USCMarshall
Critical Thinking Initiative

How To Add Creativity In Problem Solving

A Part of the Comprehensive and Fully Integrated Framework for Critical Thinking at the USC Marshall School of Business

USC Marshall Critical Thinking Initiative

- The *USC Marshall Critical Thinking Initiative* is an on-going school wide effort to enhance our students' critical thinking skills in order to make them more successful problem solvers. Its key components include…

  - ✓ The 5 Step **USC-CT** Problem Solving Process which is designed to help students tackle ambiguous, ill-defined challenges.

  - ✓ The **START** Concept Analysis which is designed to teach fundamental concepts/formulas that are utilized within the USC-CT Process.

  - ✓ **Learning Modules** which are designed to enhance specific skills such as how to reduce biases, how to enhance creativity, and how to evaluate claims & evidence.

- The lesson in this document focuses on **How To Add Creativity In Problem Solving**

How To Add Creativity In Problem Solving

(Note: This document is meant as an introduction to the subject. More in-depth coverage will occur in supplemental readings and classroom exercises)

Creative Thinking

- **<u>Objective:</u>** This module is designed to help students improve their creative skills as a means to arrive at innovative solutions.

- **<u>Approach:</u>** The approach introduces students to an array of creative exercises that include…

<div align="center">

Open-Ended Exercise

Where Competition Is Not Exercise

Ladders Exercise

Build Metaphors and Analogies Exercise

Find Connections Exercise

Change View Exercise

Eliminate Constraints Exercise

Change Analysis Exercise

Redefine Your Business Exercise

Create Headlines Exercise

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Creative Thinking

- **Open-Ended Exercise:** Continue to ask "Why? What? When? Where? How?"

- **The Situation:** Consumers are not buying as much of our potato chips anymore.

- **Example:**

  - <u>Why</u>? Because consumers are looking for healthier snacks than we offer.

  - <u>Why</u>? Because of a trend toward healthier living and an epidemic in obesity.

  - <u>What</u> are consumers eating instead of our snacks? Competitive snacks that are low calorie.

  - <u>What</u> can we do to be competitive? We might provide healthier alternatives that are not just lower calorie but also have add extra ingredients like calcium or protein.

  - <u>Why</u> would that matter? The benefit would be overall health while adding more power to achieve what they desire.

  - <u>How</u> do we start? We can begin by conducting research among current, past, and potential consumers followed by product development once we zero in on what consumers truly want.

  - <u>When</u> and <u>Where</u>? Asap, across the nation to get a representative sample.

Creative Thinking

- **Where Competition Is Not Exercise:** This entails searching for an area where your competitor is weak. It may include different consumers, products, price, promotions, and distribution paths.

- **The Situation:** Need to grow by finding untapped venues.

- **Examples:**

  ➢ While other bookstores focused on brick & mortar, Amazon went online.

  ➢ While BlackBerry focused on B2B, Apple's iPhone targeted consumers.

  ➢ While other frozen dinners develop products for adults, Kid Cuisine focused on kids.

  ➢ While other retailers focused on mid and premium price points, Wal-Mart provided lower prices.

Creative Thinking

- **Ladders Exercise:** Look for opportunities in each rung/sequence of the ladder.

- **The Situation:** What do consumers care about in nutritional foods, how do we provide it, and how to we motivate consumers to buy it?

- **Examples:**

Consumer Benefit Ladder	**Production Chain Ladder**	**Marketing Ladder**
Brand provides healthy ingredients	Raw Materials	Awareness
↓	↓	↓
Helps make them healthier	Production	Perception
↓	↓	↓
Helps make them live longer	Delivery/Distribution	Interest/Trial
↓	↓	↓
Gives them more time with family	Marketing/Sales	Product Appeal
↓	↓	↓
Achieves love and togetherness	Service	Repeat

Creative Thinking

- **Metaphor and Analogy Exercise:** Select a metaphor, analogy or precedent. How might a company in another industry solve your challenge?

- **The Situation:** Our marshmallow sales are down due to consumer disinterest in the entire category. What do we do?

- **Example: How would each of these companies solve your challenge?**

  - Disney? Create marshmallow characters, stories, magical lands in every bag.

  - Build-A-Bear? Provide marshmallow parts in each bag so that kids could create their own characters before they pop them in their mouths.

  - Mattel? Create a marshmallow oven for kids to bake/make their own.

  - General Mills/Betty Crocker? Create a cookbook with 1000 recipes that use marshmallows to expand ingredient use among adults.

  - General Electric? Make each marshmallow glow in the dark.

  - Weight Watchers? Make each marshmallow low calorie to align with health trend.

Creative Thinking

- **Find Connections Exercise:** Connect unrelated concepts by combining, adding or dropping elements.

- **The Situation:** We need unique solutions to grow our business.

- **Example:**
  - ➢ Chocolate + peanut butter = REESE'S Peanut Butter Cups
  - ➢ Quick service restaurants + driving culture = Drive-thru restaurants
  - ➢ Beverage + Power = Powerade

Creative Thinking

Mix & Match Idea Matrix to Find Unique Combinations					
Pick a Target	**Consider Consumer Behavior**	**Pick an Emotional and/or Rational Benefit/Need**		**Add Features**	**Connect to Trend**
Age	Who	**Emotional**	**Rational**	Taste	Wellness
Gender	What	Love	Quality	Sight	DNA/Medicine
Ethnicity	When	Belonging	Price/Value	Sound	Social Networking
Geography	Where	Power	Convenience	Touch	Environment
Culture	Why	Control	Time Save	Smell	Ethnicity
Religion	How	Fear/Bravery	Ease	Ingredient	Frugality
Psychographics	How Much	Self Esteem	Variety	Form	Technology
Lifestyles	How Often	Pride	Taste	Shape	Family Composition
Personas	How Long	Appreciation	Health	Activate	Terrorism
Political Affiliation	Who consumes vs. buys vs. influences	Success: Fame, $, Achieve		Transform	Virtual Reality
Social Class & Income	How acquired/used/disposed	Beauty & Glamour		Play value	Spirituality & Supernatural
Sexual orientation		Independence		Process	Personalization
Needs/Benefits		Safety			Star Power
Etc.	Etc.	Etc.	Etc.	Etc.	Etc.

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Creative Thinking

Mix & Match Idea Matrix to Find Unique Combinations

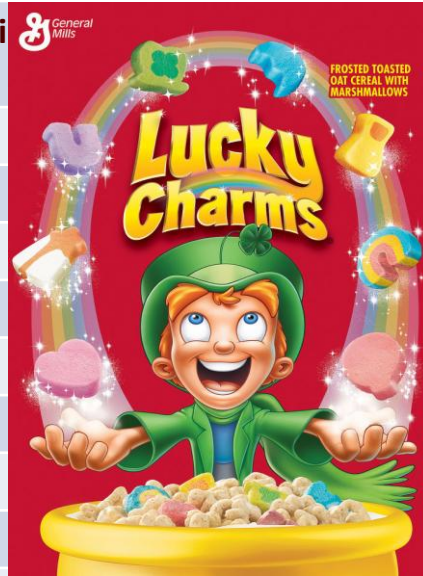| Pick a Target	Consider Consumer Behavior	Pick an Emotional and/or Rational Benefit/Need		Add Features	Connect to Trend
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Creative Thinking

- **Change View Exercise:** View issues from different functional perspectives.

- **The Situation:** Need to grow profits.

- **Example:**

  - Add Revenue

    - ✓ Marketing: Raise prices. Increase unit volume among existing consumers or by gaining new consumers across age, gender, income, geographic, lifestyle, ethnic or benefit segments. Add new products. Increase marketing spend.

    - ✓ Distribution: Expand distribution across current retail and online environment and/or by finding new distribution avenues/methods/places.

    - ✓ Finance: Consider mergers/acquisitions to grow revenue (and profit via cost synergies).

  - Cut Costs

    - ✓ Finance: Review fixed vs. variable costs, internal vs. external costs, refinancing, etc.

    - ✓ Production: Reduce costs of raw materials, labor, technology/manufacturing, etc.

    - ✓ Marketing: Create greater efficiencies across advertising, media, delivery, service, etc.

Creative Thinking

- **Eliminate Constraints Exercise:** If resources and time were not issues, what would you do? Start from scratch. Generate "ideals", then scroll them back to within constraints.

- **The Situation:** We need to increase revenue.

- **Examples:**

  ➢ Buy a company to enter a new market (scaled down = develop a competing brand)

  ➢ Launch a $50 million marketing campaign to be competitive (scaled down = use social networking grass roots effort to approximate reach and frequency of large campaign)

Creative Thinking

- **Change Analysis Exercise:** Review many analytical methods.

- **The Situation:** Company needs to know impact on sales if advertising weight is increased by 15%.

- **Examples:**

  ➢ Consider creating a <u>regression equation</u> using past data to ascertain correlation/impact on sales resulting from changing Ad weight and other variables.

  ➢ Consider <u>in-market experimental design</u> in which test and control markets are selected and given different Ad weights to ascertain impact on sales.

  ➢ Consider <u>buying an analysis</u> already conducted by a third party company.
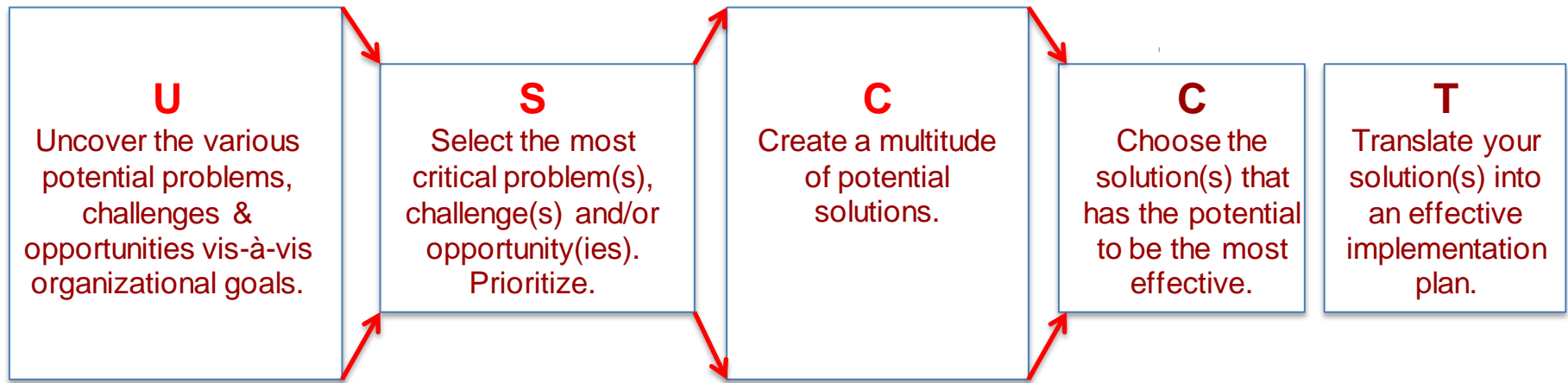
Creative Thinking

- **Redefine Your Business Exercise:** Zero in on your strengths and broaden your arena.

- **Example:**

  - Disney is not just about movies. It's about fun, family entertainment with unique magic, fantasy and storytelling that provide a basis for films, television, video games, theme parks, travel, hotels, and a retail presence.

Creative Thinking

- **Create Headlines:** What action will make positive headlines?

- **The Situation:** Oil company suffers a spill in the gulf. Needs to make real amends. Think through headlines you want to see.

- **Examples:**

  ➢ "Oil Company takes responsibility, vows to clean up the mess!"

  ➢ "Oil company CEO on the front lines of clean up, takes it personally."

  ➢ "Oil company identifies problem and puts plan in place to avoid future spills."

  ➢ "Oil company quick to save wildlife, sets up fund for wildlife preserve."

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5 Step USC-CT Problem Solving Process

U
Uncover the various potential problems, challenges & opportunities vis-à-vis organizational goals.

S
Select the most critical problem(s), challenge(s) and/or opportunity(ies). Prioritize.

C
Create a multitude of potential solutions.

C
Choose the solution(s) that has the potential to be the most effective.

T
Translate your solution(s) into an effective implementation plan.

5 Step USC-CT Problem Solving Process

U
Uncover the various potential problems, challenges & opportunities vis-à-vis organizational goals.

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Creative Thinking

- **Creative Thinking Needs**
  - Management support
  - A team of creative, diverse thinkers of varying backgrounds
  - Emotional and rational thought processes
  - Creative techniques that fit the issue
  - A formal, routine process divorced from everyday pressures
  - A connection to the disciplines impacted by the creativity
  - A system to test/research the potential of ideas generated

USC Marshall Critical Thinking Initiative

Recap

USC Marshall Critical Thinking Initiative

- The *USC Marshall Critical Thinking Initiative* is an on-going school wide effort to enhance our students' critical thinking skills in order to make them more successful problem solvers. Its key components include…

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Check them all out!

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