

Social Innovation in Industry 4.0
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Lecture 28
Creativity Tools and Techniques (Part 4 of 4)

Welcome to the next lecture on Creativity Tools.

Effectuation Theory

- Effectuation theory is a decision-making framework that emphasizes the importance of control and resources that entrepreneurs have at their disposal.
- Developed by Saras Sarasvathy, a professor at the University of Virginia's Darden School of Business.
- Based on the idea that entrepreneurs do not start with a plan, but rather with a set of means and then enact a series of small experiments to see what works.
- Effectuation emphasizes embracing uncertainty and leveraging it to create value and achieve entrepreneurial goals.

So, the next topic for discussion is going to be Effectuation Theory. It is a decision making framework, that emphasis the importance of control and resources that entrepreneur have at their disposal. This theory is a decision making framework that emphasizes the importance of control and resources that entrepreneur have at their disposal. It was developed by Saras, a professor of University of Virginia, Darden School of Business. Based on the idea, the entrepreneur do not start with a plan, but rather with a set of means and then enact a series of small experiments to see what works.

You do not plan anything, you have a set of means and then enact a series of small experiments. You do some experiment and see whether it works. This theory emphasis embracing uncertainty and leveraging it to create value and achieve entrepreneurial goals. Why am I talking about this? Because this tries to give you an importance for social innovation.

Key Principles of Effectuation Theory

The five principles of effectuation theory provide a framework for entrepreneurs to make better decisions under uncertainty. (Resource limitation)

The five key principles of effectuation theory are:

- Bird-in-Hand Principle
- Affordable Loss Principle
- Lemonade Principle
- Crazy Quilt Principle
- Pilot-in-the-Plane Principle

So, what are all the key principles for Effectuation Theory? The five principles of Effectuation Theory provide a framework for entrepreneur to make better decision under uncertainty, when there is a resource limitation or when there is uncertainty whether the event will happen or not. The five key principles or Effectuation Theory are Bird-in-Hand principle, Affordable Loss principle, Lemonade principle, Crazy Quilt principle, Pilot in the Plane principle. It is all interesting topics Bird-in-Hand principle. Bird-in-Hand means, you have a bird in your hand and talk about it, Affordable Loss principle, Lemonade principle, Crazy Quilt principle and Pilot in Plane principle. Let us see one after the other.

Bird-in-Hand Principle

Application in Practice:

Example 1: A software developer starts a freelance business using their coding skills and personal network.

Example 2: An artist opens an online store to sell their artwork, leveraging their creativity and social media platforms.

Example 3: A chef starts a catering service, utilizing their culinary skills and existing kitchen equipment.

So, here the entrepreneur starts with their existing resources, what are the resources such as, what is the skill knowledge I have and next is what is the network I have. So, these two are existing resources and take action based on what they have readily available. So, existing knowledge is skill knowledge and network. So, take action based on what they have readily available.

Next is the principle encourages taking immediate action and making progress with what is readily accessible. The key elements of principles are utilizing existing resources, take

immediate action and iterate and adapt to the existing situation. These are the key elements of the principle Bird-in-Hand. So, Bird-in-Hand means the limited resources, the knowledge what you have, the network what you have, that is what they say. So, Bird-in-Hand knowledge, network take action based on what they have readily available. So, the encourages immediate action making progress with what is available with them or accessible by them.

So, here it utilizes existing resources, take immediate action, take iterative and adaptable action. What are the benefits of Bird-in-Hand approach? Overcome resource constraints. So, you can initiate your venture despite, limited capital or other limitation, this is one. Built momentum talks about gain, traction and generate early results, this is what. So, build momentum and iterate is learn from experience and adapt your approach along the way.

So, these are the benefits. Bird-in-Hand means, the resource what I have, build momentum is gain, traction and generate early results and experience and adapt your approach along the way.

Bird-in-Hand Principle



Application in Practice:

Example 1: A software developer starts a freelance business using their coding skills and personal network.

Example 2: An artist opens an online store to sell their artwork, leveraging their creativity and social media platforms.

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So, application in practice example, a software developer starts a freelance business using their coding skills and personal network is Bird-in-Hand principle. Next example is an artist opening an online store to sell their artwork leveraging their creativity and social media platform, Bird-in-Hand principle. The chef starts a catering service, utilizing their culinary skills and existing kitchen equipments.

So, he starts his own catering service. These are all Bird-in-Hand, they are trying to do it understand what is there and then try to develop.

Affordable Loss Principle

Affordable Loss Principle:

- Emphasize acceptable downsides and risk-taking in decision-making.
- Encourage entrepreneurs to consider what they are willing to lose rather than solely focusing on potential gains.

Key Elements of the Principle:

- Define acceptable downsides (level of loss or risk)
- Shift focus from potential gains
- Make informed decisions (balance between potential gains and acceptable losses when making choices)

Benefits of the Affordable Loss Approach:

- Risk mitigation
- Learning through experimentation
- Growth mindset

Handwritten notes on the slide:
 - products
 - try time/money/resource
 - decision making
 - resilience & adaptability in the face of uncertainty

The next one is going to be Affordable Loss Principle. In Affordable Loss Principle, it emphasizes acceptable downside and risk taking in decision making. For example, I am ready to take a risk of undergoing 1000 dollars loss, when I start this business.

So, that is emphasize acceptable down sided and risk taking in decision making. Encourage entrepreneur to consider, what they are willing to lose, rather than solely focusing on opportunity, rather than potential gains, what they are willing to lose, what I am ready to lose. When I was talking to a social innovator or an social innovative entrepreneur, he was trying to tell me that he is ready to forego 3 years of his life investing on developing this social innovation platform. He was ready to do. So, what is it? Time is 3 years.

What is the money? It will be close to a few 100,000 dollars is foregoing his earnings right. So, encourage entrepreneur to consider, what they are willing to lose, rather than solely focusing on potential gains. Then, key elements of the principle is defined acceptable downsides level of loss or risk. How much can I lose with respect to time, with respect to money, with respect to resource? See, affordable loss principle is all the fossil fuel, they are all working on this affordable loss principle. How much can I go down? Resource limitation, then shift focus from potential gains.

So, do not look at gains, but look at losses. Then make informed decision, balance between potential gains and acceptable losses will when making choices you have to do. Then what are the benefits? It risk mitigation is taken in a big way, then learning through experimentation it is focusing on decision making. Then, growth mindset, so it talks about resilience and adaptability in the phase of uncertainty. So, these are some of the benefits of affordable.

Affordable Loss Principle



Real-World Examples:

- Example 1: A startup founder invests a modest amount of personal savings into product development, accepting the risk of potential financial loss.
- Example 2: An entrepreneur launches a pilot project in a new market, limiting the initial investment to gauge its success before scaling up.
- Example 3: A business owner tries a new marketing strategy with a small budget, willing to accept the potential loss if the outcome is not as expected.

Let us see some of the examples. So, the examples are going to be a startup founder invests a modest amount of personal saving into product development, accepting the risk of potential financial loss, investing risk potential loss. So, you try to invest and you know first 3 years, you will not make any profit, you will go under a loss, but still you try to invest, but what is that you are investing is the Affordable Loss Principle.

An entrepreneur launches a pilot project in a new market limiting the initial investment to gauge its success before scaling up. I put 100 rupees, I see the share market what is going on and then, if I see something good then, I go ahead with a bigger investment, if it is gone I lose only 100 rupees.

So, the entrepreneur launches a pilot project in a new market limiting the initial investment to gauge its success before scaling up. A business owner tries a new marketing strategy with a small budget. For example, you are trying to start an advertisement and in this advertisement, you are trying to do it keeping a very mass crowd puller, maybe an actor-actress. So, you try to invest on them and then, you try to see what is the outcome you get and make a short film or a short video something like that, while willing to accept the potential loss if the outcome is not as expected. So, these are all affordable loss principles.

Lemonade Principle



Lemonade Principle:

- View unexpected events or changes as opportunities for innovation and adaptation.
- Highlight the mindset of turning setbacks into advantages.

Key Elements of the Principle:

- Embrace change and uncertainty (open to unexpected events and shifts in the business environment)
- Foster a proactive mindset (Instead of dwelling on setbacks, focus on finding creative solutions and seizing new opportunities)
- Adapt and innovate (Use unexpected circumstances as a catalyst for innovation and business growth)

What is Lemonade principle? The Lemonade principle is view unexpected events or changes as opportunity for innovation and adoption. Unexpected events or whatever happens, you are undergoing a loss while you are losing it all of a sudden, you figure out, there is a fortune from the loss, whatever you are making. So, pick it up from there. View unexpected events changes as opportunity for innovation and adaptation. Highlighting the mindset of turning setbacks into advantage.


Turning the mindset of setbacks into advantage. For example, you try to do an experiment and you keep on failing minus. Every time you fall down, you try to learn something and when you try to learn something, then what will happen is, you have using the minus, the loss or you see your friend undergoing it. From there, if you can change this knowledge into an advantage, that is Lemonade principle. So, here it embrace change and uncertainty, open to unexpected events and shifts into a business environment.

Faster your proactive mindset instead of dwelling on setbacks focus on finding creative solutions and sizing new opportunities. For example, you are trying to sell a chocolate. So, in that chocolate, you are trying to integrate a toy. Your objective was to sell the chocolate. You have integrated a toy in it, where in which the toys cost is 5 rupees, but your intention was not to sell a toy.

Now, when the product was sold, you see that because of the toy, the chocolate is getting sold. So, embrace change and uncertainty. So, that is what this open and unexpected event and shift it into a business of. So, now you start focusing on the toys, whatever you give and chocolate gets sold off its own. Foster a proactive mindset (instead of dwelling

on a setback focus it on the setback and convert into an opportunity). Adapt and innovate (use unexpected circumstances as a catalyst for innovation). It is very interesting, lemonade principle. We will see some examples also.

Lemonade Principle



Benefits of the Lemonade Approach:

- Adaptability in a changing environment
- Creativity and innovation
- Resilience and growth

Examples:

- Example 1: Instagram was originally a location-based app called Burbn, but when they realized users loved the photo-sharing feature, they pivoted and became a successful photo-sharing platform.
- Example 2: Slack started as an internal communication tool for a gaming company. Recognizing its potential, they refocused their efforts and transformed into a widely used team collaboration platform.

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What are benefits of lemonade approach? It is adaptability in a changing environment. So, here you can embracing unexpected events, entrepreneurs can navigate challenge and adapt their strategies accordingly.

Next is, adapting in changing environment is embracing unexpected events. Entrepreneur can navigate challenge and adopt their strategies. Creativity and innovation is trying to turn the setback into opportunity. And, resilience to growth is to transform obstacles into advantage. Examples: Instagram was originally a location based app called burn, but when they realized, user loved the photo sharing feature, they pivoted and became a successful photo sharing platform.

This is adoption. Instagram started for location based app. Same way, Slack started as an internal communication tool for a gaming company Slack. Recognizing its potential, they refocus their effort and transformed into a widely used collaborative platform for teams. Slack is now exhaustively a platform. Instagram also worked on Lemonade principle.

Crazy Quilt Principle

Crazy Quilt Principle:

- Foster partnerships and collaborations based on shared interests and goals.
- Highlight the importance of building a network of relationships to achieve entrepreneurial objectives.

Key Elements of the Principle:

- Seek out strategic alliances
- Create a diverse network
- Leverage collective strengths

Handwritten notes on the slide:
 Innovation in Industry with individuals & organization that share common interest.
 Dr. J. Ramdani
 A quilt is a network of relationship that bring together different skills, resources
 ↓ synergistic movement

Next is Crazy Quilts Principle faster partnership and collaboration based on shared interest and goals. Highlight the importance of building a network of relationship to achieve entrepreneurs entrepreneurial objective. So, here it is faster partners and collaboration based on shared interest. I am good, you are good, let us become good. A is your space, B is my space, A and B join together you come up in a sense.

So, here it is a goal. Whatever you reach right big partners nowadays, go up, they gang up and then they do it. So, highlighting the importance of building a network of relationship to achieve entrepreneurial objectives is part of crazy quilt principle. So, here we try to seek out strategic alliance. So, here we try to form. We form partnership with individuals and organization that share common interest.

So, that is for seek out strategic alliance. Create a diverse network is build a quilt network of relationship, that brings together that brings together different skills. For example, I am very good in finance, my wife is very good in catering, my son is very good in identifying a grocery shop and doing a supply chain management. We are all trying to join together to create a diverse network.

So, different skills, resources etcetera. So, leveraging collective strength, it is 1 plus 1 leading to synergy, it is combining the capability of each. So, it is synergistic movement. So, it is 1 plus 1 leading to the 1 plus 1 becomes now 3.

Crazy Quilt Principle



Benefits of the Crazy Quilt Approach:

- Access to resources and expertise
- Synergy and innovation
- Collective growth



ideas to products
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Examples of Strategic Alliances:

- Example 1: PayPal partnered with eBay, leveraging their respective strengths in online payments and e-commerce to create a mutually beneficial ecosystem. *Dr. Amandeep Singh*
- Example 2: Collaborations between universities and startups, where academic expertise and research capabilities are combined with entrepreneurial drive and agility.

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So, what are the benefits? Access to resources and expertise synergy and innovation is there collaborative growth. For example, PayPal partnered with eBay, leveraging the respective strength in online platform and e-commerce to create a mutual benefit ecosystem.

PayPal finance and eBay both partnered in leveraging online platform and e-commerce to create a mutual benefit ecosystem. That is Crazy Quilt Principle. My capability, your capability put together. Development between universities and startups, where academic expertise and research capabilities are combined with entrepreneurial drive and agility. So, this is an example for crazy quilt principle.

Pilot-in-the-Plane Principle



Pilot-in-the-Plane Principle:

- Emphasize entrepreneurial agency and the belief in shaping the future through actions.
- Show how entrepreneurs take an active role in influencing outcomes rather than being passively driven by external factors.

Key Elements of the Principle: Innovation in Industry 4.0

- Entrepreneurial vision and control
- Proactive decision-making
- Adaptability and flexibility

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What is Pilot-in-Plane principle? It emphasizes entrepreneurial agency and the belief in shaping the future through actions. So, here we talk about entrepreneurial vision and control, then proactive decision making, adaptability and flexibility is the key element of pilot in the plane.

Pilot-in-the-Plane Principle

Benefits of the Pilot-in-the-Plane Approach:

- Empowerment and ownership
- Strategic decision-making
- Agility and adaptability

Examples:

- Example 1: Steve Jobs had a vision for Apple's success and took bold actions to reshape the technology industry.
- Example 2: Elon Musk's determination to revolutionize transportation led to the founding of Tesla and SpaceX.
- Example 3: Sara Blakely, the founder of Spanx, persisted through challenges and shaped the shapewear industry with her innovative products.

So, the benefits are empowering empowerment and ownership giving everybody equal rights and making everybody responsible. So, in a social innovation, we always try to make every stakeholder responsible and take ownership also. The strategic decision making and agility and adaptability are the most important thing for Pilot-in-the-Plane principle.

So, Pilot-in-Plane, let me repeat emphasize entrepreneurial agency and the belief in shaping the future through action. For example, Steve Jobs had a vision for Apple success and took bold decision to reshape the technological industry. So, the statement emphasize entrepreneurial agency and the belief in shaping the future. Next is Elon Musk determination to revolutionize transportation led to the founding of Tesla and SpaceX. Sarah Blakely, the founder of Spanx, persisted through challenge and shaped the shape wear industry with her innovative products. Spanx: Sarah Blakely.

Key Takeaways and Examples

Takeaways for Entrepreneurs:

- Start with what you have
- Embrace uncertainty
- Foster partnerships and collaborations

Real-World Examples:

- Sarah Blakely, Founder of Spanx: Sarah Blakely started Spanx with her own savings and a clear vision, leveraging her existing resources to create a billion-dollar shapewear empire.
- Airbnb: The founders of Airbnb started by renting out air mattresses in their living room during a conference, capitalizing on an unexpected opportunity and evolving into a global hospitality platform.
- Slack: The team behind Slack began with a gaming company, but when they discovered the internal communication tool they had created was more valuable, they pivoted and built Slack.

So, the key takeaways and examples takeaway for entrepreneurs are start with what you have, embrace uncertainty, foster partnership and collaboration these are very important.

Take home messages for you. Then, Sarah Blakely started Spanx with her own saving and a clear vision leveraging her existing resources to create a billion dollar shape wear empire. Airbnb, started by renting out air mattresses in their living room during a conference capitalizing on an unexpected opportunity and evolving into a global hospitality platform. Slack, the team behind Slack began with a gaming company, but when they discovered the internal communication tool, they had created more valuable and they piloted and built Slack. So, shape wear empire is very big. Sharon has started it with her own resources.

Summary

- Effectuation combines convergent and divergent thinking to navigate uncertainty effectively.
- Six Thinking Hats facilitate comprehensive and structured brainstorming and decision-making.
- SWOT analysis assesses internal and external factors for strategic planning.
- Decision matrix enables informed decisions based on weighted criteria.
- Effectuation principles empower entrepreneurs to take proactive actions and adapt in dynamic environments.

So, to summarize, efficacy combines convergent and divergent thinking to navigate uncertainty effectively. Six thinking hat facilitates comprehensive and structured brainstorming and decision making. SWOT analysis assesses internal and external factors for strategic planning. Decision making enables informed decision based on weighted criteria.

Effectuation principles empower entrepreneur to take proactive action and adapt in dynamic environment. The assignment for today is do SWOT analysis for your school and family. You can make strength, weakness, opportunity and threat. Write down the points.

Do not write all the sentences, only keywords. So, references for you, it has been hard from extracting from these references. Thank you very much for your patient hear.