

Figure 1: Behaviour descriptions of adaptors and innovators

Adaptors:	Innovators:
Characterised by precision, reliability, efficiency; seen as methodical, prudent, disciplined	Seen as thinking tangentially, approaching tasks from unsuspected angles; undisciplined, unpredictable
Concerned with resolving problems rather than finding them	Could be said to discover problems and discover less consensually expected avenues of solution
Seeks solutions to problems in tried and understood ways	Tends to query a problem's concomitant assumptions; manipulates problems
Reduces problems by improvement and greater efficiency, with maximum of continuity and stability	Is catalyst to settled groups, irreverent of their consensual views; seen as abrasive, creating dissonance
Seen as sound, conforming, safe, dependable	Seen as ingenious; unsound, impractical
Does things better	Does things differently
Liable to make goals of means	In pursuit of goals liable to challenge accepted means
Seems impervious to boredom, seems able to maintain high accuracy in long spells of detailed work	Capable of detailed routine (system maintenance) work for usually only short bursts. Quick to delegate routine tasks
Is an authority within given structure	Tends to take control in unstructured situations
Challenges rules rarely, cautiously, when assured of strong support and problem solving within consensus	Often challenges rules. May have little respect for past custom
Tends to high self-doubt when system is challenged, reacts to criticism by closer outward conformity; Vulnerable to social pressure and authority; compliant	Appears to have low self-doubt when generating ideas, not needing consensus to maintain certitude in face of opposition; less certain when placed in core of system
Is essential to the functioning of the institution all the time, but occasionally needs to be 'dug out' of the current systems	In the institution is ideal in unscheduled crises; better still to help to avoid them, if can be trusted by adaptors
When collaborating with innovators: supplies stability, order and continuity to the partnership	When collaborating with adaptors: supplies the task orientations, the break with the past and accepted theory
Sensitive to people, maintains group cohesion and cooperation; can be slow to overhaul a rule	Appears insensitive to people when in pursuit of solutions, so often threatens group cohesion and cooperation
Provides a safe base for the innovator's riskier operations	Provides the dynamics to bring about periodic radical change, without which institutions tend to ossify

Table 3.1 lists the differences between the two creative styles.

Adaptor	Innovator
Characterized by precision, reliability, efficiency; seen as methodical and disciplined.	Seen as thinking tangentially, approaching tasks from unsuspected angles; undisciplined, unpredictable.
Concerned with resolving problems rather than finding them.	Tends to discover problems as well as less expected avenues of solution.
Seeks solutions to problems in tried and understood ways.	Tends to question a problem's concomitant assumptions; manipulates problems.
Lessens problems through improvement and greater efficiency with maximum of continuity and stability.	Is catalyst to settled groups, irreverent of their consensual views; seen as abrasive, creating dissonance.
Disciplined in solving problems with minimum of risk.	In solving problems, seeks to explore untested areas that may be risky and jeopardize the situation.
More loyal to policy of consensus.	Shows less respect for others' views, more abrasive in presenting solutions.
Seen as conforming and dependable.	Seen as ingenious, unsound, impractical.
Does things better.	Does things differently.
Liable to make goals of means.	In pursuit of goals, liable to challenge accepted means.
Seems impervious to boredom and able to maintain high accuracy in long spells of detailed work.	Usually unable to stay on detailed routine (system maintenance) work for longer than short bursts, quick to delegate routine tasks.
Is an authority within given structure.	Tends to take control in unstructured situations.
Challenges rules rarely, cautiously, when assured of strong support and problem solving within consensus.	Often challenges rules; may have little respect for past customs.
Has high self-doubt when system is challenged, reacts to criticism by closer outward conformity; vulnerable to social pressure and authority; compliant.	Appears to have low self-doubt when generating ideas, not needing consensus to remain steadfast in face of opposition; less certain when placed in core of system.
Essential to the functioning of the institution all the time, but occasionally needs to be "dug out" of the current systems.	Ideal for tackling unscheduled crises in the institution, or for helping to avoid them, if can be trusted by adaptors.
When collaborating with innovators, provides stability, order, and continuity to the partnership	When working with adaptors, provides task orientations and the break with past and accepted theory.
Sensitive to people, maintains group cohesion and cooperation; can be slow to overhaul a rule.	Appears insensitive to people when in pursuit of solutions, hence often threatening group cohesion and cooperation.
Provides a safe base for the innovator's riskier operations.	Provides the dynamics to bring about periodic radical change, without which institutions tend to become rigid.
Has a conscientious personality trait.	Has an extroverted personality trait.
Tends to adopt ego avoidance orientation.	Tends to adopt mastery goal orientation.

Similarly, we defined features of IBSE that promote creativity:

- Constructivist approach, strong support of student activities
- Suitable contents fostering understanding how things work
- Thinking, not following instructions blindly
- Fostering a divergent thinking – flexibility, (the ability to change strategy), and originality (generation of unusual ideas), elaboration (ability to develop a basic idea and develop solutions to interesting details), **fluency** (richness of quick thoughts and ideas)
- Thinking logically, interconnection of facts and drawing conclusions from them (no memorization)
- Interdisciplinary nature of thinking
- Emphasis on the development of skills and competences
- Presenting new solutions
- Checking and/or finding relevant information with the help of inquiry
- Learning how to research which is more important than the results of the research
- Encouraging students to believe in their abilities
- Allow mistake - nobody is penalized for mistake as a result of experimenting on a new idea
- Teacher plays the role of a special adviser and guide for students