

## Scale and Questionnaire Development Presentation

Prepared for UCLM Master Business Students

Prepared by Robert Cascio, Ph. D., UCF

Introductions

Video

Tell me a little about your current understanding of research and data collection

Here is a little background about me

About Robert...

Earned Ph. D. in Business Admin.  
at UCF in August of 2011

Research and teaching Interests are  
Marketing Strategy, specifically...

Marketing Innovation

Internet / Social Networks / Mobile Marketing

Professional Selling

Industry Experience with AT&T and my own real estate company

I like Spain .

Schedule

Day 1 – Monday, 5 March

Part A – Data Collection and Constructs

Part B – Construct Measurement

Day 2 – Tuesday, 6 March

Part A – Scale Development Process

Part B – Scale Assessment

Day 3 – Wednesday, 7 March

Part A – Questionnaire Development

Part B – Online Implementation

Day 1

Part A – Data Collection and Constructs

Review of Data Collection

The Research Model

Importance of Construct Definitions

Part B – Construct Measurement

Domain of the Construct

What Items are Needed?

Iterative Process

Part A – Data Collection and Constructs

Review of Data Collection

The Research Model

Importance of Construct Definition

A1. Review of Data Collection

Primary versus secondary data

Quantitative versus qualitative data

Empirical studies

Tests of statistical and practical significance

Review Exercise – Tell me in your own words about each of these topics.

A2. The Research Model

A3. Importance of Construct Definitions

Exercise: Make a simple research model with 3 to 4 constructs as independent variables and one dependent variable.

You cannot measure what cannot be defined

Replicate or contribute new findings

Examples:

Construct 1: Marketing Insight

Construct 2: Marketing Imagination

Marketing Insight

is the act of seeing into a situation and apprehending the true inner nature and underpinnings of a market phenomenon that affect the creation, development, communication, and delivery of products or services.

(Bowen 1990; Roberts and Eisenhardt 2003)

An organization with marketing insight:

Continually understands market and industry trends, patterns, and trajectories

Uses experience, intuition, and other information to configure organizational resources

Recognizes the root cause that drives market phenomenon

Thinks deeper and more accurately on a consistent basis

Comprehends true causation and inner workings of activities in the market place

Marketing Imagination

is the ability to of the organization to disassociate with the current processes, methods, and activities in order to construct and visualize mental pictures of what is or is not actually present and what has never been actually experienced.

(Andrews and Smith 1996; Levitt 1960; Menon, et al. 1999)

An organization with marketing imagination:

Visualizes alternatives and ideas

Recognizes that end-users buy solutions, not products

Prioritizes ideation and creative processes by limiting current profitability pressures and day-to-day task loads

Tolerates slack and idleness so organization members have time to think

Avoids defining markets too narrowly (avoids marketing myopia)

Empowers employees to be risk takers

## Part B – Construct Measurement

Domain of the Construct

What Items are Needed?

Iterative Process

B1. Domain of the Construct

What it is and what it is not

What is similar the construct - shared variance

What is opposite the construct – discrimination, or discriminant validity

Exercise: Define a Construct

B2. What Items are Needed?

Cover the entire construct's domain

Measure similar constructs

Measure opposite constructs

Exercise: Revise construct definition and identify similar and opposite constructs

B3. Iterative Process

Avoid being too broad in your definition; this causes the need for too many questionnaire items and other problems

Avoid being too similar to existing constructs

Re-define the construct until you have satisfied all these issues

Exercise: Re-Define a Construct now considering all factors discussed.

Day 2

Part A – Scale Development Process

Assess current research developments (use, adapt, or create new)

Review 8-step Churchill process

Multi-Trait, Multi-Method

Part B – Scale Assessment

Dimensionality and Validity

Reliability

Statistical Methods Available

Part A – Scale Development Process

Assess current research developments (use, adapt, or create new)

Review 8-step Churchill process

Multi-Trait, Multi-Method

A1. Assess Current Research

Literature Review Process

Review academic literature with [www.scholar.google.com](http://www.scholar.google.com) or other library database search method

Review popular press

Check conference proceedings and unpublished works

Develop Nomological Network

Position your research accordingly

Scale

Example

A2. 8-step  
Churchill  
Process

A3. Multi-Trait, Multi-Method

Correlations

High

Questions on the scale

Same construct measured with different questioning methods

Low

Between different constructs using the same method

And even lower with different constructs with different questioning methods

Part B – Scale Assessment

Reliability

Dimensionality and Validity

Statistical Methods Available

B1. Reliability

Internal consistency

Coefficient alpha

The questions in the scale should correlate well with each other

Drop questions that don't correlate well with the others

Revise and re-test with new data

Note: each dimension of a multi-dimensional construct is tested separately

B2. Dimensionality and Validity

Factor Analysis

Confirms the number of dimensions in the construct

Better to assess dimensionality after reliability

Exploratory versus Confirmatory Factor Analysis

SPSS versus SEM

B3. Statistical Methods Available

Coefficient alpha

Aka Cronbach alpha

Average Variance Extracted

Factor Analysis

Exploratory vs. Confirmatory

Maximum Likelihood\* vs. Principle Components Analysis

PATH Analysis and Structure Equation Modeling (SEM)

Day 3 (tentative)

Part A – Questionnaire Development

Length of the Survey

Research and Control Constructs

Question Types

Part B – Online Implementation

Benefits

Overall Layout Suggestions

Data Results and Panel Management

Part A – Questionnaire Development

Length of the Survey

Research and Control Constructs

Question Types

Length of the Survey

Sufficient number of items to access dimensionality and reliability for the:

Focal construct(s) (construct of interest)

Antecedents

Similar constructs

Opposite constructs

Moderators / Mediators

Dependent variable construct(s)

Be able to complete survey between 10 and 25 minutes

Ensure "busy" people are not too discouraged from participating

Length

and

Sample

Size

Needed

Research and Control Constructs

Important to control for variables that can explain your results

"Even when controlling for product innovation, process innovation, R&D spending, advertising intensity, and competitive intelligence, marketing innovation explains 8.5% of firm performance."

Demonstrate the incremental value of your research

Questions Types

Multiple Choice

Matrix

Text Entry

Constant Sum

Text / Graphic

Slider

Rank Order



Drill Down

Hot Spot / Heat Map

Question

Type

Example

Part B – Online Implementation

Benefits

Overall Layout Suggestions

Data Results and Panel Management

Benefits

Ease of administration

Validation of responses

Immediate results

Saves time and money

Environmentally friendly

Ease of translation and gathering international data

Concerns: Non-internet-savvy users, browsers, impersonal appeal, respondent identification

Overall Layout

Simple and clean

Interesting and easy to follow instructions

Easy questions in front

Personal questions at the end

Progress monitor throughout

Use simple language

Pre-test

Ask for respondent feedback

## Data Results and Panels

Results in proper format with date, time, time to complete, and IP address

“Hidden” data is possible to obtain

Can provide immediate results summary to participants and follow-up in future easily

Longitudinal studies are facilitated

Use of third-party companies is facilitated

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Thank you

I appreciate your interest in the material and your patience with my Spanish

Good luck in your research!

Robert Cascio:

[robertcascio@knights.ucf.edu](mailto:robertcascio@knights.ucf.edu)

[www.robertcascio.com](http://www.robertcascio.com)