

# [Metacognition fact, had not, brings some influence into](https://assignbuster.com/metacognition-fact-had-not-brings-some-influence-into/)

Metacognition isthe idea of “ cognition about cognition”, or consciously thinking about ourcognitive processes (Flavell, 1976). The origins of this concept lead back tothe Greek philosopher Aristotle (384 – 322BC), but was officially labelled byAmerican developmental psychologist, John H. Flavell (1976). He used this idea tostudy the knowledge and cognitive awareness of children. The “ Raven’sProgressive Matrices” or RPM, first developed by J.

C. Raven (1936), provided anonverbal evaluation of intelligence through assessing participants’ visualreasoning. The current research presents to the participants a revised versionof the RPM (Raven & Court, 1998), examining the extent metacognitiveevaluations influence participants’ underlying performance.

Flavell divides metacognition into twoseparate components: metacognitive knowledge and metacognitive experiences(Livingston, 1997). Since metacognition focused primarily on metacognitiveabilities as they develop with age (Cary & Reder, 2002), Flavell’s studyaimed to identify how different aged subjects monitored their cognition whilein social settings (Flavell, 1979), with the results suggesting olderparticipants with developed cognitive knowledge are more effective in monitoringtheir metacognition compared to younger children. However, more recent work hasobserved that although cognition tends to improve with age, children as youngas 3-5 are able to understand their cognitive behaviours at a very simple level(Whitebread, Coltman, Pasternak, Sangster, Grau, Bingham, Almeqdad andDemetriou, 2009). RPM tests are independent of language, reading and writingskills. This practical application approach spread quickly and was used formany purposes, e.

g. acting as an entrance test to the armed forces and militaryservices. The findings from RPM study suggested that improvements inperformance reflected learning, as individuals learned to apply strategiesdepending on the situation (Kahneman, Slovic and Tversky, 1982). Previous studies on metacognition andRPM testing concluded that as the cognitive system develops, individuals becomemore aware of their cognitive processes, thus affecting performance levels. Inthe current study, we use these conclusions combined with the factor ofconfidence to test the extent to which task performance is impacted due tometacognitive evaluations, also known as reactivity.

In Flavell’s experiment(1979), the situation where participants who thought they had accuratelymemorised a set of material but in fact, had not, brings some influence intothe current study where the effect awareness has on underlying performance is tested. A recent study used error monitoring to compare the distinction betweenmetacognitive judgements of decision confidence and error likelihood (Yeung andSummerfield, 2012), and another examined if reactivity would alter the decisionprocess (Petrusic and Baranski, 2003). Previous research is lacking inconnection between confidence evaluation and reactivity. It has been suggestedthat there is an impact upon performance, but to what extent is something thathas yet to be established.

The current experiment design examinesreactivity, set out in three groups in which participants rated theirconfidence while performing cognitive tasks (RPM). The current studydraws upon the factors of Flavell’s experiment (1979), assessing how confidentparticipants were about their response to the material, while incorporating thedecision alteration aspects of Petrusic and Baranki’s research (2003). However, instead of using error likelihood present in Yeung and Summerfield’s study(2012), the current study questions the participants’ likelihood of correctlyanswering a question. The expectation is that if the idea of ‘ confidence’ wasprimed, an improvement would be seen in the RPM results compared to performingthe task without any metacognition awareness.