**TAXONOMY FOR INDENTIFYING, CLASSIFYING AND INTERRELATING TEACHING STRATEGIES[[1]](#footnote-1) – Data and Chance**

| CATEGORIES | Associative  **Group students based on their skills, needs and interests to help facilitate mental, emotional, and/or social growth.** | Deliberative  **Encourage a thoughtful exchange of ideas to promote cognitive, social, and verbal communications skills.** | Expositive  **Provide information, oral or written, in an orderly, authoritative and intelligible manner, to a receptive audience.** | Individualistic  **Provide instruction designed to meet the skill needs and interests of the student, based on individual assistance.** | Interrogative  **Use questioning skills to encourage participation, clarify and evaluate understanding and promote higher thinking.** | Investigative  **Solve problems, based on inductive reasoning, by collecting and analysing data, and drawing conclusions.** | Performative  **Encourage creative, aesthetic, and or psychomotor expression based on the dramatic/fine arts, and physical skills.** | Technological  **Allow students to access and record information by means of mechanical devices, from film projectors to computers.** |
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| STRATEGIES | E.g. dyads, partners, cross/multi-age, ability and interest groups, heterogeneous, homogeneous, cooperative learning teams | E.g. debate, round table, conference, panel, symposium, magic circle, fishbowl, brainstorm, buzz session, class discussion | E.g. lecture, recitation, review, oral or written report, textual readings, graphical materials, demonstration, modelling, testing | E.g. programmed self-paced, packet, contract, learning styles, mastery learning, independent study, tutorial, interest centres | E.g. convergent, divergent, prompt, probe, redirect, repetition, interview, open-ended, higher level Socratic questioning | E.g. inquiry, exploration, problem solving, critical thinking, experimentation, laboratory, case study/method, discovery | E.g. dramatic play, role play, story-telling, choral reading, calisthenics, dance, mock trial, rehearsal, simulation, gaming | E.g. audio/video-recording, data/film projection, televising, videoconferencing, word processing, webquest, emailing |
| STRATEGY  OBJECTIVES | 1. Encourage students to develop particular skills with the support of group members; 2. Facilitate a spirit of cooperation, decision making, and task resolution through group interaction; 3. Help each group member achieve self-confidence and self-esteem through a non-threatening group atmosphere; and 4. Encourage group members to respect each other’s contributions, weigh the merits of opposing arguments, and to achieve group consensus. | 1. Encourage student to examine attitudes and opinions objectively and to be receptive to new ideas; 2. Help students achieve higher levels of thinking, such as analysis, synthesis and evaluation; 3. Promote a consensus decision making after carefully examining various positions; and 4. Develop communication skills by encouraging students to express their ideas carefully and logically | 1. Develop the listener’s ability to identify the essential information by means of note- taking, highlighting text etc.; 2. Provide a body of precise information that the instructor can hold the listener responsible for learning; 3. Be efficient because the presenter can determine the amount of content and the time; and 4. Allow the providing source a structure that will minimise digressions and extraneous information | 1. Provide for personal one-on-one attention when needed; 2. Reduce the amount of frustration students might experience from group competition; 3. Allow individuals to assume responsibility and directing much of their own learning; and 4. Provide a sense of security by allowing the individual to work at a comfortable pace. | 1. Encourage a sequential development of thinking skills from recalling information to constructing generalisations and making value judgements; 2. Prompt students to identify critical information and to emphasise relevant information; 3. Encourage active participation by giving each student an opportunity to ask and respond to questions; and 4. Improve the student’s achievement and sense of accomplishment by asking appropriate questions and allowing sufficient time to respond. | 1. Increase motivation by allowing students to direct much of their own investigation with the teacher’s guidance; 2. Promote greater understanding and increased retention by often providing for active and hands-on learning; 3. Encourage the development of social skills and interdependence by means of small group investigations; and 4. Require students to arrive at valid conclusions based on supporting data. | 1. Encourage self-discipline by requiring practice and rehearsal; 2. Make learning more personal and relevant to students by fulfilling their cognitive, emotional physical and aesthetic needs; 3. Encourage the development and expression of personal values and feelings; and 4. Promote social responsibilities and values by means of group interaction, mutual assistance and shared decision making*.* | 1. To increase attention and motivation as students often regard technology as a major source of entertainment and learning; 2. Help organise information, provide multi-sensory communication, and immediate feedback, especially in the case of interactive technology; 3. Provide students with technical, interpersonal, and communication skills needed to be successful in the workplace; and 4. Encourage active participation and student-centred learning by means of interactive strategies. |
| Analyse scatter plots for outliers and positive or negative association. Interpret the effect of the outliers on measures of centre. Investigate sample population to explain or detect any bias in statistical inferences. Critically analyse statistical reports in media. |  |  |  |  |  |  |  |  |
| Use relative frequencies and sample size to explain difference between theoretical and experimental probabilities. Use measures of centre and measures of variability of data obtained from random samples to draw inferences about two populations. |  |  |  |  |  |  |  |  |
| Specify sample (event) spaces for single and straightforward compound events. Analyse, interpret and make inferences from data presented in double bar graphs, steam and leaf plots and box plots. |  |  |  |  |  |  |  |  |
| Use mean, median and range to summarise and describe numerical data. Use box and whiskers plots to interpret and compare distributions. |  |  |  |  |  |  |  |  |
| Uses ratios to calculate probabilities .Make predictions based on probabilities. Find mean, median mode and the range for data. |  |  |  |  |  |  |  |  |
| Calculate permutation and combination in counting situation. Lists all arguments using counting strategies not formulas. Distinguish between categorical, discrete and continuous data and use variety of representations to represent it. |  |  |  |  |  |  |  |  |
| Interpret and display data using bar graphs, line plots and steam and leaf graphs. Compare likelihood of random events. |  |  |  |  |  |  |  |  |
| List all possible outcomes of familiar events involving chance. Describe fairness of the event in qualitative terms. |  |  |  |  |  |  |  |  |
| Order events from least likely to happen to most likely to happen. For example events generated by tossing a coin or a dice, or events arising from social situations. Collect categorical and numerical data and represent results using simple bar graphs. |  |  |  |  |  |  |  |  |
| Distinguish between likely and unlikely events based on everyday experience Make predictions about likelihood of the events, e.g. what is possible and what is not. Collect data related to their own activities and represent using picture graphs. |  |  |  |  |  |  |  |  |
| Classify objects according to shape, colour, size or some other observable property and present results using telly table. |  |  |  |  |  |  |  |  |
| Classify objects (up to 10) according to colour, shape or size. Compare number of items in each category and can tell which category has more or less items. Read and interpret pictograms where there is 1:1 correspondence. |  |  |  |  |  |  |  |  |

1. Based on the work of Charles R. Beck, (1998), ‘A taxonomy for identifying, classifying, and interrelating teaching strategies’, Vol. 47, No. 1 , *The Journal of General Education*, pp. 37-62, 37 [↑](#footnote-ref-1)