

Administrator's Report (with confidence analysis)

The Decision Analysis Test

Denise Debutante



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What the Decision Analysis Test is designed to measure

The Decision Analysis Test is designed to measure areas of cognitive functioning that are important in real life. Any analysis of what people have to do soon shows how people are subjected to vast amounts of information which is not usually well organised and is often incomplete. In real life people find that they have to make judgements based on incomplete, ambiguous and sometimes contradictory information. This test simulates these aspects of real life and focuses less on logic and deduction and more on inference and judgements that have to be made on the basis of incomplete or ambiguous information.

The Decision Analysis Test assesses cognitive functioning through questions requiring the following skills:

- Analysis - These questions ask the respondent to extract clear information and follow known rules to reach logical conclusions.
- Synthesis - These questions test the extent that known information is used but combined to make new connections and inferences in order to reach logical conclusions.
- Evaluation and judgement - These questions test the degree to which the respondent is able to work with more ambiguous information and hence needs to make new connections, generate new concepts, handle missing data and work with ambiguous content in order to make best-fit judgements.

As well as assessing cognitive functioning, the Decision Analysis Test also asks about how confident Denise was about the answers she gave on a 5-point scale, where higher scores indicate greater confidence. This provides an indication of Denise's confidence in dealing with incomplete and ambiguous information.

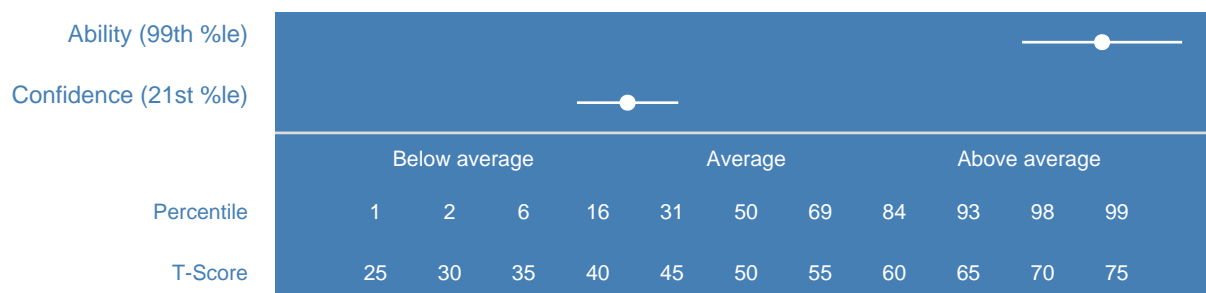
Test results

On the Decision Analysis Test, Denise attempted 30 questions out of 30 and answered 24 correctly. The average rating Denise gave for her level of confidence in her answers was 2.9 out of 5. To put these raw scores into context, they have been compared with the following group: UK Graduates (n=127).

In relation to the comparison group, Denise's ability and confidence scores are as follows:

	Ability score	Confidence
T-Score	74	42
68% T-Score confidence band	64 - 84	32 - 52
80% T-Score confidence band	61 - 86	29 - 54
Percentile	99	21

The T-Scores, percentiles and 68% confidence bands are shown below:



The table below shows how Denise performed on the sections of the test that assess different areas of cognitive functioning: 'analysis', 'synthesis and evaluation' and 'judgement'. As the more complex elements of 'synthesis and evaluation' and 'judgement' are assessed by questions towards the middle and end of the Decision Analysis Test, there may be limited information on these areas if Denise did not reach these parts of the test in the time allowed.

	Analysis	Synthesis	Evaluation and judgement
Number of items	9	11	10
Number attempted	9	11	10
Number correct	8 (89%)	9 (82%)	7 (70%)

Speed and accuracy

Combining information on the number of questions attempted and the number answered correctly indicates that Denise attempted more questions than the majority of the comparison group. Of the questions attempted, the proportion of questions she answered correctly was higher than average.

Analysis of confidence ratings

As ambiguity increases it is harder to make sound decisions. A person needs to identify the gaps and judge whether to fill the gap, extrapolate, try to identify a pattern and come to some conclusion. A person who does not recognise the ambiguity or who jumps to conclusions on the basis of too little information (without recognising they have too little information) could blindly make decisions without realising what is unclear or missing.

The confidence level was introduced as an experimental measure to explore the relationship between confidence and judgement with the potential implications for an approach to risk. It does this by identifying people who show:

- an appropriate level of confidence (high when they get the question right and low when they get the question wrong). These are potentially better decision makers since they may recognise when they do not have the information or the understanding from which to proceed.
- an inappropriate level of confidence (high when they get the question wrong and low when they get the question right). These are potentially bad decision makers since they could misjudge their information or level of understanding.
- a high overall level of confidence regardless of whether they are right or wrong. These are potentially good

decision makers until they venture into unfamiliar territory at which point they fail to recognise their inadequate grasp of the situation.

- a low overall level of confidence regardless of whether they are right or wrong. These are potentially cautious decision makers who fail to take even calculated risks.

Potentially, the difference between the confidence level on items right versus items wrong is a better measure of judgement in the real world than how good a score is on a test. Users of the DAT are invited to consider these possibilities on the understanding that considerably more research would be needed to validate these ideas.

The table below provides some preliminary interpretations of the different patterns of confidence rating. The cells towards the upper-right of the table (shaded in yellow) show the more appropriate patterns of responding in which people tend to be most confident on those items they get correct and least confident on those items they get incorrect. The cells of the table towards the lower left (shaded in pink) show less appropriate patterns of responding in which people tend to be more confident on the items they get incorrect than on those they get correct. The cells in the diagonal (shaded grey) show patterns in which levels of confidence do not vary according to whether the person got items correct or incorrect.

Denise's pattern of responding was 'Moderate confidence' which is shown highlighted in blue the table. Since this measure is currently experimental, the findings should be viewed tentatively for the moment.

		Confidence for incorrect items		
		High	Medium	Low
Confidence for correct items	High	Over-confidence High confidence in judgements even when they are incorrect.	High confidence High confidence in judgements when they are correct, but less so for judgments that are incorrect.	High Accuracy High confidence in judgements when they are correct and low confidence when they are incorrect.
	Medium	Inappropriate confidence (moderate misjudgement) High confidence in judgements which are incorrect but less confidence in judgements which are correct.	Moderate confidence Average confidence for all judgements, whether correct or incorrect.	Moderate accuracy Average confidence for correct judgements and low confidence for incorrect judgements.
	Low	Inappropriate confidence (high misjudgement) Low confidence for correct judgements, but high confidence for incorrect judgements.	Inappropriate confidence (moderate misjudgement) Low confidence for correct judgements and medium confidence for incorrect judgements.	Under-confidence Low confidence for all judgements, even when they are correct.

The 'Moderate confidence' pattern demonstrated by Denise can be described as follows:

People who show this pattern have a moderate level of confidence in their judgements. Like most people, they recognise that things are not always clear cut. However, they do not appear to differentiate between situations where they are making accurate judgements and others where they are not. If this translates to everyday life it suggests that they make decisions based on the information they have without any particular tendency towards self-doubt or over-confidence. As a style, this could mean that they have the confidence to take initiatives or to seek further information to the same degree as most people. Perhaps they need to learn to question a little more and to recognise those times when more information is required before they

make a judgement

Descriptions for the remaining patterns in the table are given below.

Over-confidence

People who show this pattern have a very high confidence in their judgements – even when they are wrong. They do not appear to know when they have insufficient information or when they are making incorrect assumptions. If this translates to everyday life it suggests that they may act with confidence even when they are unsure. This could mean that they have a bold and entrepreneurial style. When this is working well they may be full of confidence and initiative. However, this is most likely to work well when they are on familiar ground. It raises the question as to whether they could sometimes be over-confident – especially in new situations. Perhaps they need to learn to recognise those times when more information is required before they make a judgement. If they do not learn to do this it would be worth exploring further the degree to which they see themselves as high risk takers – and whether to others this is sometimes seen as reckless.

High confidence

People who show this pattern have a high confidence in their judgements. However, they temper this to some degree when the situation is less clear cut at which times they still show a moderate level of confidence. If this translates to everyday life it suggests that they recognise when the ground they are on is less certain - but that this only affects their confidence to a moderate degree. As a style, this could mean that they have the confidence to take initiatives, something which is likely to work well when they are on familiar ground. It raises the question as to whether they could sometimes be over-confident, especially in new situations. Perhaps they need to learn to recognise those times when more information is required before they make a judgement. If they do not learn to do this it would be worth exploring further the degree to which they see themselves as high risk takers – and whether to others this is sometimes seen as reckless.

High Accuracy

People who show this pattern have been accurate in their judgements. They appear to know when they have sufficient information and when they are justifiably unsure. If this translates to everyday life it suggests that this awareness would help the person to recognise when they needed to inquire further before making a decision.

Inappropriate confidence (moderate misjudgement)

People who show this pattern are prone to make misjudgements. They show very high confidence in their judgements when they are wrong but moderate confidence when they are right. If this translates to everyday life it suggests that they may sometimes act with confidence inappropriately. However, this is a slightly unusual pattern and it would be worth exploring to what degree they understood the task they were given – perhaps there are issues about understanding the purpose of the test, familiarity with the language or whether they got the confidence scale the wrong way round. If none of these apply it would be worth exploring further the degree to which they see themselves as being prone to misjudge situations – and perhaps being over-confident in the wrong situations.

Moderate accuracy

People who show this pattern have been accurate in their judgements. Perhaps they could develop greater confidence in the judgements they do make but their confidence is in the right direction – higher when they are right and lower when they are wrong. They appear to know when they have sufficient information and when they are justifiably unsure. If this translates to everyday life it suggests that this awareness would help the person to recognise when they needed to inquire further before making a decision.

Inappropriate confidence (high misjudgement)

People who show this pattern are prone to make misjudgements. They show very high confidence in their judgements when they are wrong but low confidence when they are right. If this translates to everyday life it suggests that they may act with confidence inappropriately. However, this is an unusual pattern and it would be worth exploring to what degree they understood the task they were given – perhaps there are issues about understanding the purpose of the test, familiarity with the language or whether they got the confidence scale the

wrong way round. If none of these apply it would be worth exploring further the degree to which they see themselves as being prone to misjudge situations – and perhaps being over-confident in the wrong situations.

Inappropriate confidence (moderate misjudgement)

People who show this pattern are prone to make misjudgements. They show moderate confidence in their judgements when they are wrong but low confidence when they are right. If this translates to everyday life it suggests that they may not always act with appropriate confidence. However, this is an unusual pattern and it would be worth exploring to what degree they understood the task they were given – perhaps there are issues about understanding the purpose of the test, familiarity with the language or whether they got the confidence scale the wrong way round. If none of these apply it would be worth exploring further the degree to which they see themselves as being prone to misjudge situations.

Under-confidence

People who show this pattern have a very low confidence in their judgements. They appear to doubt the information they have and the judgements they make. If this translates to everyday life it suggests that they may either act with very little confidence or even fail to act at all. Perhaps they are extremely risk averse. This may be appropriate in some situations but they may benefit from learning to recognise situations where they are capable of making sound judgements and to learn to act with greater confidence.

Notes on interpreting this report

When reading this report, you should remember that test results are only one source of information about a person's abilities, and the test Denise has taken looks at a very specific type of ability. All test scores are subject to error and so scores indicate a band of ability within which the test taker might fall, so an obtained score may under or over estimate ability. Low test scores can occur for many reasons - misunderstanding, lack of familiarity, anxiety - and the score may change if the test is taken again.

Date tested: 22/7/2010

Norm used: UK Graduates (n=127)

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