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Status of pedagogical practices in Somaliland higher education institutions

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ABSTRACT

Recently, there has been a concern in many parts of the world about the teaching strategies employed at higher education institutions (HEI). Empirical evidence shows that pedagogical practices affect the student engagement and academic excellence. Despite progress on the new innovative pedagogies globally, Somaliland HEI are still struggling with the old didactic teaching method which impedes students lifelong learning and future endeavors. Traditional teaching methods of HEI in Somaliland prevented students to unleash their potentials. Guided by the human capital theory, this study examined the status of lecturers' application to modern pedagogical practices. The 35 lecturers at the University of Hargeisa, Somalia from the different faculties who had received postgraduate diploma in education provided by the university participated in this study. Employed by micro-teaching observation protocol of quantitative research design, the study found out lecture method as the most prevalent in their teaching practicum, with very low student cognitive engagement, inconsistencies with the instructional behavior and inadequate instructional aids. The study therefore proposed a cooperative jigsaw method as a veritable strategy for effective classrooms and better student engagement. The study recommends Somaliland higher education to adopt the policies, guidelines and regulations that guide the universities across the country.

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1. INTRODUCTION

Throughout history, education has been a salient tool for addressing man's most pressing issues. Various levels of education such as pre-primary, primary, secondary, tertiary, and vocational schools have always been intended to come up with comprehensive plans and ideas that transform societies across the globe. There is a consensus among educational researchers that education plays a vital role in equipping learners with the skills, attitudes, values, and knowledge necessary to contribute to their communities. For example, a study by Maton [1] found that education is an essential tool for empowering individuals to participate actively in their communities and to promote positive social change. Similarly, a report by the World Bank [2] highlighted the importance of education in fostering social and economic development, stating that education is a key driver of inclusive growth and poverty reduction.

One of the primary contributions of higher education is the education and training of individuals to become skilled professionals in various fields. Higher education institution (HEI) provides students with the knowledge, skills, and experiences necessary to succeed in their chosen careers. According to a report by the

National Center for Education Statistics, in 2019, there were approximately 20.4 million students enrolled in colleges and universities in the United States alone [3]. These students go on to become doctors, lawyers, engineers, teachers, scientists, and other professionals who make significant contributions to society.

In addition to providing individuals with the skills they need to succeed in their chosen professions, HEI also conduct research that contributes to the advancement of knowledge and the betterment of society. Through research, HEI generate new knowledge and ideas that can be used to solve complex problems and improve people's lives. For example, researchers at universities have played a significant role in developing vaccines for COVID-19 [4]. Moreover, research conducted at HEI has also contributed to the development of new technologies, improved healthcare, and environmental sustainability.

Similarly, HEI contribute to their society through community outreach and engagement. Many universities and colleges have established partnerships with local communities, governments, and non-profit organizations to address social and economic challenges. These partnerships help universities to use their resources to improve the quality of life for people living in their communities. Higher education also plays a significant role in the remedy of societal encumbrances such as ravaging wars and instability by promoting peace, tranquility, and vigilance among societies. A study by UNESCO found that higher education can contribute to peacebuilding by fostering critical thinking, tolerance, and respect for diversity. It can also provide opportunities for conflict resolution and promote social cohesion [5]. Similarly, the World Bank Group [6] explain that education represents a fundamental entitlement of all individuals, a potent catalyst for progress, and a highly effective means for diminishing impoverishment, enhancing well-being, fostering gender equity, and promoting harmony and security. It can contribute to rebuilding institutions, promoting democratic values, and reducing poverty and inequality. In this way, HEI yield competitive human capital that brings about economic growth and societal development in various dimensions. On the vast literature on human capital and education, producing the quality human capital requires the content to be delivered and of course the teaching method employed for the instructional strategy [7].

Teaching methods are part of the educational discipline called pedagogical practice. Pedagogical practices are defined as the methods and strategies used by teachers and educators to facilitate learning and promote student engagement and achievement. Teaching methods, which are an essential component of pedagogical practices, enable educators to effectively deliver instructional content and foster meaningful learning experiences. Moreover, pedagogical practices encompass various elements of teaching, including curriculum design, assessment, and classroom management, all of which are crucial for creating a positive and productive learning environment. Therefore, this study portrays the concept of pedagogical practices by focusing teaching methods which are now employed by the HEI of Somaliland. The paper elucidates the historical aspect of teaching methods by culminating the traditional approaches used by the early civilizations, ancient times, Islamic golden age, colonial era, and how Somali context has been.

Teaching methods have evolved significantly throughout history. From ancient times to modern-day, educators have developed numerous teaching methods and techniques to enhance the learning experience of students. Historically, teaching methods were primarily oral and experiential. In ancient times, the Greeks used the Socratic method, where the teacher would ask questions and encourage students to think critically [8]. Similarly, in India, the Gurukul system was prevalent, where students would live with the teacher and learn through observation and experience [9]. In medieval Europe, the apprentice system was used to teach trades, where the apprentice would work alongside a master to learn the necessary skills [10].

The golden age of Islamic civilization, which lasted from the 8th to the 13th century, was a time of great scientific, cultural, and intellectual achievements. During this period, numerous teaching methods were developed that have had a lasting impact on education. One of the most prominent teaching methods was the system of *madrasas* or Islamic school, which were educational institutions that taught Islamic law, theology, science, math, and philosophy. These institutions were designed to provide a comprehensive education to students, and they were open to people of all social classes and backgrounds [11].

The curriculum in *madrasas* was based on a system of memorization and repetition. Students would memorize the Qur'an and other Islamic texts and then recite them to their teachers. This approach to learning was based on the belief that repetition and memorization were essential for developing a deep understanding of the material [12]. Another important teaching method in the golden age was the use of textbooks. Islamic scholars produced numerous textbooks on a variety of subjects, including mathematics, astronomy, medicine, and literature. These textbooks were widely used in *madrasas* and other educational institutions throughout the Islamic world, and they played a significant role in the dissemination of knowledge.

Islamic scholars also developed a system of debates and discussions, known as *mubahathah*. This method of teaching involved students engaging in lively debates and discussions with their teachers and fellow students. This approach to learning was based on the belief that debate and discussion were essential for developing critical thinking skills and for fostering a deeper understanding of the material. In addition, Islamic scholars developed a system of apprenticeships, known as *ustad-shagird*. This method of teaching involved a master (*ustad*) working with an apprentice (*shagird*) to teach them a particular skill or trade. This

approach to learning was based on the belief that hands-on experience was essential for developing mastery of a particular subject.

With the invention of the printing press in the 15th century, books became more accessible, and teaching methods started to change [13]. The lecture method became prevalent in universities, where teachers would read from textbooks to a large group of students. In the 17th century, John Locke introduced the idea of teaching by association, where teachers would relate new information to something students already knew [14]. In the 18th and 19th centuries, education reformers began to advocate for more student-centered approaches. Jean-Jacques Rousseau, for example, emphasized the importance of allowing children to learn through experience and exploration [15]. Johann Pestalozzi developed the method of object teaching, where students would learn by manipulating physical objects [16]. Maria Montessori developed the Montessori method, which focuses on individualized learning and self-directed activities [17]. In the 20th century, behaviorism became a dominant theory in education, and teaching methods were heavily influenced by this approach. B. F. Skinner developed the theory of operant conditioning, which led to the development of programmed instruction and the use of teaching machines [18]. However, behaviorism eventually gave way to cognitive theories of learning, which emphasize the importance of mental processes in learning.

In the case of Africa, one of the most prominent teaching methods used in African schools during this time was the lecture method [19]. Another teaching method used in African schools during this period was the demonstration method [20]. The question-and-answer method was also commonly used in African schools during this period. In addition to these teaching methods, African education during the colonial era also placed a strong emphasis on rote learning. While these methods may have been effective in certain contexts, they often failed to take into account the unique cultural, linguistic, and social contexts of African students.

In Somaliland, most of educational settings have been delivering their content through didactic mechanism since the inception of formal education during the British Protectorate in Sheikh District. In higher education, the most employed instructional strategy is straight lecture method where lecturers passively impart knowledge from slides to students. Numerous studies carried out in Somaliland revealed that academic performance is affected by the pedagogical practice teachers employ during their instruction. For example, a study by Gulled [21] revealed that teachers pedagogical practices have positive effect on the academic performance of students in public primary schools in Hargeisa, Somalia. Since the establishment of Somaliland higher institutions, lecturers at the universities have not been subjected to training, workshops, and seminars on instructional teachers of the dynamic world. Despite the increase of HEI of Somaliland, knowledge to pedagogical practices as instructors has not been an issue of the local universities in the country; the only requirement is having a degree relevant to the subject matter. As a result, concerns have been raised on the declining overall quality of education system in Somaliland due to the insufficient qualified professionals and the limited funds.

There is a growing recognition of employing interactive teaching methods. One of the most pertinent teaching methods which is now employed by the education institutions is the cooperative method. Cooperative learning is a teaching method that emphasizes active participation and collaboration among students. According to Johnson and Johnson [22], cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning. The jigsaw method is a cooperative teaching strategy that has uses in multiple areas of science, language instruction, foreign language teaching, social sciences, and medical science. It is beginning to show up in various in-class activities based on changes throughout time. In terms of the length of the group work (a unit or a single topic), the educational materials used, the activities, the evaluation procedures, the organization of the groups, the methods of creating dependency, delegating duty, offering engagement strategies, and offering incentive programs, the characteristics of the field and the specific subject have experienced extensive adjustments.

Therefore, this study is aimed at exploring the status of pedagogical practices of HEI of Somaliland. For this purpose, the study explored how lecturers at the universities of Somaliland delivered their contents to their students. From this perspective, the study also depicted some of the new innovative pedagogies that will trigger provision of quality education to the students in higher institutions.

2. LITERATURE REVIEW

Elliot Aronson, a social psychologist, developed a method to defuse tension in racially diverse classrooms in the early 1970s [23]. Aronson and his team noticed that the competitive atmosphere in these classrooms was creating problems for the freshly mixed black, Hispanic, and white children. Aronson suggested a cooperative atmosphere where students had to rely on one another to learn the subject to address this. Within a short time, students who had previously been hostile to one another started cheering for and

praising one another as they mastered the material. Racial tensions subsided as a result, and students showed greater mastery of the subject. According to research, pupils of all ages can benefit from this strategy. According to Gulled [24], the findings of both the qualitative and quantitative analyses suggest that public investments in teacher quality are associated to improvements in student achievement. The primary tactic entails designing assignments and activities that enable students to become experts in a particular field and then impart that knowledge to their classmates. Then, they are urged to work in groups to successfully complete assignments or prepare for tests by drawing on one another's expertise.

Jigsaw assignments that are designed to include components essential to efficient cooperative learning have favorable benefits, according to research on the usage of jigsaw in undergraduate courses [25]. The emphasis on interpersonal and small group skills, individual accountability, face-to-face connection, and group processing are some of these essential components. Students are said to benefit from taking more ownership of their education, being more involved in class, asking more questions, and turning to their peers for information rather than the teacher. Different jigsaw variations have been successfully used in undergraduate courses in an array of subject areas, including statistics and language classes [26], chemistry [27], psychology [28], [29] multi-disciplinary computational science and engineering [30], philosophy [31], biology [32], geology [33], and sociology [34], [35].

The jigsaw method is a cooperative learning method that encourages active student participation, critical thinking, and teamwork, all of which can result in academic distinction. In the jigsaw method, pupils work in small groups to become authorities on a particular subject before presenting their expertise to their peers. This section will investigate the possible advantages of the jigsaw method for achieving academic brilliance and will make use of pertinent research in this field.

Slavin [36] looked at the effect of cooperative learning strategies, such as the jigsaw method, on math student progress in one research. In 59 elementary school classes, the study indicated that children who employed cooperative learning techniques outperformed those in traditional classrooms in terms of achievement. The jigsaw method was particularly successful at fostering higher order thinking abilities and enhancing student learning attitude. Educational researchers [37] also looked at the effects of cooperative learning on academic performance in a variety of subject areas. In almost 600 classes spanning several grade levels, the study indicated that pupils who adopted cooperative learning strategies performed better than those in typical classroom settings. It was discovered that the jigsaw method is especially good at encouraging critical thinking and problem-solving abilities.

The jigsaw method's effects on middle school students' academic achievement and social-emotional learning were investigated in a more recent study by Aronson *et al*. [38], students who employed the jigsaw method had higher academic scores and gained more social-emotional skills than those in regular classes, according to research involving 19 classrooms. The jigsaw method was particularly successful at encouraging pupils to cooperate, feel a sense of community, and have sympathy. The jigsaw method can help to foster academic achievement by encouraging collaborative learning, critical thinking, and engaged learning among students. According to studies, the jigsaw method can boost students' accomplishment levels and attitudes toward learning in a variety of subject areas and grade levels. Teachers can assist their students in achieving academic achievement and the growth of vital social-emotional skills by introducing the jigsaw method into classroom education. This study by guided by the human capital theory. Human capital theory is an economic theory developed by Theodore W. Schultz in the 1960s [39]. The theory argues that education and training are investments in human capital, which increases an individual's productivity and earning potential. According to Schultz, the accumulation of human capital is a key determinant of economic growth and development.

Schultz in 1961 defined human capital as the knowledge, skills, and abilities that make people productive [40]. He argued that individuals can invest in their own human capital by acquiring education and training, and that firms can invest in the human capital of their employees through training programs and other forms of skill development. The theory postulates that investments in education and training can have long-term economic benefits. Individuals who invest in their own human capital can increase their productivity and earning potential, which can lead to higher wages and greater job security. Similarly, firms that invest in the human capital of their employees can increase their productivity and competitiveness in the marketplace. Human capital theory also highlights the importance of education and training as a means of reducing inequality and promoting social mobility. According to Schultz [41] in 1990, education is a key factor in determining an individual's earning potential and social status. By investing in education and training, individuals can overcome the constraints of their social background and achieve greater economic success.

In addition to its implications for individuals and firms, human capital theory has broader implications for economic growth and development. Schultz argued that investments in education and training can increase a nation's stock of human capital, which can lead to greater economic productivity and competitiveness. He also argued that education can contribute to social and political stability by promoting

greater understanding and tolerance among diverse groups. From this perspective, investment in scientific and evidence-based training in Somaliland higher education is a pertinent aspect that can bring about the provision quality of education which triggers economic growth in the country. Providing training on innovative pedagogies and practicums to our lecturers at the promote society's productivity and potentials.

3. RESEARCH METHOD

Employing quantitative research design, the researcher carried out classroom observation at the University of Hargeisa, a public university in the capital city, Hargeisa. The 35 lecturers at the University of Hargeisa from the different faculties (very few were secondary school teachers and lecturers from the other universities in Hargeisa City) who had been participating in postgraduate diploma program in education provided by the university to enhance their teaching practice were sampled to participate in the study. The study sought to examine the status of the pedagogical practices of the teachers. The participants of this study had taught different fields and disciplines such as science, technology, engineering, and mathematics (STEM), social sciences and humanities. Therefore, the pedagogical practices focused on the relevance of the lesson plans and schemes of work that the teachers had submitted before the lesson and its conformity with the practical session. Pedagogical practices were further operationalized as the teaching methods employed by the teachers (cooperative teaching, jigsaw method, flipped method, technology enabled active learning (TEAL), discussion method, inquiry-method, demonstration method, project-based method, case study and scenario mapping, experiential method, and many others) and its compliance with the objectives of the lesson.

Each teacher was observed on three occasions by the researcher and recorded the teacher's behaviors every three minutes using the checklist that reflects on the aspects that are subjected to measurement. It is important to note that this was solely a micro-teaching observation protocol and was not intended to undertake rigorous teacher evaluation program which requires adequate resources. Micro-teaching, a globally employed pedagogical method in teacher training, offers educators a platform to enhance their instructional abilities by refining fundamental teaching skills. With demonstrated efficacy among both novice and experienced educators, micro-teaching fosters genuine teaching practice. Key components of micro-teaching, like presentation and reinforcement competencies, facilitate the learning of the teaching craft, making it accessible and comprehensive for novice teachers. Founded in 2000, University of Hargeisa was selected as it has the highest number of student enrollment in Somaliland country. This makes it the target for research since it also accommodates the highest number of lecturers.

4. RESULTS

4.1. Lecture as the dominant instructional strategy

The delivery of the course material was mainly constituted by the lecture teaching method. Out of the repertoire teaching strategies, the sole method by which most of the teachers employed was straight lecture method. About 75% of the 3-minute intervals on the occasions to observe the teacher, the most prevalent method was lecture method with short slides intended to impart knowledge to the students. Writing or drawing on the whiteboard was seldom seen. Similarly, 14% of the teachers employed the inquiry method and posed questions to the students. Similarly, in the areas that needed diagram presentation or crafting a picture, only 5% of the teachers' employed diagrams and tree-diagrams to draw inferences for their students. The pictorial superiority effect was not imperative for the teachers during this observation.

4.2. Instructional behavior

During the observation, the researcher observed inconsistent mannerism styles among the teachers observed. During the content delivery, very few teachers employed analogy to persuade a concept to the students. In creating student-teacher rapport, 8% of the teachers were seen instances they utilized humor to engage students' attention. It is worth noting that 14% of the teachers who employed inquiry-method experienced some questions from the students. The teachers responded to the questions on the comprehension domain while ignoring the novel questions.

4.3. Status of student cognitive engagement

The observer saw the majority of instances where teachers delivered the content using lecture (didactic) teaching method. This method was based on the theory of tabula rasa and students were passively receiving lessons from the lecturers. The researcher also captured instances were teachers (10%) engaged students on rote memorization to recall information. The observer did not come across any instances were teachers employed critical thinking, collaboration, creativity, solving real world problems and communication.

4.4. Use of teaching learning materials

In regard to this perspective, the researcher observed the extent to which teachers deployed digital and non-digital aids to help students better understand the concepts of the lesson. The 91% of the teachers employed slides (PowerPoint presentation). Only 8% of the teachers used whiteboards. The 5% of 91% only introduced their lesson writing the topic on the whiteboard.

5. JIGSAW IN ACTION: SIMPLIFIED PROCESSES AND PRACTICES

As previously discussed in the literature, the jigsaw method is a cooperative learning strategy that involves breaking a class into small groups, with each group responsible for mastering a specific piece of content and then teaching it to the rest of the class. Figure 1 portrays how the method works. To employ jigsaw teaching method, a teacher should follow these guidelines. They are: i) Update the pupils; explain the value of the jigsaw approach and how it enhances students' academic achievement, communication, critical thinking, creativity, teamwork, and problem-solving skills in general; ii) Create smaller groups in your class by dividing it into sections of four to six pupils each. Ensure that each group includes students from all backgrounds and skill levels. Students are grouped together as seen in Figure 1. Each group can hold four people; iii) Give each group a specific assignment or topic to research and become authorities on; assign a topic. Give students the tools they need to do research and gather their data; iv) Give pupils enough time to conduct independent research on the topics they have been assigned. You can complete this as homework or in class; v) Create new groups (expert group): rearrange the class into new groups, ensuring that each group contains a representative of each of the original groups. Ensure that the members of the new groups are diverse and possess various levels of competence; vi) Information sharing: students in their new groups should educate their peers on the material they have learnt. Encourage them to debate and elaborate on any ideas that need more explanation; vii) Piece together to develop a final product: students should produce a final piece that combines all of the knowledge they have gained. This might be a written report, a poster, or a presentation; and viii) Motivate students to ponder on their work and assess their own and their group's progress after finishing the final product. They can use this to pinpoint problem areas and make necessary modifications.

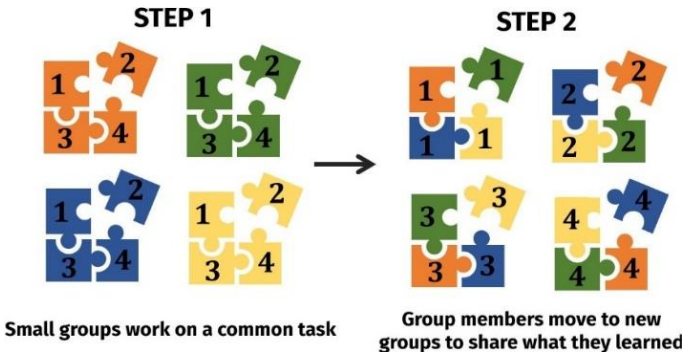

Figure 1. Jigsaw method employed

6. DISCUSSION

The study revealed that the most prevalent instructional strategy in Somaliland universities is the lecture method. The finding that the majority of teachers employed the lecture method during lessons is supported by previous research [42]. While the lecture method can be an effective way for teachers to convey information it can also be problematic if overused or not used in conjunction with other teaching methods. A potential issue with the lecture method is that it can be passive for students, who may become disengaged and lack motivation to [43]. Additionally, it may not be effective for students who learn better through hands-on activities or group work [44].

The finding is also supported by a study of Mahanta *et al*. [45], they examined the use of the lecture method in medical education in India. They found that while lectures were the primary mode of instruction, students preferred more interactive and hands-on learning experiences. The authors suggest that incorporating more interactive teaching methods, such as problem-based learning, could improve student engagement and learning outcomes. Research by Yasin [46] asserted that for a teacher to be effective, they must possess a deep understanding of instructional methodologies, the use of teaching aids, classroom

management, student participation, and constant assessment. In commensurate with the finding, a study by Yeo *et al*. [47] explored the use of the lecture method in accounting education in Malaysia. They found that while lectures were the main instructional strategy, students also valued group work, case studies, and online resources. The authors suggest that incorporating a variety of teaching methods could enhance student engagement and promote deeper learning.

The study also found out the lecture method employed by the teachers brought about low student engagement. The finding that there was relatively little student cognitive involvement during the lecture is consistent with earlier studies [48]. Low cognitive engagement can be brought on by a variety of things, such as a lack of relevance or interest in the subject matter, a teacher with poor presentational abilities, and inefficient teaching methods. To enhance the student's cognitive engagement, a teacher should employ active teaching strategies rather than passive and didactic methods. For example, they can use multimedia tools, such as videos or interactive online quizzes, to help students better understand the material. Teachers can also use active learning techniques, such as role-playing or case studies, to help students apply the material in a meaningful way.

Interestingly, the study found out that providing slides to students was the sole way of covering the content. The documented literature states that slides can be supplementary to the teaching process but cannot be the only way of instructional aid. This supported by the study conducted by Kiewra *et al*. [49]. They found that while slides can be useful as a supplement to teaching, they are not sufficient on their own. The study showed that students who received a lecture supplemented with slides performed better on a test than those who only received the slides. The researchers suggest that slides should be used as an aid to teach, rather than a replacement for it. Similarly, a significant number of studies revealed that adequate teaching learning materials improve the academic performance of students and their interactive engagement.

There are various studies that suggest that simply providing slides is not enough to enhance learning and that other teaching methods should be used in conjunction with slides to create a more effective learning environment. Mayer and Moreno [50] argued that simply presenting slides with text and images can lead to cognitive overload and that additional instructional methods, such as narration, should be used to reduce cognitive load and enhance learning. Research by Clark and Mayer [51] provided evidence-based guidelines for designing effective multimedia learning materials, including the use of other teaching methods in conjunction with slides to enhance learning. Research by Kalyuga *et al.* [52] suggested that learners with low levels of expertise may benefit from more guidance and instruction beyond slides, such as worked examples and problem-solving tasks. Overall, these studies suggest that while slides can be a useful tool for presenting information, they should be used in conjunction with other teaching methods to create a more effective learning environment.

7. CONCLUSION

Despite teachers possessing good knowledge of subject matter issues, the study found that the majority of the teachers in the University of Hargeisa employed didactic or lecture methods during their instructional time. In terms of student engagement during the instruction, the study revealed that majority of the lecturers used teacher-centered approach where knowledge was passively imparted to students using rote memorization. Students' priori knowledge was ignored, and knowledge was deposited to their brains as banks. From the perspective of the use of teaching learning materials, the study found out that the majority of the teachers used projectors for slide presentations. Whiteboard and markers were rarely used. Although there were instances where the use of teaching aids was important, teaching aids were not brought to class.

Somaliland National Commission for Higher Education (SNCHE) should develop and implement a comprehensive teacher training program that focuses on pedagogical practices, subject matter expertise, and effective use of technology. SNCHE should encourage teachers to adopt innovative student-centered pedagogies that promote active learning and engagement in the classroom. SNCHE should provide training and resources for teachers on the use of teaching aids and materials. The Ministry of Education and SNCHE should establish a system of teacher evaluation and feedback that includes input from students, peers, and supervisors. Universities of Somaliland should also promote the use of formative assessment strategies to gauge student understanding and promote learning. Universities should also provide opportunities for teachers to observe and learn from each other (peer observation). Encourage teachers to seek feedback from their students on their instructional practices. Provide support for the development and implementation of effective instructional strategies and practices. The SNCHE and universities should also provide incentives, recognition, awards, and opportunities for career advancement for teachers who demonstrate excellence in teaching can help to create a culture of excellence within the institution and inspire all teachers to strive for excellence in their own teaching practice.

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