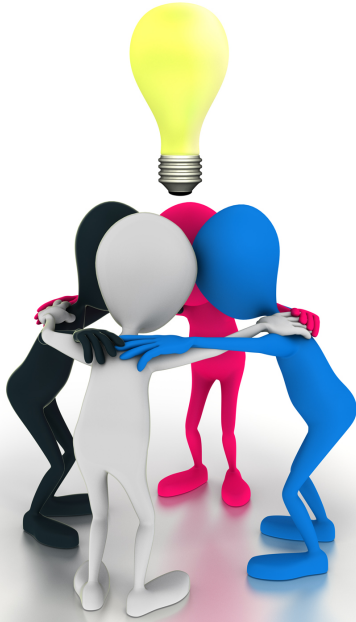


Team Working in Computing

Brainstorming

Introduction



- Working Within a Project Team
- You will be asked to work within a team in this unit.
- Before you come up with ideas for the project, we will look at some of the latest findings and research on teamwork and techniques for generating ideas.

Working in Teams



- In the early 1940's, advertising executive Alex Osborn argued that it was possible to enhance creativity by putting a group of people in a room and having them follow a set of simple rules. For example, coming up with as many thoughts as possible, encouraging wild and exaggerated ideas, and not criticizing or evaluating anyone's comments.
- Osborn claimed that 'the average person thinks up twice as many ideas when working as a group as than when working alone'.
- The idea soon took hold and employees were encouraged by companies and organisations worldwide to adopt these techniques to tackle problems.

Brainstorming

- Researchers have gone to a great deal of trouble to test the efficacy of group brainstorming.
- Perhaps surprisingly in the majority of studies it was concluded that participants working on their own produced a higher quantity and quality of work than those working in groups.



Social Loafing and the Bystander Effect



- Other research suggests that brainstorming may fail in part due to phenomenon known as ‘social loafing’.
- When working alone, people are responsible wholly for the success or failure of a task. If they do well, the glory is theirs, if they fail they carry the can.
- Add other people to the situation and everybody stops trying so hard, safe in the knowledge that, although they will not receive personal praise if the group does well, they can always blame others if it performs badly.

Research shows in many situations:

- When asked to make as much noise as possible, people make more on their own than as part of a group.
- The same is true for lifting weights.
- In short, group brainstorming may have been inadvertently stifling and not stimulating creativity.



Testing Creativity

Task:

- Split the class into two, 'teams' and 'singles'.
- Give the class an everyday object and ask them to come up with as many uses as possible for it.
- Evaluate the ideas for originality and creativity.



Tasks

- Add a single line to the following equation to make sense
– $10\ 10\ 11 = 10.50$
- Joanna and Jackie were born on the same month of the same day of the same year. They have the same mother and father but they are not twins. How is that possible?
- A man has married twenty different women in the same town. All are still alive and he never divorced any of them. Polygamy is unlawful, yet the man has not broken the law. How is that possible?
- A man walks into an antique shop and offers to sell a beautiful bronze coin. One side contains a wonderful image of a Roman emperor's head, while the reverse shows the date as 300 BC. How does the antique dealer know the coin is a fake?

“Groupthink” ... bad ideas and false consensus



- Psychologist Irvine Janis mapped this idea through research about the US decision to invade Cuba – the Bay of pigs.
- In 1961, President JFK and his advisers tried to overthrow Fidel Castro with a force of 1,400 exiles – non professional soldiers. They were slaughtered.
- This led to Cuba getting friendly with the USSR which almost led to a nuclear apocalypse.
- Why did these intelligent people make such bad decisions?
- Janis wanted to get to the bottom of it – his research led to the scientific categorisation “Groupthink”.

Groupthink ctd

- For a group to work every team needs at least one dissenter
- For a group to succeed it must allow dissent and convince everyone they are free to speak without risk of punishment.
- How many times have you settled on a bar no one really wanted to go to?
- The Titanic, Chernobyl, the banking crisis are all examples of groupthink leading to bad decisions

Answers

- IO T0 II = IO.50
- Joanna and Jackie are part of triplets
- The man is the minister who presided over the weddings
- The year 500 BC predates the birth of Christ, and thus a coin from that time would not be inscribed with an abbreviation before Christ

Groupthink – avoidance strategies

- Don't let the boss express his opinion before the meeting
- Let the group break into pairs every once in a while to discuss the issues at hand to foster a manageable level of dissent.
- Allow outsiders to give their opinions periodically to maintain your objectivity
- Assign one person the role of Dissenter