འབད་ 'བཀོད་ཡོད་པ་བརྒྱམ་སྟེ་ སྐྱབ་འཇུས་འདི་གིས་ཡང་ འབྲུག་མི་ཡོངས་ཀྱི་ཁ་ཐུག་ལས་རྩོང་ཁ་ལུ་ རྒྱབ་སྐྱོར་ཡོད་པའི་གསལ་བཀོད་འབདཔ་ཞིན་མས།

ཟ། རྩོད་གལ་ལྟོ་བ་མ་བསྒྲིལ་མི་འདི་གཅི་འབད་ཨེན་ན།



ཐེག་ཁམ་ཉ་ དང་ ན་གཞོན་ཚུ་གི་རྩོད་གལ་ལྟོ་བ་མ་སྐྱེད་མི་འདི་ རྩོད་ག་དང་རྒྱབ་བརྟེན་གྱི་ལྷག་དེབ་ ལངམ་ཞེད་ནི་འདི་གིས་ཨེན་ཟེར་མི་ རྒྱ་ཆ་ཀ.ཟ % དང་། རྩོད་ཁའི་ཤེས་ཡོན་ཡོད་མི་ཚུ་ལུ་ ལྟ་གཡོག་གི་གོ་སྐབས་ཞེད་ནི་འདི་གིས་ཨེན་ཟེར་མི་ རྒྱ་ཆ་ ཟ༠.༠ % ། གཞུངབཟེལ་གྱི་ཕྱག་ལྟ་ཚུ་ མངའ་ཞེས་ཨིངས་རྙེད་གནང་ནི་འདི་གིས་ཨེན་ཟེར་མི་ རྒྱ་ཆ ཨཀ.ཀ % ། རྩོད་ག་འདི་ལྷག་སྤྱང་འབད་བའི་སྐབས་ལུ་ལྟ་ཁག་ཡོད་ནི་འདི་གིས་ཨེན་ཟེར་མི་རྒྱ་ཆ་ ཀཉ.༠ % ཐོན་ཡོདཔ་ལས།

སྤྱབ་འབྲས་འདི་གིས་ དཔལ་འབྱོར་ རབ་གསལ་འཐོན་རིམ་ཀཉ (ཟ༠ཀཉ) དང་ གཞུང་འབྲེལ་ཡིག་ཚང་གི་ཡིག་འགྱུལ་ཚུ་ རྩོད་ག་དང་ ཡག་ལེན་འཐབ་མི་ བརྒྱ་ཆ% ཟ༠.ཤ དང་ ཨིངས་རྙེད་ཡག་ལེན་འཐབ་མི་ བརྒྱ་ཆ% ཇཉ.ཉ ཨིནམ་འབད་བཀོད་ཡོད་བཟུང་སྟེ། གནས་སྤུས་ཀྱི་སྤྱབ་འབྲས་ནང་ལུ་ཡང་ ན་གཞོན་ཚུ་གིས་རྩོད་གལ་ལྟོ་བ་མ་སྐྱེད་མི་འདི་ གཞུངབཟེལ་གྱི་ཕྱག་ལྟ་ཚུ་མངའ་ཞེས་ར་ ཨིངས་རྙེད་ཀྱི་ཐོག་ལུ་ གནང་ནི་འདི་གིས་ཨེནམ་མ་ཚད་ རྩོད་ཁའི་ཤེས་ཡོན་ཡོད་མི་ཚུ་ལུ་ ལྟ་གཡོག་གི་གོ་སྐབས་ཞེད་ནི་འདི་གིས་ཨེན་པའི་ སྤྱབ་འབྲས་འཐོན་ཡོདཔ་ཨིན།

ཐག་ཆོད་དང་གྲོས་འཆར་སྐྱན་ཞུ། (Recommendations)

ཞིབ་འཚོལ་གྱི་སྐུབ་འཐས་ལུ་ལྟ་བ་ཅིན་ གཞུང་དང་སྒེར་གྱི་ཁ་ཐུག་ལས་ རྩོད་ཁ་ལུ་རྒྱབ་སྐྱོར་ཡོད་པ་འབད་ཐོན་ཡོད་མ་ཚད་ སློབ་ཁྲག་ཆུ་གིས་ཡང་ རྩོད་ཁ་ལུ་སྤྲོ་བ་ཡོད་པ་འབད་ཐོན་ཡོད་པ་ཞིན། འདི་འབདཔ་ལས་ མི་དབང་མངའ་བདག་རིན་པོ་ཆེ་གི་ ཐུགས་ཀྱི་དགོངས་བཞེད་དང་ གཞུང་གི་སྲིད་ཐྲུས་ནང་ རྒྱལ་ཡོངས་ཀྱི་ངོ་རྟགས་ འབྲུག་གི་ཁ་སྐད་ཡིག་འདི་ མི་ཉམས་གོང་འཕེལ་གཏིང་དགོས་འབད་ཡོད་མི་ལུ་ ག་ར་གིས་ངོས་ལེན་ཡོད་པའི་ རྟགས་མཚན་འཐོན་མ་ཞིན་མས།

ན་གཞོན་ཚུ་གིས་ རྩོད་ཁ་ལུ་སྤྲོ་བ་སྤྲོམ་འབད་ བསྐྱེད་མ་ཚུགས་མི་གནད་དོན་གཅོ་བོ་ཅིག་ ཡིག་ཚང་གི་ཕྱག་ལྟ་ཚུ་ མང་ཤོས་ཞིངས་སྐད་ནང་གནངམ་ལས་བརྟེན་ རྩོད་ཐའི་ཤེས་ཡོན་ཡོད་མི་ཚུ་ལུ་ ལྟ་གཡོག་གི་གོ་སྐབས་ མ་སྐོབ་ནི་འདི་གིས་ཞིན་པའི་ གྲུབ་འཐས་འཐོན་ཡོད་པ་ཞིན། དཔལ་ཕར་ གཞུང་གིས་ འབྲུག་ཆུལ་ཁབ་ནང་འགོད་ཀྱི་ཡིག་ཚང་ཚུ་ནང་ ཡིག་འགྲུལ་གྱི་ཕྱག་ལྟ་ཚུ་ རྩོད་ཁ་དང་ཞིང་ཡིའི་གཉིས་འདྲ་མཉམ་འབད་ གནང་དགོ་པའི་སྲིད་ཐྲུས་བརྩམ་གནང་པ་ཅིན་ ན་གཞོན་ཚུ་གིས་རྩོད་ཁ་ལུ་ སློབ་བཞས་འབད་རང་ བསྐྱེད་ནི་ཞིན་མ་མ་ཚད། ཆུལ་ཡོངས་ཀྱི་སྐད་ཡིག་འདི་ ཡར་ཆུས་གཏང་མ་ཚུགས་པའི་དུས་མི་སྲིད་ནི་ཞིན་པས།

ལེའུ་ཚན་བཅུད་བསྡུས། (Conclusion)

གནས་སྤྱད་དཀྱེ་དཔྱད་ཀྱི་ སྐུབ་འཐས་དང་འཁྲིལཔ་དང་ མ་འོངས་པའི་ན་གཞོན་ཚུ་གིས་ རྩོད་ཁ་ལུ་སྤྲོ་བ་བསྐྱེད་བཅུག་ནིའི་དོན་ལུ་ འབྲུག་ནང་འགོད་ཀྱི་ཡིག་ཚང་དང་འཁེལ་བའི་ ཡིག་འགྲུལ་གྱི་ཕྱག་ལྟ་ཚུ་ རྩོད་ཁ་དང་ཞིང་ཡིའི་གཉིས་ འདྲ་མཉམ་གི་ཐོག་ལུ་ གནད་དོན་ཡོད་པའི་ བོད་ཚུགས་པ་ཅིན་ འབྲུག་མི་ རྩོད་ཐའི་འོས་བཅས་ཡོད་མི་ཚུ་ཡིས་ ལྟ་གཡོག་གི་གོ་སྐབས་ ཐོག་ཚུགས་ནི་ཞིན་པས་ རྩོད་ཁ་ལུ་ སྤྲོ་བ་བསྐྱེད་དེ་ ཡར་ཆུས་ངམ་ངམ་ཤུགས་ཀྱིས་ འགྱོ་ནིའི་འོས་བཅས་ཡོད་པ་འབད་མཐོང་ཞིས་ འདི་ལུ་ འབྲུག་མི་ཡོངས་དང་ འཁེལ་ཡོད་དབང་འཛིན་ཚུ་གིས་ ངོས་ལེན་མཛད་དེ་ འགན་ཁུར་འབག་དགོས་འདུག་ཟེར་ཞུ་ནི་ཞིན།

༥.༤ རྒྱབ་རྟེན་དཔེ་ཐོ།

སྐལ་བཟང་དབང་ཕྱུག། *ཀུན་གསལ་འཛོད་རིམ།* (Jan 31, 2014) ན་གཞོན་ལྟ་གཡོག་གི་དོན་ལུ་ ལས་འཆར་སྣ་ཚགས་ཐིམ་ཐུ། ཀུན་གསལ་རང་སྒྲོངས་ལས་འཛིན། http://www. dzkuensel.gov.bt/ ལས།

སྐལ་བཟང་དབང་ཕྱུག། *ཀུན་གསལ་འཛོད་རིམ།* (Jan 8, 2015) རྩོད་ཁ་གོང་འཕེལ་ལྟན་ཚོགས་ཀྱི་རྩྭ་ཆེན་དང་དྲི་བ་དྲིས་ལན། ཐིམ་ཐུ། ཀུན་གསལ་རང་སྒྲོངས་ལས་འཛིན། http://www. dzkuensel.gov.bt/ ལས།

དཔལ་འབྱོར། རིན་ཆེན་མཁའ་འགྲོ། (༢༠༡༩) *སྤུ་རོ་རྡོང་ཁག་གི་མངའ་འོག་ལུ་ རྡོག་ཁ་དང་ཙིངརྐང་གཉིས་ཀྱི་ཐོག་ལུ་ འབྲི་ཡུག་ལག་ལེན་གྱི་གནས་ཚད་ གཅིག་བསྡུར།* སྤུ་རོ། སྤུ་རོ་ཤེས་རིག་མཐོ་རིམ་སློབ་གྲྭ།

ཕུང་པ། (༢༠༡༡) *ངོ་སྤྲོད་ཞིབ་འཚོལ་གྱི་ཐབས་ལམ།* སྤུ་རོ། རྩ་དབྱངས་ཤེས་རིག་གྲོས་བསྡུན།

རྡོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། (༡৮৮০) *རྡོང་ཁ་བརྡ་གཞུང་གསལ་བཤད།* ཐིམ་ཕུ། ཀ་ཞེམ་གྱི་དཔེ་སྐྲུན་ཁང་།

རྡོང་གོང་ལྷན་ཚོགས། (༢༠༠༢) *རྡོང་ཁའི་བརྡ་གཞུང་གསལ་བཤད།* ཐིམ་ཕུ། ཀ་ཞེམ་གྱི་དཔེ་སྐྲུན་ཁང་།

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རྡོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། (༢༠༡༣) *ཐིམ་ཕུ་ཁོོམ་སྡེའི་ནང་སྐོ་ཐུང་དུ་བརྡ་ཐུང་ནང་ རྡོང་ཁ་ལག་ལེན་གྱི་བརྟག་ཞིབ་སློན་ཞུ།* ཐིམ་ཕུ། རྡོང་གོང་ལྷན་ཚོགས།

Creswell, J.W.(2009). *Research design: qualitative, quantative and mixed methods Approaches* (3rd ed.). United States of America: Sage publication.

IP.Adakahari (6/8/2010) *Aggregating identity in Bhutan.*

Singye Namgyel (2011) *Quality of Education in Bhutan. Historical and Theoretical*

Enhancing the Effectiveness of E-learning for Grade IX Students through Synchronous and Asynchronous Method

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Abstract

The purpose of this quasi-experimental research was to examine the effectiveness of E-learning for grade IX students by using Google Meet and Google Classroom as synchronous and asynchronous mode respectively. sampling was used to select 14 students (5 male and 9 female). The lesson was taught using a combination of Google Meet and Google Classroom app followed by online test using Google Form. Using the explanatory sequential mixed method approach, the baseline data and post intervention data were used to analyze the relationship between students' perception towards E-learning, accessibility of technology and skill in technology. The findings of the study showed that 71.4% of students received limited access to internet through their mobile data. Both quantitative and qualitative data showed that students' attitude towards BBS E-learning were mostly negative. Students had moderately positive attitude towards Google Classroom for accessibility of learning material and for submitting assignments. They also had positive attitude towards Google Meet for learning purpose due to its good functionality of virtual interaction through video conferencing. The study provides some recommendations based on the findings which can be beneficial insights for promotion of E-learning in Bhutan.

Keywords: E-learning, Asynchronous, Synchronous, Google meet, Google Classroom

Background

The first case of a new infectious respiratory disease called COVID-19 caused by coronavirus was reported in Wuhan, China in December 2019. The World Health Organization (WHO) declared the outbreak a pandemic on 11th March, 2020 (Cucinotta & Vanelli, 2020). In order to slow the advance of pandemic, many governments ordered to cease face-to-face instruction for most of their students, requiring them to switch, almost overnight, to online teaching and virtual education (Daniel, 2020). As a result, there is a sudden paradigm shift in teaching and learning scenario i.e., from face-to-face teaching to E-learning.

The moment Bhutan registered the first COVID-19 case on 5th March 2020, the Honourable Prime Minister issued a directive to close all educational institutes in Paro, Thimphu, and Punakha beginning 6th March

2020 for two weeks. Further, with surge in Covid cases worldwide and in the region, all educational institutes in the country were closed from 18th March 2020.

However, in order to ensure continuity in students' learning the Ministry of Education (MoE) in collaboration with Royal Education Council (REC) and Bhutan Council for School Examinations and Assessment (BCSEA) developed a prioritized curriculum. The curriculum was planned to be delivered through different platforms such as broadcast media (TV and radio), YouTube, Google Classroom, WeChat and messenger.

The MoE also launched Bhutan E-learning Program on 26th March 2020 on BBS Television. The lessons were delivered by Volunteer Teachers of Bhutan (VTOB) and the recorded versions were aired through Bhutan Broadcasting Service channels BBS 1 and 2. The delivery of lessons is done as per the key stages I-V for classes PP-XII. The lesson presenters gave competency-based questions during or at the end of every lesson.

With the advancement of computer, multimedia and network technologies, E-learning is being explored as an effective way of delivering materials to previously unreachable students with previously unavailable access and presentation methods (Horton, 2000). However, in Bhutan, unlike the formal mode of lesson delivery in classroom, eLearning platform is new for students as well as for teachers. Bhutan being a developing country, the traditional methods are widely used in teaching and learning (Andersson & Gronlund, 2009). In the study by Maxwell et al, (2016), monasteries were the only centres of learning in Bhutan until the advent of Western-styled 'modern' education in the late 1950s. The transition from monastic system to secular school education system took place during the reign of 3rd King in the early 1960s. The country initially adopted the Indian education system and it has only been in the last 20 years that the Bhutanese education system has become largely independent from India. REC has painstakingly developed textbook less curriculum for some subjects that provides both teacher and students to use internet extensively but this practice is never akin to E-learning.

Study Site - Thrimshing Higher Secondary School

It is a boarding school located almost at the heart of Thrimshing Gewog, which is about 14 kms from Kharungla - a nippy cold junction between Wamrong and Khaling in Trashigang Dzongkhag. It is perched at an approximate altitude of 1990m.

The Internet facility is made available to both staffs and students through Wi-Fi and landline connections on their smartphones, personal laptops and desktops in offices and computer lab. However, the internet accessibility to students is restricted only to computer lab and during class hours. The

existing ICT facility in the school was hardly used for the promotion of E-learning in the school by teachers and students.

It is important to study the challenges and opportunities faced by students in the implementation of E-learning. Apart from this we can also know about their attitude towards E-learning, its effectiveness and in turn find practical solutions to make E-learning in Bhutan more effective.

Objectives

The purpose of this study was to investigate the effectiveness of E-learning for grade IX students through synchronous and asynchronous method. Therefore, the main objectives were:

1. Examine the effectiveness of E-learning for grade IX students through synchronous and asynchronous method.
2. Investigate the grade ninth students' perception towards E-learning by incorporating synchronous and asynchronous method.
3. Examine pragmatic interventions to make E-learning an effective option of delivery lessons in times of education in emergencies.

Research Questions

Based on the literature on asynchronous and synchronous methods to enhance the effectiveness of E-learning, this research study posed the following question:

1. How can synchronous and asynchronous method be used to enhance the effectiveness of E-learning for grade IX students?

2. What is the grade IX students' perception towards E-learning by incorporating synchronous and asynchronous method?

Literature Review

What is E-learning?

According to Cheng (as cited in Li, et al, 2014), E-learning is referred to as online learning or electronic learning, is anything delivered, enabled, or mediated by electronic technology for explicit purpose of learning. Castle and McGuire (2010) suggested that "E-learning" can improve learning experience because students can learn anywhere and under any conditions with the help of the device used to connect the internet without having to follow face-to-face interaction. Bates (2005), believes that there are four reasons for using technology in education:

- To improve the quality of learning;
- To improve access to education and training; and
- To improve the cost-effectiveness of education.

Synchronous E-learning

Synchronous E-learning is live, real-time (and usually scheduled), facilitated instruction and learning-oriented interaction (Shahabadi & Uplane, 2014). Through the use of a virtual classroom, the teacher and student can converse with one another by phoning, video conferencing and chat. The study by Weissman (2017) showed that students who participated in the live online synchronous sessions exhibited more positive perceptions of social and cognitive presences than those who viewed a recording of the session.

Videoconferencing has been acknowledged as a successful delivery method in remote education for synchronous E-learning. Despite the bandwidth restriction, many academics concur that video conferences reduce the psychological distance between students and offer a personal touch to online learning (Lim, et al, 2012).

Asynchronous E-learning

In Asynchronous E-learning there is no requirement for live teacher-student contact. It uses online learning resources to make it possible for a network of people to share information without being constrained by time or place (Shahabadi & Uplane, 2014). Using Google Classroom for asynchronous E-learning truly helps teachers learn and communicate material clearly and accurately to students (Hakim, 2016). Teachers can benefit from a number of Google Classroom services, including the assignments, grading, communication, and mobile applications (Fauzan & Arifin, 2019).

Absorb, Do, & Connect Method

The effectiveness of E-learning constituting of synchronous and asynchronous mode can be enhanced by using Horton's Absorb, Do and Connect activities. According to Horton (2012), learning activities can be classified into three key types: Absorb, Do, and Connect. These activities make it easy to come up with an effective E-learning workout.

Students are introduced to the subject through absorb activities which includes reading, listening and watching reading material in the form of lectures, anecdotes, hyperlinks, and video examples. They spend up to 50% of their time participating in these activities during the "Do" phase. Applying

knowledge through various exploratory activities, including simulations, role-playing scenarios and games will help learners retain more information and gain a wider understanding of the subject area. The "connect" phase emphasizes linkages to the real world and directs pupils toward higher order thinking through group discussions and rhetorical questions (Horton, 2012).

Challenges of E-learning

As per the study conducted by Fahad et al. (2016), several academics have addressed the idea that blended learning and online education can be just as effective as conventional classroom models. Despite the potential benefits of E-learning, some developing nations, like Botswana, view the technology-based tools for E-learning as a disruption to the conventional class that have been cherished for generations (Brown et al as cited in Rhema & Miliszewska, 2014). In addition, Shalini (2008) explained that the developing nations find the traditional means of learning more reliable and sustainable. Students' computer experience including perceived self-efficacy, enjoyment, and usefulness of using e- learning also plays a vital role in student attitudes towards the subject matter (Liaw & Huang, 2011).

In Bhutanese context, there is a mixed response regarding E-learning from all sections of the society including teachers, students, and parents. The studies by Dorji (2021) revealed that teachers favored classroom instruction over online instruction since classroom instruction is more comfortable, authentic and accessible. The Education in Emergencies (EiE) during COVID-19 Report revealed that most of the students believed that compared to traditional classroom instruction, online learning was less efficient and more expensive. Additionally, parents claimed that contact instruction can never be effectively replaced by online instruction. (Education Monitoring Division, 2021). On the other hand, according to the research by Wangmo et al (2020), students consider E-learning useful and participatory provided they have proper interaction with teachers and peers.

Contrarily, in 2003, E-learning was used intensively for teaching and learning during the SARS (severe acute respiratory syndrome) crisis in Hong Kong (Kinley, 2009). While Lee (2004) and Chan et al. (2007) concluded that E-learning during SARS was ineffective in terms of lowering anxiety or enhancing knowledge, Wong (2004) found that it was ineffective when compared to traditional classroom learning. This year due to COVID-19 pandemic; closures of schools have impacted more than 1.57 billion students worldwide. Thus, it is important to find the strategies to enhance the effectiveness of E-learning for students' education. Therefore, this research examined students' accessibility to technology, their skill in using smartphone/tab for E-learning, their satisfaction with E-learning platforms and their perception

towards E-learning.

Ethical Clearance

Prior to doing the research, the ethical approval was sought from the Cluster Research committee and participating students. Since this research involved interviews, online video and audio recording, the consent of participating students was taken. Apart from that no original names of the students are reflected in the research to maintain confidentiality.

Methodology

Mixed Method

A sequential explanatory mixed method was used whereby the quantitative data collection and analysis was followed by the qualitative data collection to substantiate the result of the initial quantitative data. This method was used because it focusses on understanding not just whether an intervention is effective but also for whom, under what conditions, and why an intervention did (or did not) have the desired effects on all topics for which mixed methods techniques are well-suited (Gallo et al., 2015).

Research Design

A quasi-experimental research design was used as an appropriate research method for this study. This method is used to estimate the causal impact of an intervention on its target population (to test causal hypotheses), without random assignment (White & Sabarwal, 2014).

Population and Sample

Total population comprised of 100 students (43 male and 57 female) of ninth grade at Thrimshing Central School under Trashigang Dzongkhag, Bhutan. From 100 students, only 60 students had access to smartphone and internet. Since the research was done during the first lockdown time, only 20 students used to send assignments through Google Classroom and also used to watch BBS VTOB lessons. Rest of the students were inactive in Google Classroom and did not submit assignments. The researcher used convenience sampling to select from those active students. The "Survey on E-learning" google form was sent to 20 students. However, 14 students had responded to "Survey on E-learning" google form.

Data Collection

The quantitative data were collected from the survey questionnaires using Google forms, online assignments and online test. The survey questionnaires included close-ended questions developed based on Five Point Likert Scale. The quantitative data were used to find the relation between the dependent variable "students' attitude towards technology and E-learning" and independent variable "accessibility

of technology", "skill in technology" and "ease and usefulness of Google Meet".

The reliability of quantitative data in this study was determined by finding Cronbach's Alpha by using SPSS v22. Refer table number 1.

Table No.1: Reliability of survey items

Scale	Number of Survey Items	Cronbach's Alpha
Accessibility to Technology	4	0.66
Skill in Technology	10	0.91
Students attitude towards technology	17	0.96
Ease and usefulness of Google Meet	13	0.85

The Cronbach's Alpha value for quantitative data ranges from 0.66-0.96 which is acceptable to excellent value (Konting et al, 2009). This indicates that the above-mentioned scales are reliable.

The qualitative data were collected from the semi-structured interview of 10 of the participating students. While conducting the interview, consent of students was taken. They were called individually in IT lab and were informed that this interview is for the research purpose. Before conducting the interview, they were asked about their preference between audio recording and video recording. They preferred for audio recording over video recording. Instead of students' name, the students were labelled as S1 for student 1, S2 for student 2 and so on till S10.

Baseline Data

1. ACCESS TO TECHNOLOGY

Accessibility to technology in the form of gadgets and internet plays a significant role in shaping students' attitude towards E-learning. According to the finding, only 14.3% of the participating students have laptop and tab as shown in Figures 2 & 3, in addition to smartphones. As illustrated in Figure 1, 71.4% of students have received limited access to internet (mobile data) and only 28.6% of students have received good access to internet. However, 92.9% (Figure 4) of the students had no access of Wi-Fi connection.

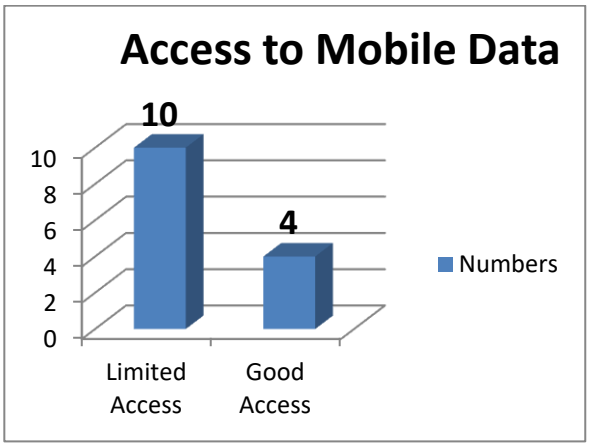


Figure 1: Access to Mobile Data

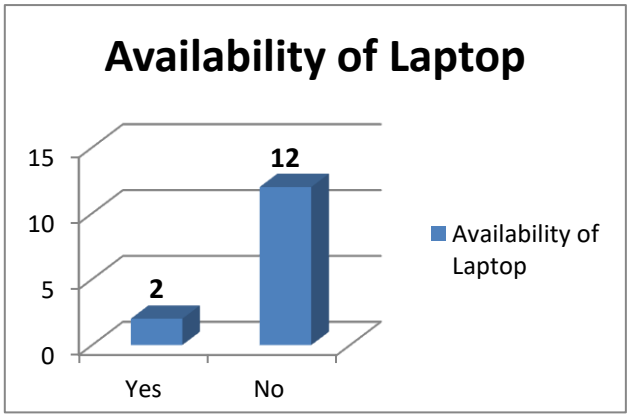


Figure 2: Availability of Laptop

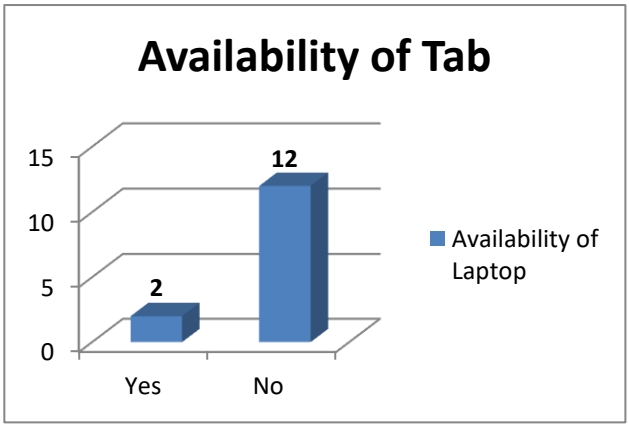


Figure 3: Availability of Tab

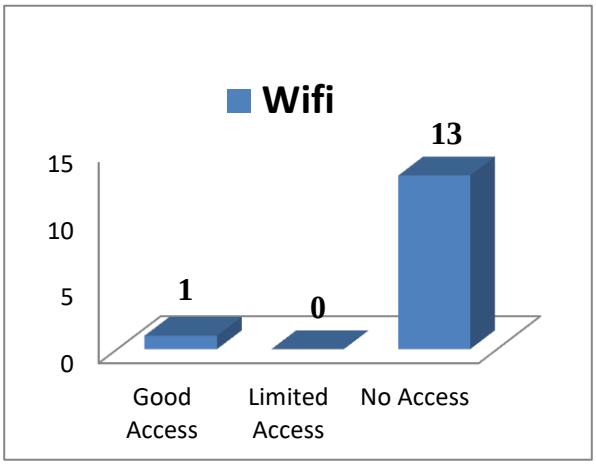


Figure 4: Accessibility of Wi-FI

2. SKILLS IN TECHNOLOGY

To measure the student's skill in use of technologies for various purposes, they were asked to apply rating scale (from "1" 'not skilled at all' to "5" 'very skilled'). The overall mean of 2.64 indicates that the students are 'not very skilled" in using technology for various purposes.

Table 2: Mean value for Students' skill in use of smartphone

No. of Respondents (n =14)

Statements	Mean	Std. Deviation
Use smartphone to play games	2.00	0.96
Use internet to play online games	1.86	1.03
Use internet to send or receive email	2.64	1.08

Use smartphone for photography	2.86	1.41
Use smartphone for making videos	2.79	1.31
Use social media platforms such as Facebook and WeChat for chatting	2.79	1.31
Use social media platforms such as Facebook and WeChat for sharing photos and videos	2.86	1.03
Use internet to make audio call and video call	2.64	1.28
Use smartphone to listen to radio FM	2.57	1.22
Use smartphone to send text message to people	3.43	1.16
Weighted Mean	2.64	1.18

3. STUDENTS' PERCEPTION TOWARDS TECHNOLOGY AND E-LEARNING

Note: **SD= Strongly Disagree D=Disagree N=Neutral A=Agree SA=Strongly Agree**

Numbers in brackets indicate percentage

Table 2: Likert Scale analysis of students' perception towards technology and E-learning

Statements	**SD**	**D**	**N**	**A**	**SA**
E-learning should be continued even after this pandemic for learning purposes.	0	3 (21.4)	3 (21.4)	4 (28.6)	4 (28.6)
I believe that convenience is an important feature of E-learning	0	3 (21.4)	2 (14.3)	6 (42.9)	3 (21.4)
E-learning increases the quality of learning because it integrates all forms of media (print, audio, and video).	2 (14.3)	3 (21.4)	3 (21.4)	3 (21.4)	3 (21.4)
I am satisfied with online interaction with my subject teachers through Google Classroom.	4 (28.6)	0	3 (21.4)	5 (35.7)	2 (14.3)
I believe that E-learning gives me the	2	4	2	3	3

opportunity to acquire new knowledge.	(14.3)	(28.6)	(14.3)	(21.4)	(21.4)
I understand the concept better through BBS E-learning compared to traditional method.	3 (21.4)	4 (28.6)	4 (28.6)	1 (7.1)	2 (14.3)
I find easy to submit my assignments through Google Classroom app.	4 (28.6)	1 (7.1)	1 (7.1)	2 (14.3)	6 (42.9)
I always watch BBS E-learning programme as per the scheduled time.	3 (21.4)	3 (21.4)	2 (14.3)	5 (35.7)	1 (7.1)
I watch BBS E-learning through BBS TV	3 (21.4)	2 (14.3)	2 (14.3)	3 (21.4)	4 (28.6)
I use instant messaging chat such as Facebook Messenger "Class IX Physics (2020)" group chat to communicate or collaborate with my friends to ask doubts to my subject teachers.	2 (14.3)	1 (7.1)	3 (21.4)	2 (14.3)	6 (42.9)
I receive my grades/marks from my subject teachers in Google Classroom.	4 (28.6)	0	2 (14.3)	2 (14.3)	6 (42.9)
Every time I submit my assignment, I receive comments and feedbacks from my subject teachers in Google Classroom.	2 (14.3)	1 (7.1)	2 (14.3)	6 (42.9)	3 (21.4)
Household chores and other responsibilities at home interfere with	2 (14.3)	4 (28.6)	1 (7.1)	3 (21.4)	4 (28.6)

An item analysis of responses to the survey was conducted by collapsing the two measures of 'strongly agree' and 'agree', and 'strongly disagree' and 'disagree'. Considering 'agree' statements as indicators of positive attitudes, the range of percentages under the 'agree' category was 14.3-64.3% as compared to 0-35.7% under the 'disagree' category. This indicates that the students' overall responses to the attitude scale were moderately positive.

About 57.2% of the participating students wants the E-learning to continue even after pandemic, 64.3% of them find it convenient and 42.8% of them opined that E-learning increases the quality of learning.

4. ASSIGNMENTS ON BBS LESSON.

After the BBS lesson on "Work, Power and Energy", an assignment was given to the students on same topic via Google Classroom. It was found out that 12 out of 14 students scored less than 4 out of 8 marks indicating that they did not understand the lesson well.

Intervention

The baseline data revealed that students have negative attitude towards E-learning through BBS E-learning programme and moderately positive attitude towards Google Classroom. Therefore, two interventions were used to see its effect on students' attitude towards E-learning as mentioned below:

i. **Use Google Meet app for synchronous E-learning:** According to Stefan (2008), synchronous communication allows for the monitoring of the receiver's response to a message, increasing the receiver's commitment to and motivation for reading. It raises students' motivation and excitement. Therefore, the Google Meet app was used for synchronous online learning.

ii. **Use Google Classroom app for asynchronous E-learning:** Stefan (2008) stated that when communicating asynchronously, the receiver has more time to comprehend the message, since the sender does not expect an immediate answer. Thus, it increases the ability to process information. Therefore, for asynchronous E-learning, Google Classroom app was used.

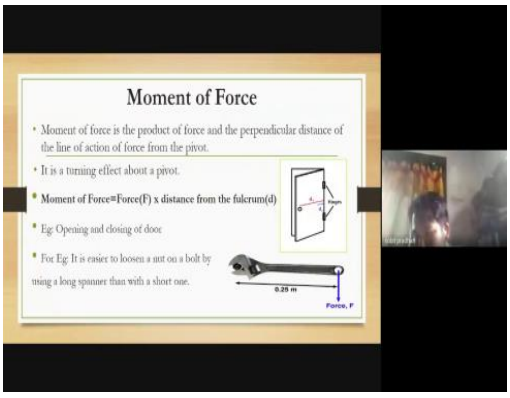
The participating students were oriented on the installation and usage of Google Meet app. Since the topic taught through BBS E-learning programme for key stage 4 was more of class X syllabus, class X topics were taught so that students can understand the topic well. Three Google Meet classes were

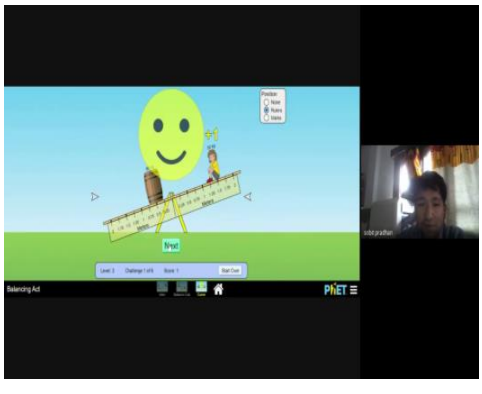
conducted to the class IX participating students on the topic “Principle of Moments”, “Ohm’s Law” and “Work, Power and Energy.” The lesson was made following the Absorb, Do and Connect formula. Apart from that, the recorded video of E-learning on Google Meet app was shared to the students through Google Drive for ready reference.

A Google Meet link was distributed to the students via Messenger group chat on the day of Google Meet class. Some of the students were unable to attend the first class since they did not know how to open Google Meet. Following the first class, students were instructed on how to launch the Google Meet app. The class was then taken the next day.

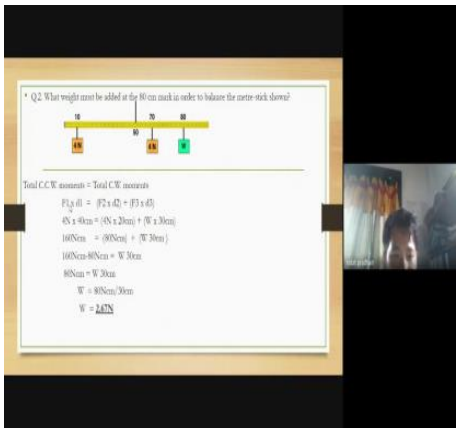
The Google Meet class was conducted using laptop with Wi-Fi. Before taking the Google Meet class, ground rules were set for conducive learning environment. The researcher teacher muted the microphone of all the participating students so that there would not be any disturbance while teaching. After explaining the topic for about 10-15minutes, the students were given chance to ask doubts if they had any either through unmuting their mic or by chatting. The class was taken for about 40-50mins. However, when there was internet problem from students’ side or when students asked many doubts, the class used to last for about 1 hour to 1 hour 30 minutes.

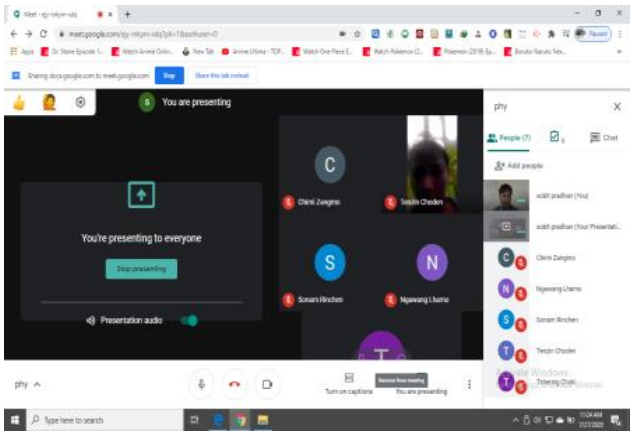
Diagrams showing real-world applications of the Principle of Moments, PhET simulations of see-saw and steps to solve the numerical problems using the formulae were included as part of "Absorb activity" for the topic "Principle of Moments." Questions related to the topic were randomly asked to the student as part of “Do activity.” “Connect activity” included a follow up activity for them to submit after 2 days on Google classroom.





‘Do’ Activity





‘Connect’ Activity

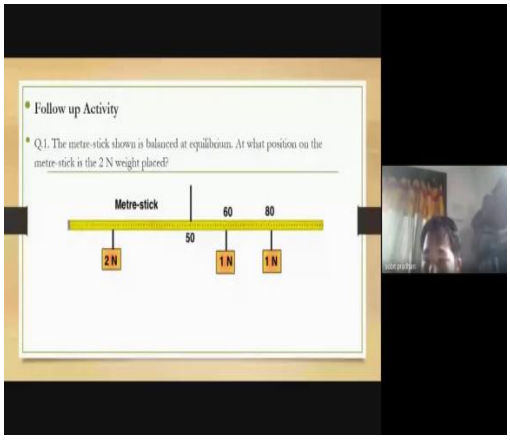
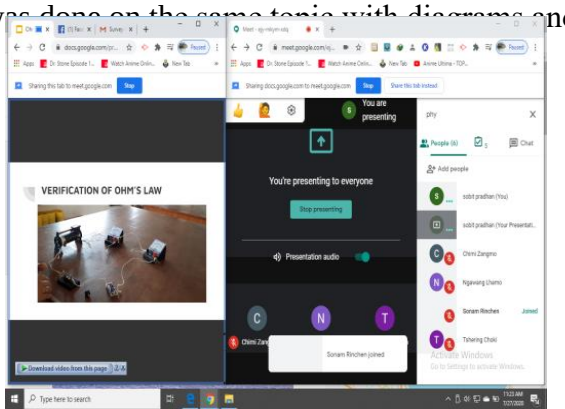
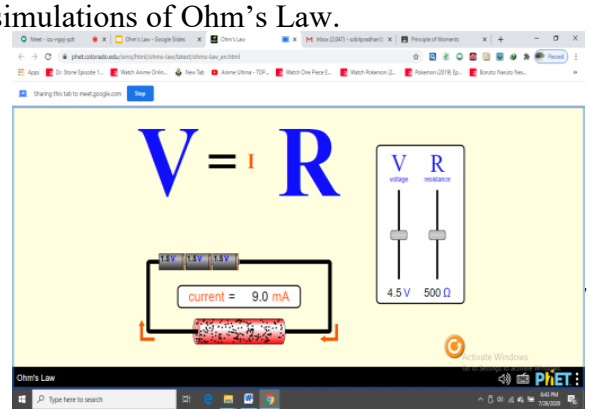


Figure. 8: Assign a follow up activity

hm’s Law” experiment was made and uploaded in Google Classroom. The students were asked to refer the video to get the gist of the topic. This was part of Absorb activity. The next day, Google Meet class was done on the same topic with diagrams and Phet simulations of Ohm’s Law.





A 20-point online test on the topic "Work, Power, and Energy" was given a week after assignments were due. The "Quilgo" Google Chrome extension, which provides camera recording, cheating prevention measures, and clock countdown tracking for Google forms, was used. The research teacher made use of Quilgo's free version which did not have camera recording feature. One hour was allotted for the online test, which had nine multiple-choice questions and one short response question. Students received instructions on how to access the Google form for the online test before beginning the test.

Post intervention

Students were assessed based on their performance in assignment and online test on the topic "Work, Power and Energy." It was followed by Google meet survey for perceived ease of use and usefulness for students.

Post Intervention Data analysis

The quantitative data was analyzed through descriptive statistics using SPSS v22. Conversely, pie diagrams and bar graphs were prepared using Microsoft excel. The data collected from participants' semi-structured interview was analyzed and interpreted using a thematic approach (Cresswell & Cresswell, 2018).

Findings & Discussion

The results of the quantitative data and qualitative data are combined and discussed under five different themes.

1. EFFECTIVE E-LEARNING PLATFORM FOR UNDERSTANDING

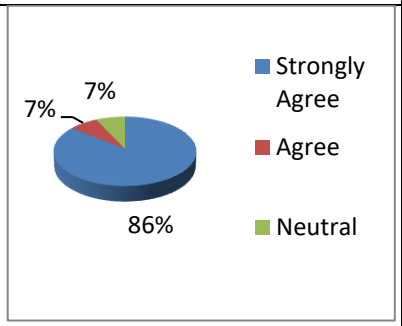
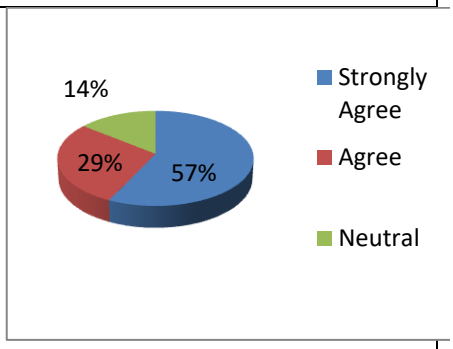
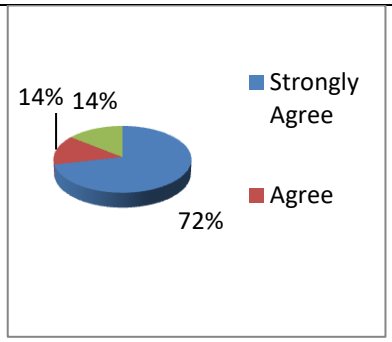
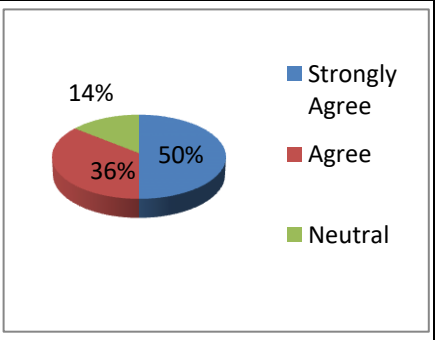
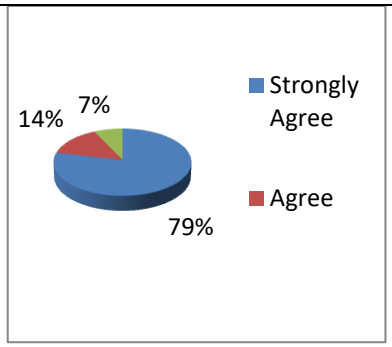
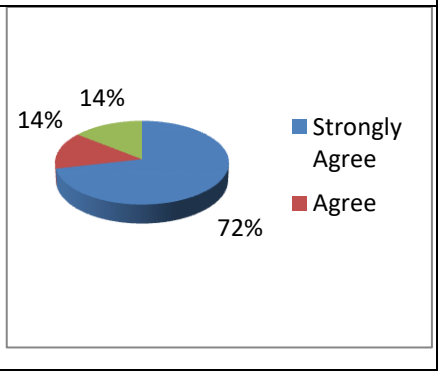
The participants were of the opinion that they learnt the lesson better through Google Meet as it was a kind of face-to-face teaching like the regular class. They were able to ask doubts to their subject teachers in real time. The multimedia such as pictures, videos, power point presentations, brain break videos, simulations made the lesson interesting as expressed below:

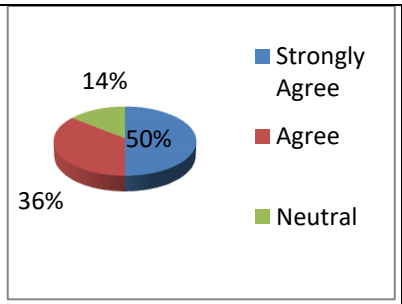
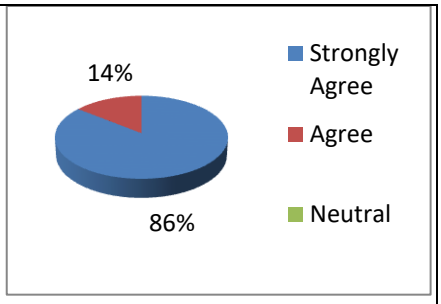
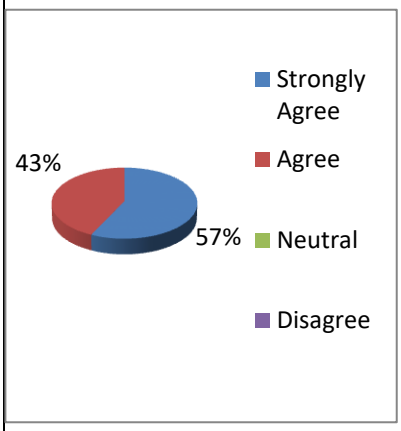
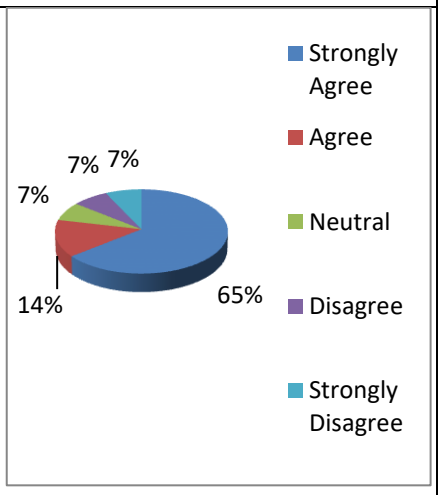
> Through Google Meet, teacher explains the topic with pictures, videos and brain break videos and thus I'm able to understand the lesson well. (EEPUS2)
>
> In class, I used to hesitate to ask question due to crowd. But through Google Meet, I'm able to ask my doubts to subject teachers. (EEPUS10)
>
> Google meet looks like regular class as I can ask questions directly to my teacher. (EEPUS7)

This finding was supported by quantitative data which indicates that students' attitude towards E-learning have improved from moderately positive to highly positive. It was discovered that 86% of the

class were able to understand the lesson through live video lectures in Google Meet and found it simple to use for interacting with their classmates and subject teacher. Furthermore, 79% of the students agreed that Google meet has a potential as an instructional tool. The overall mean of students responding either agree or strongly agree to all the 13 statements is 4.46 [See Table 3]. Similar study by Mannong (2020) highlighted that students understand the given materials and assignment instruction easily through Google Meet. It also made students enthusiastic in teaching and learning process.

Table 3: GOOGLE MEET SURVEY FOR PERCEIVED EASE OF USE AND USEFULNESS FOR STUDENTS

Statements	Students' response	Statements	Students' response
My interaction with Google Meet is clear and understandable		**Google Meet has good functionalities**	
Interaction with Google Meet does not require a lot of my mental effort.		**Live video lectures using Google Meet helps me to learn the topic well.**	
I find Google Meet easy to use		**Google Meet helps to increase interaction with my classmates**	

Learning how to perform tasks using Google Meet is easy.		**Google Meet makes online collaboration enjoyable**	
Google Meet is a good medium to clear our doubts		**Google Meet has a potential as an instructional tool**	

With an average point of 11 out of 20 i.e 55% and 12 out of 14 students getting above pass percentages, the online test result shows that students have learnt the lesson well through Google Meet [See Figure 13]

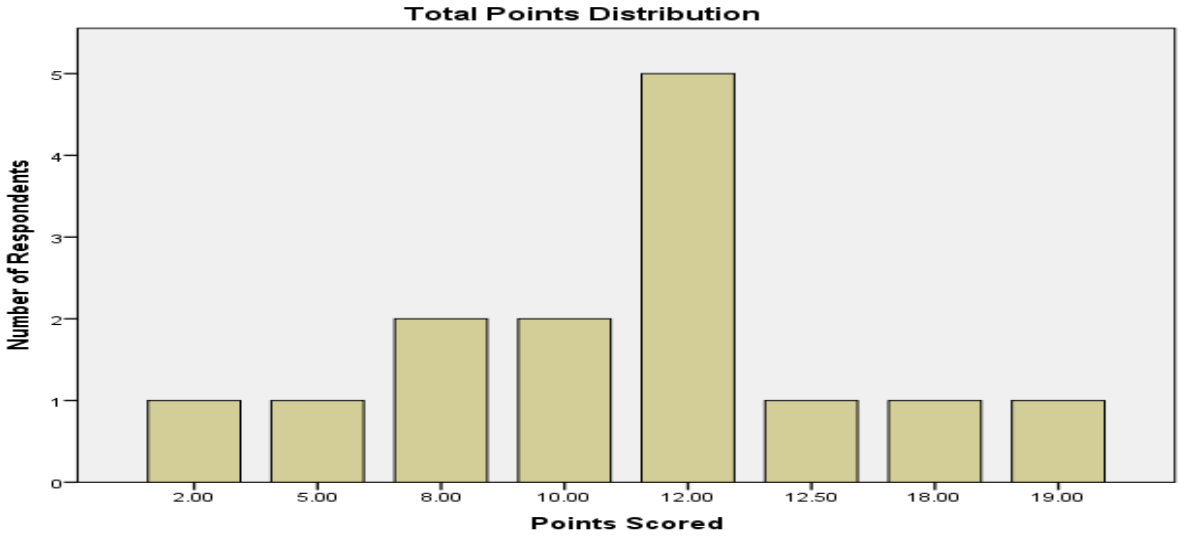


Figure 13: Online Test Result

2. INEFFECTIVE E-LEARNING PLATFORM

The participants were not too satisfied with the BBS E-learning programme. Two of the participants did not watch BBS E-learning programme as they did not have TV. Three of them expressed that they understood the lesson little bit through BBS E-learning. Rests of them were of the opinion that they did not understand the topic well through BBS E-learning. This indicates that there was lack of understanding of the topics taught. For instance, the following excerpts revealed:

> It was difficult to understand numerical problems. (IEPS3)
>
> The topics taught through BBS are not there in our text book. (IEPS7)
>
> Since there is no face-to-face teaching like in regular teaching, when there is doubt; I couldn't clear my doubts. (IEPS1)

As per the survey, only 9 students i.e., 64.3% of the total students watched the BBS E-learning programme. Out of 9 students, only 21.4% of the students understood the concept better through BBS E-learning than through regular teaching. These findings are in line with similar study done by Kado et al (2020) which highlighted that there was less interaction between teachers and students during BBS lessons, and learning was not as successful as it was during contact teaching.

3. EFFECTIVE E-LEARNING PLATFORM FOR ASSIGNMENT

The participants were of the opinion that sending assignments through Google Classroom was not tough though for few assignments they had to type using their mobile phones which was time consuming. However, all of them were of the opinion that Google Classroom is not suitable for learning the topics taught in BBS as expressed below:

> It was easy to send assignment through Google Classroom. (EEPAS1)
>
> It was difficult for me to type assignment in mobile. (EEPAS5)
>
> I was not able to understand the topic well through Google Classroom as there was only questions given for assignments. (EEPAS7)

The survey shows that 57.2% of the students find it easy to submit assignment through Google Classroom. With 64.3% of the students agreeing on receiving the feedback from their subject teachers for their assignment, 57.2% of the students' assignments being graded and 50% of the students being satisfied with the online interaction with subject teacher through Google Classroom; it indicates that students have moderately positive attitudes towards E-learning through Google Classroom. This is in line with the findings of Sibuea (2018) which stated that students find online assignment as the best feature of Google Classroom and they find Google Classroom easy to use.

4. SKILL IN TECHNOLOGY, ACCESSIBILITY OF GADGETS AND INTERNET CONNECTION

The participants were of the opinion that the internet connection was good to average. Especially during bad weather, the net connection dropped but on fine days, the net connection was good (AICS2). Another student mentioned that, "I had good 4G connection (AICS6).

The students who had laptop/tab and good internet connection showed stronger positive attitude towards E-learning. Hence the students' attitude towards E-learning to some extent was affected by their skill in technology and the accessibility to gadgets and internet connection. This is consistent with the findings of Rhema and Miliszewska (2014) which highlighted that along with technological aptitude, there was statistically significant association between students' attitude toward technology and their amount of access to various technologies. Similarly, results was observed by Kado et al (2020) i.e. students who do not have smart gadgets such as smartphones/tab/laptop, inaccessibility of internet data and internet connection found it difficult to submit assignments through Google Classroom.

5. PREFERENCE OF E-LEARNING PLATFORM

Majority of the participants were of the opinion that they would prefer to use both Google Meet and Google Classroom for learning the lesson and for submitting the assignment respectively. However, few students would prefer to have the combination of BBS E-learning programme, Google Meet, and Google Classroom. Following are the excerpts of the interview:

- Since we can have face-to-face interaction with our subject teachers in Google Meet, we are able to understand the lesson well. Through Google Classroom, we are able to submit assignment. (PEPS2)
- I would prefer to have BBS E-learning, Google Meet and Google Classroom together. (PEPS10)
- Since we got skill of using Google Meet and Google Classroom, in future we are confident to learn the topics well through these E-learning platforms. (PEPS3)

The study revealed that the combination of synchronous and asynchronous method helps in enhancing the effectiveness of E-learning for grade IX students. The result of this study is in line with the findings of Borup et.al, Heeyoung and Johnson (as cited Kobayashi, 2015) "both synchronous and asynchronous online tools have positive impacts on students' learning". Similarly, the study by Lalap Jr (2021) states that students were highly satisfied with the use of Google Classroom and Google Meet followed by Google form as this Google application are user friendly, affordable and easy to use. Apart from that there was significant effect on using these apps to the academic performance of class VII students learning social studies.

Conclusion

Though E-learning is new in Bhutan, the pandemic was a blessing in disguise for the curriculum developers, teacher educators, teachers and learners nationwide. It's because the pandemic was an eye opener for all the stake holders related to education department in the sense that we should be ready for E-learning platform during emergencies. The study showed that in E-learning, "instructors and students" must depend on technology for effective communication with each other as stated by Kobayashi (2015). Students' attitude towards E-learning depends upon the accessibility to required gadgets and internet, skill in technology and satisfaction with E-learning platforms. Apart from that choosing the right technology plays a vital role in making E-learning a fruitful experience for both teachers and students.

The two E-learning platforms namely Google Meet and Google Classroom overall have positive changes in students' attitude towards E-learning. The positive attitudes and willingness of students to learn through E-learning platforms suggests that future E-learning initiatives have good potential in Bhutan.

Limitations

The size of the sample was small and it is based on the study done on students of Thrimshing Central School. The Google meet feature "Raise your hand" and "Break out room" was not used as it is a new feature which weren't there during the time of doing research. There is a scope for the researchers to do further research with bigger sample size using the new features of Google Meet.

Recommendations

In order to have a better E-learning experience for teachers and students nationwide, the researchers would like to lay down the following recommendations:

- The Teacher Professional Support Division (TPSD) should organize PD for the teachers on the use of Google Meet app for teaching purpose, Google form for preparing questionnaires and conducting test.
- The Ministry of Education can avail for the paid version of Quilgo website for all the teachers to use in conducting a cheating-free test like in real exam.
- The school should then give the orientation on the use of Google meet app and online test using Google form and Quilgo for all the students nationwide.
- The VTOB lessons aired through BBS as part of E-learning can be effective if the lessons are taught class wise rather than key stages.
- The Department of Curriculum and Professional Development (DCPD) should frame a curriculum whereby E-learning is integrated in the syllabus as blended learning for the effective teaching and learning process to take place. This will ensure the continuity of education even during the pandemics.

References

Andersson, A. & Grönlund, A. (2009). A conceptual framework for E-learning in developing countries: A critical review of research challenges. *The Electronic Journal on Information Systems in Developing Countries*, *38*(8), 1-16. https://onlinelibrary.wiley.com/doi/pdf/10.1002/j.1681-4835.2009.tb00271.x

Bates, T. (2009). Can or should E-learning improve the cost-effectiveness of higher education?: *International Journal of Instructional Technology & Distance Learning (ITDL). http://www.itdl.org/Journal/Oct_09/article01.htm*

Castle, S. & Mc Guire, C. (2010). An analysis of student self-assessment of online, blended, and face-to-face learning environments: implications for sustainable education delivery. https://www.researchgate.net/publication/42606566_An_Analysis_of_Student_Self-Assessment_of_Online_Blended_and_Face-to-Face_Learning_Environments_Implications_for_Sustainable_Education_Delivery

Chan, S. S. C., So, W. K. W., Wong, D. C. N., Lee, A. C. K., & Tiwari, A. (2007). Improving older adults' knowledge and practice of preventive measures through a telephone health education during the SARS epidemic in Hong Kong: A pilot study. *International Journal of Nursing Studies*, *44*(7), 1120–1127. https://doi.org/10.1016/j.ijnurstu.2006.04.01

Creswell, J.W. & Creswell, J.D. (2018). Research design: Qualitative, quantitative, and mixed methods approach. Sage, Publishing. (n.d.). Www.scirp.org. https://www.scirp.org/reference/referencespapers.aspx?referenceid=2895169

Cucinotta D, & Vanelli M. (2020). WHO declares COVID-19 a pandemic Acta Biomed. 91(1), 157-160.
Daniel, S.J. (2020). Education and the COVID-19 Pandemic. Prospects, 49(1), 91-96. https://doi.org/10.1007/s11125-020-09464-3

Dorji, K. (2021). Online Teaching During the Covid Pandemic: Attitude of Teachers Towards E-learning in Bhutanese Classroom. *i-manager's Journal on School Educational Technology*, 16(4), 46-61.

Education Monitoring Division. (2021). *Education in Emergency Report.* http://www.education.gov.bt/wp-content/uploads/2021/09/EiE-Report_FINAL_28.06.21.pdf

Fahad, A. & Hassan, Z. (2013). A study towards using E-learning based information technology resources for the development of students thinking skills higher education. https://www.researchgate.net/publication/261401058_A_Study_Towards_Using_E-

learning_Based_Information_Technology_Resources_for_the_Development_of_Students_Thinking_Skills_in_Higher_Education

Fauzan & Arifin.F. (2019). The Effectiveness of Google Classroom Media on the Students' Learning Outcomes of Madrasah Ibtidaiyah Teacher Education Department. *Al Ibtida*, 6(2), 271-285. DOI: http://dx.doi.org/ 10.24235/al.ibtida.snj.v6i2.5149

Gallo, Joseph.J., Lee & Yeon.S. (2015). Eleven: Mixed methods in Behavioural intervention research. *Springer Publishing Connect*, DOI:10.1891/9780826126597.0011

Hakim, A.B., (2016). Efektifitas Penggunaan E-learning Moodle, Google Classroom Dan Edmodo. ISTATEMENT: Information System and Technology Management, 2(1).

Horton, W. (2012). ***E-learning by design.*** (2nd ed.)**.** Wiley and Sons.

Kado Kado, N. D., & Yonten, S. (2020). Effectiveness of Google Classroom as an Online Learning Management System in the Wake of COVID-19 in BHUTAN: Students' 'Perceptions. *Educational Practices during the COVID-19 Viral Outbreak: International Perspectives*, 121.

Kinley, K. (2009). E-learning at Paro College of Education, Bhutan: A case study. https://www.researchgate.net/publication/263619244_E-learning_at_Paro_College_of_Education_Bhutan_A_Case_Study

Kobayashi, M. (2015). Students' evaluation of Google Hangouts through a cross cultural group discussion activity. https://www.researchgate.net/publication/277609792_Students'_Evaluation_of_Google_Hangouts_Through_A_Cross-Cultural_Group_Discussion_Activity

Konting, M. M., Kamaruddin, N., & Man, N. A. (2009). Quality Assurance in Higher Education Institutions: Exit Survey among Universiti Putra Malaysia Graduating Students. International Education Studies, 2(1), 25-31.

Lalap Jr. V.G.(2021). Students' academic performance and their perception on the use of Google applications in Social studies. *EPRA International Journal of Research & Development (IJRD)*.6(7). https://doi.org/10.36713/epra2016

Lee, P. T. P. (2004). VITLE Experience: HKBU Library Supporting e-Learning in a SARS Environment. *Library Hi Tech News*, *21*(1), 19–21. https://doi.org/10.1108/07419050410526475

Li, Hui & Masters, Jennifer. (2009). Editorial: E-learning and Knowledge Management in the Early Years: Where Are We and Where Should We Go. Knowledge Management & E-learning : an International Journal. 1.

Liaw, S.S. (2011). A study of investigating learners attitudes towards E-learning. Retrieved from

https://www.researchgate.net/publication/267199358_A_study_of_investigating_learners_attitudes_toward_E-learning

Mannong, A.B.M. (2020). The students' eyesight: The effectiveness of learning based applications on ELT in Pandemic era. *Eternal (English, Teaching, Learning and Research Journal)*, 6(2), 394. https://doi.org/10.24252/eternal.v62.2020.a14

Maxwell, T.& Schuelka,M.(2016). Education in Bhutan: Culture, Schooling, and Gross National Happiness. https://www.researchgate.net/publication/309489689_Education_in_Bhutan_Culture_Schooling_and_Gross_National_Happiness

Rhema, A., & Miliszewska, I. (2014). Analysis of student attitudes towards E-learning: The case of engineering students in Libya. *Issues in Informing Science and Information Technology, 11*, 169-190. http://iisit.org/Vol11/IISITv11p169-190Rhema0471.pdf

Shahabadi,M.M. & Uplane,M. (2014). Synchronous and asynchronous E-learning styles and academic performance of e-learners. https://www.sciencedirect.com/science/article/pii/S1877042815004905/pdf?md5=8338049babd41459b496b81042ddab02&pid=1-s2.0-S1877042815004905-main.pdf&_valck=1

Shalni, G. (2008). Technology-Enhanced Learning in Developing Nations: A review. International Review of Research in Open and Distance Learning. 9. 10.19173/irrodl.v9i1.477.

Sibuea, Todo. (2018). Students' Perceptions on The Use of Google Classroom to support Blended Learning for the Pengantar Linguistik Umum Course. LINGUA : JURNAL ILMIAH. 14. 1-14. 10.35962/lingua.v14i2.45.

Stefan,H. (2008). Asynchronous and Synchronous E-learning. https://er.educause.edu/articles/2008/11/asynchronous-and-synchronous-elearning

Wangmo, U., Nesor, M.R., Choki, S., Om, L., Dorji, K., Dema, N., Sonam, N., Wangchuk, D., & Tshering, N. (2020). Students' perception on E-learning in Punakha dzongkhag in Bhutan. *Asian Journal of Education and Social Studies*, 11(2), 18-24. DOI: 10.9734/AJESS/2020/v11i230286

Weisman, N. (2017). Evaluating the effectiveness of a synchronous online environment in establishing social, cognitive and teaching presence. https://etd.ohiolink.edu/pg_10?0::NO:10:P10_ACCESSION_NUM:kent1492007293545229

White, H., & S. Sabarwal (2014). Quasi-experimental Design and Methods, Methodological Briefs: Impact Evaluation 8, UNICEF Office of Research, Florence

Wong, E.T.T. (2004). Impact of E-learning during SARS outbreak in Hong Kong. The Social and cognitive impacts of E-Commers on Modern Organizations, 185-203. https://doi.org/10/4018/978-1-59140-249-7.ch0

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Scholarly Review

Scholarly papers take the form of essays that represent well-developed arguments on philosophical, theoretical, or practical problems in the field of education. They are not required to adhere to an empirical research design (i.e., methods, data collection, and data analysis). Instead scholarly papers pose analytical or conceptual frameworks.

Scholarly papers should contain as many of the following as are applicable, preferably in this order: (1) objectives or purposes of the inquiry; (2) the philosophical, theoretical, or practical

argument; (3) literature, sources, or evidence to support the argument/analysis; (4) conclusions and implications of the argument; and (5) significance of the argument

Project reports

These articles will be shorter and more preliminary reports about interesting educational projects (innovative courses, learning communities, etc.). Several of these reports could be published in each issue. The focus of a project report is on the progress or outcomes of an academic innovation that addresses issues in education.

PREPARATION OF MANUSCRIPT

1. The complete title of the paper, the names of the author(s), institutional affiliations, e-mails, and other identifying material should be typed on a separate sheet/the title page only to assure anonymity in the review process. The first text page of the article should have the complete title of the manuscript, but not the names of the author(s).

2. The length of manuscripts should be not more than 5000 words.

3. All manuscripts should be sent with an abstract of *150–200 words* and 4 to 5 keywords. The abstract should be placed preceding the paper.

4. Articles should be double spaced and 12-point, Times New Roman font**. Do not** use forced section, page breaks, or automatic footnotes.

5. *Make sure to* provide complete, APA-formatted references and text citations, making sure the two correspond exactly. Pages 207–281 of the *APA Manual* (fifth ed.) detail these guidelines.

6. Change all instances of passive voice to **active voice** whenever possible, as these changes will be necessary before publication. Spell out each acronym at its first use.

7. Set all margins to 1 inch.

8. Format for 8½ in. x 11 in. paper. Do not format for A4 paper.

9. Please type all copy upper and lower case—do not use all capitals or small capitals.

10. Place all figures and tables in a separate file. Tables need not be double spaced. Indicate the location of tables and figures in text in boldface, enclosed in angle brackets, on a separate line.
Example: **<Fig. 1 here>**

All figures must be camera-ready, suitable for reproduction. Figures will not normally be redrawn by the publisher.

11. Please use your tab key and centering functions to do head alignment, paragraph indents, etc. DO NOT USE THE SPACE BAR.

12. Use endnotes as sparingly as possible. Number them with Arabic numerals starting with 1 and continuing through the article; for example: "(see Note 1)." Do not use footnotes.

Artwork

Figures must be provided as production-ready. Do not use rules or tick marks smaller than 1 point in size. Acceptable electronic formats for figures or other art are: TIFF, EPS, Word, or Excel. If you have trouble loading Excel files, copy and paste them into a Word document. Scans must be of high resolution. Scans done at lower resolutions will have a very poor print quality even if they look crisp and clear on a laser printout.

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