

## Presenter Handout

# COMPREHENSION AND LITERACY FOR STUDENTS WITH ASD

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## An Analysis of Problematic Cohesion

Below are 5 examples of problematic cohesion. The extracts are from public examination papers in Computing Studies between the years 1987 and 1992.

### Example 1

Extract: "If a value is not within the inclusive bounds stated earlier, it is considered out of bounds."

Analysis: Instead of the vague anaphoric reference in the underlined phrase (itself an ellipsis of the fuller that were stated earlier), it would be more helpful to candidates if the bounds were repeated. Candidates would then not have to search back in the previous text to find the information they need: If a value is not within the inclusive bounds -99 to +99, it is considered out of bounds.

### Example 2

Extract: "Given the flowchart below, redraw this flowchart fragment using the standard flowchart constructs for while/do..."

Analysis: This is a good example of how ambiguity of reference may result in candidates failing to understand what they have to do. It is not immediately clear that the flowchart below and this flowchart fragment are one and the same thing. Much better is the omission of the first 4 words, resulting in: Redraw the flowchart fragment below using the standard flowchart constructs 'for while/do'.

### Example 3

Extract: "A bar code is often found on produce sold in supermarkets and, by means of a bar code reader, a computer can directly identify that item. A bar code consists of a series of light and dark lines of varying widths."

Analysis: The difficulty here is caused by the faulty determiner that. The problem is that produce is a mass noun referring to the total of food on sale in a supermarket and item is a count noun referring to one entity of that total. A non-native candidate may not immediately make the required connection between the two words. The potential ambiguity is avoided if the passage is reformulated in a more logical order as follows: Many supermarkets have computers which use a bar code reader to identify food products. The bar code, which is printed on the packaging of most products, consists of a series of light and dark lines of varying widths.

***Example 4***

Extract: "Produce an algorithm for a sub-program which would process and calculate the charge for a single call. Your solution should ideally include all four built-in functions described below."

Analysis: The use of the word solution in the second sentence may make this short extract stylistically more agreeable, but candidates are probably better served by a direct repetition of the word algorithm.

***Example 5***

Extract: "During the milking process a feeding trough is filled under computer control with an amount of concentrated food directly proportional to the weight of the cow. This is supplemented by powdered additives the quality of which is directly proportional to the amount of milk produced by the cow over the previous three days."

Analysis: This is a demanding text, both linguistically and conceptually; linguistically because there is minimal punctuation and the lexis is difficult, and conceptually because the candidate has to juggle with two separate proportional quantities. The intelligibility of the passage is not improved by the inexplicitness of the pronoun this. If the candidate is unsure of the meaning of powdered additives, it is very difficult for him to work out what is being referred to, since milking process, feeding trough, computer control, concentrated food or cow are all potential referents. This ambiguity could be avoided by the simple expedient of repeating the word food; i.e., this food.