

## 21ST CENTURY TEACHING TECHNIQUES

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### Abstract

*The 21st century has witnessed a transformative shift in education, marked by the emergence of innovative teaching techniques and methods aimed at meeting the diverse needs of today's learners. This paper explores key pedagogical approaches that define contemporary education, including gamification, flipped classrooms, technology integration, and personalized instruction. In contrast to conventional didactic approaches, 21st century teaching techniques prioritise student-centered learning, collaboration, critical thinking, and digital literacy. Virtual reality, augmented reality, and gamification are transforming traditional classrooms into immersive learning environments, engaging students through interactive simulations and experiential learning opportunities. Flipped classrooms redefine traditional teaching models by leveraging online resources for content delivery, allowing for interactive classroom activities and personalized guidance. Inclusive practices are also central to contemporary education, Recognising the diverse backgrounds, abilities, and learning styles of students which are highlighted the different techniques mentioned such as questioning, use of mnemonics, graphic organisers, brainstorming and many more. A teacher that wants to be effective will have to be equipped with these and many more differentiated instruction techniques and methods accommodate individual needs and preferences, ensuring equitable access to educational opportunities and promoting a culture of inclusivity and belonging. In conclusion, 21st century teaching techniques revolutionize education by prioritising student-centered learning, collaboration, and digital literacy. By embracing these innovative approaches, educators empower students to thrive in an ever-evolving world, equipped with the skills and competencies needed for future success.*

**Keywords:** Teaching techniques, flipped classroom, gamification, student-centered learning

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### Introduction

For some teachers the first few months of starting the profession can be perplexing and exhilarating at the same time. However, after a while, the perplexity and the excitement that come with joining the profession tends to wane which eventually gives way to monotony; the teacher teaches the topics the same way while the students are also bored. The explanation for the aforementioned is very readily found and understood in the saying “variety is the spice of life”. Every teacher requires a range of teaching methods, techniques, approaches and strategies

in their “teaching bag” to pull from depending on the lesson, the students, and things as seemingly minute as the time the class is and the subject. Using these distinct methods and techniques, which are rooted in different educational philosophies, will not only help teachers realise their potentials, but more importantly engage, motivate and impact the students in their classes, whether in person or online.

Therefore, to be a great teacher, it is necessary that one should know most of the 21st century instructional techniques and methods and utilise them appropriately since learners learn

better when their instructor knows and employs the teaching styles which would engage them the most. However, several terms that are used similarly in local usage should not be confused in a professional educational context. The terms are: strategy, technique, approach and method.

**A strategy** is a plan, goal, set of actions designed for a specific outcome. It is an organisational plan or set of systematic procedures designed to convey subject matters to the learners. Teaching strategy involves setting the goals of teaching, determining the steps or actions to be carried out for achieving the goals and mobilising available resources or means for execution of action. (Mangal and Mangal, 2009). Strategies are used to attain desired learning outcomes by creating a more engaging and supportive learning environment. Each teacher gets to develop teaching strategies with time and they have the freedom to select whichever one works for them.

**A method** is a process, procedure, or way something is done or implementing a plan. Method talks about the “how”. That is the way the teacher selects to do a task. A method is how to carry out assumptions and theories. A method is an overall plan for the orderly presentation of teaching materials, no part of which contradicts, and all of which is based upon the selected approach. There are many methods of teaching: lecture, demonstration, discussion, simulation, laboratory, field experience, brainstorming, debates, among others. (MacDonald, 2022).

**A technique** is a way of accomplishing a task. Technique is a very specific skill or trick designed to accomplish an immediate objective. Technique is a classroom device or activity and it is more specific than method. It is the tools and tasks you use to make your method succeed. Techniques must be

consistent with a method and therefore in harmony with an approach (Maduekwe, 2007 and Gupta, 2019)

**An approach** is a perspective, a set of correlative assumptions about the nature of teaching and learning. Teaching approach is one’s personal philosophy, a set of accepted theories and principles of teaching. Teaching approaches can be divided into two, which: are student-centred approach and teacher-centred approach.

Teaching Methods of the 21<sup>st</sup> Century

1. **Flipped Classroom** is a pedagogical method in which the traditional elements of the lesson taught by the teacher are reversed – the primary educational materials are studied by the students at home and, then, worked on in the classroom.

The main objective of this methodology is to optimise time in class by dedicating it, for example, to meet the special needs of individual student, develop cooperative projects or work on specific tasks.

2. **Cooperative Learning**

The motto for this is “Stronger Together”. With cooperative learning, [teachers group students together](#) and, thus, impact on learning in a positive way. The proponents of this method theorise that working in a group improves the attention, involvement and acquisition of knowledge by students. The main characteristic is that it is structured based on the formation of groups of 3-6 people, where each member has a specific role and to reach the objectives it is necessary to interact and work in a coordinated manner.

3. **Gamification and Games**

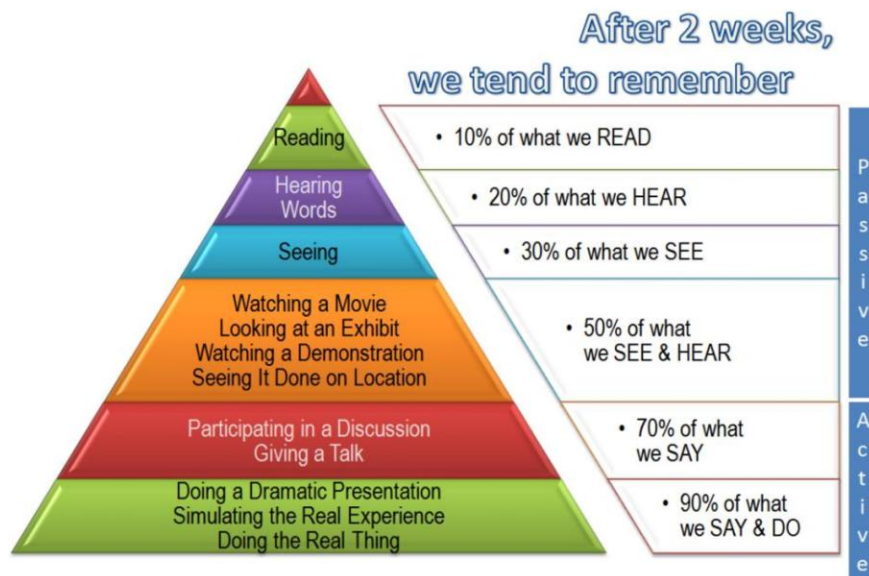
The integration of game mechanics and dynamics has been practised for a long time. Over the past few years, however, and particularly due to the evolution of videogames, the phenomenon has gathered

unprecedented dimension, and is one of the most talked about as a [current and future trend](#) of the EdTech industry. Gamification started gaining traction in the late 1980s from the use of big desktop computers for one-man game, to the use of portable consoles and cellular phones in the early 1990s and now to the use of tablets and cellphones for individual and multiplayer (virtual) games with the aid of the internet. This trend has been consolidated with the increasing inclusion of gamification in school curricula and it is predicted that this

inclusion will continue to grow in the future.

The following are games that could be readily used in class; Scrabble, Ayo Olopon, Cross Word Puzzle, Picture Puzzle, Last Man Standing, Naming Game (using alphabets/things), Charades, Letter Scramble, What Am I Thinking Of, The Boat Is Sinking, etc.

Below is a diagram of the importance of the teaching and learning method choice and how long they stay with students according to Giorgdze and Dgebuaдзе (2017)



### Criteria for Selecting Teaching Methods

The choice of a teaching method to be used in a classroom encounter depends on many factors. Research has shown that many factors could determine the method a teacher would choose in teaching his/her lesson. Afolabi (2010) reported the factors that determine the choice of teaching methods in no particular order as follows:

1. the instructional materials available to the teacher ;
2. teacher's ability and knowledge of the teaching method;
3. the objectives of the lesson or topic;

4. the content of the topic or lesson;
5. the attitude of the students;
6. the subject/course;
7. the time for the subject;
8. the learners' activities in the lesson;
9. the learners' age, ability and maturity level;
10. the population of the students;
11. the teacher's feeling or mode;
12. the school environment.

All these criteria are important for the teacher to consider before selecting a particular method. The teacher should also consider his/her experience with the student and know

what actually interests and motivates them to learn.

### Teaching Techniques

Teaching technique refers to specific skill or trick designed to accomplish an immediate objective in a classroom or teaching-learning situation. Technique is a classroom device or activity and it is more specific than method. Teaching techniques are tools and tasks teachers use to make the teaching method succeed. For instance, two teachers may decide to use small group discussions as their means of delivering a lesson but each may have a unique way of conducting the process of the discussion. One may decide to use two pupils to conduct the discussion; the other may decide to employ four pupils for that. Techniques must be consistent with a method and therefore in harmony with an approach (Anthony, 1963; Nasrullah, et al. 2021) Below are some teaching techniques to note:

Questioning Technique  
 Thematic Technique  
 Concurrent Theme Technique  
 The use of Mnemonics  
 Graphic Organisers  
 Brainstorming  
 Spaced Teaching Technique  
 The use of short physical exercises

### Questioning Technique

Questioning technique which is also referred to as the Socratic technique is a skill that teachers use to open a lesson, to build it up, and or to round it off. It could be used for the greatest part of the lesson, following one with another, in a series, in such a way that questions become the framework around which the whole is built. Questioning techniques is important because it can stimulate learning, develop the potential of students to think, drive to clear ideas, stir the imagination, and incentive to

act. It is also one of the ways teachers help students develop their knowledge more effectively. Teachers should also pay attention to students' questions, that is, both teacher and student questions are important (Dada and Jimola, 2018). However, a lesson may fail if the teacher does not prepare his/her questions carefully. Some characteristics of good questioning technique are highlighted by Ayodele and Adegbile (2007) below:

a. When a question sounds forced, i.e. asked because a teacher believes he/she has to ask not because responses to them will improve the development of the class, then such questions are unnatural. In such cases, learners would feel less challenged, or would feel that the teacher asked the question to make them look stupid rather than to test their level of knowledge. So they might keep silent, being a safer option than revealing their incompetence. Imagine a nurse tutor asking teenagers and adults "How many of you have had syphilis before?"

b. Questions have to be grammatically correct and devoid of ambiguity

Situations abound of when pupils are knocked off balance when there is so much uncertainty in a question. Furthermore, a question that has observable grammatical error could produce a stir/misdirection in class.

c. Questions have to be thought-provoking

Questions that are mind-provoking promote thought and response. They make learners view an issue from a new perspective rather than flog an old issue the same way.

d. Questions have to be limited in scope

These are questions that demand for only one or two points in chain of reasoning. For example in Geography class, the question "What can you see along the coast of West Africa?" is quite likely to draw out different responses which many might

not link to the topic at hand. A common inquiry Nigerian teachers ask that barely elicits evaluation answers are; “Do you understand? / Are you following me?” But consider a query like “Can you find any lagoon along the coast of West Africa?” “In what countries can you find them?”

e. Questions have to be suited to the level of the class

The age, class, experiences and backgrounds of the learners need to be considered before questions can be prepared and asked. This is why an expatriate or young teacher could find it difficult to be productive in class until he/she has been adequately entrenched in the culture of the class.

Other factors that should be considered in using the questioning technique are

**Attention** - Questioning is one of the most effective ways to help learners pay attention in the classroom. This means that the question must be addressed to the full classroom before a student is requested to answer (Shanmugavelu, Ganesan, et al. 2020). Teachers should also ask a question first before revealing the name of a student to answer the question posed. This is to ensure that all learners are focused on the posted questions. If the student's name is mentioned first, only the student in question will pay attention in the class. Teachers should always pose questions to all students in the classroom and not just to the students who raise their hands.

**Voice** - One of the most crucial communication tools for a teacher is voice. When asking questions, teachers should make sure their voices are clear and that their tone is well-heard. The questions should be given carefully and clearly to the learners and look forward to receiving answers. This is vital to attract learners to answer a question.

**Pause** - After asking a question, the teacher should pause talking for a

moment and look at the whole class. Note the verbal cues that indicate that the student is ready to respond. After asking questions, students should be given time to think about the answers. The time given should not be too long because if it is too long, the interest in it will fade. Many researchers recommend between 5 to 20 seconds pause. This is called waiting time.

**Distribution of Questions** - In asking questions, teachers should ask questions from all students in the classroom. Questions shall be given to all the students to encourage them to participate in the teaching and learning process. Teachers should also avoid asking questions according to the sitting position of students in the classroom. This is because students who sit in the back and on the sides of the classroom usually do not pay attention, hence the questions should be thrown to them too at random. So, questions need to be posed to all students so that all students can focus and participate.

Questioning has varying forms or order, and it is essential for teachers to know and apply these orders for effective teaching. They include

1. Recall questions
2. Tag questions (yes or no answers)

The others are according to Bloom's (1956) Taxonomy of Education Objective which are:

(i) Knowledge - Knowledge-based questions are questions that can easily digest students' memory. These types of questions should be chosen by teachers, especially when presenting new topics or ideas for students. The operative words here are: select, list, identify, name, locate, define, recite, state, memorise, label etc.

(ii) Understanding - After being exposed to a concept and knowledge, teachers should ask questions that are comprehensible. This means that teaching and learning activities will

take place in the dimension of understanding or understanding activities. The operative words here are: match, explain, defend, express, summarise, distinguish, give examples, illustrate, paraphrase, etc.

(iii) Application - The following features of the questions involve the use of information provided to students. The application questions are intended to help students apply their knowledge through the information provided during the teaching and learning activities. The operative words here are: apply, sketch, choose, paint, produce, organise, draw, dramatise, prepare, show, etc.

(iv) Analysis - The feature of the analysis question is that this form of question works to separate ideas. At a higher level, students will be presented with analytical questions, and teachers need to be careful so that students can follow the content of the subject and apply all the skills to them. The operative words here are: compare, differentiate, prioritise, categorise, infer, point out, survey, distinguish, etc.

(v) Synthesis - Synthesis questions are questions that can help students to come up with a new idea through the initial information they are exposed to. These skills also require high skills in which teachers need to guide students until they can synthesise information. The operative words here are: compose, construct, combine, construct, hypothesise, plan, invent, etc.

(vi) Evaluation - At the highest level, evaluation based questions will be given to students. Evaluation means students should be able to make and maintain their justifications. The operative words here are: judge, critique, recommend, criticize, compare and contrast, support, appraise, weigh, etc.

### **Thematic Technique**

This is a major technique under the term teaching method, and it could also be used in other methods. In the thematic technique, there is a running general theme/ central idea that the teaching is based on. The theme could be War and Peace, Power and Authority, Capital, Famine, The Community, Early Civilisations, Water and Waters, etc. Stemming from the agreed themes are a series of linked topics and the students will study each of the topics in turn. Each unit of work lasts for a number of weeks, after which, a new unit, based on another theme is introduced.

### **Concurrent Theme Technique**

In this technique, two or more themes are in operation with the same class. For instance, the Mathematics teacher could decide to complement the Geography class study of rainfall and temperature with its own 'graphs'. This way, courses will run on independent, yet parallel lines, having continual cross-reference and links with each other.

### **Use of Mnemonics Technique**

Mnemonics are techniques for improving memory and learning. The ancient Greeks developed the basic principles more than a thousand years ago, and today those principles have been implemented in many different ways, ranging from simple acronyms to help remember specific ideas to complex strategies that help to remember numbers by recoding them as distinctive words and phrases. Researchers believe that mnemonics improve memory by capitalising on naturally occurring memory processes such as visual imagery, organisation, and elaborative encoding (Worthen & Hunt 2011; McCabe, Osha, Roche, & Susser 2013). Mnemonic is a technique

that is used as “mental linking tool” or as “memory aiding” in memorising and assimilating information. The teacher can use the mnemonic to guide their presentation about delivering materials so that the students can easily absorb the information from those presentations.

### **Descriptions of Popular Mnemonic Techniques and Systems**

**Peg system** A “peg list,” or a list of concrete objects in a specific order (e.g., one is a bun, two is a shoe, three is a flea) is learned. Then, visual imagery combines the to-be remembered items with the peg items. Items can be retrieved by thinking of a number and the corresponding peg, which cues the target item.

**Keyword method** First, a keyword is found that sounds like the unfamiliar word (e.g., “dentist” sounds like “la dent”). Then imagery joins the keyword with the definition of the unfamiliar word (an image of a “dentist” holding a large “tooth”). Seeing “la dent” activates dentist, which in turn should activate tooth.

**Acronyms** The first letters of a list of words are used to create a new word. For example, the colors of the rainbow (red, orange, yellow, green, blue, indigo, violet) can be remembered as ROYGBIV. Each letter serves as a retrieval cue for the target items. Another example is MR NIGER D, BODMAS etc

**Acrostics** The first letters in a list of words serve as the first letters in a new sentence or phrase. For example, the colors of the rainbow can be remembered as Richard Of York Gave Battle In Vain. Another example is My Very Educated Mother Just served Us Nine Pizzas” to remember the nine planets in order (Mercury, Venus, Earth, Mars, Jupiter, Saturnus, Uranus, Neptunus and Pluto). The first letter in

each word of the acrostic serves as a retrieval cue.

**Songs, stories, and rhymes** Words in a list are joined together by being elements in a story, or by being included in a song or rhyme. Songs and rhymes can also be written to remember specific pieces of information (e.g., i before e except after c).

### **Graphic Organisers Teaching Technique**

Graphic organisers are visual and graphic displays that organise ideas and demonstrate relationships between different information and concepts. They are designed to improve learning outcomes for students, review information, and are especially helpful to students who struggle with arranging information. Tacaíochta and Leibhéal (2008) explain that graphic organisers provide a visual method of developing, organising and summarising students’ learning. They help to structure disjointed information. They facilitate the learning process by providing a scaffold for the development of ideas and the construction of knowledge. Visual, auditory and kinaesthetic learners all benefit from using the organisers. High quality teaching in mixed ability classrooms is also facilitated.

Some organisers are more applicable to the different aspects of the learning process than others, for example: collecting information, comparing and contrasting, developing ideas, sequencing information, summarising and extending thinking and learning. Some are also more relevant to different subjects and topics than others. However, they can all be used at the various stages of the learning process: pre-teaching, introducing a topic, teaching a topic, independent learning, study and revision, and preparing answers to

examination questions. The following are types of graphic organisers that can be used: Ranking Ladder/Stair Steps, Chain of Events, Sequence Charts, Funnel, Double and Triple Venn Diagram and Mind-mapping.

### **Ranking Ladder/ Stair Steps**

This ladder can be used to prioritise or rank ideas and/or information. It can also be used for topics with a series of stages or steps. It is suitable for subject matter with a definite beginning and end. At the pre-teaching stage the teacher can have pairs/triads of students fill in any information they know about the topic on the correct step. The teacher can monitor the results and then focus the teaching more accurately on the needs of the class. Active learning can be facilitated if the teacher provides the information in jumbled form and students work together to rank the information correctly.

### **Chain of Events**

When a teacher wishes to build links between events or when the topic involves a series of interlinked events, this model can be used. This visual method assists students who find it difficult to memorise from notes. It can help to bring coherence to a large quantity of information and to establish or clarify the links in the pupil's mind. As with previous organisers it can be used for pre-teaching, i.e. identify what pupils know about the topic so teaching can be accurately focused at the level of students' knowledge. It can be used for teaching a topic where information is provided in a disjointed form and pupils have to link it correctly. It works best when a small group (2/3) students work together. One records agreed information on the model, one researches, one ensures that all contribute ideas and reach consensus

or checks that all understand the material.

### **Sequence Charts**

When a topic involves a sequence of events, this organiser can be helpful. It is particularly useful when multiple or sequential factors need to be put in order and remembered. It is effective for pre-teaching and teaching the causes of an event. For instance, the teacher may provide information in jumbled form to be correctly sequenced.

### **Funnel Technique**

When synthesising ideas, drawing conclusions, reducing a body of information to its core, e.g. creating a definition, this model is useful. All details, components or parts of the information or picture are placed inside the funnel. They emerge as a conclusion, definition or synthesis. It can also be used to challenge or test pupils, e.g. find the elements that are missing from the funnel. Like other technique models, it can prove a very potent tool for visual and kinaesthetic learners. It facilitates active experiential learning.

### **Double and Triple Venn Diagram**

The double Venn is a simple and highly effective model for examining the similarities and differences between two or more items using two or more circles that overlap. Similarities between topics are presented where a circle from one category overlaps with a circle from another category. Features that do not fit in both categories are placed where the two circles do not overlap.

### **Mind-mapping Technique**

Mind map involves writing down a central theme and thinking of new and related ideas which radiate out from the centre. By focusing on key

ideas written down in one’s own words and looking for connections between them, one can map knowledge in a way that will help better understand and retain information. Researchers from the University of Adelaide noted that mind mapping was developed as an effective way for generating ideas by association. In order to create a mind map, you usually start in the middle of a blank page with the central theme/main idea and from that point you work outward in all directions to create a growing diagram composed of keywords, phrases, concepts, facts and figures. It can be used for assignments and essay writing especially in the initial stages, where it is an ideal strategy to use for your ‘thinking’. Mind mapping can be used for generating, visualising, organising, note-taking, problem-solving, decision-making, revising and clarifying your university topic, so that you can get started with a

task (Arulselvi, 2017). Essentially, a mind map is used to ‘brainstorm’ a topic and is a great strategy for students.

**Uses of mind maps**

1. Taking notes in a lecture and listening for the most important points or keywords.
2. Showing links and relationships between the main ideas in your subject.
3. Brainstorming all the things you already know about an essay question.
4. Planning the early stages of an essay by visualising all the aspects of the question.
5. Organising ideas and information by making it accessible on a single page.
6. Stimulating creative thinking and creative solutions to problems.
7. Reviewing learning in preparation for a test or examination.

Below is a typical mind map of steps in making a presentation by Buran, 2015;



Graphic organisers are outstanding instructional tools to be used with students of all abilities and grade levels. To increase the effectiveness of graphic organisers, three simple guidelines should be followed: (a) organisers should be clear and straightforward; (b) teachers should teach students how to use organisers and implement them in creative ways; and (c) teachers should integrate them into daily instruction so that students internalise the organisational strategies displayed.

### Conclusion

We have summed up the difference between strategies and methods, techniques and approaches that all teachers should know. Knowing and using these teaching methodologies and techniques, particularly, will make the classrooms more creative and dynamic place for students to get qualitative education. Also, in this rapidly changing world, teachers should hone the skills to transform the smart, creative, and tech knowledge into their students.

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