

Review Questions for Chapters 10 & 11: Language Production and Problem Solving

The final exam will cover everything in Matlin for Chapters 1-6, 8, 9, 10, & 11 as well as the material covered in class. You may want to use the following review questions, along with the previous three review sheets to study for the final exam.

1. Describe the production process of speaking. What are the important stages? What is the linearization problem? What is prosody?
2. Describe the three different types of speech errors proposed by Dell (1986) and give examples of each. Be able to identify each type of speech error. Also be able to identify the three different forms that each error can take (i.e. anticipation, perseveration, and deletion errors).
3. What is meant by the term discourse? What is the narrative form of discourse? How is it different from more typical forms of conversational discourse?
4. An important aspect of the social context of speech is establishing common ground? What does this refer to? How does collaboration fit into this?
5. Describe some of the important characteristics of conversational format (e.g. turn-taking)
6. What is a directive? Describe some of the various types of directives. What are indirect questions? Indirect speech acts?
7. What are the three basic cognitive tasks that comprise writing? Discuss each of these in turn and what is involved with each.
8. Be able to identify the three types of elements that would be a part of any writing plan.
9. Characterize how sentence generation works.
10. Describe John Hayes cognitive model of writing including the various proposed components.
11. Discuss the research on planning, sentence generation, and revision. What does the research show about each of these processes
12. What differences are observed between college students and expert writers in how they go about revising a text? In what other ways are expert writers different from novice writers?
13. Define bilingualism and multilingualism.
14. Distinguish between subtractive bilingualism and additive bilingualism.
15. L1 versus L2: What is this?

16. What was the early view of bilingualism and its effect on other cognitive and thinking skills? What is the more recent view? Why was the earlier research mistaken about the benefits of bilingualism?
17. Discuss some of the many advantages of bilingualism and multilingualism? Are there any disadvantages?
18. What did Bahrick's 1994 study of Spanish-English bilinguals living in the United States show about the proficiency of these individuals in Spanish and English compared to monolinguals of the same age and education.
19. Do children actually have an advantage over older adults in learning a second language? On what specific factors does the difference depend? Is the advantage always one way (e.g. are children always better than adults)?
20. What four aspects characterize all problems according material presented in class and in the book.
21. Distinguish between well-defined and ill-defined problems and give examples of each type of problem.
22. Be able to classify problems along all of the dimensions discussed in class (e.g. well-defined versus ill-defined, insight versus non-insight, etc.)
23. Describe the important components and ideas in the Newell and Simon Model of problem solving.
24. Discuss what is meant by problem solving as search and as representation. Give examples that make clear the importance of these ideas in thinking about what problem solving is and how it works.
25. Characterize the information processing system and how it affects problem solving
26. What is meant by the task environment?
27. What is the problem space? To what does it refer? Of what does it consist? (hint: be sure to include *states* and *operators* in your answer).
28. Distinguish between the 'objective' problem space and the problem space.
29. What is a problem space graph? Draw an example graph for the Tower of Hanoi problem.
30. Explain what is meant by the statement "Problem solving can be thought of as a search for a path through the space that connects the initial state of the problem to the goal state of the problem."
31. The characterization of problem solving as search is an important and fundamental idea in cognitive psychology. What is meant by this statement. Explain the various ways in which human problem solvers deal with the problem of search (be sure to include algorithms and heuristics in your answer).

32. Define algorithm and heuristic. Compare and contrast them and give examples of each in human problem solving.
33. Although there are currently computer chess programs that consistently can beat all but the very best human chess players (and even the best players sometimes), why do these programs have little to teach us about human problem solving and cognition?
34. What is means-ends analysis? Give examples of its use in problem solving (not the Tower of Hanoi, please).
35. What is hill-climbing? Give examples. Do the same for working backwards
36. Discuss the importance of representation in problem solving. Along with search this is one of the fundamental ideas about problem solving contributed by cognitive psychologists. Give examples of the role representation plays in problem solving.
37. What is functional fixedness? Classic example? Other examples?
38. What are set effects? What is the classic demonstration of this effect
39. What is meant by insight problem solving? Distinguish between insight problems and non-insight problems. What empirical data support the distinction? Be sure you can give examples of problems of both types.
40. Discuss the research on analogy. Explain what analogy is and how analogy figures in problem solving. Discuss the Gick and Holyoak work and its relevance.
41. What are problem isomorphs? Why do people often fail to solve problem isomorphs?
42. When are people more likely to use analogies effectively in solving problems?
43. Discuss how expertise influences problem solving? Be sure to discuss expert/novice difference in knowledge, memory, representation, etc., in your answer
44. What is the main dilemma in studying creativity? Give a current best definition of creativity?
45. Describe two approaches to creativity discussed by Matlin.
46. Characterize the classic approach to the study of creativity. Give examples of how the approach measured creativity. Discuss the problems with this approach.
47. Characterize the investment theory of creativity. Can it be compared to the classic approach or are they different kinds of theories?
48. Discuss the research on motivation and creativity. What does the research show concerning intrinsic versus extrinsic motivation and their effects on creativity?
49. What is incubation? How is it relative to the topic of creativity? What does the research on incubation suggest?

