

Knowledge Utility results from Rigor in Methods & Relevance in Content

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Funded by NIDRR, US Department of Education, PR# H133A060028

Key Points

Governments fund technology-based R&D projects to generate beneficial socio-economic impacts.

Achieving impacts starts with a validated need, recognized by stakeholders and addressed through market mechanisms of supply & demand.

Industry is the customer for R&D outputs due to ability to design & deploy technology-based innovations in market over short timeframe.

Decision to adopt/implement knowledge rests with Receiver (Customer) not Producer (Investigator).

Three Critical Roles

- **Identify the Customer** – who and what knowledge do they need?
- **Identify your Role** – What role can R&D methods play in providing knowledge?
- **Identify the Goals** – What can your Role deliver in required timeframe and format, and how will that contribute to Innovation?

The Customer's Context is Key!

3 Erroneous Assumptions

- **Customer** - The target customers for R&D are people with disabilities/elderly.
- **Role** – AT manufactures do not talk to their customers, so they welcome feedback gathered in formal or informal ways.
- **Goal** – All opinions solicited from end users represent insights for improving the features/functions of devices.

The Customer knows what you don't!

Problem with Assumptions

- What is novel to the R&D team is not necessarily useful to Industry.
- R&D team perceives feasibility & utility due to a lack of insight about constraints.
- If end user input is gathered independent of Industry, the probability of making a useful contribution is low.

Utility is defined by Customer!

Solution to Adding Value

- *Listen* to needs of the R&D Customer; the needs of Industry (Relevance).
- *Design* the project with methods recognized as valid and reliable by Industry (Rigor).
- *Plan* and manage implementation to deliver the knowledge in forms appropriate to -- and under timeframes of -- Industry.

Path for achieving Innovations with Impact!

Example: Focus Group Method

- Opportunity for Rigor & Relevance in one method.
- How many studies report results from “Focus Groups”?
- How many studies formally report the Focus Group method applied?

QUIZ: Recruitment Technique?

- Multiple Methods
- Probability Sampling:
 - Systematic, Stratified, Cluster
- Non-Probability Sampling:
 - Purposive, Quota, Snowball, Convenience

Primary Market Studies – Purposive!

QUIZ: Number of People per Group?

- Ranges from 6 – 12.
- Wide range of opinions, but efficient for 60 – 90 minute session.
- Groups involving demonstrations or trials may required 2 – 3 hours.
- Best to over-recruit (12-15) for attrition.
- Compensation? Pay everyone!

QUIZ: Number of Groups per Topic?

- 3 or 4 Groups per topic.
- Seek patterns or themes across Groups.
- Able to eliminate tainted/dominated Group.
- Monitors will know when saturation is reached within and across groups.

QUIZ: Other Requirements?

- **Trained Moderator** – skilled at listening, prompting and follow-up.
- **Structured Script:**
 - General to Specific
 - Brief, Clear, Open-Ended
 - Expected / Exciting / Revealed
- **Full capture** – audio/video/notes.

Summary

- *Consider Industry as Customer for R&D.*
- *Review R&D findings for evidence of Rigor & Relevance.*
- *Plan and Implement future R&D projects with Industry Customer in mind.*

ACKNOWLEDGEMENT

This is a presentation of the Center on Knowledge Translation for Technology Transfer, which is funded by the [National Institute on Disability and Rehabilitation Research](#), U.S. Department of Education, under grant #H133A080050.



The opinions contained in this presentation are those of the grantee and do not necessarily reflect those of the U.S. Department of Education.