Abstract Title Page

Title: The Development and Evaluation of a Professional Development Model to Build Meaningful and Effective IEPs for Transition-Aged Students

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Background / Context:

The intent of the transition mandates contained within the Individuals with Disabilities Education Act (IDEA, 2004) has been to ensure that students with disabilities receive meaningful and effective transition services. The Individualized Education Plan (IEP) is the foundation of the implementation of these services (Grigal, Test, Beattie, & Wood, 1997; Halpern, Yovanoff, Doren, & Benz, 1995). The transition requirements are focused on a results-oriented coordinated set of activities that promote movement from school to post-school activities, including postsecondary education, vocational education, integrated employment (including supported employment); continuing and adult education, adult services, independent living, or community participation (Gartin & Murdick, 2005).

Typical training and monitoring of IEPs has focused on teaching what the requirements are and monitoring that the IEP document contains minimal elements of these requirements. This approach to training has yet to result in quality secondary IEPs that are effective and meaningful. Specifically, studies indicate that secondary IEPs suffer from: a) unclear or vague goals, b) lack of mandated areas c) vague transition services with unclear timelines, and d) lack of alignment of IEP components (Grigal et al., 1997; Powers et al., 2005; Krom & Prater, 1993). Meaningful and effective transition age IEPs require a shift from considering the IEP as an annual action plan to a strategic long-term plan to ensure that services support student's identified postsecondary goals (deFur, 2003). The current study was grounded in a strategic planning process. This strategy generalizes to the IEP by shifting the focus of the development of the IEP on annual progress to a focus on the postsecondary goals and developing components to include skills, services, and annual goals to support progress toward postsecondary goals. Additional features of the training included, a) conducting several trainings over time, b) congruency of trainings with teacher's current knowledge and experience, c) active learning, d) use of professional learning communities, and e) opportunities for practice and direct linkage to practice. These features are commensurate with effective professional development strategies and adult learning principals (Borko, 2004; Little Gearhart, Curry & Kafka, 2003; Vaughn & Coleman, 2004).

Purpose / Objective / Research Question / Focus of Study:

The purpose of the study was to examine the potential efficacy of a professional development training model targeting IEP case managers of transition-age students. A training model was developed and a pilot study conducted to understand the promise of the model to improve the development of critical components within the IEP document that support the preparation of students with disabilities for further education and employment after high school services have ended. The current study focused on the postsecondary goals that are required within IEPs of transition-aged students.

Population / Participants / Subjects and Setting:

Participants included 18 secondary special education teachers from 12 high schools across five school districts located within the same county in a Northwest state. Teachers were included that managed a caseload of transition-age students identified for special education services. Years case managing IEPs ranged from 0=less than a year to 39 years ($\bar{X}$ =9.9, *SD* =10.6). Teachers ranged in age from 24 to 63 years ($\bar{X}$ = 42.8, *SD* = 13.2), and 61% of the participants were female.

Intervention / Program / Practice:

All case managers attended a two-day group training. The training focused on the rationale for postsecondary goals, transition services including the course of study, present level of academic and functional performance, and annual goals. Emphasis was placed on providing

the highest level of clarity and specificity within each of these components, and alignment of components with postsecondary goals. Case studies and participant's own IEPs were used throughout the training to demonstrate IEP components within a substantive context. IEPs and components were examined, discussed, and revised based on feedback provided by the research team and participants. Several extended learning and practice sessions were conducted. The format of these sessions was based upon a professional learning community model in which learning and extension to practice occurs through critical reflection with others who share the same experience and a focus on student learning (Buysse, Sparkman, & Wesley, 2003).

Research Design:

A pre-post waitlist control group design was employed to understand the promise of the intervention to impact the development of transition-age IEP documents. Preliminary findings are presented here that represent an examination of pre-post within group differences for the intervention group and the extent to which case manger and IEP-level variables accounted for differences in the development of postsecondary goals. Additional findings will be included in the poster session including treatment and comparison group analyses.

Data Collection and Analysis:

A sample of IEPs was gathered from each participant before and after participating in the professional development. A scoring manual was developed and tested to facilitate reliable scoring of the components of the IEP. The scoring manual went through several iterations of development and revision after which the manual was finalized and IEPs scored. Inter-rater reliabilities were conducted on 26% of the IEPs. Average inter-rater reliability was 89%. Scores along with student demographic characteristics were obtained from the IEP and a case manager information was obtained via a profile questionnaire.

Outcomes. The IDEA mandated postsecondary goal areas of employment and education/training were assessed. Within each of these two areas three outcome variables were scored reflecting: a) whether or not a postsecondary goal was present for employment or education/training (PSG-Present; 1=yes; 0=no), b) when present, whether or not the goal was stated to occur after high school services (PSG-After HS; 1=yes; 0=no), and c) the quality of the postsecondary goal (PSG-Quality—a continuous variable that ranged from 0 to 1). Postsecondary goal quality represented an average of scores of three attributes including: a) the degree to which the goal was measurable (scored 0=not observable to 3=observable and specific), b) is based on student interests and preferences (1 =yes; 0=no), and c) is based on an age-appropriate assessment scored (0= none stated to 2=both an assessment and interpretation of results provided).

Predictors. Three case manger level variables were included: a) the amount of professional development was scored as a proportion of the total number of hours of professional development training received divided by the total number of hours possible and ranged from 0=none to 1=all, b) years case managing IEPs, and c) primary teaching placement of the case manager scored 1=self-contained or 0=general education classroom or resource room. Three IEP level variables were included: a) time of measurement (0=pre; 1=post), b) student grade level scored 10 (9 and 10 combined) 11, 12 and 13 (18-21 services), and c) primary disability category which was rescored to represent the presence (=1) or absence (=0) of the three largest disability groups LD (learning disability), ID (intellectual disabilities) and Autism in the sample of IEPs collected. Table 1 provides a summary of the IEP and case manager level predictors.

Analytic Approach. The unit of analysis was student IEPs. The purpose of these analyses was to examine pre- and post- professional development differences in the scoring of IEP

postsecondary goal components (time of measurement variable) at the IEP level when case manager level variables are controlled r and additional IEP-level variables are included in the model. Hierarchical linear regression models were estimated for each of the three outcome variables within each of two postsecondary goal areas to produce six models. For these models, all case manager variables were entered in block one and all IEP level variables were entered in block two. Logistic regression models were estimated for dichotomous dependent variables (i.e., PSG-Present and PSG- After HS). Multiple linear regression models were estimated for the continuous PSG-Quality variable.

Findings / Results:

Table 2 depicts descriptive statistics of outcomes by time of measurement (pre/post). Case managers showed significant differences after receiving the intervention in whether a goal was present in the postsecondary education area but not for the employment area. For both areas significant differences were noted between pre and post IEPs in whether a goal was specified to occur after high school, and in the quality of the postsecondary goal. Overall, the initial descriptive statistics indicate an improvement in the IEP postsecondary goal components after the professional development.

Case manager and IEP-level variables

Presence of the postsecondary goal. When case manager and IEP-level variables are modeled in the PSG-Present in the employment area, the total model was significant χ^2 (8, 129) = 22.93 $p < .05$. Fit statistics (AIC) indicated that the model including only case manager–level variables was a better fit χ^2 (8, 129) = 17.76 $p < .001$ (See Table 3). Although no IEP or case manager level variables were significantly associated with whether or not an employment goal was present, the magnitude of the odds ratio for IEPs from case managers with a primary placement in a self-contained classroom indicated that these case managers were nearly 3 times more likely to have employment goals then case managers with primary placements in a general education classroom or resource room. In addition, IEPs of students with Autism were two times more likely to include an employment goal than students with other types of disabilities.

For PSG-Present in the education/ training area, the total model was significant χ^2 (8, 129) = 25.45 p < .001 and provided the best fit. The cumulative variance of the IEP variables was significant (block two), indicating the likelihood that case managers will write an education goal may vary according to individual student characteristics. Parameter estimates indicated that time of measurement was significant and the odds ratio indicated that IEPs collected after professional development were 6 times more likely to contain a postsecondary education/training goals than IEPs collected before training when case manager-level variables were controlled. No other case-manager or IEP-level variables were notable (See Table 4).

Postsecondary goal stated to occur after high school. The total model for PSG-After HS in the employment area was significant χ^2 (8, 106) = 45.88, $p < .001$ and provided the best fit. Parameter estimates indicated that IEPs from case managers with a primary placement in a self-contained classroom were 78 times more likely to have employment goals stated to occur after high school services than IEPs from case managers with a primary placement in a general education classroom or resource room. In addition, time of measurement was significant (p. < .05) and the odds ratio indicated that IEPs collected after training were 44 times more likely to contain employment goals that were stated to occur after high school services than IEPs collected before the training (See Table 5).

The total model for PSG-After HS in the education/training area was not significant. However, there were notable odds ratios for: a) teaching context, b) whether or not IEPs were of

students with Autism, and c) time of measurement. Namely, teachers whose primary placement was a self-contained classroom were 15 times more likely to write a postsecondary education goal that was to occur after high school than case managers with a primary placement in a general education classroom or resource room. IEPs of students with Autism were more than two times more likely to contain a postsecondary education goal that was stated to occur after high school than IEPs of students with other types of disabilities. Finally, IEPs collected after professional development were over four times more likely to have an education/training goal that was specified to occur after high school than IEPs collected before professional development, (See Table 6).

Quality of postsecondary goals. The total models were not significant in either area however, time of measurement contributed significant unique variance to both the employment ($t = 2.15$, $p < .05$) and education ($t = 2.07$, $p < .05$) models.

Conclusions:

The results indicate that when case-manager and other IEP-level variables were included in the model, postsecondary goals developed after the professional development training were more likely to be present for education/ training and to be stated to occur after high school services. In addition, time of measurement accounted for unique variation in the quality of postsecondary education/training goals. For the employment area, time of measurement did not significantly or meaningfully impact the presence of an employment goal, however, IEPs developed after professional development were more likely to contain postsecondary employment goals that are stated to occur after high school and time of measurement accounted for unique variation in the quality of employment goals. It was noted that a majority of IEPs contained postsecondary employment goals prior to professional development. The results also indicate that case manager's primary placement and a student's disability impacts the postsecondary goal content. Case managers with a primary placement in self-contained classrooms were more likely to have employment goals and postsecondary education goals that were to be stated after high school than case managers in a general education classroom or resource room. One explanation for a greater likelihood of having an employment goal for these case managers may be that case managers in self-contained classrooms focus more on functional goals rather than academically-focused goals. These case managers are typically focused on life skills and services required to support students with more severe disabilities to function in the community and therefore, may be more focused on after high school goals and services than case managers in general education/resource rooms. Similar findings were noted for IEPs of students with Autism.

These preliminary findings provide modest promise that the professional development training model impacted the development of essential components of postsecondary goals-- a foundational component of secondary IEPs. In addition, postsecondary goals varied by case manager and IEP level variables. Developing secondary IEPs that are compliant, aligned with the postsecondary goal and meaningful is important to the implementation of effective transition services that will prepare students with disabilities for further education, employment, and independent living. By the time of the SREE 2012 poster submission we will provide findings that include comparisons between our intervention and wait-list control group. With the provision of additional case managers and IEPs, we will use a HGLM framework to examine dichotomous variables and HLM for continuous. Time of measurement will be examined at Level 1 and group membership at Level 2. Moderator analysis will provide additional information regarding treatment variation.

Appendix A. References.

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Appendix B. Tables and Figures

Table 1

Student and Teacher Predictors

Predictor	*N*	%
Student		
Learning Disability	41	30
Mental Retardation	48	35
Autism	34	25
Other	21	15
Grades 9-10	36	26
Grade 11	29	21
Grade 12	41	30
Grade 13	31	23
Teacher		
Teaching context		
General Education or Resource Room	72	53
Self-contained classroom	65	47
Dosage[a]	.71[a]	.16[a]
Years Experience[a]	10.06[a]	9.88[a]

Notes. Students with multiple disabilities (14%) were counted in all appropriate disability categories. Dosage scale range is 0 to 1 and meant to be interpreted as a percentage. Years Experience ranged from 0 to 39.

[a]Means and standard deviations reported instead of *N* size and percent

Table 2

Pre/Post Professional Development Training Differences by PSG Outcomes across Employment and Education

	Pre- Training			Post- Training				
Outcome	*N*	$\bar{X}$	*SD*	*N*	$\bar{X}$	*SD*	*t*	Cohen's *d*
Employment								
PSG Present	75	.83	.38	62	.84	.37	0.18	.03
PSG- After HS	62	.69	.47	52	.98	.14	4.63**	.84
PSG Quality	43	.25	.19	51	.36	.25	2.38*	.50
Education								
PSG Present	75	.52	.50	62	.84	.37	4.14**	.73
PSG- After HS	39	.79	.41	52	.94	.24	2.16*	.45
PSG Quality	31	.32	.16	49	.41	.17	2.37*	.55

Note. Scale range on all outcomes is 0 to 1. Cohen's *d* statistic (.20 small effect, .50 medium effect, .80 large effect)
*$p < .05$.**$p < .001$.

Table 3

PSG Present: Hierarchical Logistic Regression Model Results and Standardized Beta Weights Employment

Model	β	*SE*	Odds	*df*	χ^2	-2LL	AIC
Step 1: Teacher characteristics				3	17.76**	106.2	114.2
Dosage	.37	.22	1.44				
Years teaching	.01	.04	1.01				
Teaching context	1.07	1.11	2.93				
Step 2: Student characteristics				5	5.16	101.1	119.1
Pre/Post	-.02	.51	.97				
Grade	-.43	.32	.65				
Learning Disability	-.56	.66	.56				
Mental Retardation	.38	1.07	1.46				
Autism	.81	.93	2.25				
Total model fit				8	22.93*		

Note. Standardized beta weights are shown when all variables were included in the equation. *SE* = standard error. -2LL = -2 Log Likelihood. AIC = Akaike Information Criteria. CI = Confidence Interval

*$p < .05$. **$p < .001$

Table 4

PSG Present: Hierarchical Logistic Regression Model Results and Standardized Beta Weights Education

Model	β	*SE*	Odds	*df*	χ^2	-2LL	AIC
Step 1: Teacher characteristics				3	5.06	169.7	177.7
Dosage	.01	.16	1.01				
Years teaching	.01	.02	1.00				
Teaching context	-.79	.71	.45				
Step 2: Student characteristics				5	20.38**	149.4	167.4
Pre/Post	1.78**	.45	5.98				
Grade	.12	.21	1.12				
Learning Disability	.19	.63	1.21				
Mental Retardation	-.20	.65	.81				
Autism	-.83	.57	.43				
Total model fit				8	25.45**		

Note. Standardized beta weights are shown when all variables were included in the equation. *SE* = standard error. -2LL = -2 Log Likelihood. AIC = Akaike Information Criteria. CI = Confidence Interval
*$p < .05$. **$p < .001$

Table 5

PSG- Stated-After-High-School: Hierarchical Logistic Regression Model Results and Standardized Beta Weights

Employment

Model	β	*SE*	Odds	*df*	χ^2	-2LL	AIC
Step 1: Teacher characteristics				3	17.58**	88.3	96.3
Dosage	-.84*	.32	.43				
Years teaching	.22*	.07	1.25				
Teaching context	4.35*	1.65	78.00				
Step 2: Student characteristics				5	27.30**	60.9	78.9
Pre/Post	3.78*	1.19	44.14				
Grade	-.63	.40	.52				
Learning Disability	-.58	.90	.42				
Mental Retardation	-1.65	1.24	.19				
Autism	-.46	.99	.63				
Total model fit				8	45.88*		

Note. Standardized beta weights are shown when all variables were included in the equation. *SE* = standard error. -2LL = -2 Log Likelihood. AIC = Akaike Information Criteria. CI = Confidence Interval
*$p < .05$. **$p < .001$

Table 6

PSG- Stated-After-High-School: Hierarchical Logistic Regression Model Results and Standardized Beta Weights

Education

Model	β	*SE*	Odds	*df*	χ^2	-2LL	AIC
Step 1: Teacher characteristics				3	2.52	64.5	72.5
Dosage	-.57	.33	.56				
Years teaching	.04	.05	1.04				
Teaching context	2.70	1.65	15.01				
Step 2: Student characteristics				5	11.01	53.5	71.5
Pre/Post	1.52	.80	4.59				
Grade	.04	.36	1.04				
Learning Disability	.52	1.00	1.69				
Mental Retardation	-1.20	1.44	.30				
Autism	1.95	.99	2.07				
Total model fit				8	13.52		

Note. Standardized beta weights are shown when all variables were included in the equation. *SE* = standard error. -2LL = -2 Log Likelihood. AIC = Akaike Information Criteria. CI = Confidence Interval
*$p < .05$. **$p < .001$