Knowledge Translation for Speech Language Pathology Students and Practitioners:
Supporting Evidence-Based Practices

MSKTC Online Course Teaching Companion for Instructors of Speech Language Pathology

Purpose	The Model Systems Knowledge Translation Center (MSKTC) developed this guide to serve as a companion to the online course, *Knowledge Translation for Speech Language Pathology Students and Practitioners: Supporting Evidence-Based Practices.* The purpose of this guide is to support teaching professionals in helping their students deepen their understanding of knowledge translation (KT) and the role it can play in their professional practice.
Format	This guide outlines the core sections of the online course and includes suggestions for discussion topics and activities.
Audience	The audience for this guide includes speech language pathology instructors and professional development and training specialists.
Resources	A lesson planning template is included at the end of the document.

About The Model Systems Knowledge Translation Center

The Model Systems Knowledge Translation Center (MSKTC) is a national center that translates health information into easy to understand language and formats for individuals living with spinal cord injury, traumatic brain injury, and burn injury, their families, and those who support them. The center also develops knowledge translation (KT) tools to help maximize the impact of research and clinical practice. The center website, MSKTC.org, houses all of this information for public access. The MSKTC is operated by the American Institutes for Research® (AIR®).

Contents

Why an Online Course on Knowledge Translation?

The goal of knowledge translation (KT), as applied to rehabilitation-oriented occupations, is to move what is learned from health research into the hands of clinicians, policy makers, and people with injuries and other medical conditions to improve their daily lives. The MSKTC developed the online course, *Knowledge Translation for Speech Language Pathology Students and Practitioners: Supporting Evidence-Based Practices*, to educate undergraduate and graduate students in physical therapy, physical therapy, and speech/language therapy programs about the fundamentals of KT and its role in their current studies and future careers. Students who are studying to be researchers and clinicians learn evidence-based practices in their programs, and they benefit from understanding the connection between research and its application in the health care field. This course is intended to supplement college students' beginning research courses and practicum placements. To this end, the online coursework can be integrated into class activities, or students can independently complete the online course as a stand-alone module.

> The National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), defines knowledge translation as: "…the multidimensional, active process of ensuring that new knowledge and products gained through the course of research ultimately improves the lives of people with disabilities and furthers their participation in society."
>
> *—NIDILRR, 2018, p. 21*

Access the course on the MSKTC Website: https://msktc.org/online-kt-course-slps-supporting-evidence-based-practices

Overview of the Guide

Purpose and Target Audience

This guide is intended for use by professors who have assigned the online KT course to their students as an introduction to knowledge translation. The guide provides guidance on how to delve deeper into the questions within the online course either through group work and activities, or through independent activities assigned to students.

How to Use the Guide

The online course includes several sections that pose questions for students to contemplate or reflect on so as to put the course content into the context of their studies, practicum

experiences, and future work. Although students can address these analytical questions independently as they move through the course, the questions can also be used for in-person or virtual group discussion, writing assignments, and as jumping-off points for expanded activities. The course also includes some instances where students are asked to enter their own descriptions of what KT is and how their thinking has evolved as they have moved through the course. Professors do not have access to such responses, and they are not saved within the course after completion; they are meant to help students incorporate new information as they learn from each course section. This guide includes key content from the course to frame the discussion and activity suggestions.

Overview of the Course: Content and Structure

The course provides a foundation in the basic concepts of KT. The five sections of the course are listed below, along with the corresponding section numbers within the course.

1. Introduction

2. What Is KT?

3. KT for SLP

4. KT and Your Practice

5. Wrap-Up

The primary content from the course is also reflected in this guide through the following components:

- Definitions of KT from NIDILRR, researchers, and other experts in the rehabilitative field are presented so students can learn various interpretations and formulate their own description of what KT means in the context of health care and rehabilitation (**Section 2.1**).

- The knowledge-to-action (KTA) framework created by Ian Graham and colleagues (2016) is presented to help students understand how knowledge is developed and applied. Students are prompted with questions to consider so that they can make connections between the material and their studies and their future role as professionals (**Section 2.2**).

- A brief scenario related to rehabilitation is provided to illustrate how occupational therapists fit into the larger network of stakeholders who are creating, disseminating, and acting on knowledge related to rehabilitation (**Section 3.1**).

- Self-assessment questions are included so students can consider whether they are engaging in KT practices now and how they might want to integrate them into their future work (**Sections 4.3–4.6**).

- An activity is provided so that students can explore the MSKTC website and find resources to help patients now and in the future. These resources include guidelines for developing materials such as policy briefs, infographics, websites, videos, and social media campaigns (**Section 5.1**).

Knowledge-to-Action Framework

The KTA framework is widely used for understanding KT and it is included in this course to explain the implementation of KT in clinical settings. The framework includes two primary components: knowledge creation and the action cycle. Knowledge creation includes generating information and developing tools and products. The action cycle concerns implementation and guides how to apply knowledge in practice to a range of activities, from initial inquiry to final evaluation (Figure 1).

Figure 1. Knowledge-to-Action Framework (Graham et al., 2006)
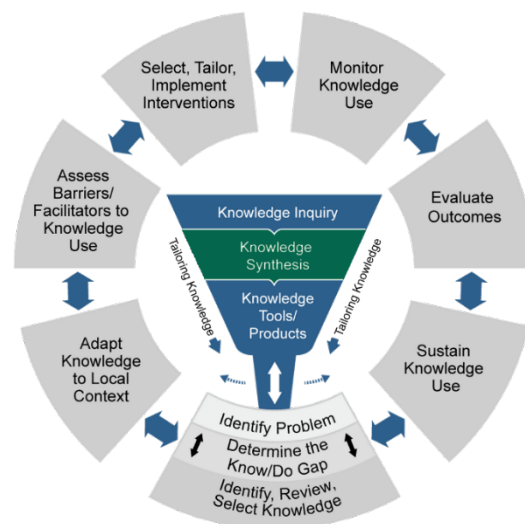
Knowledge Creation Cycle: Knowledge Inquiry, Synthesis, and Tools and Products

During knowledge inquiry and synthesis, information from research studies is carefully collected, vetted, and synthesized. Then, the synthesis findings are used to determine which evidence-based practices have been documented as effective to use in treatment. Once the approaches and interventions have been identified, the information is shared via tools and products that communicate the findings and facilitate implementation.

Knowledge Inquiry and Synthesis

Discussion Questions

- If so, how did you take the information and make use of it? What steps did/might you take to apply it to your work?

- Have you participated in studies that gather data, either as a researcher or as a subject? If so, what thoughts did you have about applying that data to practice?

- If you are presented with evidence-based practices that you are asked to implement, how would you approach integrating this information into caring for your patients? Would you talk to colleagues? Would you compare the new evidence-based practices to current or past experiences you have had? Would you do more research?

Suggested Activities

- Provide first-generation research, systematic reviews, meta-analyses, and other information that has not yet been synthesized into an evidence-based practice and ask students how they would approach integrating this information into their work.

- Provide students with a patient case. Ask them to determine the main treatment concerns. Then ask them to find research that could help them formulate a treatment plan.

Knowledge Tools and Products

Discussion Questions

- What tools and products have we discussed in class? How do you think you would use them in your practice?

- What tools and products have you used, and how did you use them? How did they affect your work?

Suggested Activities

- In this section of the course, general categories of tools and products are mentioned such as clinical practice guidelines, patient decision aids, videos, electronic evidence repositories, and podcasts. Provide students with samples of these tools and products and an analysis rubric to determine their potential effectiveness.

- Ask students to design a tool to promote the use of an intervention for patients as a way to create buy-in among patients for the treatment plan.

Action Cycle

After research-based tools and products emerge from the knowledge creation phase, the next step is to apply these tools and products to practice. Clinicians need to:

– Access information about these best practices and/or evidence-based practices,

– Apply this information to their specific context,

– Make adaptions as needed,

– Identify barriers to implementation,

– Monitor whether interventions are being adopted with fidelity,

– Observe and measure whether outcomes are being achieved, and,

– If the interventions are effective, develop a plan to sustain these successful approaches.

The action cycle is a continual process that occurs as new knowledge and experience are gained.

Identify Problem to Review and Select Knowledge
Practitioners look for interventions to help patients. As a first step, they can investigate current research and practices by using systematic reviews and database searches or by consulting medical journals and professional networks to determine which approaches may be effective.

Discussion Question
- When you confront a patient's condition or issue for the first time, how might you find information about a treatment approach? Would you use citation analysis, systematic reviews, database searches, or other strategies?

Suggested Activities
- Provide students with a sample patient case and ask them to describe which approaches and resources they would use to identify possible interventions.
- Provide students with a sample patient case and ask them to conduct a gap analysis.
- Provide students with a sample patient case and ask them to conduct a citation analysis.

Adapt Knowledge to Local Context
Practitioners select interventions based on their relevance to their patients' needs; however, they often make modifications so that the interventions address each patient's particular circumstances and challenges.

Discussion Question

- When you are presented with evidence-based practices that do not match the needs and specific details surrounding your patients, how would you adapt the practices to better serve your patients?

Suggested Activities

- Ask students to develop a treatment plan for a person who has extensive resources to aid in their rehabilitation, such as money; access to equipment and services; a support system of caregivers, family, and the community; flexibility to attend treatment sessions; access to supplemental medical care; access to nutrition; and so on. Then ask them to develop a treatment plan for someone with the same condition who does not have access to these resources and who has significant barriers that would interfere with executing a treatment plan.

- Ask students to develop a tool (e.g., factsheet, infographic, video, etc.) to support a patient population with one or more specific challenges.

Assess Barriers to Knowledge Use

Evidence may show that a treatment is effective. However, each practitioner operates within a specific system and often cannot make decisions about treatments independently. The culture, politics, and availability of resources within a facility will influence which approaches are adopted.

Discussion Questions

- What might you do if the facility where you work does not have the right equipment or resources to implement an intervention that the current research is indicating is particularly effective?

- What might you do if the evidenced-based research treatment approach that you have learned in school to address the injury does not meet your patients' needs?

- What might you do if others you work with need to develop research assessment skills to better discern effective treatments?

- What might you do if the organizational culture where you are working prevents the application of new research (e.g., leadership does not promote or welcome new ideas; veteran staff rely more on institutional norms than current research; staff are not given time to explore new approaches)?

⚙ *Suggested Activities*

- Ask students to write a plan for how they would introduce an evidence-based practice that their clinic may not be aware of yet. Students should consider how they would approach the task, the issues they would keep in mind to address internal politics and other challenges they may face, and the potential solutions they might propose.

- Ask students to role-play how they would present that plan to the director of the clinic.

Select, Tailor, and Implement Knowledge

After practitioners identify the treatment approach and adapt it to fit the context of their patient, they are in the implementation phase.

💬 *Discussion Questions*

- How might you determine whether evidence supports an intervention? What resources and people might you consult? What steps might you take?

- Once you have tailored knowledge to the intervention you selected to use with a patient, what supports might you need from your workplace to implement that intervention?

⚙ *Suggested Activities*

- Ask students to develop a protocol or checklist to collect information that will allow them to tailor an intervention.

- Ask students to role-play interviews with patients that will allow them to identify patient goals, the challenges they may face in reaching these goals or in completing a treatment plan, the resources they have available to them, etc.

- Ask students to develop a 2-hour workshop for a group of patients with the same injury or condition.

Monitor Knowledge Use

Practitioners can devise an excellent treatment plan; however, if the patients do not follow through or the practitioner does not implement the plan as designed, it will affect patient rehabilitation outcomes.

💬 *Discussion Questions*

- How might you assess if patients are following treatment plans?

- How might you assess if patients are making lifestyle changes?

- How might you assess if practitioners are following protocols?

- How will you assess if practitioners are using data for decision making?

Suggested Activities

- Ask students to create a tracking tool and a self-assessment tool for a patient so that the patient can monitor his or her own work and behaviors outside of therapy sessions.

- Ask students to develop interview protocols to follow up with patients at different intervals during treatment.

Evaluate Outcomes

Practitioners want to achieve outcomes that improve patients' lives. To assess the effectiveness of interventions, practitioners will measure and chart patients' progress and make needed adjustments.

Discussion Questions

- How might you determine if an intervention is working? What tools would you use to measure impact?

- How might an organization monitor implementation and determine if the treatment protocol is being used as intended? What measures might be used?

Suggested Activities

- Provide students with a treatment plan and ask them to develop an outcome measurement protocol.

- Provide students with a patient case including the intervention, progress notes, patient self-reporting, and typical results found in current research. Ask the students to diagnose why things are progressing or not progressing.

Sustain Knowledge

If practitioners identify a successful intervention, they want to promote it within their facility, share it with patients, and inform their professional networks.

Discussion Question

- Below are examples of ways to sustain knowledge. What other ways can you think of to accomplish this goal?

  - Establish norms, standards, and protocols.

  - Create videos of patients describing what works for them.

  - Coach and mentor colleagues.

  - Audit leadership and provide feedback.

- Support clinicians, researchers, academics, and others who educate stakeholders and model behavior.

- Maintain an organizational focus on using new research.

- Create factsheets to facilitate knowledge use.

Suggested Activities

- Ask students to develop a plan for how they will continue to learn and integrate learning into their practice. Ask students to think through how they will assess information and the data they are collecting from their practice, including the tools they will use to gather information. Ask students to consider with what frequency they will conduct monitoring and evaluation processes and what decision process they will use after examining the data.

- Ask students to create a video diary about their on-the-job KT experiences, including their own reactions and reflections on the work they are doing with patients. Ask them to think through what they will continue to do, and what they will modify, and why.

The Knowledge Translation Network

The online course includes a basic example to illustrate how, as professionals, these students will eventually fit into the overall network of stakeholders fueling KT. Figure 2 shows how these students, in their professional roles, will decide what information will improve their practice and patient outcomes, and how they can contribute to the knowledge base for their field by informing researchers, physicians, patients, policy makers, funders, patient advocates, and community organizations about the practical application of research.

> Pimjai Sudsawad has described the universe in which KT occurs as follows:
>
> Knowledge translation is built upon and sustained by ongoing interactions, partnerships, and collaborations among various stakeholders, including researchers, practitioners, policy-makers, persons with disabilities, and others, in the production and use of such knowledge and products.
>
> —*Sudsawad, 2007*

The primary goal of this activity is to show how students' knowledge, clinical practice, and a continued focus on evidence-based interventions contribute to patient outcomes and impact the other stakeholders in the patient care system.

Speech language pathologists play a central role in translating and transferring knowledge during the KT process. Figure 2 presents the KT network and illustrates the dynamic flow of information and knowledge that occurs between various stakeholders.

Figure 2. The KT Network
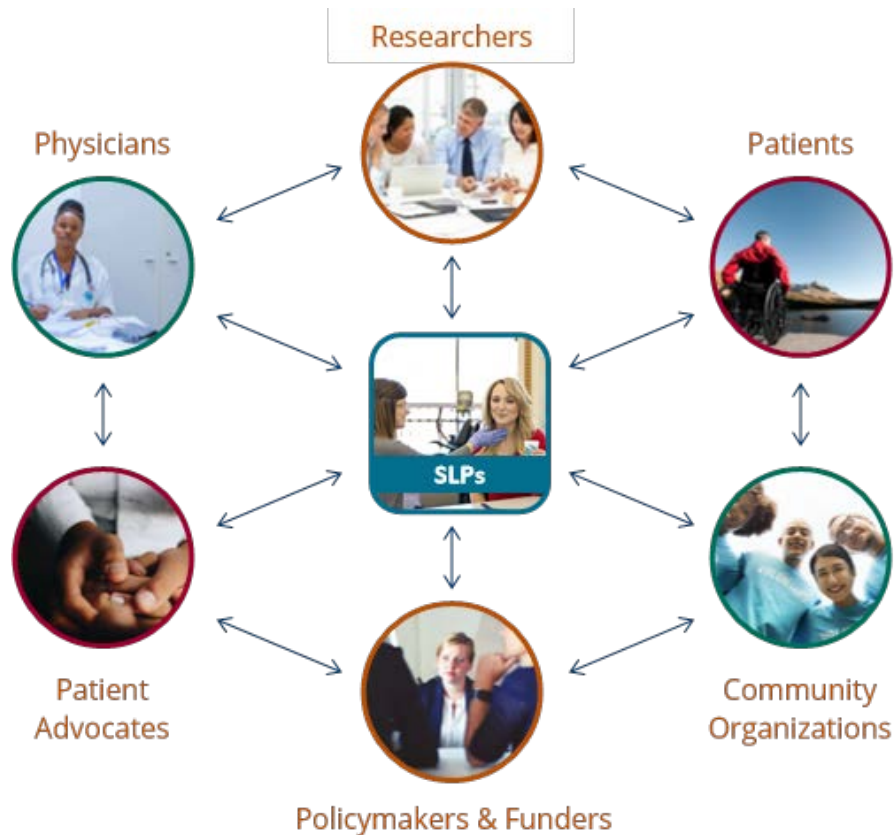
✳ *Suggested Activities*

- Ask students to think about what other stakeholders may exist in the rehabilitation network that have not been identified in Figure 2.

- Provide students with a case study and ask them to identify the different stakeholders within the scenario and the role each is playing in KT.

- Ask students to think about the universe within their field. Specifically, ask them which specific entities they can identify as the other stakeholders.

Knowledge Translation Strategies

KT strategies are ways to create, generate, and produce information that is research-based and draws on the experience of patients, clinicians, and other stakeholders. This information is then shared with participants in the KT network with the goal of promoting evidence-based practice. These strategies fall into three general categories: products, events, and networks. Examples of strategies that fit into each of these categories are highlighted in the course and shown in Table 1.

Table 1. Overview of KT Strategies

Products	Events	Networks
• Peer-reviewed publications • Literature reviews • Factsheets • Conceptual papers • Research summaries, including infographics and other visual aides	• Online courses • Webinars • Lectures • Conferences • Symposium panels • Workshops	• Colleagues • Program cohorts • Workplace training cohorts • Universities/alumni • Mentors • Communities of practice • Professional association

Suggested Activities

- Provide students with sample products and examples of events and networks.
- Ask students to locate examples of each and share them with other students.
- Ask students to compile resources into a guide related to products, events, and networks on a specific topic (e.g., treatment, or rehabilitation need).

Self-Assessments

After students have reviewed the course content, they are asked to reflect on how the information relates to their current work as students and their future work as practitioners.

Discussion Questions

- What do you personally bring to the creation and application of knowledge in your field? Think about strengths as a learner, as a gatherer of information, and as one who helps others learn and heal and who has many other skills and talents.

- *If you have done the suggested activities within this guide with your students, ask them the following question:* How do you think the activities we have done help you contribute to the knowledge-to-action cycle?

- How relevant do you think these concepts are to your practice?

- What are you most curious about when it comes to KT?

Knowledge Translation Toolkit Activity

The MSKTC website (https://msktc.org/) includes extensive resources on how to share treatment information with various stakeholders. In this course, students are asked to explore one section of the site—the Knowledge Translation Toolkit—for tools that will help them conduct KT to serve their patients.

✳ *Suggested Activities*

- Assign the role of a different stakeholder to each student. Ask students to design or outline a product (policy brief, infographic, website, video, social media campaign, etc.) from the lens of someone within that stakeholder group. Ask them to explore the KT Toolkit to see which resources will help them accomplish this task.

- Provide a patient case, and ask the students to explore the MSKTC website to locate products and tools that they could use in working with the patient. Ask them to document their path and provide rationales for the decisions they make.

Lesson Planning

Appendix A includes a basic lesson planning template that can be used to incorporate the content of the online course into class activities.

Appendix A. Planning Template

Objectives for using the online course with students:	
Sections of the course to use:	

Activity from guide:
Adaptation to guide activity: *If you do not want to use the activity as presented*
Questions from course/adaptations of questions in course: *Questions from the guide, or modifications of those questions to better fit your objectives*
New questions: *Your own questions to add to or replace those in the course*

References

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Online KT Course for SLPs: Supporting Evidence-Based Practices

Course Details: The course introduces the basic concepts of knowledge translation as it relates to the practice of speech language pathology. It is designed for speech language pathology students, instructors, and new speech language pathologists. The course presents various definitions of knowledge translation, introduces a model for knowledge translation research and application activities, and helps clarify the role of speech language pathologists in the knowledge translation process.

Duration: Approximately 30-40 minutes

Questions: Please contact us with any questions and feedback at MSKTC@air.org.

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