UNAE
Intro to Research
Unit 2 quiz

Total: _____/10

Name: _____

1. Which type of research is primarily concerned with developing new knowledge and theories without a specific practical application in mind?

(a) Applied Research

(b) Pure Research

(c) Experimental Research

(d) Social Research

2. A scientist is studying the behavior of black holes to understand their formation and properties. This research is most likely an example of:

(a) Applied Research

(b) Pure Research

(c) Medical Research

(d) Technological Research

3. An engineer is testing a new type of solar panel to see if it can improve energy efficiency in homes. This research is most likely an example of:

(a) Applied Research

(b) Pure Research

(c) Observational Research

(d) Survey Research

4. The main goal of pure research is to:

(a) Solve a specific problem

(b) Develop fundamental knowledge

(c) Create a new product

(d) Test the effectiveness of a treatment

5. Applied research often relies on the findings of:

(a) Opinion polls

(b) News articles

(c) Pure research

(d) Social media trends

6. Applied research is designed to:

(a) Develop broad theories without immediate practical applications.

(b) Find solutions to specific problems using scientific methods.

(c) Gather opinions through surveys and polls.

(d) Analyze historical data and trends.

7. While applied research aims for solutions, it can be called a "scientific process" because:

(a) It prioritizes speed over following established methods.

(b) It utilizes existing scientific tools and methodologies

(c) It relies on intuition and guesswork.

(d) It focuses on broad, theoretical questions.

8. Which of the following is NOT an example of applied research on education?

(a) Evaluating the effectiveness of a new after-school tutoring program on student test scores.

(b) Studying the historical development of educational philosophies like progressive education.

(c) Comparing the learning outcomes of students using traditional textbooks vs. online learning platforms.

(d) Developing a new theory of how children learn best.

Which of the following questions is most likely to be answerable through scientific research?

(a) What is the best teaching style for all students?

(b) Why do some students struggle in math?

(c) How does incorporating spaced repetition exercises affect student memorization of historical dates?

(d) What qualities make a great teacher?

(a) Impossible to answer with current technology.

(b) Testable through observation or experimentation.

(c) Based on a hunch or guess.

(d) Outside the realm of science altogether.

11. When formulating a scientific question, it's helpful to consider:

(a) Your personal beliefs.

(b) Existing scientific knowledge on the topic.

(c) Only the most recent research findings.

(d) Completely unrelated areas of science.

12. Which of the following best describes the difference between a scientific question and a hypothesis?

(a) A question is always about the past, while a hypothesis is about the future.

(b) A question requires an answer, while a hypothesis does not.

(c) A question is open-ended, while a hypothesis is a tentative answer.

(d) A question is always subjective, while a hypothesis is always objective.

13. What is the main purpose of classroom observation?

(a) Evaluating students' performance.

(b) Improve student learning outcomes by providing feedback to teachers.

(c) Providing feedback for professional development.

(d) To document any negative behavior by students.

14.Which is a benefit of using video recording as a classroom observation tool?

(a) It allows the observer to control the classroom environment during the observation.

(b) It provides a detailed record of the lesson that can be reviewed later by both the teacher and observer.

(c) It eliminates the need for the observer to take notes during the observation.

(d) It reduces the pressure on the teacher during the observation

15. Which of the following is NOT an observation tool?

(a) Checklist

(b) Rating Scale

(c) Surveys

(d) Anecdotal Record

16. Peer observation involves teachers observing and providing feedback to each other.

(a) True

(b) False

17.There are two main types of observations: qualitative and quantitative.

(a) True

(b) False

18. A scientist is studying the behavior of butterflies in their natural habitat by watching them with binoculars and taking notes on their movements. This is an example of:

(a) Structured observation

(b) Unstructured observation

(c) Direct observation

(d) Indirect observation

19. An astronomer uses a powerful telescope to observe distant stars and galaxies. This is an example of:

(a) Structured observation

(b) Unstructured observation

(c) Direct observation

(d) Indirect observation

20. A teacher uses a pre-made checklist to track student participation and engagement during a group activity. This is an example of:

(a) Unstructured observation

(b) Structured observation

(c) Direct observation

(d) Indirect observation

21. A researcher observes children playing in a playground, taking note of their interactions and communication patterns without a specific plan in mind. This is an example of:

(a) Structured observation

(b) Unstructured observation

(c) Direct observation

(d) Indirect observation

22. Descriptive field notes focus on:

(a) The observer's opinions and interpretations of the observation.

(b) Objective details about what is seen, heard, and experienced.

(c) Recommendations for improvement based on the observation.

(d) The observer's emotional response to the observation.

23. An example of a descriptive field note might include:

(a) "This activity seems boring for the students."

(b) "The student raised their hand three times during the lesson."

(c) "I wonder if a different teaching approach would be more effective."

(d) "I felt frustrated by the lack of student participation."

24. Reflective field notes go beyond description and consider:

(a) Only the positive aspects of the observation.

(b) The observer's thoughts, feelings, and interpretations.

(c) A judgment on whether the observation was successful.

(d) How the observation relates to existing research or theory.

25. An example of a reflective field note might include:

(a) "The students were very engaged in the group activity."

(b) "I noticed some students struggling with the instructions."

(c) "I wonder if simplifying the instructions would improve student understanding."

(d) "Overall, I think the lesson was a success."

26. Both descriptive and reflective notes are valuable for:

(a) Providing entertainment for the reader.

(b) Creating a rich and detailed record of the observation.

(c) Replacing the need for formal data collection methods.

(d) Only evaluating the performance of the observed subject.