Title:

Translating New Knowledge from Technology Based Research Projects:

A Randomized Controlled Study

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Topic:

Advancing and Sustaining Research in Disability and Rehabilitation

Description

Background: There is a growing concern about obtaining beneficial social impact from research and development (R&D) projects sponsored through public funding. Knowledge Translation (KT), which responds to this concern, upholds knowledge utilization as a desired research outcome. In the specific case of technology based R&D, effective KT strategies call for integrating technology transfer (TT) in their processes. The KT4TT Center is funded by the National Institute on Disability and Rehabilitation Research (NIDRR) at the University at Buffalo for developing such KT best practices. The center is conducting a series of randomized controlled studies to evaluate effectiveness of interventions focused on NIDRR funded R&D projects. The first RCT in the series addressed Augmentative and Alternative Communication technology. This presentation focuses on the key results.

Purpose: The purpose of the study was to evaluate the effectiveness of a Knowledge Translation intervention or strategies to communicate new knowledge generated from technology based research and development projects related to Augmentative and Alternative Communication (AAC) technology. K use was measured as the effect on the participating stakeholders in a randomized controlled design.

Method: The study chose the vocabulary list for adult users of AAC by Dr. Bryen, as the focus of the intervention, based on the criteria of utility, feasibility and innovativeness. Five types of stakeholders participated in an eight-month long randomized controlled study. They were: manufacturers, brokers, clinicians, consumers and other researchers. The intervention compared effects of three KT strategies: tailored and targeted dissemination (TTDK), targeted dissemination (TDK) and passive diffusion (control). The effect observed was changes in K use as measured by the Level of Knowledge Use Survey (LOKUS), developed for the study. The primary question was: Are there differences in effectiveness among the three methods of communication, that is, TTDK, TDK and Passive Diffusion, in terms of raising overall levels of knowledge use by stakeholders?

Participants responded to LOKUS at baseline (pretest), at 4 months (follow/up 1) and at 8 months (follow/up 2). During the first 4 months of the study, the TTDK group received Bryen's research article, along with a Contextualized Knowledge Package (CKP) that tailored the information to the specific stakeholder context. The TDK group received just the original article; and the control group received nothing. During the second 4 month period, the TTDK group received a

tailored webcast on the same innovation (vocabulary lists) –other groups did not receive anything.

Results: A total of 207 stakeholders participated. There were no significant differences among the TTDK, TDK and control groups regarding age, years of experience, gender, race-ethnicity, education and work status. Results showed both TTDK and TDK to be more effective than the passive diffusion method in terms of change in level of K use. This was only true from baseline to follow-up 1, but not between follow-up 1 and follow-up 2, nor between baseline and follow-up 2. Further, both TTDK and TDK were effective in raising knowledge use level from non-awareness to awareness and beyond, as well as from non-use to use. However, in terms of frequency changes, more individuals at baseline (30%) moved up from non –awareness level compared to those (15%) that moved up from non-use to use level.

Conclusions: (1) Audience-Targeting is an effective KT strategy; it was part of both TTDK and TDK. Both TTDK and TDK were shown effective compared to control, so additional effect of knowledge-tailoring is not supported. (2) The CKP component of TTDK (administered between baseline and follow/up 1) was effective for the participating stakeholders, but not the webcast (administered between follow/ups 1 and 2) (3) Both TTDK and TDK can raise awareness about new K but the decision to use it rests with the user. Conclusions tentative in lieu of replication studies.