



Science Teachers' Competence Reflective of The New Normal Flexible Learning Modalities

DOI: <https://doi.org/10.5281/zenodo.11184281>

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Abstract

This study aimed to determine the Science Teachers' competence reflective of the new normal flexible learning modalities for the school year 2022-2023 at Carcar City Division as basis for a teacher support model. The study is quantitative in nature which utilized the descriptive-correlational design to determine the competencies of the Science teachers. Furthermore, qualitative research using thematic analysis was also used in probing students' perceptions of their teacher's teaching competencies which focused on the areas of Classroom Management, Instructional Delivery, Formative Assessment and Personal Competencies. Findings revealed that majority of the respondents were 31-40 years old, female, with MA units, General Science major, holders of Teacher 3 positions who had attended various trainings relevant to Science. They had teaching experience of 1-5 and 6-10 years respectively. Students under the Science teachers had Outstanding academic performance and the teachers had Very Satisfactory ratings in their Individual Performance Commitment Form (IPCRF). It was further shown that the Science teachers were Highly Competent based on classroom management, instructional delivery, formative assessment, and personal competencies as rated by the teachers, master teachers and principals. As to the level of significance on the demographic profile and the teachers' teaching competencies, it was found out that only educational attainment of the science teachers is moderately, inversely, and significantly related to their competency in terms of classroom management. In conclusion, Science teachers as educators should demonstrate the following competencies such as effective classroom management, instructional delivery, formative assessment, and personal competencies which are expected to promote purposeful learning among the students.

Keywords: *Science Teachers, Teaching Competencies, Descriptive-Correlational, Carcar City Division*

Introduction

Science is the systematic study of the structure and behavior of the physical, social, and natural worlds through observation and experimentation. It is also the integral part when teaching science. One of the goals of science teaching across the world is to provide every learner quality education to become scientifically competent for global advancement in science education. In the recent years, the aim of science in the curriculum is to help learners develop their basic scientific knowledge and understanding about the biological and physical aspects of the world, and its processes which also strengthen knowledge and understanding. Zhang (2018) mentioned that in the educational paradigm shifts, there have been many changes in the school system across the globe which include teaching approaches, curriculum framework, learning styles of the students, and academic related policies.

Educational communities across the world proposed educational reform agenda in teaching competencies in science to meet the demands in preparing future citizens for scientific literacy in the 21st century. As mentioned in Organization for Economic Cooperation and Development (2015), the educational goals in the entire world transcend knowledge acquisition by including competencies that encompasses four areas namely: classroom management, instructional delivery, formative assessment, and personal competency to live in the current global educational society.

Van Rooy (2020) mentioned that classroom management, instructional delivery, formative assessment, and personal competency are interdependent aspects of the competencies of science teachers which need to be integrated in the teaching and learning process. Meaningful teaching delivery in science requires in-depth understanding of the degree of the competencies acquired by the teachers. Also, to achieve the vision and mission of science education for all, teachers should become more engaged in the planning, development, and assessment which is reflected in the Individual Performance Review Form (IPCRF).

For the last few years, the educational system of the Philippines has been experiencing challenges in providing the basic function of a quality education. One of the challenges noted was the ineffective establishment of quality education due to underachieving student's performance in science, and the poor quality of teachers' teaching competencies and skills. These two educational aspects affected the teaching and learning process, which were evident based on the performance of the students. As cited by Villenes (2019), the K-12 curriculum crafted by the Department of Education emphasized that teachers are required to develop their competencies together with the essential knowledge, skills, and attitudes to obtain best results in the educational system.

These concerns in teaching science at all levels of the educational system in the country are a challenge to truly provide quality teaching and learning process and improve students' learning performance in science. Teachers and schools are cooperative working together to ensure growth, development, and improved performance of every learner as the central clientele in the classrooms. The practice of aligning teaching and learning processes to the set standards will also be manifested by the Department of Education to ensure a higher level of learning. Thus, the competencies that the teachers should intensify are classroom management, instructional delivery, formative assessment, and personal competencies that enable a science teacher to be successful in achieving good results on students' performance.

Teachers should be innovative in strengthening their competencies as they continue to cater to the needs of the learners in the teaching and learning process anchored on the learner-centered pedagogical approach (Barrot, 2015). Thus, the primordial role of the teachers is to guide the learners through giving feedback and assessment to help student keep on track. In the time of educational paradigm shifts, there have been many changes in the school system which include teaching performance and pedagogies, curriculum formats, learning styles, and the related academic policies.

The researcher has been teaching science for almost 10 years and has observed problems in the performance of the students in science. In fact, in the last 3-year results of Division Assessment Test, it revealed that there was only an average of 45%-50% MPS in science which was lower compared to other subjects (DAT, 2019). The challenges of science teachers' competencies correlate to poor performance of the students because there are teachers teaching science outside their field (Suan, 2019), hence hinders students' progress as they attempt to meet the specific learning outcomes.





In this level of teachers' teaching competencies and performance in science, the teachers must strengthen their teaching pedagogies to help improve students' needs. Thus, the school helps in cultivating capabilities such as exercising self-directed learning of the students in science and across all learning areas.

Therefore, the researcher assessed the teachers' teaching competencies and performances in science reflective to the new normal flexible learning modalities and used the result of this study as the basis for crafting a teacher support model. These goals are addressed to intensify the teachers' teaching competencies in the delivery of learning instructions. It is expected that science teachers will develop students' proficiency in science which creates opportunities to students pursue progressively higher levels of study, prepares them for science-related occupations, and engages them in science-related activities appropriate to their interests and abilities.

Literature Review

According to the book by Rozdi et al. (2016), teachers of science in the twenty-first century face a variety of difficulties in their line of work, including demands on their time, intellectual capacity, new ideologies, and concerns about their ability to teach. Due to these difficulties in teaching science, teachers must become more skilled in both delivering education and helping students build their scientific literacy. Thus, the most significant factors influencing students effectiveness are the attributes and proficiency of their teachers. The teachers' qualities and competence are the most significant factors in determining the efficacy of the students. This claimed of Rodzdi, et al (2016) relates to the present study since it has proven that science teachers have explored the challenges and issues in teaching and learning continuity of the delivery of instructions in the Philippines because of the COVID-19 pandemic. According to Guerriero, (2019) the educational attainment of science teachers was considered a factor in determining students' achievement. He added that the predictors of teacher's quality of teaching have typically included factors such as class size, type of qualification that a teacher has, degrees earned, and years of experience. This statement of Guerriero (2019) has connected to the present study on the Science Teachers' Competence Reflective of the New Normal Flexible Learning Modalities where educational attainment was considered as pre-determinant on their teaching performance regardless of the teachers' postgraduate attainment.

On the other perspective, Robson et al., (2020) pointed out that the top performing educational systems around the world recruited teachers from the top third of each cohort of graduates. It is argued that teachers with higher academic qualifications tend to promote a culture of high expectations and learning success for learners. They are more likely to use a diagnostic approach to support children's learning. However, other studies examining teacher academic qualifications found no or negative association between higher degrees and student attainment. Furthermore, the study of Bhair and Horoi (2019) found no significant difference in the science performance of the students who were taught by teachers with master's degree and or with advanced degrees and to those who were taught by teachers with a lower qualification.

Moreover, as cited in the book of Obori, (2019), science teachers who have high competency qualities could enhance the critical and scientific thinking of the students and at the same time help improve students' learning and motivation emphasizing on individual differences which greatly influence their academic performances. He added that a good and high competent science teacher is the one that works towards achieving the primary goal of education which is to produce quality learner by inculcating long term literacy and numeracy skills. This citation by Obori (2019) relates to the teachers' teaching competencies in science where a science teacher who has the ability and capacity to effectively communicate the lesson to the learners becomes the basis for scientific and reflective thinking in the new normal flexible learning.

Liwe-wise, Basilio & Bueno (2019) mentioned that every teacher should be capable of managing the classroom. The knowledge students learn in the classroom has a big impact on their ability to succeed. Teachers who adopt the proper strategy can have a positive impact on student behavior and aid in both the academic and personal growth of their charges. It is possible to get the most out of one's students' ability and aid in their development to become successful and intelligent adults by using appropriate classroom management techniques.

In the book of Frey, Fisher, and Pumpian, (2019) it was elaborated that instructional delivery is the interaction between the teachers and the students, the content knowledge, and skills which students need for learning and collaborating with others in a diverse classroom environment and rapidly changing world. The process of instructional delivery involves applying a repertoire of instructional strategies to communicate and interact with students in the academic content, and to support student engagement. This relates to present study where the goal of the instructional delivery standard among science teachers is to ensure that the best teaching delivery is given to the students which permits them to learn the lesson. A teacher that delivers teaching effectively will differentiate instruction, build prior knowledge, and integrate technology into the delivery of teaching instructions.

In addition, Hydon et al (2019) mentioned that students who are at risk of emotional behavioral disorders (EBD) are often off task and disruptive during instructional time, thus, teachers need alternative teaching strategy which generate task engagement and encourage students' participation during class discussion. The process of demonstrating each task where teachers and students carry out in a classroom has been described as instructional delivery. Therefore, instructional delivery refers to the teacher's efforts to obtain a productive engagement with the students, including material exposure, application of methods and tactics, students' engagement during instruction delivery, use of resources, and evaluation process (Blackwell & McLaughlin, 2015). These literature connect to the present study of teachers teaching competencies where teachers carry out instructional delivery using the knowledge, skills, and values gained from attended training which also modify the learner's behavioral position.

As mentioned by Baes (2019), aside from the teaching competencies and pedagogical approaches, the issues and concerns of science teachers are the high level of integrity, competence, ethics, and professional judgement towards students' achievements. This pushes the present study to consider the personal competency of the science teachers to sustain quality learning despite the global pandemic. In the present study, science teachers in Carcar City Division must always uphold integrity despite the situation.

In the same vein, Wiggan (2016) mentioned that the factors influencing students' achievement and educational outcomes are interconnected. Teachers' attributes, achievements, and emotional competencies interactions have an impact on students' success. Comparatively, school-based protective factors like effective teachers and the provision of academic, social, and emotional supports can positively impact student learning. This relates to the present study where it emphasizes on teachers' personal attributes and ensures motivations for students' success as evident in the learning outcomes.

On the other hand, as surfaced in the study of Rowe (2019) that apart from the teachers' teaching competencies, teachers' achievements are also a notable predictor of a positive student outcomes and it is commonly known that the more teacher has achievements the more the teacher can be labeled as an effective teacher, thus leaving greater impact on students' learning outcomes than to those teachers who have less achievements. He added that, at this level, the achievements of science teachers out from performing various activities can contribute to the teaching and learning process. Furthermore, the important factors of the holistic success of the students are knowing the students' identity and background, developing a good rapport, and building strong student-teacher relationships. The interaction between teachers' behavior and competence (instruction tactics and methods) and students' performance (conceptual learning, attitudes) has been studied in the research like the study of (Sadker, 2019; Seifert &





Sutton, 2020). Researchers have discovered clusters of instructional tactics, teachers' behaviors and strong competencies are interconnected in improving cognitive outcomes through a method related to the study of (Rowe, 2019).

Research Design and Methods

The study employed the descriptive and correlational methods of research. It is descriptive in nature because it described the profile of the Science teacher in terms of age, sex, educational attainment, area of specialization, teaching position, training attended relevant to science teaching and number of training attended per level, years of teaching experience in science, and the teachers' competence reflected on their Individual Performance Commitment Review Form. The study also gathered the academic grades of the students related to the teaching competencies of the science teachers as stipulated in the Individual Performance Commitment Review Form. The study also utilized the correlational method because the variables involved were correlated.

This design used a survey questionnaire reflecting the profile of the respondents and was administered to the identified schools of Carcar City Division which qualified to the characteristics sought in this study.

Then, the qualitative findings supported the quantitative findings through the input and personal observation of the students to their respective science teachers' competencies. Qualitative data were collected through a Focus-group discussion (FGD), a semi-structured interview on the selected students utilizing an open-ended question. The qualitative data were interpreted and analyzed using thematic analysis.

Results and Discussions

After a thorough analysis of the study, the researcher came up with the following findings:

Demographic Profile

1. As to the demographic profile of the respondents, majority of the respondents were at the age bracket of 31 – 40, who were females, with MA Academic Requirement, major in General Science, Teacher 3, and attended various training from division level to international level, with a teaching experience of 1-5 and 6-10 years, and had a very satisfactory performance in IPCRF.

2. Teaching Competence of Science Teachers in Terms of Classroom Management.

As to science teachers' extent of teaching competence in teaching science in terms of classroom management, it was rated competent by the school principals and highly competent by the teachers themselves and as rated by the master teachers.

3. Teaching Competence of Science Teachers in Terms of Instructional Delivery.

On the instructional delivery, formative assessment, and personal competencies, it was revealed that the teaching competencies of the science teachers were Highly Competent as rated by science teachers, master teachers and school principals.

4. Teaching Competence of Science Teachers in Terms of Formative Assessment

On formative assessment, it was revealed that the teaching competencies of the science teachers were Highly Competent as rated by the science teachers, master teachers and school principals.

5. Teaching Competence of Science Teachers in Terms of Formative Assessment

On personal competencies, it was revealed that the teaching competencies in terms of personal competencies among the science teachers were Highly Competent as rated by the science teachers, master teachers and school principals.

6. Significant Relationships between the Demographic Profile and the Teachers' Competencies.

7. As to the level of significance on the demographic profile and the teachers teaching competencies, it was found out that only educational attainment of the science teachers is moderately, inversely, and significantly related to their competency in terms of classroom management.

8. The following themes were drawn per competency on science teachers' competence reflective of the normal flexible learning modalities. For the classroom management, the themes were understanding the diversity in the classroom, committing to explicit teaching, achieving quality outcomes, and sustaining quality for excellence. For the instructional delivery, themes were active learning, direct instructions, experiential instructions, and independent learning. On the formative assessment, the themes were digitization, web-based portfolio assessment, self-evaluation and feedback. For the personal competencies, the themes were motivations, caring and inclusiveness and flexibility and adaptability.

Thematic Analysis

Classroom Management

Continual student involvement in activities, the use of creative teaching techniques by teachers, teachers serving as role models, monitoring, effective communication, a stimulating classroom environment, and routine use of questions during instruction were just a few of the effective classroom management techniques. The classroom management strategies and techniques used by the science teachers to maintain an effective classroom environment based on the students' responses. The following themes were drawn in table 1 based from responses of the participants of the study.

Table 1

Themes on Teachers' Competencies Focus on Science Teaching in terms of Classroom Management

THEMES	CATEGORIES
Understanding Diversity in the Classroom	- Establish parameters for the delivery of instructions. - Ensures everything that makes students different from each other. - Acknowledge and respect every student's difference in learning style.





Committing to Explicit Teaching	● Targeted feedback to students learning as systematic and sequential. ● Clearly explain to students why they are learning the lesson. ● Look after for the good of the students and fast-tracked the student's performance.
Achieving Quality Outcomes	● Positive atmosphere and varied approaches and format of teaching. ● Look for the achievement of quality output.
Sustaining Quality for Excellence	● Constant monitoring and feed backing. ● Meet the expectation of the students' learning outcomes. ● Encourage student-led activities.

Teaching can be both a rewarding and challenging job — and one of the difficulties that arise is classroom management. Classroom management allows teachers to set standards and expectations for their students. It covers rules for behavior, disciplinary actions, and daily procedure. Effective classroom management is crucial to being able to teach and pass on knowledge to the next generation. It can help create a sense of consistency for both students and the teachers.

Table 1 presented the teachers' competencies focus on science teaching in terms of classroom management. As mentioned, it can help create a positive learning environment and can be a big help for effectively and efficiently deliver the lessons.

Classroom Management

Science teachers must have strong and firm of the competency as to classroom management as how science teachers influence student behavior to create an environment conducive to learning. Classroom management happened in which students learning is being carried out with minimum interruption.

Understanding the Diversity in the Classroom. Diversity of students is everything that makes every student different from each other. As a teacher, she or he must be aware of the different behavior and attitudes of the student. Having a diverse teaching workforce allows teachers to connect with a variety of students and allows teachers to collaborate and learn from each other to benefit all the students they serve.

Committing to Explicit Teaching. Targeted feedback is used into explicit instruction, which entails a high level of teacher-student engagement. By using specific teaching techniques, the science teachers can teach the students exactly what to do and how to do it.

Achieving Quality Outcomes. This is a shared expectations between students and the science teachers. Helping students learn more effectively. Providing clear direction when making instruction and assessment decisions. Learning outcomes helps ensure that students' learning is relevant and centered on what learners must achieve as some of the respondents said.

Sustaining Quality for Excellence. The science teacher is after and looking forward for good quality output of the students. In sustaining quality outcomes, the teachers had established a feedback mechanism with the students. The science teachers must make a quality embedded with the vision and mission of the school for better learning results.

The lives of the students in their classes are profoundly impacted by the teachers. The primary responsibility of teachers is to educate the students entrusted to their charge. Additionally, teachers play a variety of different functions in the classroom as a classroom manager. Wordu (2018) mentioned that teachers should establish the atmosphere in their classes, create a welcoming environment, mentor and care for pupils, serve as role models, and listen and look out for any potential problems.

Instructional Delivery

The connection between the student, the teacher, the subject matter, and the knowledge, skills, and dispositions that students will require for learning and working with others in a varied society and a quickly changing world are referred to as instructional delivery. Resource-based learning is a student-centered approach for instructional delivery that adapts to student needs, interests, abilities, learning styles, and prior knowledge. An environment that is rich in resources allows students to explore and discover as they learn, and to make personal learning choices that are relevant and meaningful.

As our educational system continues to change, so do the roles of teachers and learners. Therefore, a more flexible model of the teaching-learning process in which teachers facilitate the learning process and students make decisions and assume responsibility for their learning is becoming more prevalent in our schools. The table 2 presents the themes based on the gathered responses of the students.

Table 2

Themes on Teachers' Competencies Focus on Science Teaching in terms of Instructional Delivery

THEMES	CATEGORIES
Active Learning	● Encouraged through resource-based and experiential learning ● The use of strategies that promote student inquiry and interaction ● Engage students in scientific inquiry processes such as research, problem solving, and decision making
Direct Instruction	● Providing concrete information ● Developing step-by-step skills and strategies ● Introducing other approaches and methods ● Teaching active listening and note making
Experiential Instructions	● Focusing on processes of learning rather than on products ● Developing students' knowledge and experience ● Preparing students engaged learning process whereby students "learn by doing" and by reflecting on the experience





Independent Learning

- Accessing and developing student initiative
- Developing student responsibility
- Developing self-reliance and independence

Effective science instructional delivery includes the use of strategies that promote student inquiry and interaction inside the. It allows teachers to augment and strengthen students' knowledge base when students do not possess adequate prior knowledge and experience to engage with new information and ideas. It further stimulates curiosity and initiate the inquiry process that will direct learning about science concepts.

Table 2 presented the teachers' competencies focus on science teaching in terms of instructional delivery. As mentioned, the instructional delivery were active learning, direct instruction, experiential instructions, and independent learning.

Instructional Delivery

The participants in this study described that science teachers must have strong and instructional delivery as the competency needed for achieving educational goal.

Active Learning. It describes instructional strategies used by the science teachers that help improve students' active participation in the learning process. Any educational activity in which the student actively engages in the learning process rather than merely absorbing the knowledge as uttered by some of the participants.

Direct Instruction. While teaching a specific skill to students, teachers employ clear teaching methods called direct instruction. This style of instruction is teacher-directed, where the teacher typically addresses the class from the front of the room. Because it promotes more contact, direct education is crucial. Students can now ask more questions and make help the students have direct responses as some of the participants uttered.

Experiential Instructions. Students "learn by doing" and reflecting on the experience during experiential learning, which is an active learning process. Hands-on experiments and performances are just a few examples of experiential learning activities. This strategy is student-centered where the teacher's role may be to design the order and steps of the teaching and learning process. This increases in student understanding and retention on the lessons. Some of the participants uttered:

Independent Learning. Independent teaching approach takes the students as the center focus of teaching and learning process and the teacher is restricted in the process, as a support for the students. Independent learning revolves about the learners. Teacher's role to guide or supervise students' independent study, teach knowledge, skills, and strategies that students require for independent learning, and provide adequate practice.

Formative Assessment

Formative evaluation is tied in with utilizing educational practices that give proof of where understudies are in their advancing so educators (and students) can make changes everyday of the students. Formative assessment aims to keep track of student learning and provide continual feedback that both students and teachers can utilize to enhance their instruction.

Formative evaluations assist students in identifying their areas of strength and weakness for improvement. This would serve the teachers in making important instructional decisions based on the performance of the students. Formative assessments give us the ability to provide constant feedback to our students. This allows our students to be part of the learning environment and to develop self-assessment strategies that will help with the understanding of their own thought process. Table 3 presents the themes of Teachers' Competencies Focus on Science Teaching in terms of Formative Assessment.

Table 3
Themes on Teachers' Competencies Focus on Science Teaching in terms of Formative Assessment

THEMES	CATEGORIES
Digitization	● Use google form ● Uploaded assessment ● gives students assignments and also allows students to take a test online ●
Web-Based Portfolio Assessment	● Work assessment via online portfolio ● Web based Assessment portfolios used to demonstrate mastery in the subject ● Document student learning on specific curriculum outcomes.
Self-Evaluation and Feed backing	● Bridge learning gaps and evaluate students' progress during the learning process. ● Help teachers to assess the academic growth of a student ● Elevate students' motivation

One of the most important aspects of teaching and learning is formative assessment. It aids in achieving the goals for both teachers and students. Through formative assessment, teachers check student understanding, get valuable data on student learning, and then use that data to modify instruction. When teachers know what students know (or don't know), they can adjust to meet students right at their level. The best formative assessment tools also help students self-reflect and assess, figuring out where they are and where they need to go as learners.

Teachers should create opportunities for students to actively engage in Formative Assessment within these five phases (Villenes, 2019). These five phases are: (1) clarifying expectations, (2) eliciting student responses, (3) analyzing student responses, (4) communicating with students about responses and (5) taking follow-up actions: adjusting teaching and learning.

Formative Assessment. The participants in this study described that science teachers must have integrate technology in formative assessment. The science teachers integrate technology in formative assessment as uttered by some of the participants:





Digitization. It is commonly referred to as "digital enablement," and is the of online platforms and technology in evaluating student achievement. The digitization of the whole assessment process offers many innovative possibilities to drive learning and education in positive directions, through the capture of authentic student work, and to assess students more efficiently, reliably and in different ways.

Web-Based Portfolio Assessment. Assessment based on the systematic collection of learner work (such as written assignments, drafts, artwork, and presentations) that represents competencies, exemplary work, or the learner's developmental progress.

Self-Evaluation and feed-backing. It a way of encouraging children to evaluate and assess their own learning and gives students a chance to reflect on their own learning and analyze their own learning processes and outcomes.

Feedback is a fantastic way to interact with students, support online training, and focus learning efforts. Feedback is essential for learners because it enables them to monitor their development and adjust their learning plan as necessary. It assists students in identifying their areas of weakness and enhances the acquired skills.

Personal Competencies

A teacher is a professional who, via his personality attributes, adds a unique touch to his line of work. When these character qualities mesh with the necessary professional skills, they support motivating students to achieve success in their chosen fields. Consequently, a list of personal competencies on the qualities that a teacher should possess were discovered through the responses of the students.

Personal Competencies

The participants in this study described that science teachers must have strong personal personality as the competency needed for achieving educational goal. Personal competencies of the teachers include high expectation, love of teaching, ability to inspire students and have shown empathy with others. The themes were enumerated in the table 4 based on the responses from the participants.

Table 4
Themes on Teachers' Competencies Focus on Science Teaching in terms of Personal Competencies

THEMES	CATEGORIES
Motivating	• Giving of rewards • Encourages me to do study in order to have a successful life • Motivated students to achieve their potential and find success
Caring and Inclusiveness	• Inclusive and supportive of all students • Maintain an environment that is caring, • Demonstrate a commitment to each student and their unique needs
Flexibility and Adaptability	• Able to manage ambiguity inherent to the learning environment • Creative in developing solutions to student/classroom challenges • Differentiate teaching practices to best meet the needs of each learner

Personal competencies to teaching include high expectations, love of learning, active listening, ability to adapt to novel situations, empathy, students' motivation, positive regard for students, and good time management. Personal competencies of the science teachers described such as motivating, caring and inclusiveness, and flexibility and inclusiveness were emerged in themes.

Motivating. Motivated teachers are essential to successful effective teaching. They appear regularly to inspire and engage students. Enthusiastic teachers assess student skills, provide feedback, and collaborate with other teachers and able to radiates to other people.

Caring and Inclusiveness. Respect student diversity. Ensuring all students participate in learning and reach their potential. The science teachers ensure that the learning needs and preferences of different students are met, regardless of background, learning style, or ability.

Flexibility and Adaptability. Adaptability is a word that teachers often use in their application of teaching to show the willingness to adapt. This can include changing teaching strategies to address new situations or altering your tasks for the day to accommodate modifications. Flexibility is a term that you can use to describe your ability to compromise. This includes negotiating or changing the level of contribution to the delivery of teaching. Flexibility often refers to offering more or taking less of something, depending on the situation.

Conclusions

Ideally, then, science teachers as educators should demonstrate the following competencies such as effective classroom management, instructional delivery, formative assessment, and personal competencies. A range of competencies should be employed to promote purposeful learning with the students. Effective instructional delivery which is knowing when and how to use current educational instructional materials, as well as the choosing most appropriate type and level of instruction to maximize student learning. Effective formative assessment in which incorporating formal tests; responses to quizzes; evaluation of classroom assignments, student performances and projects, and standardized achievement tests to understand what students have learned. Personal competencies where science teachers are compassionate, empathetic to the students understanding and motivated to share her knowledge to the students. These identified competencies are practices of science teachers and are embedded in training which also signify capability of science teachers to carry out a specific task. These competencies could be integrated in the education practices of the teachers for these are crucial in achieving the goal of Department of Education for quality teaching and learning. Defining teachers' competencies will contribute to the implementation of the quality of the educational system which positively affects the students' learning outcomes.

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