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# Transition Trends Associated with Topic Focus Since 1990: A Literature Review

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**Abstract**

A systematic review of transition literature was conducted on 743 articles published in 22 special education journals from 1990 to 2015. Demographic data and topics of transition-related articles were coded to identify the trends in transition literature. Results found only 4.1% of articles in those journals focused on transition. Student participants were primarily White males with a specific learning disability or intellectual disability. Key topics of transition (e.g., self-determination, transition planning) were supported by several studies in the literature. Yet, crucial topics (e.g., transportation skills, interagency collaboration) contained little research support. A summary of the current trends in transition research and implications for future research are discussed.

**Keywords**

transition, students with disabilities, literature review

In 1990, the reauthorization of the Individuals with Disabilities Education Act (IDEA) mandated transition services for all students with disabilities aged 16 and older. In lieu of a singular focus on employment touted by then Secretary of Office of Special Education and Rehabilitative Services, Madeline Will (1983), the IDEA acknowledged the importance of multiple outcomes, defining transition as

> A coordinated set of activities for a student within an outcome-oriented process, which promotes movement from school to post-school activities, including postsecondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, and community participation. (IDEA, 2004)

Prior to the enactment of this reauthorization, youth with disabilities were more likely to drop out of high school, leave school unprepared for employment, or live dependently. According to the National Longitudinal Transition Study (NLTS) data collected during the 1980s, approximately 37% of students with a disability failed to complete high school, compared with 21% of students without a disability (Wagner, D'Amico, Marder, Newman, & Blackorby, 1992). Young adults with a disability were 41.3% less likely to pursue postsecondary education than their counterparts without a disability. Youth who enrolled in postsecondary education were more likely to attend some type of vocational training or trade school (16%) than a 4-year university (4.2%; Wagner et al., 1992). In addition, competitive employment rates for young adults 3 to 5 years out of high school lagged significantly behind peers without disabilities (56.8% and 69.4%, respectively). Finally, adults without disabilities were nearly twice as likely to live on their own (60.4%) than individuals with disabilities (37.4%).

Since enactment of this reauthorization, students with disabilities have generally experienced better postschool outcomes (PSOs). The National Longitudinal Transition Survey-2 (NLTS-2) found that within 8 years after high school, 60% of young adults with disabilities had enrolled in postsecondary education, 91% had been employed, and 59% had lived independently (Newman et al., 2011). These statistics can be deceiving, however, as significant disparities remain. Postsecondary education completion rates lag

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behind those of students without disabilities, ranging from 34% for 4-year institutions to 57% for vocational or technical schools. Moreover, less than a third of these students pursue any postsecondary education (Newman et al., 2011). Only 25% of postsecondary goals for students with severe disabilities focus on postsecondary training and only 11% of the goals target colleges (Grigal, Hart, & Migliore, 2011). In 2015, only 34.9% of adults with disabilities were employed compared with 76% of those without disabilities and workers with disabilities earned approximately US$10,000 less on average (Kraus, 2017). Most (58.7%) adults with disabilities live independently, but only 16% of young adults with severe disabilities do (Newman et al., 2011). Furthermore, despite an overall trend in closures, more than 20,000 people with intellectual and developmental disabilities continue to live in segregated state-operated living facilities, significantly limiting their independence and inclusion in their community (Larson et al., 2017).

Clearly, improvements in all outcome areas can and should continue, but researchers continue to grapple with how to best support youth as they transition to adulthood. A critical analysis of the extant transition literature will reveal pertinent information regarding trends and gaps in topics and demographics to support stakeholders to assist youth with disabilities attain better PSOs. In 1997, Hughes and colleagues published a comprehensive review of transition-related empirical studies that reported on interventions implemented in integrated secondary special education settings over a 23-year period. The authors examined publication trends, participant demographics, type and technical adequacy of assessment measures, type of research studies, outcome measures, and environmental settings. The 181 studies culminated in the generation of 268 student outcomes with social interactions, employment, community adjustment competence, and independent living identified as the most recurrent outcomes. An astounding 90% of studies addressed areas associated with self-determination skills. However, this review was conducted more than 20 years ago and may not reflect current trends.

Recognizing a need for an updated appraisal of the literature, Alwell and Cobb (2006) conducted an exhaustive review of secondary transition interventions from 1990 to 2003. This review consisted of 164 intervention studies and included descriptive information pertaining to educational interventions, outcomes, settings, and disability categories. Articles were classified into the following six categories: life skills ($n = 48$), vocational ($n = 33$), transition planning ($n = 29$), social skills ($n = 28$), self-determination ($n = 16$), and counseling ($n = 11$). Although the authors included participants as young as 12, this study offered an initial sweep of the transition topic areas from its inception and fueled the need to align interventions with outcome measures.

In addition to these reviews on transition interventions, a robust body of research has emerged to identify in-school practices that improve postschool success. Kohler (1993) evaluated transition-related articles from 1985 to 1991 and found that only nine of the 21 transition-focused practices identified were supported by at least one empirical study (i.e., vocational training, parent involvement, social skills training, paid work experience, follow-up employment services, employer input, integration, daily living skills training, and employability skills training). The remaining practices (i.e., interagency collaboration, individualized transition plans, community-based instruction, and daily living skills training) were not empirically substantiated. Landmark, Ju, and Zhang (2010) expanded Kohler's study to encompass literature from 1985 to 2005. Consistent with Kohler's findings, they identified several practices with strong empirical support (e.g., work experience, employment preparation program participation), whereas other practices had minimal evidence (e.g., community/agency collaboration, daily living training, self-determination training). Both reviews highlight the importance of empirically corroborating practices, as well as identifying unsupported or under-researched topics.

Test, Fowler, and colleagues (2009) reviewed 63 literature reviews, meta-analyses, and interventions to identify evidence-based practices (EBPs) in secondary transition. The review uncovered 32 practices of which approximately 80% concentrated on student development (e.g., life skills, functional academic skills). Only one family involvement practice was identified (i.e., teaching families about transition) and no EBPs emerged for interagency collaboration. Test, Mazzotti, and colleagues (2009) analyzed 22 correlational studies from 1984 to 2009 and uncovered 16 in-school EBPs commonly associated with improved PSOs. However, this review included only studies that met quality indicators, which may have limited its scope.

In 2013, *Career Development and Transition for Exceptional Individuals* (*CDTEI*) dedicated an issue to its 35th anniversary in which several renowned researchers reflected on research trends as well as the potential directions for future research in transition. Madaus and colleagues (2013) conducted a systematic review of 581 articles spanning the 35-year period and evaluated them for trends in demographics and topical focus. The authors noted that a majority of research was concentrated within specific topics such as transition planning, self-determination, and vocational education. Little attention was afforded to other topics such as transportation skills, work-study experiences, and interagency collaboration. This review systematically identified trends in participant demographics and topical focus; yet, it was limited to articles published in *CDTEI* and therefore represented a microcosm of the transition literature. In the same issue, Carter and colleagues (2013) acknowledged the need for an extensive review incorporating multiple journals to advance a comprehensive picture of trends in participant demographics and transition research

topics. Furthermore, it could convey valuable information pertaining to topical focus and serve as a guide for current and future research.

The majority of transition-related studies have focused only on a select number of topics (e.g., self-determination, transition planning) with minimal emphasis on other vital topics (e.g., interagency collaboration, family involvement), and while the review conducted by Madaus et al. (2013) provided insight into the transition landscape, it was limited in scope. Therefore, the purpose of the current literature review was to provide the field an extensive review of transition trends and topics of transition-related articles in 22 special education journals since transition was first mandated by IDEA in 1990. The following research questions guided this review:

**Research Question 1:** What are the trends in the publication of transition-related articles from 1990 to 2015?
**Research Question 2:** What demographic characteristics have been represented in the transition literature?
**Research Question 3:** What transition topics have been addressed in the literature?

## Method

### Review Process

A systematic review was conducted on articles published in 22 special education journals between 1990 and 2015. Twenty-one of the 36 top-ranked journals in the *Special Education* category were selected from the 2012 *Journal Citation Report* (Thomson Reuters, 2013). Journals were chosen if they met the following criteria: maintained a focus on special education topics, were peer-reviewed, published in English, and included secondary students with disabilities (aged 14–22 years) or discussed topics relevant to transition-age students with disabilities from the United States. *CDTEI* was not listed on the report, but was included in this review due to its focus on transition. Book reviews, journal issue introductions, memoranda, and international articles were excluded. A total of 18,151 articles were initially identified from the 22 journals. Journals were accessed using the university library, and electronic versions of selected articles were downloaded and organized by journal in an electronic shared folder.

Hand searches of all 22 journal issues from 1990 to 2015 were conducted using the following keywords and combinations identified in the transition conceptual frameworks of Kohler (1996) and Morningstar and Clark (2003). The subsequent keywords in various combinations had to be located in the article: transition, transition planning, self-determination, PSOs, student involvement, family involvement, interagency collaboration, assessment, student-focused planning, student development, program structure, postsecondary education, employment, independent living, or curriculum and instruction.

Finally, articles were reviewed to verify inclusion of the following criteria: (a) involve or discuss secondary students with disabilities receiving services under IDEA (aged 14–22 years), their families, or related personnel and (b) discuss supports and services necessary to the transition of students with disabilities (e.g., academic, social, vocational) or discuss topics pertinent to the transition arena (e.g., family involvement, self-determination, transition frameworks).

### Coding Manual and Procedures

A manual was developed that revised the coding procedures used by Madaus et al. (2013). First, articles that met inclusion criteria were categorized as either research or nonresearch. Articles that collected or analyzed data, including extant databases, were considered research. Nonresearch articles consisted of literature reviews or "other" articles, such as nonresearch papers, conceptual articles, or practice papers. Data were collected on demographics (i.e., participant roles, ethnicity, gender, age, disability), study setting (i.e., national, state, and local), level of the setting (i.e., school district, school, community), and location of the settings (i.e., urban, suburban, rural).

Next, articles were classified into two categories: (a) K–12 Education (i.e., focus on students in the school system served under IDEA) and (b) Nonstudent-Specific topics (i.e., focus indirectly on students). The K–12 Education topics were grouped into subcategories: Academic Development or Career/Vocational Development. Both of these subcategories targeted students between the ages of 14 and 22 years served under IDEA or adults with disabilities that were reflecting on their transition experiences during high school.

Once sorted into a category, topics were selected from 33 possible options found in Madaus et al. (2013) plus two additional codes. The Academic Development category included foci such as independent living, student perceptions of transition, self-determination, and transition planning. The Career/Vocational Development category included topics such as career or vocational education, work experiences, self-determination, and employment/job preference. The Nonstudent-Specific category contained subjects such as interagency collaboration, professional development, policy work, and instrument development. An article could contain more than one topic (e.g., assistive technology and community-based instruction). Most topics were derived directly from those used by Madaus and colleagues (2013). However, their initial codes included self-determination under Academic Development. This did not accurately depict the full pool of articles for the current review, though, so self-determination categories were added

**Table 1.** Frequency of Transition and Transition Research Articles per Journal: 1990 to 2015.

| Journal | Articles per journal | Transition articles[a] | Transition research articles[a] |
|---|---|---|---|
| *Career Development and Transition for Exceptional Individuals* | 364 | 276 | 186 |
| *Education and Training in Autism and Developmental Disabilities* | 983 | 69 | 48 |
| *Exceptional Children* | 833 | 62 | 52 |
| *Remedial and Special Education* | 915 | 49 | 28 |
| *Intervention in School and Clinic* | 1,088 | 45 | 3 |
| *Research and Practice for Persons with Severe Disabilities* | 628 | 42 | 21 |
| *Focus on Autism and Other Developmental Disabilities* | 571 | 29 | 13 |
| *Exceptionality: A Special Education Journal* | 413 | 24 | 8 |
| *Intellectual and Developmental Disabilities* | 1,405 | 23 | 19 |
| *Journal of Learning Disabilities* | 1,419 | 22 | 10 |
| *The Journal of Special Education* | 597 | 19 | 15 |
| *Focus on Exceptional Children*[b] | 210 | 14 | 1 |
| *Learning Disabilities Quarterly* | 562 | 13 | 4 |
| *American Journal on Intellectual and Developmental Disabilities* | 1,125 | 12 | 10 |
| *American Annals of the Deaf* | 1,074 | 12 | 8 |
| *Research in Developmental Disabilities* | 2,478 | 12 | 10 |
| *Journal of Emotional and Behavioral Disorders* | 504 | 11 | 10 |
| *Journal of Positive Behavior Interventions*[c] | 399 | 5 | 3 |
| *Journal of Deaf Studies and Deaf Education* | 622 | 2 | 1 |
| *Research in Autism Spectrum Disorders* | 1,068 | 1 | 1 |
| *Reading and Writing Quarterly* | 556 | 1 | 0 |
| *Annals of Dyslexia* | 337 | 0 | 0 |
| Total | 18,151 | 743 | 451 |

[a]Per Journal. [b]Denied access past 2012, stopped publishing. [c]Began publishing in 1999.

in Career/Vocational Development and Nonstudent-Specific categories.

Five graduate students and two faculty members in special education were trained in coding procedures. Coders were required to maintain 85% or higher reliability throughout independent coding; otherwise, a refresher training session was conducted.

### *Interrater Reliability*

Interrater reliability was calculated on article selection and article coding (e.g., demographics, topics). To minimize bias for article selection, an inclusion criteria checklist was developed. Interrater reliability for article selection was calculated on 54.5% of the articles with an average reliability of 93.1% (range = 30%–100%) across journals and coders. Interrater reliability for article coding was calculated on 35% of the articles and averaged 95.6% across coders and articles (range = 67%–100%). Any disagreements were resolved through discussion.

## Results

### *Publications and Trends Across Journals*

Table 1 delineates the journals and frequencies of articles, transition-based articles, and transition-based research articles. Of the 18,151 articles published between 1990 and 2015, 4.1% ($n$ = 743) met the inclusion criteria as transition-related articles and only 2.5% of transition articles were research studies. Not surprisingly, 75% of articles found in *CDTEI* met our inclusion criteria. Articles from this journal accounted for 37.1% of articles in this review. A total of five journals (i.e., *Education and Training in Autism and Developmental Disabilities, Exceptional Children, Remedial and Special Education, Intervention in School and Clinic*, and *Research and Practice for Persons with Severe Disabilities*) were responsible for 36.2% of all transition articles. The percentage of transition articles identified in journals outside of *CDTEI* ranged from 0% (i.e., *Annals of Dyslexia*) to 7.4% (i.e., *Exceptional Children*).

### *Participant Demographics*

Table 2 presents information about the participants in the 394 research studies included in this review that collected primary data sources. The 58 research studies that used secondary analyses (e.g., NLTS-2 data) were excluded from this part of the analysis to avoid duplication of students.

Researchers inconsistently reported demographics, resulting in unequal totals across categories. When the number of students' demographics reported was less than the total participants reported in an article, the difference was coded as "not clearly specified." If the authors reported

**Table 2.** Participant Demographics of Articles With Original Data ($n$ = 392).

| Demographic | Frequency | % |
|---|---|---|
| Participants | 73,747 | |
| Special education students | 41,752 | 56.6 |
| Parents/caregivers/siblings | 9,779 | 13.3 |
| Special educators | 6,588 | 8.9 |
| General education students | 6,570 | 8.9 |
| Administrators/case managers | 1,755 | 2.4 |
| General educators | 1,258 | 1.7 |
| Paraprofessionals | 629 | 0.9 |
| Related service personnel | 492 | 0.7 |
| Transition specialists | 412 | 0.6 |
| Other | 2,444 | 3.3 |
| Not clearly specified | 2,068 | 2.8 |
| Student race/ethnicity | 41,789 | |
| Caucasian | 15,753 | 37.7 |
| African American | 5,029 | 12.0 |
| Latino/a | 1,897 | 4.5 |
| Native American | 228 | 0.5 |
| Asian | 215 | 0.5 |
| Other | 740 | 1.8 |
| Not clearly specified | 17,927 | 42.9 |
| Student gender | 41,782 | |
| Male | 19,130 | 48.4 |
| Female | 12,037 | 29.6 |
| Not clearly specified | 10,615 | 22.0 |
| Disability | 42,580 | |
| Specific learning disability | 16,998 | 39.9 |
| Intellectual disability | 7,956 | 18.7 |
| Emotional/behavioral disorder | 2,498 | 5.9 |
| Other health impairment | 1,291 | 3.0 |
| Deaf/hard-of-hearing | 1,015 | 2.4 |
| Developmental delay | 762 | 1.8 |
| Multiple disability | 580 | 1.4 |
| Autism spectrum disorder | 559 | 1.3 |
| Speech/language | 425 | 1.0 |
| Orthopedic | 424 | 1.0 |
| Hearing impairment | 220 | 0.5 |
| Vision impairment | 166 | 0.4 |
| Traumatic brain injury | 116 | 0.3 |
| Attention-deficit/hyperactivity disorder | 89 | 0.2 |
| Deaf-blind | 36 | 0.1 |
| Not clearly specified | 9,445 | 22.2 |

demographic data for more participants than their stated sample size (e.g., race/ethnicity in Baer, Daviso, Flexer, Queen, & Meindl, 2011), the larger reported number was used as it was impossible to discern the location of the discrepancy. Some authors reported demographic information for student participants grouped with other participants (e.g., Powers, Geenen, & Powers, 2009). In these instances, the totals were coded as "not clearly specified."

Participant roles in studies have not changed significantly. Each year, an average of 53% of the participants in articles reporting demographics with primary data sources were students with disabilities, though this varied considerably over the years (range = 9%–94%). The second most frequently included group were families ($M$ = 14%), followed by special educators ($M$ = 11%) and general education students ($M$ = 8%). An average of 6% of participants each year were from the "other" category, such as agency representatives, employers, and parole or probation officers.

**Table 3.** Characteristics of Articles With Original Data.

| Characteristic | Frequency | % |
|---|---|---|
| Included students with low SES | | |
| Yes | 61 | 15.5 |
| No | 45 | 11.4 |
| Not clearly specified | 288 | 73.1 |
| Level[a] | | |
| National | 38 | 9.1 |
| State | 115 | 27.5 |
| Local | 249 | 59.6 |
| Not clearly specified | 16 | 3.8 |
| Setting[a] | | |
| Urban | 124 | 26.5 |
| Rural | 94 | 20.1 |
| Suburban | 84 | 17.9 |
| Not clearly specified | 166 | 35.5 |
| Total articles with original data | 394 | |

*Note.* SES = socioeconomic status.
[a]Articles could indicate more than one setting.

Characteristics of student participants have also been mostly static. Since 1990, males have represented an average of 61% of the student participants reported in transition studies (range = 48%–72%). The students' ethnicities remained moderately stable. Native American students with disabilities were virtually absent from the transition literature until 1995 when Ramasamy published a study about the curriculum for Apache students. Since then, Native American students have been included infrequently (range = 0%–5% per year).

The most common disability identified in this review was specific learning disabilities (SLDs) that represented an average of 45% of the students with disabilities each year (range = 10%–86%). Students with intellectual disabilities were participants in an average of 32% of transition-related research studies each year (range = 5%–83%). Until 1995, no students with autism spectrum disorders (ASDs) were included in transition research. From 1995 to 2011, students with ASD accounted for between 0% and 10% of the total student participants in research. Since 2012, they have maintained an average 13% of all student participants reported in transition research.

Unlike the data presented in Table 2, the demographic characteristics provided in Table 3 were coded by study, not by the individual participant. Of the articles describing socioeconomic status (SES) data, an average of 52%

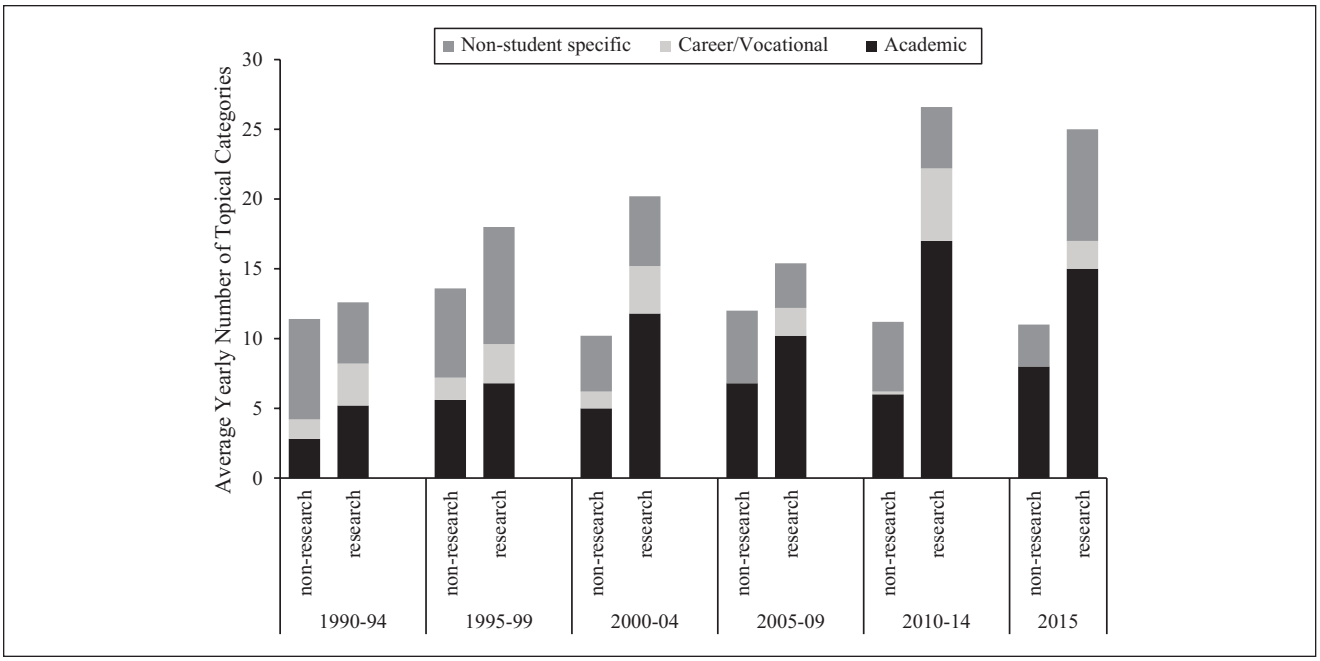


**Figure 1.** Average yearly topical categories of research and non-research articles.
Note. SPED = special education; *CDTEI* = *Career Development and Transition for Exceptional Individuals*.

included students from low-income backgrounds each year. An average of 40% of the studies were conducted in urban settings, 31% in rural contexts, and 29% in suburban settings with no discernible pattern over time. Until 1998, no studies included participants who were nonnative English speakers. Since then, only one study per year has done so.

Gender was reported on 78% of student participants and ethnicity was disclosed for only 60.4% of student participants. SES was only described in 27% of the articles and 57.9% of articles stated setting type. Because of inconsistent, unclear, or ambiguous descriptions of participant and sample demographics, data reported here may not fully represent the participants of the studies conducted since 1990.

## *Transition Topics*

*Frequency and trends of topics.* Figure 1 presents the average number of topic categories by article type since 1990 to 1994. Overall, the number of topics addressed through research articles has increased over time, whereas the number of topics addressed through nonresearch articles has stayed consistent. Nonstudent-Specific topics comprised 48.3% and Career/Vocational Development comprised 18.3% of all topics coded during the 1990 to 1994 time frame. However, the number of topics represented in the articles decreased over time. By 2010 to 2014, only 25% of topics were Nonstudent Specific and, although there was an increase in the number of research articles in Career/Vocational Development, the number of represented topics in this category fell to 7%. Topics associated with Academic Development nearly doubled over time, from 33.3% in 1990 to 1994 to 64% in 2015.

Table 4 delineates the frequency of topics across each of the three topic areas. Most topics were categorized under Academic Development (52.4%). Transition and educational planning, self-determination, and "other" were the most prevalent topics covered in this section. The "other" category embodied topics such as general PSOs ($n = 34$), postsecondary education ($n = 25$), and cultural influences on transition ($n = 18$). Articles about general PSOs examined transition as a "package" or a set of outcomes rather than addressing specific transition themes such as employment, postsecondary education, or independent living (e.g., Harvey, 2002). Articles attending to postsecondary education discussed or evaluated students with disabilities' preparedness and access to college and vocational training after leaving high school (e.g., Field, Sarver, & Shaw, 2003). Cultural influence articles focused on, for example, transition needs of Latino/a students and their families (Povenmire-Kirk, Lindstrom, & Bullis, 2010); multicultural perspectives on self-determination (Leake & Boone, 2007); and African American, Latino/a, and Native American students preparing for college (e.g., Oesterreich & Knight, 2008).

The Career/Vocational Development category consisted of "other" ($n = 48$), vocational education ($n = 47$), employment/job preferences ($n = 39$), and work experiences ($n = 35$). The "other" category included subjects such as general PSOs ($n = 7$) and social skills in the workplace ($n = 4$). A general PSO example was the work by Sitlington and Frank (1990), which described general characteristics of students

**Table 4.** Topics Addressed in Transition-Related Articles.

| Category | All | Research | Nonresearch |
|---|---|---|---|
| Academic Development | 408 | 270 | 138 |
| Transition or educational planning | 162 | 93 | 69 |
| Self-determination/self-advocacy | 137 | 88 | 49 |
| Other | 132 | 74 | 58 |
| Student perceptions of transition | 84 | 83 | 1 |
| Family perceptions of transition | 68 | 68 | 0 |
| School personnel perceptions of transition | 52 | 51 | 1 |
| Needed supports/services | 39 | 29 | 10 |
| Academic and classroom instruction | 28 | 13 | 15 |
| Assistive technology | 28 | 17 | 11 |
| Community-based instruction/participation | 19 | 10 | 9 |
| Independent living | 20 | 14 | 6 |
| Futures or person-centered planning | 14 | 7 | 7 |
| Interpersonal relationships | 12 | 4 | 8 |
| Educational placement/participation | 11 | 8 | 3 |
| Leisure and recreation | 7 | 3 | 4 |
| Money management and consumer skills | 6 | 3 | 3 |
| Self-care | 4 | 0 | 4 |
| Transportation skills | 2 | 2 | 0 |
| Extracurricular activities | 1 | 0 | 1 |
| Career/Vocational Development | 106 | 84 | 22 |
| Other | 48 | 42 | 6 |
| Vocational education | 47 | 32 | 15 |
| Employment/job preference | 39 | 36 | 3 |
| Work experiences | 35 | 31 | 4 |
| Self-determination/self-advocacy | 8 | 7 | 1 |
| Nonstudent-Specific areas | 267 | 125 | 142 |
| Other | 69 | 22 | 47 |
| Policy work | 44 | 10 | 34 |
| Self-determination/self-advocacy | 40 | 13 | 27 |
| Program description/evaluation | 38 | 27 | 11 |
| Family | 20 | 11 | 9 |
| Interagency collaboration | 20 | 11 | 9 |
| Instrument development | 20 | 18 | 2 |
| Preservice training | 17 | 9 | 8 |
| Adult services/service delivery | 12 | 5 | 7 |
| Professional development | 12 | 8 | 4 |

with SLD through an employment lens. Clement-Heist, Siegel, and Gaylord-Ross (1992) examined the effect of social skills training on the vocational behaviors of students with SLD and was, therefore, categorized as social skills in the workplace. Overall, topics in the Career/Vocational Development category displayed decreasing trends since 1990. Declines were also noted in topics attending to work experience, which is concerning, as this is a strong predictor of employment outcomes (Test, Mazzotti, et al., 2009).

The Nonstudent-Specific category encompassed 33.9% of all topics. Over one quarter of the topics were categorized as "other" and included cultural influence ($n = 5$) and general PSOs ($n = 6$; e.g., Chadsey-Rusch, Rusch, & O'Reilly, 1991). Cultural influence articles in this category included topics such as professional development for teachers working with students from diverse backgrounds (Kim & Morningstar, 2007) and cultural and social capital (Trainor, 2008). Since 1990, two of the three most frequent topics (e.g., "other," self-determination) in this category displayed decreasing trends. Articles about family involvement (e.g., Rodriguez & Cavendish, 2013) and professional development (e.g., Finn & Kohler, 2009) have generally increased over time and topics about adult service delivery and preservice training have declined over time. Interagency collaboration (e.g., Noyes & Sax, 2004) remains remarkably understudied and has displayed a declining trend since 2005 to 2009.

**Table 5.** Average Yearly Publication Rate of Transition-Related Topics.

| Topic | 1990–1994 | 1995–1999 | 2000–2004 | 2005–2009 | 2010–2014 | 2015 |
|---|---|---|---|---|---|---|
| Academic Development | | | | | | |
| Transition or educational planning | 3.4 | 7.4 | 7.2 | 6.2 | 7.6 | 3 |
| Self-determination/self-advocacy | 1.6 | 3.4 | 6.4 | 6.2 | 8 | 9 |
| Other | 2.2 | 3.2 | 4 | 7.4 | 7.8 | 10 |
| Student perceptions of transition | 2.2 | 2.4 | 3 | 4.8 | 3.2 | 6 |
| Family perceptions of transition | 1.6 | 2 | 3.6 | 2.8 | 3 | 3 |
| School personnel perceptions | 0.8 | 2 | 3 | 3 | 1.2 | 2 |
| Needed supports/services | 1 | 0.4 | 1 | 1.6 | 2.8 | 5 |
| Academic and classroom instruction | 0.4 | 0.8 | 0.8 | 1.4 | 2 | 1 |
| Assistive technology | 0 | 0.6 | 0.8 | 0.4 | 1.2 | 3 |
| Community-based instruction | 0.6 | 1 | 1.2 | 0.2 | 0.6 | 1 |
| Independent living | 0.2 | 0.4 | 0.8 | 0.4 | 1.2 | 3 |
| Futures or person-centered planning | 0.2 | 0.8 | 0.8 | 0 | 0.8 | 1 |
| Interpersonal relationships | 0.2 | 0.4 | 0.2 | 0.4 | 1.2 | 0 |
| Educational placement, participation | 0.2 | 0.4 | 0.2 | 0.4 | 0.8 | 1 |
| Leisure and recreation | 0.2 | 0.4 | 0.2 | 0.4 | 0.4 | 0 |
| Money and consumer skills | 0 | 0.2 | 0 | 0.4 | 0.2 | 0 |
| Self-care | 0 | 0.2 | 0 | 0.4 | 0.4 | 0 |
| Transportation skills | 0 | 0 | 0 | 0 | 0.6 | 0 |
| Career development | | | | | | |
| Other | 3.2 | 1.6 | 1.8 | 1.2 | 1.6 | 0 |
| Vocational education | 1.8 | 2.4 | 1.8 | 1.4 | 1.8 | 1 |
| Employment/job preference | 0.6 | 1.4 | 1.8 | 0.8 | 3 | 1 |
| Work experiences | 1.6 | 0.6 | 2.2 | 0.6 | 2 | 0 |
| Nonstudent-Specific areas | | | | | | |
| Other | 2.4 | 3.4 | 0.8 | 3.4 | 3.2 | 2 |
| Policy work | 1.6 | 3 | 1.6 | 2.2 | 0.2 | 3 |
| Self-determination/self-advocacy | 0.4 | 2.4 | 1.8 | 2.2 | 1 | 1 |
| Program description, development, or evaluation | | 2 | 1.8 | 0.6 | 0.2 | 3 |
| Family involvement | | 0.4 | 1.2 | 0.8 | 0.8 | 2 |
| Interagency collaboration | | 1.4 | 0.8 | 1 | 0.6 | 0 |
| Instrument development | | 0.8 | 0.4 | 0.4 | 0.4 | 1 |
| Preservice training | | 0.4 | 2.2 | 0.4 | 0 | 0 |
| Adult services/service delivery | | 0.6 | 0.6 | 0.6 | 0.4 | 0 |
| Professional development | | 0.4 | 0 | 0.6 | 0.2 | 2 |

Table 5 depicts the average yearly number of transition topics from 1990 to 2015. During this time frame, articles about self-determination and "other" (e.g., general PSOs, postsecondary education, culturally relevant practices) grew significantly (454% and 563%, respectively); however, articles that addressed transition planning decreased by more than half. Increases in these topics are attributed to a surge in the Academic Development category, which comprised 67% articles about self-determination and 90% of articles pertaining to "other." Four topics (i.e., student perceptions, needed supports/services, assistive technology, and independent living) in this category have systematically increased over time and articles associated with student perceptions have nearly tripled since 1990 to 1994. However, in 2015, five of the six articles related to student perceptions were published in one journal (i.e., *CDTEI*).

In addition, topics related to assistive technology have been steadily increasing. Even though transition-based articles about assistive technology were first documented in 1999, it was not until 2009 that at least one article per year was published (range: 1 in 2009 and 2013 to 4 in 2010). Eleven of the 17 research studies that focus on assistive technology used students with an intellectual disability and 41% of those studies were published in *Education and Training in Autism and Developmental Disabilities*. Multiple articles examined the use of computer-assisted instruction (CAI) to improve involvement in self-directed individualized education programs (IEPs; Kelley, Bartholomew, & Test, 2013), knowledge of postschool options (Mazzotti, Test, Wood, & Richter, 2010), and comprehension of transition planning for parents of young adults with a disability (Rowe & Test, 2010). Several articles evaluated handheld devices to

improve independent living skills. For example, youth were taught to use iPhones to improve grocery shopping skills (Douglas, Ayres, & Langone, 2015).

Finally, several transition topics remain significantly understudied, such as transportation skills and extracurricular activities. Mechling and O'Brien (2010) described a video modeling intervention for bus transportation for youth with intellectual disabilities. Only one nonresearch-based article about extracurricular activities was identified (Carter, Swedeen, Moss, & Pesko, 2010).

## Discussion

The purpose of this review was to establish a comprehensive evaluation of transition literature associated with trends in publication, demographics, and topics. We examined 743 transition-related articles from 1990 to 2015. This review is the first study since Alwell and Cobb (2006) to analyze both research and nonresearch articles and extends the work of Madaus et al. (2013) which analyzed articles published in *CDTEI* from 1978 to 2012 on demographics and topical foci. Several findings emerged from our analysis.

First, the number of transition articles being published is increasing, as is the number of journals in which they are published. Although the numbers of articles being published outside of *CDTEI* remains low, the number has nearly doubled since 1990. Moreover, certain topics have routinely been published outside of *CDTEI*. Transition-related articles about assistive technology and independent living, for example, were found in eight other journals. Publishing in a wider range of journals affords researchers the ability to influence a more diverse audience outside of the transition arena.

Second, some topics have consistently garnered attention over time, whereas other areas remain overlooked. As in previous reviews (e.g., Alwell & Cobb, 2006; Hughes et al., 1997; Kohler, 1993; Landmark et al., 2010; Madaus et al., 2013), self-determination and transition planning have been the most frequently addressed and supported. Furthermore, there has been an increased interest in student perceptions about school, transition, and future. As early as 1997, Hughes and colleagues noted an increase in studies involving the active engagement of student participants in research. These studies continue to include mainly students with high-incidence disabilities, but many have shown that it is possible and important to include input from students with significant disabilities (Walte, Cushing, Athamanah, & Posey, 2017). There have also been increases in assistive technology (e.g., video modeling, audio-supported prompting) and student supports, which could be due to the increased access to handheld devices.

It is critical to describe areas that continue to receive little attention and lack empirical evidence such as independent living skills, transportation skills, money management, family involvement, and interagency collaboration. The lack of transition-related research in these areas is troubling, as life skills instruction accounted for 17 of the 32 in-school predictors of postschool success identified by Test, Fowler, and colleagues (2009). The dearth of family involvement and interagency collaboration research remains particularly concerning because these areas continue to be keystones within the updated version of the transition taxonomy by Kohler, Gothberg, Fowler, and Coyle (2016) and Morningstar and Clark's (2003) transition wheel. Studies purport the importance of family involvement on later postschool success in the areas of employment (Wagner, Newman, & Javitz, 2014) and postsecondary education (Grigal et al., 2011); yet, there exists little research to substantiate these claims. In addition, several researchers have highlighted the lack of evidence supporting interagency collaboration (Kohler, 1993; Landmark et al., 2010; Madaus et al., 2013). Similar to the results found by Landmark and colleagues (2010), of the 20 articles about interagency collaboration, only one of the 11 research studies was an intervention (i.e., Noonan, Erickson, & Morningstar, 2013).

A third finding, consistent with Habner and colleagues (2015) and Madaus and colleagues (2013), was unclear, inconsistent, or ambiguous demographic data. Participants' SES and English language proficiency were the most difficult to discern from the information authors reported. Transparency about participants and settings allows practitioners and researchers to accurately interpret the research and apply it to their settings. In addition, while researchers reported conducting studies in urban, rural, and suburban settings somewhat equally (i.e., a difference of $<10\%$ between settings), this finding is suspect and most studies (35.5%) failed to specify the location of the study. Almost 20% of school-age students live in poverty (U.S. Department of Commerce, U.S. Census Bureau, American Community Survey, 2016) and more than 10% of students with IEPs are English language learners (U.S. Department of Education, Office for Civil Rights, 2015), yet relatively few studies reported including these students in their research. As Madaus et al. (2013) explained, ambiguity in reporting demographics can lead to difficulty in making conclusions and connecting one study to another, thus halting the natural progression of research and blocking its pathway to practice.

Similarly, student participants in this review were not proportionately represented in terms of race/ethnicity and disability. Nearly 40% of student participants were identified as White. Only 12% of student participants were reported as African American, 4.5% were Latina/o, and a mere 0.5% were Native American. The most recent estimate from the U.S. Department of Education, Office for Civil Rights (2015) indicates that 23% of students with IEPs are Hispanic or Latino, 18.5% are African American, and 1.5% are Native American. Native American students, however, are identified with disabilities at a higher rate than any other group (i.e., 17% per McFarland et al., 2017), making their exclusion from transition research especially troubling.

Also concerning, the proportions of students' disabilities did not reflect their actual numbers in schools. For example, students with other health impairments (OHIs) represent 12.5% of the student population but only 3% of the research participants in this review. It is crucial that research accurately reflect the students who receive those practices to ensure equity in the attention their transition services garner in the literature and the availability of high-quality research for practitioners (Trainor, Lindstrom, Simon-Burroughs, Martin, & Sorrells, 2008). Fortunately, this is changing for some disability groups. Students with autism had historically been excluded from research but have recently been included in proportions almost identical to the actual representation in U.S. schools. According to the most recently reported IDEA data, students with ASD constitute 12.7% of students aged 18 to 21 years in the United States (U.S. Department of Education, 2016) and, since 2012, have made up 13% of the participants in transition research.

Finally, student transition outcomes are most successful with the support of a multidisciplinary team (Flowers et al., 2018), but most participants identified in this review were students with disabilities. Few participants represented other members of the typical transition planning team, such as administrators, paraprofessionals, adult agency personnel, and parents. The dearth of parent participants in particular is of deep concern, given that parental involvement is a strong predictor of postschool success (Test, Mazzotti, et al., 2009). Transition research must include a wider spectrum of participants to give a clear picture of how to best support transition-age students through planning.

### Limitations

There were several limitations identified in this literature review. First, the review was limited to 22 special education journals that met our inclusion criteria, which may have inadvertently reduced its scope. As transition transcends K–12 special education, several relevant articles may have been excluded because they were published in journals that focused on other related disciplines (e.g., *Journal of Vocational Rehabilitation*) and could have bolstered the areas with low representation such as interagency collaboration (e.g., Oertle & Trach, 2007; Povenmire-Kirk et al., 2015). Similarly, articles from other special education journals not included in the 2012 Journal Citation Report (Thomson Reuters, 2013), such as *Teacher Education and Special Education*, could have provided a more comprehensive picture related to teacher education and training of transition specialists (e.g., Kohler & Greene, 2004; Langone, Langone, & McLaughlin, 1991; Morningstar, Kim, & Clark, 2008).

As reported in previous reviews (e.g., Haber et al., 2015; Madaus et al., 2013), the amount of demographic data that was missing, inconsistent, or ambiguous made drawing conclusions and identifying trends difficult. Ages were often presented as ranges (e.g., 14–21 years) or categories (e.g., high school), gender was inconsistently reported, and student disabilities were sometimes described too broadly to be meaningful (e.g., "developmental delays"). Furthermore, 74 studies used secondary analyses (e.g., NLTS-2) and were excluded from the demographic analysis; yet, including them may have led to different conclusions about participants.

### Implications for the Field of Transition

The transition process inherently encompasses more fields than just K–12 education and research should extend into adult services and vocational rehabilitation and related services within the school system (e.g., occupational therapy, social work). This could generate a more comprehensive picture of the transition for multiple stakeholders. Although there has been an increase in research studies since 1990, a dearth of research in specific areas vital to the transition process persists. Topics such as interpersonal relationships, money management, transportation skills, extracurricular activities, and interagency collaboration remain understudied. Research that tackles these topics may result in new factors that promote positive PSOs.

In addition, researchers must strive to accurately and reliably report demographic data. Reporting participant and setting descriptions can affect intervention fidelity and help bridge the research-to-practice gap. Without research to guide teachers and other service providers that is reflective of their student population, students are at risk of receiving services that do not align with their needs (Wagner et al., 2014). To better inform practice, research should represent students from a variety of backgrounds. Otherwise, educators will be forced to retrofit supports and services shown to be effective with a subset of the population to students that remain outside of that subset. Such narrowly focused research can inadvertently lead to curricula, teacher preparation, and transition planning that may not be culturally relevant, which could potentially reproduce patterns of institutional racism by neglecting the unique needs of students and cultures that are not present in the literature (Santamaría & Santamaría, 2015). Therefore, researchers need to include diverse participants as well as consistently report demographics to assist readers when applying the findings to their own students.

An updated comprehensive review of methodological features (like Carter et al., 2013) and a review of intervention strategies and student outcomes (like Hughes et al., 1997) are required for a complete understanding of the current state of transition literature. Carter and colleagues (2013) analyzed articles only located in *CDTEI* and in Hughes and colleagues' (1997) review, although comprehensive requires updating with a broader focus on transition. These reviews would provide valuable information about research characteristics linked to improvements in

PSOs. In addition, reviews targeting transition-age students with high- and low-incidence disabilities would help guide research and practice for those groups of students.

This comprehensive literature review adds value to the field of transition for several reasons. It provides a historical perspective associated with trends in publication and topics beginning from the onset of when transition was first mandated in IDEA. Over the years, results indicate an increase in the frequency and venue associated with articles related to transition. We also have noted increases in research-based articles. Student participants continue not to reflect the general student population, as most participants are White males. Results from this review identified topics that have consistently garnered attention to topics with limited research.

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