

When in Newport

Strategic Innovation

2. Innovation vs Invention





When In Newport Stopover

OUTLINE. Strategic Innovation

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Innovation 101



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*Innovation vs
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We are here

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Innovation vs Invention

Today I would like to bring some concepts to the table which are used interchangeably as if they were synonyms. But aren't. What is the difference between Creativity, Invention, Innovation and Design? Let's start by creativity.

Creativity:

Creativity

(noun) | kri·eɪˈtɪv·ɪ·t̬i

1. The ability to think of novel and useful ideas

- Creativity means different things to different people.
- Creativity is the essential building block of innovation.
- I would like to define the word Creativity beyond the dictionary or the traditionalist concepts. Moreover, Creativity has thousands of definitions which depend very much on who is trying to define it.
- "A glimpse of the concept of creativity: until now scientists have not yet had a deal of creativity in defining creativity" (Susanto, 2016).
- The Standard Definition of Creativity (Runco, Jaeger 2012) involves two dimensions: originality and effectiveness.
- Thoughtful cognitive neuroscientists such as Abraham, Beeman, Bristol, Christoff, Fink, Gray, Green, Jung, Kounios, Takeuchi, Vartanian, Zabelina and others are on the forefront of investigating what actually happens in the brain during the creative process.
- Creativity does not involve a single brain region or single side of the brain.





Innovation vs Invention

Creativity has little to do with the “flash of inspiration out of the blue: It is not something where someone who has never worked in that field suddenly gets this marvelous idea”. J. Hunt

Creativity:



- The majority of people accept the following definition: **“Creativity is the act of coming up with an idea”**. But if we dig a bit deeper in this concept, it is still limited. We are missing something.
- Creativity is relating an idea to a particular body of knowledge. The existing “body of knowledge” is as vital as the novel idea. Trustful Creative people spend years and years acquiring and refining their knowledge base – whatever the discipline: STEAM (Sciences, Technology, Engineering, Arts and Mathematics), Business, Finance, etc.
- Creativity requires a level of **erudition**. Which means that Creativity can be stimulated and supported through training and the right environment.





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Teresa Amabile PhD coined the componential theory of creativity in the year 2013. It is a comprehensive model of the social and psychological components necessary for an individual to produce creative work...

Creativity:

What does 'creativity' mean?

Everyone suggests creativity is key for a 21st-century workforce, but educators and executives differ on what specific creative skills are most important, according to a 2007 survey of 155 school superintendents and 89 employers.

Rank determined by percentage of respondents selecting skill. Respondents allowed to select only three skills.

	SCHOOL SUPERINTENDENTS	
	BUSINESS/EMPLOYERS	
Problem identification or articulation	1	9
Ability to identify new patterns of behavior or new combination of actions	2	3
Integration of knowledge across different disciplines	3	2
Ability to originate new ideas	4	6
Comfort with notion of 'no right answer'	5	11
Fundamental curiosity	6	10
Originality and inventiveness in work	7	4
Problem solving	8	1
Ability to take risks	9(t)	8
Tolerance of ambiguity	9(t)	7
Ability to communicate new ideas to others	11	5

- The theory specifies that creativity requires a confluence of four components: Creativity should be highest when 1) an intrinsically motivated person with 2) high domain expertise and 3) high skill in creative thinking 4) works in an environment high in supports for creativity.
- However, creativity cannot be ordered as a cup of coffee. It is based on **people**, being enthusiastic, inspired and knowledgeable.
- To be creative, people have to think differently.
- Creativity is about being different, thinking not just outside of the box (sometimes there is no boxes), but making new connections of problems, ideas and solutions.
- Creativity can be encouraged, never forced.
- Creativity can't be rushed, but allowed it.





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*Nevertheless, my own definition of creativity is beyond the definitions we have seen and read...
Creativity is an essential part of innovation.*

Creativity:

**“Creativity is natural. Allow it.
Give creativity time and space. Freedom.
Give it practice.
Creativity means change. Notice what needs
changing.
Creativity is not about setting standards for
comparison; it is a doorway for
expression,
exploration,
discovery,
curiosity,
focus,
movement,
stillness,
play.**

**New ideas, new decisions, new actions. New
pair of eyes.
Creativity takes courage to separate, if only
for a moment, into a world of imagination,
and remix, combine, and/or elevate old ideas
to new perspectives, new times, new futures.
Practice, learn, experience and grow from
frustration,
confusion,
curiosity,
clarity,
joy,
laughter,
breakthrough,
insight, aha!.”**



<https://www.wciw.org/category/definition/>



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32 Traits of Creative People (by Robert Alan Black)

Creativity:

Sensitive	Question asker	Ingenious	Curious
Not Motivated by money	Can synthesize correctly, often intuitively	Energetic	Open –ended (keep looking for different ideas or ways to do the things)
Sense of Destiny	Able to fantasize	Sense of Humour	Independent
Adaptable	Flexible (willing to try things in many different ways)	Self-actualizing	Severely Critical
Tolerant of ambiguity	Fluent (produce lots of ideas when working on a challenge)	Self-Disciplined	Non-conforming
Observant	Imaginative	Self-knowledgeable	Confident
Perceive the World Differently	Intuitive	Specific interests	Risk Taker
See possibilities	Divergent Thinker (looks at things in many different ways simultaneously)	Original	Persistent



Innovation vs Invention

Let's continue with Invention. Invention is Creative Ability. Inventing is about something new into being.

Invention



- A general definition of **Invention**: “The creation of an idea to do or make something **without** verification that it works, or is commercially valuable”.
- Examples of invention are scientific proposals, artistic crafts, new music, product designs, business models, or working prototypes.
- Invention cannot occur without creativity, but just creativity is not enough to properly develop an idea.
- An invention can serve many purposes, and **does not** necessarily create positive value. These purposes might differ significantly and may change over time. An invention or its development may serve purposes never envisioned by its inventors.
- Inventions are of three kinds: scientific-technological (including medicine), sociopolitical (including economics and law), and humanistic or cultural.
- Some people believe that Necessity is the mother of invention.





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Innovation vs Invention



Invention

- Formulation of new ideas
- Novel product, device, process, concepts, new forms of artistic expressions
- Requires Knowledge, competence and financial aid
- New concepts or products that derive from individuals, scientific research or social-political collaboration



Innovation

- Practical application of new inventions into marketable products and services
- Requires technical knowledge, competences, market needs, trends and financial support
- It is the commercialization of the invention
- Innovation is composed of several parts: Invention, Implementation and conversion into business-useful applications

Source: Tutor2u, and <http://www.nesta.org.uk/>

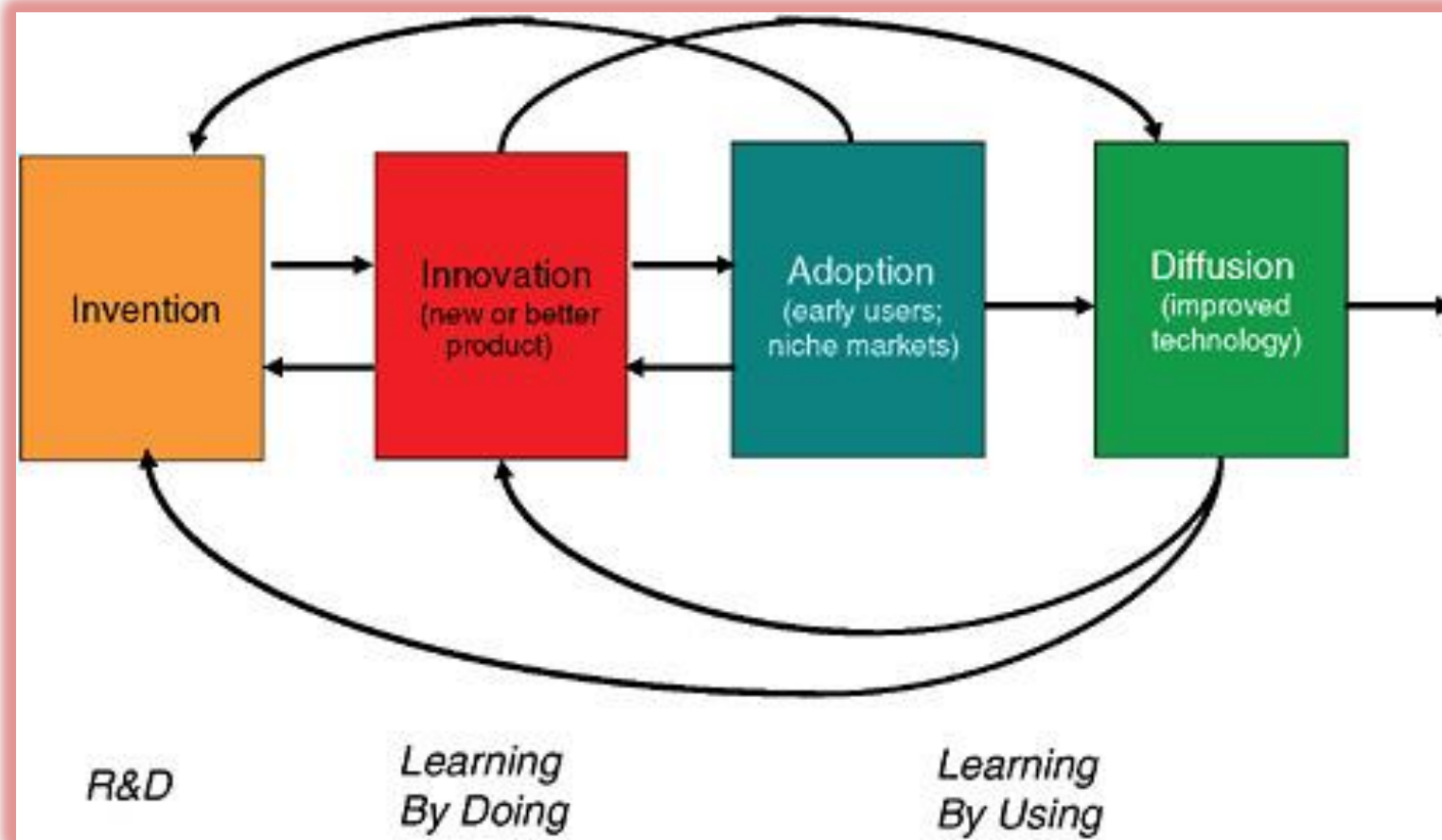




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Source: <https://www.nap.edu/read/12785/chapter/7#139>





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- I have tried to give you some insights about creativity, invention and innovation.
- All these concepts are not easy to simplify. I have done my best by land them into my domain area (business and strategy).
- It is not easy to define these terms, given the different perspectives and field gurus. So many different opinions. I have spent several hours trying to **simplify** as much as I can to bring you an easy conceptualization of these terms.
- In addition we need to visit the domain of Open Innovation, and understand how the internet and social media have triggered a culture of collaboration, transparency and co-creativity for us.
- On my next post, we will discuss about Strategic Innovation particularly in the context of Industry 4.0



Innovation



“There is a way to do it better - find it”

-Thomas Edison

Source: Joan vijetha Quality Assurance Officer at Divine Laboratories Pvt Ltd

Thank you!

