



Bloom's taxonomy ppt slideshare

1. Bloom's TaxonomyBloom's Taxonomy A Focus on Higher Level Thinking Skills 2. Background Background In 1956, Benjamin Bloom, a professor at the University of Chicago, shared his famous "Taxonomy of Educational Objectives". Bloom identified six levels of cognitive complexity that have been used over the past four decades to make sure that instruction stimulates and develops students' higher-order thinking skills. 3. What is taxonomy? "Taxonomy and "classifying thinking according to six cognitive levels of complexity. It led many teachers to encourage thinking according to six cognitive levels of complexity. It led many teachers to encourage thinking according to six cognitive levels of complexity. It led many teachers to encourage thinking according to six cognitive levels of complexity. their students to "climb to a higher (level of) thought." 4. Cognitive Domain (Higher-Level Thinking Skills)(Higher-Level Thinking Skills) 5. Evaluation Synthesis Analysis Application Comprehension Knowledge Higher-Level Thinking Skills 6. Knowledge Recall or recognition of information. list name identify show define recognize recall match define classify describe locate outline give examples distinguish opinion from fact 7. ComprehensionComprehension The ability to understand, translate, paraphrase, interpret or extrapolate material. (Predict outcome and effects). explain interpret describe compare convert distinguish estimate 8. Application Application and transfer knowledge from one setting to another. (Use learned material in a new situation). apply classify modify put into practice demonstrate compute operate solve illustrate calculate interpret manipulate predict show 9. Analysis Analysis Identifying detail and having the ability to discover and differentiate the component parts of a situation or information. contrast compare distinguish categorize outline relate analyze organize deduce choose diagram discriminate 10. Synthesis Synthesis The ability to combine parts to create the big picture. - discuss plan compare create construct rearrange compose organize design hypothesize support write report combine comply develop 11. Evaluation The ability to judge the value or use of information using appropriate criteria. (Support judgment with reason). defend appraise 12. KNOWLEDGE COMPREHENSION APPLICATION ANALYSIS SYNTHESIS EVALUATION 13. Receiving Being aware of or attending to something in the environment Responding Showing some new behaviors as a result of experience Valuing Showing some definite involvement or commitment Krathwohl, D., Bloom, B., & Masia, B. (1956). Taxonomy of educational objectives. Handbook II: Affective domain. New York: David McKay. The Affective Domain 14. The Affective Domain 14. The Affective Domain 0 rejarization by Value Acting consistently with the new value; person is known by the value. 15. The Psychomotor Domain Perception Process of becoming aware of objects, qualities, etc by way of senses. Basic in situation- interpretation-action or experience; may be mental, physical or emotional. Simpson, J. S. (1966). The classification of educational objectives, psychomotor domain. Office of Education Project No. 5-85-104. Urbana, IL: University of Illinois. 16. Mechanism Learned response becomes habitual; learner has achieved certain confidence and proficiency or performance. Guided Response Overt behavioral act under guidance of an instructor, or following model or set criteria. The Psychomotor Domain 17. Adaptation Altering motor activities to meet demands of problematic situations. Complex Overt Response Performance of motor acts or ways of manipulating materials out of skills abilities and understandings developed in the psychomotor area. The Psychomotor Domain 19. Writing Instructional Objectives while it is possible to write instructional Objectives of all types for each of the three domains, the vast majority are written for the cognitive domain. The major exceptions include preschool, physical education, and perhaps fine arts courses such as sculptureing and drama. 20. Activity Choose a topic of your own choice and write down its objectives by defining three domains separately 21. Q & A SlideShare uses cookies to improve functionality and performance, and to provide you with relevant advertising. If you continue browsing the site, you agree to the use of cookies on this website. See our User Agreement and Privacy Policy. SlideShare uses cookies to improve functionality and performance, and to provide you with relevant advertising. If you continue browsing the site, you agree to the use of cookies on this website. See our User Agreement for details. 1. REVISED BLOOM'S TAXONOMY: Pathway to G N Improve I K N I H T 2. The development of critical and creative kinds of thinking is a major goal for education in the 21st century. This presentation aims to help furnish the teachers with all of the scaffolding and assistance she/he will need to be able to involve learners in development of critical and creative kinds of thinking is a major goal for education in the 21st century. order processes. The development of improved thinking among our students should be our focus of attention. The Revised Bloom's Taxonomy will provide the pathway that would lead to improve thinking. 3. PRIMING - 10 Minutes Let's answer the anticipation Guide individually. Anticipation Guide individually. AGREE if you go with the statement and DISAGREE if you are not in favor. 4. 1. Asking students to think at the higher level beyond simple recall is an excellent way to stimulate students' thought processes. 5. 2. Bloom's Taxonomy is a classification of thinking organized in accordance with the interest of the learners. 6. 3. Changes in the Revised Bloom's Taxonomy occur in terminologies, structure and processes. 7. 4. The main focus of Bloom's Taxonomy is to improve student learning and thinking. 8. 5. Creating is the Highest among the Thinking Skills. 9. 7. Factual Knowledge refers to the essential facts, terminology, details or element students must know or be familiar with in order to solve a problem. 10. 6. Change in Emphasis in RBT is placed upon its use as an authentic tool for curriculum planning, instructional delivery and assessment. 11. 8. The knowledge dimensions consist of factual, conceptual, procedural and meta- cognitive. 12. 9. Higher order thinking applies to all subject areas. There is a link between the skills, processes and content. 13. 10. Knowledge and prior experience are not necessary for higher order thinking. Basic and higher order skills can be clearly separated, and they don't operate in an integrated manner. Note: Go back to your answers when the discussion is done. 14. Activity 1 - 10 minutes Using the shown "balak", formulate at least three different questions following the Bloom's Taxonomy. Make sure to identify the level of the questions. Write the questions in Manila Paper and present to the assembly. 15. Ang Bawon ni Todeng Ni: Dr. Alejandro P. Macadatar Sa matag adlaw nga pag-eskwela Bitbit kanunay ang bawon niya Pinutos sa dahong saging Ang pagkaon ni Todeng Pagka udto sa ilang pagkaon Abrihan dayon ang iyang baon Bisan ginamos ang apil sa putos Lipay gihapon aron mahaw-as sa kakabus 16. Activity 2 - 40 minutes Listen to the lecturette on "Revised Bloom's Taxonomy: Pathway to Improve Thinking". Based on the presentation, you will return to your output and will classify the questions formulated. 17. Where do we begin in seeking to improve human thinking? What do we do to stimulate thinking and provides a simple structure for many? • Bloom's Taxonomy? • Bloom's Taxonomy? • Bloom's Taxonomy? different kinds of questions. 19. Evaluation Synthesis Analysis Application Comprehension Knowledge Bloom's Taxonomy (1956) 20. What is REVISED BLOOM'S TAXONOMY? The Revised Bloom's Taxonomy provides the measurement tool for thinking. The changes in RBT occur in three broad categories: • Terminologies • Structure • Emphasis 21. A Visual Comparison of Two Taxonomies (Terminology Changes) Evaluation Creating Synthesis Evaluating Analysis Analyzing Application Applying Comprehension Understanding Knowledge Remembering 1956 2001 (Based on Pohl, 2000, Learning to Think, Thinking to Learn, p. 8) 22. Changes in Terms • Noun to Verb • Thinking is an active process therefore verbs are more accurate • Knowledge is a product of thinking and was inappropriate to describe a category of thinking and was replaced with the word remembering 23. Changes in Terms • Comprehension became understanding and synthesis was renamed creating in order to better reflect the nature of the thinking described by each category. 24. Level One : Remembering The learner is able to recall, restate and remember learned information. - Recognizing - Listing - Describing - Identifying - Retrieving - Naming - Locating - Finding Can you recall information? 25. Remembering cont' • List • Listen • Memorize • Relate • Group Recall or • Show • Choose recognition of • Locate • Recite specific information • Distinguish • Give example • Reproduce • Quote • Reproduce • Quote • Reproduce • Quote • Reproduce • Cite • Fact • Workbook • Read • Sort • Worksheet • Reproduction • Write • Test • Vocabulary • Outline 26. Classroom Roles for Remembering Teacher roles • Describes • Retells • Passive recipient 27. Remembering: Engagement Activities and Products • Make a story map showing the main events of the story. • Make a time line of your typical day. • Make a concept map of the topic. • Write a list of keywords you know about.... • What characters were in the story? • Make a chart showing... • Make an acrostic poem about.... • Recite a poem you have learnt. 28. REMEMBERING (Knowledge) (Shallow processing: drawing our factual answers, testing recall and recognition) • The learner is able to recall, restate and remember information. 29. • When did ? • How would you describe ? • Can you recall ? • Can you list three ? 30. Sample happen? • How would you explain _? • Can you select ? • Who was ? • Why did ? • Which one ? 31. • Questions starting with ? • When did ? • How would you show ? • Who were the main Questions for Remembering • What is ? • Where is ? • How did it happen ? • How is what, where, when, why and how whose answers could be retrieved, recognized and recalled from the text or on the lines of the text read, fall under remembering. 32. Level Two: Understanding The learner grasps the meaning of information by interpreting and translating what has been learned. - Interpreting - Exemplifying - Summarizing -Inferring - Paraphrasing - Classifying - Comparing - Explaining Can you explain ideas or concepts? 33. Classroom Roles for Understanding Teacher roles • Demonstrates • Explaining • Compares • Restates • Contrasts • Translates • Explaining • Can you explain ideas or concepts? 33. Classroom Roles for Understanding Teacher roles • Demonstrates • Interprets • Active participant 34. Understanding cont' • Restate • Describe • Identify • Report Understanding • Discuss • Recognize of given information • Retell • Review • Research • Observe • Outline • Annotate • Account for Products include: • Translate • Interpret • Recitation • Example • Give main • Summary • Quiz • Paraphrase idea • Collection • List • Reorganize • Estimate • Explanation • Label • Associate • Define • Show and tell • Outline 35. Understanding: Engagement Activities and Products • Write in your own words... • Cut out, or draw pictures to illustrate a particular event in the story. • Report to the class... • Illustrate what you think the main idea may have been. • Make a cartoon strip showing the sequence of events in the story. • Write a brief outline to explain this story to someone else • Explain why the character solved the problem in this particular way • Write a summary report of the event. • Prepare a flow chart to illustrate the sequence of events. • Make a colouring book. • Paraphrase this chapter in the book. • Retell in your own words. • Outline the main points. 36. UNDERSTANDING (Comprehension) (translating, interpreting and extrapolating) • The learner grasps the meaning of information by interpreting and extrapolating what has been learned. 37. Sample Questions for Understanding • State in your own words... • Which are facts? Opinions? • What does this means...? • Is this the same as...? • Is this the same as...? • Giving an example • Select the best definition 38. Questions with what, where, why and how questions answers could be taken between the lines of the text through organizing, comparing, translating, interpreting, extrapolating, summarizing and stating main ideas fall under understanding. 39. • Condense this paragraph... • What would happen if...? • What part doesn't fit? • How would summarized...? 40. Level Three : Applying The learner makes use of information in a context different from the one in which it was learned. Implementing - Carrying out - Using - Executing Can you use the information in another familiar situation? 41. Applying cont' • Translate • Paint • Collect • Make • Change Using strategies, • Exhibit • Compute concepts, principles and theories in new • Sequence situations • Illustrate • Show • Calculate • Solve • Interpret • Collect • Make • Demonstrate Products include: • Practice • Dramatize • Photograph • Presentation • Construct • Illustration • Interview • Draw • Demonstration • Journal 42. Classroom Roles for Applying Teacher roles Student roles • Shows • Solves problems • Facilitates • Demonstrates use • Observes of knowledge • Evaluates • Calculates • Calculates • Constructs • Active recipient 43. Applying: Engagement Activities and Products • Constructs • Active recipient 43. Applying: Engagement Activities and Products • Construct a model to demonstrate how it looks or works • Practise a play and perform it for the class • Make a diorama to illustrate and event • Write a diary entry • Make a scrapbook about the area of study. • Prepare invitations for a character's birthday party • Make a topographic map • Take and display a collection of photographs on a particular topic. • Make up a puzzle or a game about the topic. • Write an explanation about this topic for others. • Dress a doll in national costume. • Make a clay model... • Paint a mural using the same materials. • Continue the story... 44. APPLYING (Knowing when to apply, why to apply and recognizing patterns of transfer to situation that are new, unfamiliar or have a new slant for students) The learner make use of the acquired knowledge, facts, techniques and rules in a different ? • What elements would you change way. 45. Sample Questions for Applying • How would you organize to show ? • How would you show your understanding of ? • What facts would you select to show what ? 46. • What other way would you plan to ? • What questions would you ask in an interview using what you have learned? 47. Level Four: Analyzing The learner breaks learned information into its parts to best understand that information. - Comparing - Organizing - Deconstructing - Attributing - Outlining - Finding - Structuring -? • How would you apply what you learned to develop ? • How would you solve with Integrating Can you break information into parts to explore understandings and relationships? 48. Analyzing cont' • Distinguish • Compare • Sequence • Seq Debate • Arrange • Analyze Products include: • Investigate • Diagram • Graph • Survey • Sift • Relate • Discusses Guides • Uncovers • Observes • Argues • Debates • Acts as a resource • Thinks deeply • Questions • Tests • Organizes • Examines • Dissects • Questions • Calculates • Investigates • Inves • Design a questionnaire to gather information. • Survey classmates to find out what they think about a particular topic. Analyse the results. • Make a family the actions of the characters in the book • Create a sociogram from the narrative • Construct a graph to illustrate selected information. tree showing relationships. • Devise a role play about the study area. • Write a biography of a person studied. • Prepare a report about the area of study. • Conduct an investigation to produce information to support a view. • Review a work of art in terms of form, color and texture. • Draw a graph • Complete a Decision Making Matrix to help you decide which breakfast cereal to purchase 51. ANALYZING (breaking down into parts, forms) The learner breaks learned information into its parts determining how the parts relate to one another to an overall structure or purpose through differentiating, organizing and attributing. 52. Sample Questions for Analyzing • Which statement is relevant? • What is the conclusion? • What does the author believe? Assume? • Make a distinction between • What ideas justify the conclusion? • Which is the least essential statement? • What literacy form is used? 53. Level Five : Evaluating The learner makes decisions based on in-depth reflection, criticism and assessment. - Checking -Hypothesizing - Critiquing - Experimenting - Judging - Testing - Detecting - Monitoring Can you justify a decision or course of action? 54. Evaluating cont' • Judge • Choose • Rate • Conclude Judging the value of • Validate • Deduce ideas, materials and • Predict • Debate methods by • Assess • Justify developing and • Score • Recommend applying standards • and criteria. Revise • Discriminate • Infer • Appraise • Determine • Value • Prioritize • Probe Products include: • Tell why • Argue • Debate • Investigation • Compare • Decide • Panel • Verdict • Evaluation • Persuasive • Measure speech 55. Evaluating: Engagement Activities and Products • Write a letter to the editor • Prepare and conduct a debate • Prepare a list of criteria to judge... • Write a persuasive speech arguing for/against... • Make a booklet about five rules you see as important. Convince others. • Form a panel to discuss viewpoints on.... • Write a letter to ...advising on changes needed. • Write a half-yearly report. • Prepare a case to present your view about... • Complete a PMI on ... • Evaluate the character's actions in the story 56. Classroom Roles for Evaluating Teacher roles • Judges • Clarifies • Disputes • Accepts • Compares • Guides • Critiques • Accepts • Compares • Guides • Critiques • Accepts • Compares • Guides • Clarifies • Disputes • Accepts • Compares • Guides • Critiques • Accepts • Compares • Guides • Clarifies • Disputes • Accepts • Compares • Guides • Critiques • Clarifies • Disputes • Accepts • Compares • Guides • Critiques • Clarifies • Disputes • Accepts • Compares • Guides • Clarifies • Disputes • Accepts • Compares • Guides • Critiques • Clarifies • Disputes • Dispute Active participant 57. Sample Questions for Evaluating • What fallacies, consistencies, inconsistencies appear _____? • Which is more important _____? ? • Do you agree ? • What information would you use ? • Do you agree with the ? • How would you evaluate ? 58. EVALUATING (according to some set of criteria and state why) The learner makes decisions based on in-depth reflection, criticism and assessment through checking and critiquing. 59. Level Six : Creating The learner creates new ideas and information using what has been previously learned. - Designing - Constructing - Producing - Inventing - Devising - Making Can you generate new products, ideas, or ways of viewing things? 60. Creating cont' • Compose • Formulate • Assemble • Organize • Improve Putting together ideas or elements to develop • Invent • Act a original idea or • Compile • Predict engage in creative thinking. • Forecast • Devise • Produce • Propose • Blend • Construct • Set up Products include: • Plan • Film • Song • Devise • Prepare • Story • Newspaper • Develop • Concoct • Project • Media product • Originate • Compile • Plans • Analyses • Takes risks • Evaluates • Modifies • Creates • Proposes • Active 62. CREATING (combining statement into a pattern not clearly there before) The learner creates new ideas and information using what have been previously learned. 63. Creating: Engagement Activities and Products • Use the SCAMPER strategy to invent a new type of sports shoe • Invent a machine to do a specific task. • Design a robot to do your homework. • Create a new product. Give it a name and plan a marketing campaign. • Write a TV show play, puppet show, role play, song or pantomime about.. • Design a new monetary system • Develop a menu for a new restaurant using a variety of healthy foods • Design a record, book or magazine cover for... • Sell an idea • Devise a way to... • Make up a new language and use it in an example • Write a jingle to advertise a new product. 64. Sample Questions for Creating • Can you design a ? • What possible solution to ? • How many ways can you ? • Can vou create a proposal which would _? 65. B. STRUCTURAL CHANGES Bloom's original cognitive taxonomy was a one-dimensional form consisting of Factual, Conceptual and Procedural - but these were never fully understood for use by the teachers because most of what educators were given in training consisted of a simple chart with the listing of levels and related accompanying verbs. 66. LEVELS OF LEARNING Knowledge/Comprehension Arrange Explain Match Report Cite Express Name Restate Classify Give Order Review Convert Examples Outline Specify Copy Identify Recall Summarize Define Indicate Recite Tell Describe Label Record Translate Discuss List Relate Underline Distinguish Locate Reproduce 67. LEVELS OF LEARNING Application Apply Draft Infer Produce Assemble Dramatize Interpret Relate Calculate Draw Modify Schedule Change Employ Operate Select Choose Estimate Practice Show Compute Explain Predict Sketch Defend Illustrate Prepare Use Demonstrate Discover 68. LEVELS OF LEARNING Problem Solving Analyze Criticize Inspect Question Appraise Debate Interpret Rate Argue Defend Judge Relate Arrange Differentiate Justify Recognize Estimate Organize Solve Compare Evaluate Plan Support Compose Examine Predict Test Conclude Formulate Prepare Value Construct Illustrate Propose Write Create Infer 69. The Revised Bloom's Taxonomy takes the form of Two-dimensional table. The Knowledge to be learned and second is the Cognitive Process Dimensional table. Understand- Applying Analyzing Evaluating Creating Dimensions -ing ing Factual Conceptual Procedural Metacog- nitive 70. • Factual Knowledge - refers to the essential facts, terminology, details or elements student must know or be familiar with in order to solve a problem in it. 71. • Conceptual Knowledge - is knowledge of classification, principles, generalizations, theories, models or structure pertinent to a particular disciplinary area. 72. • Procedural Knowledge - refers to information or knowledge - refers to information or knowledge that helps students to do something specific to a discipline subject, area of study. It also refers to methods of inquiry, very specific or finite skills, algorithms, techniques and particulars 73. • Meta-cognitive Knowledge - is a strategic or reflective knowledge about how to go solving problems, cognitive tasks to include contextual and conditional knowledge of self. 74. C. CHANGE IN EMPHASIS Emphasis is the third and final category of changes. It is placed upon its use as a more "authentic tool for curriculum planning, instructional delivery and assessment. • Aimed at a broader audience • Easily applied to all levels of schooling • The revision emphasizes explanation and description of subcategories 76. BLOOM'S REVISED TAXONOMY Creating Generating new ideas, products, or ways of viewing things Designing, constructing, planning, producing, inventing, judging Analyzing Breaking information into parts to explore understandings and relationships Comparing, organizing, deconstructing, interrogating, finding Applying Using information in another familiar situation Implementing, carrying out, using, executing Understanding Explaining Remembering Recalling information Recognizing, listing, describing, retrieving, naming, finding 77. "The new century has brought us the Revised Bloom's Taxonomy which is really new and improved. Try it out; the author thinks you will like it better than a cake". 78. Activity 3-30 minutes Present your output and solicit the reactions of other participants on the way you classified your question. 79. Abstraction - 10 minutes What new insights have you gained from our session? What self realizations have you discovered? 80. Application - 30 minutes - Here are essays and news items, select one and formulate questions. Reverse the trend that have been recorded during our activity as evidently shown by the table posted on the board - Reporting and concluding of output 81. "A good teacher makes you think even when you don't want to." (Fisher, 1998, Teaching Thinking) 82. References: • Clements, D.; C. Gilliland and P. Holko. (1992). Thinking in Themes: An Approach Through the Learning Centre. Melbourne: Oxford University Press. • Crawford, Jean (ed.) (1991). Achieveing Excellence: Units of Work for levels P-8. Carlton South, Vic.: Education Shop, Ministry of Education and Training, Victoria. • Crosby, N. and E. Martin. (1981). Don't Teach! Let Me Learn. 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