Development of an Online Professional Development Module to Support Special Educators in Implementing the Universal Design for Transition Framework

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Abstract

There is a persistent demand for practical professional development for special educators that focuses on providing effective transition services while still maintaining academic standards for students with disabilities. This article describes the development of an online module professional development package that introduces special educators to the Universal Design for Transition (UDT) framework as a way of blending academic and transition instruction. This online professional development package was developed so that it could be used for both the preparation of pre-service special educators and to strengthen the skills of in-service professionals. Pre-service and in-service special educators learn about the components of the framework and use them to develop and refine their lesson planning process in an authentic, performance-based assessment process. Together, the module and hands-on practical application components of this online professional development package offer updated, effective practices special educators can implement in their classrooms.

Keywords

Universal Design for Transition, Universal Design for Learning, Online Professional Development, Adult Learning, Linking Academics and Transition Education

1. Introduction

Young adults with disabilities continue to experience adult lives at increased levels of poverty and are often in isolation from their communities (Sanford et al., 2011). They are less likely to enroll in postsecondary education and live independently than their same-aged general education peers (Sanford et al., 2011). In addition, young adults with disabilities often experience difficulty acquiring employment and are more likely to live in poverty than those without disabilities (Test et al., 2009). The focus on providing planning and functional instruction for transition has improved these outcomes over time (Newman et al., 2011). Yet the recent emphasis on having all students (including students with disabilities) meet academic standards (ESSA, 2015; IDEA, 2004), has resulted in special education teachers reporting that they struggle with doing both (Scott et al., 2019).

As a result of a perceived inability to address both academic and transition goals, some special educators focus on one or the other, often depending on the degree to which students with disabilities are expected to make progress in the general education curriculum (Knight et al., 2019). For example, students with learning disabilities were more likely to have academic goals included on their IEPs and few, if any, transition goals, while students with intellectual disability were more likely to have transition goals in their IEPS with few if any academic goals (Landmark & Zhang, 2013). These findings are contrary not only to federal policies, but also to research that supports providing both academic and transition instruction as they both are predictors of improved outcomes for transition-aged youth with disabilities (Mazzotti et al., 2021; Test et al., 2009).

2. Purpose of the Article

The purpose of this paper is to describe the process of developing an online module designed to increase the ability of special educators to implement a Universal Design for Transition framework. This two-part module was developed following principles of adult learning theory (ALT) and androgen. It seeks to address the professional development needs of special educators in skills that allow them to blend the academic and transition goals of students with disabilities. We documented procedures for developing the online module, and provide insight into its use and implementation as a method for professional development for secondary special education teachers at the pre-service and/or in-service levels.

2.1. What Special Educators Need to Know

Effective special education teachers show mastery in a wide variety of practices (McLeskey et al., 2017). Researchers have identified 22 High Leverage Practices (HLPs) categorized under collaboration, social, emotional, and behavioral practices, instruction, and assessment (McLeskey et al., 2017). HLPs are a checkpoint for beginning and early career special education teachers with the expectation of continued growth beyond these areas over time. Many transition and academic competencies fall under the HLPs. For example, special educators must collabo-

rate with a wide variety of individuals to meet students' needs (HLPs 1 - 3). This includes instructional support staff (e.g. general education teachers) and other individuals who may support student success and secure services (e.g. transition specialist, community members, and families). Additionally, special education teachers must be able to assess students over a variety of means, communicate these assessments with various stakeholders, and adjust students plans based on evidence collected from the assessments (HLPs 4 - 6). Instruction must include goal setting, systematically designing instructional to meet those goals, while making appropriate adaptations to curriculum and tasks (HLP 11 - 13). These instructional decisions may include scaffolding (HLP 15), using explicit (HLP 16) or intensive (HLP 20) instruction, using technology (HLP 19), and actively engaging the students in the learning process (HLP 18). The overarching goal of success includes teaching beyond a skill, where students develop cognitive and metacognitive skills (HLP 14) to support future learning. As students progress through various knowledge and skills, the goals become maintaining and generalizing them over time and in additional settings (HLP 21).

Many of the HLPS can be observed through an academic and transition lens. Special education teachers have the responsibility to develop, plan, and implement student plans that include both academic and functional goals and progress. Secondary special educators need to have the knowledge related to provide transition instruction (Holzberg et al., 2018), know how to write student-centered goals within the context of the individualized education program (Rowe et al., 2020), and how to integrate academic content and functional/transition related activities into their instruction (Scott et al., 2019). Yet, special educators struggle to align academic and transition through goals, instruction, and assessment and many report their preparation did not include this instruction (Scott et al., 2019). Most special educators learn about transition planning on the job (Plotner et al., 2016). The transition planning process is further complicated by the use of outdated transition practices or practices unsupported by research (Mazzotti & Plotner, 2016). This lack of preparation and/or knowledge of effective transition practices is troubling since the development of high-quality and compliant transition plans is linked to improved post-school outcomes (Gaumer-Erickson et al., 2014; Landmark & Zhang, 2012). Therefore, the development and access to high-quality academic and transition education training can enhance the instruction provided to students with disabilities (Prince et al., 2013).

2.2. Overview of Universal Design for Learning and Universal Design for Transition

UDL is a research-based framework that supports learner accessibility by incorporating flexibility in the materials used, techniques, and instruction (McLeskey et al., 2017). In addition, this framework promotes inclusion by adapting classroom instruction and assessment to meet the academic needs of diverse learners (CAST, 2018). The *Every Students Succeeds Act* (ESSA, 2015) defined and endorsed the use of the UDL framework in teaching and assessment planning for

students with disabilities (SWDs). By dismantling classroom barriers, including inflexible curriculums, UDL offers students, including those with disabilities, access to learning in inclusive settings (Hitchcock et al., 2002) which in turn also has been linked to improved post-school outcomes such as employment and independent living (Test et al., 2009). Additionally, Rojewski and colleagues (2013) identified time spent in the general education classroom as a predictor of postsecondary enrollment for students with high-incidence disabilities. The UDL model consists of three key principles for implementation in the classroom: multiple means of engagement, representation, and action and expression (CAST, 2018). Research has shown that teacher training targeting UDL principles can positively impact lesson plan development and modification across the four lesson plan components (e.g. goals, assessments, methods, and materials; Courey et al., 2013; Spooner et al., 2007). More details about these core principles are provided below in the description of the UDT module.

The Universal Design for Transition (UDT) framework, an extension of the UDL framework, provides a practical method to ensure students with disabilities receive both adequate transition planning and academic support (Thoma et al., 2009). The UDT framework adds four additional principles to the UDL framework that links transition and educational practices, serving as a way to help ensure that students with disabilities receive a free and appropriate public education (FAPE). These four principles include: 1) multiple life domains, 2) multiple means of assessment, 3) student self-determination, and 4) multiple perspectives for transition (Thoma et al., 2009). Through the addition of these principles, the UDT framework enables teachers to simultaneously consider supports and services for academics and post-high school or transition goals while providing students more significant opportunities to reach successful transition outcomes. This updated framework, rooted in research-based practices, focuses on improving student academic and transition outcomes (Thoma et al., 2009), and provides educators with a comprehensive pathway to connect academic content and transition planning in their lesson plans and instruction (Scott & Bruno, 2018).

2.3. Effective Professional Development

Due to this need to find ways to blend these two seemingly disparate goals of academic achievement and preparation for the transition to adult life, teacher preparation programs (TPPs) and Local Education Agencies (LEAs) should prioritize opportunities for prospective and current special educators to develop and enrich skills to do both equally well (Morningstar & Mazzotti, 2014; Scott & Bruno, 2018). Yet, there is limited research on secondary special education training and professional development specific to addressing their ability to better prepare their students with disabilities for a successful transition to adult life, including providing excellent academic instruction (Morningstar et al., 2014; Scott et al., 2019). Despite the fact that Even though this specific type of professional development has not been a focus of previous research, there is a body of research re-

lated to teacher professional development in general, much of which could apply to increasing special educator knowledge and skills in implementing a UDT framework. These components of successful professional development components are summarized in the following paragraphs.

Teachers reported critical features of effective professional development as content is focused and relevant (i.e. professional development based on teacher and school needs), includes active learning and collective participation (i.e. being involved in the process of planning), and is delivered over time (Desimone, 2011; Garet et al., 2001). Other features of effective professional development should also be in alignment with curriculum expectations at the grade and state levels (DeMonte, 2013), and that new-era professional learning needs to build on the evidence we use to teach students (i.e. collaboration and increased engagement; Darling-Hammond & McLaughlin, 2011). Therefore, for professional development focused on blending academic and transition instruction, attention must be paid to the implementation of what was learned, not merely the knowledge acquired. In addition to evaluating implementation, feedback should be provided to participants of the professional development to ensure the knowledge is being translated to the practice (Doren et al., 2013; Flannery et al., 2015; Scott et al., 2019). The incorporation of transition skills and knowledge competencies into teacher preparation and professional development can improve poor post-school outcomes as well as enhance students' in-school experiences (Morningstar & Mazzotti, 2014). There is a continued need to further identify effective practices to guide the development and delivery of content that teachers can use across various settings. Identifying these effective practices has critical implications for managing and overcoming long-standing gaps associated with poor postsecondary outcomes for students with disabilities.

2.4. Blending of Adult Learning Theory and UDT

The principles of UDL (as a component of the UDT framework) and the tenets of adult learning theory (ALT) can be intertwined in that they both consider the variability in each learner in the classroom environment (Boothe et al., 2018; Rao & Meo, 2016). Considering the learner's unique needs allows the teacher to offer flexibility in the presentation and demonstration of mastery of the skills (CAST, 2018). Therefore, ALT makes learning more meaningful, interactive and engaging to adult learners (Boothe et al., 2018). Therefore, to create greater accessibility to content to enhance teachers' skills and knowledge around the UDT framework, the team created the online module that incorporated principles of both UDL and ALT theoretical frameworks.

2.5. Adult Learning Theory

Andragogy is grounded in ALT based on Malcolm Knowles work in 1968 which attempted to account for how adults and children learn (Merriam, 2001). Knowles coined the term andragogy in direct contrast to pedagogy. Learning is shaped through an adult's ability to drive their own learning process, prior life experiences,

internal motivation, and problem-focused learning (Merriam, 2001). Cercone (2008) identified nine components of effective professional development based on ALT which include starting with a learner-centered approach, minimizing limitations such as threats and distractions, active involvement, providing support and scaffolding, tapping into previous knowledge/learning, assuring immediacy of application, providing a safe environment, including self-reflection, and having opportunities for collaboration.

3. Principal Components of the UDT Framework

As described, the UDT Framework combines the three core principles of the UDL framework with effective research-based transition strategies to bridge academic and transition education for youth with disabilities. This section will describe these principles in more detail and Table 1 provides a quick overview of each of the components that make up the UDT framework.

3.1. Multiple Means of Engagement

Through various opportunities for engagement, teachers can tap into student interest, sustain effort and persistence, and promote self-regulation (CAST, 2018). By optimizing autonomy, choice, relevance, value, and authenticity while minimizing threats and distractions, teachers can spark excitement and curiosity for learning (CAST, 2018). Teachers can help to build student skills of self-regulation and self-determination as a tool for motivation. Transparency and focus on

Table 1. Principles of universal design for transition.

UNIVERSAL DESIGN FOR TRANSITION	**Transition Components**	*Multiple life domains*	Focus is on the transition to a complete, integrated plan for life rather than on multiple, divided life segment
		Multiple means of assessment	Focus is on collecting an array of information about the student that provides holistic data upon which decisions are made.
		Individual self-determination	The student is the focus of the process, with his or her preferences and interests serving as the basis for transition services. The student is the causal agent.
		Multiple resources/perspectives	Transition planning and services are developed collaboratively, pooling resources (financial, human, and/or material), using natural supports and/or generic community services, as well as disability-specific ones.
	Universal Design for Learning	*Multiple means of representation*	Transition planning and services are developed so that they include materials, services, and instruction that include a range of methods.
		Multiple means of engagement	Transition planning and services are developed to assure that there are multiple ways that students can be involved in the process.
		Multiple means of action and expression	Transition planning and services are developed to assure that students can communicate their preferences and interests, and demonstrate progress in multiple ways.

personalized learning goals, variations in demands and methods for completing assignments, an emphasis on collaboration/cooperative learning, and utilizing clear and timely feedback are amongst the many strategies that can be utilized to develop persistence and sustained effort. Finally, self-regulation involves capitalizing on the emotion and motivation to impact learning. By focusing on beliefs that encourage motivation and having high expectations, teachers can provide opportunities for students to develop self-regulation skills. Examples include promoting high expectations and reflection and facilitating personal coping skills.

3.2. Multiple Means of Representation

There are many ways to represent the content of a lesson. By focusing on multiple formats for presenting and receiving information, teachers can provide information that is accessible, activate background knowledge, and allow for classroom-wide participation. Additionally, students can complete their work through a method that is meaningful to them. Representing classroom instruction through multiple means provides opportunities to clarify vocabulary, provide multiple perceptions of the content, and focus on comprehension of the material.

3.3. Multiple Means of Action & Expression

Student action and expression can manifest in a classroom in various ways. Students need opportunities to show us what they know and understand through flexibility and autonomy. For example, students may use technology, teachers may do informal check-ins during the lesson, students may type on a keyboard instead of handwriting their assignments, or students may record a podcast in-lieu of a formal writing assignment. Multiple means of actions and expression require teachers to go beyond traditional methods for classroom participation as methods for determining student understanding of content. An additional piece of this component of UDL is the inclusion of developing student executive functioning. These cognitive processes are crucial for students sustaining attention, maintaining working memory, planning and implementing strategies for learning, organizing information for a task, self-monitoring progress, self-regulating emotion and productivity, and following multiple-step directions.

3.4. Multiple Life Domains

Transition services and supports should be comprehensive and prepare students for the many aspects of their postsecondary life (Thoma et al., 2009). This includes postsecondary education, vocational education, integrated employment, adult services, independent living, and community participation. Historically, post-school work has been the primary focus of transition planning. However, there are many additional skills that are crucial to a successful transition that occurs outside of the workplace. Some examples are managing finances, socializing and leisure time, navigating college, and living independently. To fully be prepared for transition, transition planning must be comprehensive and consider multiple life domains.

3.5. Multiple Means of Assessment

The quality of transition assessments can impact transition planning and services (Thoma et al., 2009). The information-gathering process should include a variety of standardized, informal, and alternative assessments. The goal of transition assessments should include identifying students' interests and preferences in relation to their postsecondary goals; linking the skills necessary for successful achievement of identified goals; determining which skills need further development; and matching appropriate supports, services, and instruction necessary to develop those skills and/or meet goals for adult life (Thoma et al., 2009). Matching the general education curriculum to identified transition-related goals and real-world tasks is an essential component of using multiple means of assessment (Thoma et al., 2009).

3.6. Student Self-Determination

Quality transition planning includes a focus on student self-determination, which has been identified as a best practice (Test et al., 2009). Self-determination has been the focus of much of the transition research in the field of special education, much of it led by Wehmeyer and colleagues (e.g. Wehmeyer, 1998), and has been re-imagined as Causal Agent Theory (Shogren et al., 2015) referring to one's ability to be a causal agent in one's life. Self-determined behavior has been described as having three characteristics: volitional action, agentic action, and action-control beliefs (Raley et al., 2021) which refers to the ability to set goals, actions that lead to goal attainment, and the belief in one's ability to reach self-selected goals. There are a number of ways to support student self-determination, including the use of the self-determined Learning Model of Instruction (SDLMI; Wehmeyer et al., 2002) which teaches students to use a problem-solving approach to set and meet their goals.

3.7. Multiple Resources & Perspectives

There are many perspectives to consider during the transition process. This can include people that have an essential understanding of the student (i.e. family members), individuals that specialize in a specific goal area of the student's (i.e. related services providers, job training personnel), and community representatives that are connected to opportunities and resources (i.e. local community organization). This process creates connections between the school, home, family, and community. Collaboratively, the team can identify real-world opportunities that include consideration of key functional skills and transition outcomes (Thoma et al., 2009). Additionally, new ideas can be brought to the discussion for consideration to meet the student's needs.

4. Module Development

Two team members worked on developing the UDT module for the project, with input from the full research team. The full research team included four

doctoral students (two co-authors on this paper and two contributors), faculty who originally conceptualized the UDT framework, and two early career faculty members with expertise in UDT and/or blending academic and transition education for students with disabilities). The two team members who developed the module had expertise in the module components as well as technology skills to incorporate effective professional development components into the module and the performance-based assessment process of revising lesson plans to demonstrate an understanding of the framework's components. The process for module development consisted of a variety of planning steps, including identifying what critical features to include in the UDL and UDT modules. Once the content was identified, team members began building the modules using Google Sites, a free, online, structured web page creation tool. Once the initial site was created, module content and format were then reviewed by the study team and outside experts. Reviews focused on the accuracy of the content, accessibility of the module, and integration of culturally responsive practices within the frameworks. Using both UDL and ALT principles, the use of online modules allowed participants to set their own pace for completion and to stop and save their progress. The content was also delivered using multiple means of engagement, representation, and expression, including a combination of videos, visual images, written text, and opportunities for self-evaluation and reflection.

4.1. Overview of Training Module

There were five major phases of the module (i.e. pre-assessment, UDL Principles, lesson plan mid-check point, Transition Components, and post-assessment). Figure 1 shows a diagram depicting this process. Each part of the module where content was provided was structured to provide a general overview of first the UDL Framework and then the Transition Components of UDT, with opportunities to update an initial lesson plan to incorporate the principles discussed. Prior to the start of the first part of the module, participants were asked to upload a sample lesson plan. After completing the first part: *Universal Design for Learning*, participants were asked to revise their initial lesson plan incorporating their newly acquired knowledge of UDL. Finally, after participants complete the final part of the module, where the transition components were introduced, they were to upload a revision of the same lesson plan incorporating the elements of UDT. The revision of a common lesson plan was to determine if participants were able to apply what they learned from the module regarding implementation of the UDT framework.

4.2. Part 1: Universal Design for Learning

Part 1 of the modules was designed using a scaffolded approach focused on building background knowledge of Universal Design for Learning first and finishing with the application of UDL in lesson plans. This section incorporates a variety of principles of UDL by activating prior knowledge by presenting a video
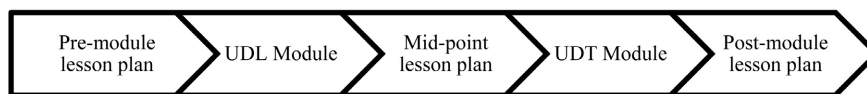
Figure 1. Phases of training module.

that gives a broad overview of UDL, including information about the alignment of UDL within federal policies. Once participants' background knowledge was activated and basic information presented, they are challenged with a *Stop and Think* activity (i.e. one form of expression,) which allows for a break for the participants to reflect on their current practices and express how they are meeting the needs of their students. Finally, participants were provided a summary of the information with the option to download a handout with examples of ways to incorporate UDL in lesson plans, a tool for their mid-point check and post-assessment.

4.3. Part 2: Transition Components

Part 2 of the module was designed to build background knowledge of the effective transition practices that are part of the UDT framework. Participants are introduced to research literature that demonstrates the importance of and need for enhancing transition services for students with disabilities. This builds the case for a UDT approach and addresses one of the core principles of ALT, establishing a reason for participants to gain the knowledge and skills addressed in the module. Each of the four transition principles (i.e. multiple domains, multiple means of assessment, student self-determination, and multiple resources and perspectives) are explained in detail with examples of how each can be used in a classroom to merge academic and transition skills in a lesson. The final section provides an overarching summary of the information presented on UDT. Another handout was provided to be used as a reference to provide examples of ways to incorporate UDT in the final revision of the lesson plan.

In total, participants can complete the modules in approximately 60 minutes, and then about 15 - 30 additional minutes to revise and update lesson plans at the midpoint and final stages. Special educators first start with an existing lesson plan. They revise the lesson plan after completing the first part of the module where they learn about the UDL components of the UDT framework. They receive feedback about their revised lesson plan with suggestions for any improvements needed to adequately incorporate UDL components into their lesson plans. In keeping with the adult learning principle for "safety" we refrain from using terminology that would suggest that they did something wrong in the revisions they did make, but instead present recommendations for further strengthening their lesson plan to better align with UDT components.

After completing the second part of the module, where the focus is on learning about the transition components of the UDT framework, a similar process is used. That is, lesson plans are further revised to incorporate at least one of the transition components and feedback is provided about the component they chose

and ways to further strengthen the lesson plan (if needed). Only one transition component is required for the lesson plan since it is not feasible to expect that all components of effective transition education would be incorporated into each individual lesson plan. Instead, special educators are advised to address these components over time and choose the one that makes the most sense given the academic content.

The two-part UDT module was developed using the ALT principles as described by Cercone (2008). Table 2 highlights each of these components and the features of the online module that demonstrate each.

5. Discussion

This article provides a program description of a two-part online module focused on the Universal Design for Transition Framework. UDT was developed to address a major concern of practicing special educators: meeting requirements that they address both academic and transition instruction for students with disabilities. Another way that special educators continue to improve their skills is by taking additional courses at a local university. However, not all special educators have time to take additional courses or they can find that institutions of higher education are often inaccessible either in terms of distance or in terms of the cost associated with taking courses. Certainly, in-service special educators are busy focusing on the coursework they need to acquire their initial teaching license which most likely does not include information about how to blend academic and transition instruction (Scott, et al., 2019) or even sometimes a basic course on transition education (Williams-Diehm et al., 2018). Special education teachers of students with disabilities need additional resources to support the transition needs of their students with disabilities without sacrificing academic instruction and to meet their own professional development goals. The development of this online UDT module, with its focus on hands-on experience and principles of ALT, can be a model that addresses the unique challenges that special educators face as they try to meet seemingly competing goals of addressing academic achievement and supporting the transition to adult life for students with disabilities.

Offering accessible online training modules can be one way to make professional development available to a wider audience, including those at both the in-service and pre-service levels. Asynchronous learning provides the opportunity for learners to incorporate the training into their busy schedules and to access the material on an as-needed basis. This is particularly important for in-service special educators, the majority of who are female who not only work full-time, but often have families of their own that learning opportunities would need to work around. In addition, as stated earlier, an asynchronous module has the ability to be incorporated into existing pre-service special education courses, fitting easily around the existing course content as appropriate.

The submission of a lesson plan and the two revisions provides special educators

Table 2. Adult learning theory and universal design for transition module.

Considerations for Adult Learning (Cercone, 2008)	Components of UDT Module
Learning preferences, Learner-centered	Because the practice/assessment component is based on a lesson plan of the learner's choosing, they are focusing on an academic area of their choice. They also have freedom to choose how to incorporate UDT components that fit with their classroom/school context.
Limitations	The module was developed to be divided into two parts that could each be kept short to minimize distractions. We used graphics whenever possible to keep it interesting as well as reflection breaks to guide their learning.
Active involvement	While the learning component of the module was not as active, there were reflective breaks and opportunities to apply what they learned at two different stages to enhance active involvement.
Facilitator vs. teacher preference; Support and scaffolding	The scaffolding occurred with the opportunity to revise the lesson plan at two different stages, with feedback that can be incorporated into the next revision. As stated earlier, special educators choose the academic content, grade level, and other class contexts, as opposed to the preference of instructors.
Previous Learning Background; Prior learning experience	This module does not focus on the specifics of teaching the academic content; it is presumed that this information was previously learned and incorporated into the initial lesson plan.
Deliberate practice; Immediacy of applications	Lesson plans are blue-prints for what happens in the classroom and helps ensure that components of good teaching and assessment are deliberately implemented. By focusing on the revision of a lesson plan with this module, there is a greater chance that the knowledge will be applied to the classroom instruction.
Safe learning environment	Receiving feedback about the lesson revisions from a neutral party (not your university instructor or a school-based supervisor), there is a great degree of safety in learning a new approach, and incorporating it into one's practice.
Self-reflection	There are opportunities for self-reflection built into the modules themselves. Also, providing the feedback as suggestions/recommendations provides an additional opportunity for self-reflection.
Collaboration	There isn't a great deal of opportunity for collaboration in the module as developed, however, it could easily be incorporated if this were used as part of a course (that is, having two or three pre-service teachers work together to revise a lesson plan), or as part of an in-service professional development experience. Lastly, there is some collaboration between the learner and the team providing feedback, where the suggestions could be integrated into the final lesson plan.

with opportunities to implement the UDT framework's components, and receive feedback about their strengths and opportunities for further growth at each stage of the process. The research team developed a rubric with the seven components of a UDT framework to help them focus their feedback on each of these components. At each stage (initial lesson plan, midpoint lesson plan after the UDL component of the module, and final lesson plan that incorporates UDT components as appropriate), special educators are provided with feedback about all components, so that those UDT components that are already included are rec-

ognized. Feedback on lesson plan revisions focuses on the strengths of the revisions based on what was learned, with suggestions to further strengthen lesson plans in the future. Rather than asking for self-report information about their ability to implement the model's component principles, this assessment method provides insight into their growing skills and supports their further development.

5.1. Limitations

These modules have been used to provide training on implementing a UDT framework in the preparation of a lesson plan for instruction, but insufficient numbers of pre-service and in-service special educators have completed the modules to have data on the efficacy of this training package for improving special educators' ability to blend academic and transition education. In addition, the degree to which these lesson plans improve academic and transition goal attainment for youth with disabilities has not been well-researched, with only one study (Scott et al., 2011) finding that this framework does hold promise. Lastly, despite research that demonstrates that professional development that includes an opportunity to receive feedback on one's practice in the class is most effective, this training package only provides an opportunity to apply what was learned to the development of a single lesson plan rather than implementing the lesson in the classroom. This provides the opportunity to use the module with a number of different populations, settings, and trainers/instructors.

5.2. Research Recommendations

The research team is still actively evaluating the impact that participation in the two-part module has on the ability of special educators to design and implement lesson plans that address both academic and transition goals. It is important to note that some effective transition strategies do not lend themselves to whole class instruction; these must be individualized to address the unique needs of a specific student, given his/her/their goals for adult life. However, there can and should be opportunities to address transition goals in the context of the general education curriculum. The UDT framework offers a pathway to accomplish both.

As we move forward, we hope the data we collect will help us know two important research questions. First, does participation in the module lead to improvements in the knowledge and skills of special educators to address both academic and transition goals for youth with disabilities? Second, does this online module, in terms of content and format, address the specific needs of special educators to provide effective transition and academic education for their students with disabilities? Future research could focus on whether implementing a UDT approach results in improved post-school outcomes for youth with disabilities, as well as whether it improves post-school outcomes for students without disabilities who are taught in inclusive classrooms where this approach is used. Lastly, qualitative studies that focus on the implementation of the UDT frame-

work by special education teachers in their classrooms would be helpful to determine fidelity of implementation as well as the perceptions of special educators and students with disabilities on the impact of specific lessons. These research studies will help with identifying the implications for practice and/or policy of the UDT framework and this specific professional development opportunity.

5.3. Practice Recommendations

Our investigation of the research and development of the UDT module reveals several key implications for improving practice in this area that special educator teachers and other practitioners should consider. First, practitioners need explicit instruction and clear approaches for how to address both academic and transition goals, planning, and programming for their students with disabilities. Simply receiving disconnected instruction in academic and transition content separately does not provide special education teachers with additional strategies needed to synthesize these considerations. In order to accomplish this synthesis, pre- and in-service teachers need real-world practice opportunities to make connections between academic and transition planning using individualized resources for their students and within their communities. These practice opportunities could include activities like integrating academic instruction into research-based transition programming like paid work experiences, or developing academic lesson plans that incorporate career development. Additionally, pre- and in-service educators need scaffolded opportunities to practice planning for individual students using UDT components and ensuring these align with student strengths. Aligned with best practices for professional development, these scaffolded opportunities would be coupled with continuous follow-up and training with feedback to continually improve practice. This could also translate beyond special education as well, as the UDT framework also promotes collaboration between secondary and general educators so minimizing the delineation and integrating academic and transition instruction is critical for student success.

In addition to these content-related recommendations specific to UDT, our manuscript also supports the use of online modules as an accessible and sustainable means of delivering content to pre-service teachers within the context of coursework or in-service teachers who are directly applying strategies with current students. Especially for those educators working in communities with fewer resources or those geographically distant from available in-person training, online asynchronous content provides a vital means of ensuring that teachers have access to research-based content. Additionally, online modules enable teacher educators to seamlessly integrate UDT and other specific content into new and existing preparation coursework. Therefore, based on the professional development framework (Desimone, 2009), the increase in knowledge, skills, and attitudes to blending academic and transition instruction can lead to greater change in teachers' behavior (i.e. writing academic and transition goals for all students with disabilities) towards integrating these ideas and improving outcomes for

learners.

5.4. Policy Recommendations

With federal mandates calling for an increased emphasis on having *all* students meet academic standards (ESSA, 2015) and students with disabilities being required to receive transition services (IDEA, 2004), teachers need to find a way to provide instruction in both areas, rather than providing an emphasis on one area over another. Thus, as states increasingly adopt competency standards for personnel preparation to develop quality educators to meet federal requirements and provide the best instruction to their students, enactment of these standards should place an emphasis on linking academic and transition goals. Our work demonstrates the importance of framing these competencies with an emphasis not only on knowledge, but also on application of bridging academic and transition planning. Thus, state leaders should aim to cultivate opportunities for pre-service teachers to develop these skills by ensuring that the UDT framework is considered in preparation standards. Likewise, devoting training and technical resources to supporting in-service teachers to develop and hone these skills is also recommended.

In addition, the most recent reauthorizations of IDEA (2004) and the Workforce Innovation and Opportunity Act (2014) highlight the importance of interagency collaboration within transition planning with considerable attention to this intersection. However, while these policies have increased innovation in transition and expanded opportunities for youth with disabilities, little attention has been paid to specific models of collaboration between school-based and adult service transition practitioners. Therefore, in upcoming reauthorizations of these key legislations, further attention should be paid to providing cross-training of personnel and grounding this collaboration in both academic and transition experiences for youth. The use of online modules can be one way to do this and meet the needs of a variety of stakeholders as well as to best understand the needs of students with disabilities.

6. Conclusion

Successful outcomes for transition-age youth require comprehensive planning and high-quality instruction that includes both rigorous academic standards and robust transition programming. However, special educators often receive little to no instruction in providing these two important priorities in coordination. In this article, we described how the development of an online module professional development package introducing special educators to the UDT framework could prepare both pre-service special educators and in-service professionals to combine academic and transition instruction. By applying UDT principles gleaned from these modules, pre- and in-service can be better equipped to develop and refine lesson plans using authentic, performance-based assessments. In turn, equipping teachers with effective strategies based on UDT is a critical means of improving

outcomes for students with disabilities after graduation.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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