Beginning special education teachers: A model for assuring quality in a Master in Educating in Diversity

Abstract

The aim of the study is to assess the key components of the Master in Educating in Diversity (MED). It offers an alternative frame of reference for conducting process program assessment. The authors descriptively examine the following key MED components: formative program, organization of teaching, human resources, training process, and results. The process assessment method has two stages. The authors implement analyses in three phases: They compare the perceptions of two hundred and eight University students and 235 part-time faculty members on the quality of the MED components over a 10 year life span, examine the satisfaction of MED by 135 postgraduates, and assess the value added of MED by 707 stakeholders. The investigators conclude by describing steps necessary to improve the MED research base.

1.   Objectives

Since 1994, the University of La Laguna (ULL) in the Canary Islands, Spain, offers a rigorous two-year, 150-credit-hour Master in Educating in Diversity (MED). The two-year MED is designed to prepare teachers for positions within schools and other vocational workshops and residential settings serving persons with mild to severe disabilities in 1,500 hours (150 credits). Several objectives support MED: (a) diversity students must master the basic principles of learning professional roles in diversity and participate in integrated and inclusive educational settings by providing interaction with parents, children, and professionals, and (b) diversity students must demonstrate a high degree of competency in MED quality assessment, instructional intervention, and outcome evaluation as measured through systematic course exams and assignments and by carrying out applied research with human participants in various contexts. MED further seeks to produce highly competent professionals who have a firm foundation in evaluation, numerous experiences in the application of competencies to special education populations, and knowledge of current best practices in inclusion. These objectives are achieved through the guidelines of core course modules and elective seminars, which insure that all general competencies are demonstrated and evaluated. Practicum portfolio focuses on how to enact pedagogic strategies, use materials, and administer self-assessment associated with a particular case study report.

The investigators sought to test the basic hypothesis that personnel will develop a better understanding of inclusion competencies through the implementation of MED. Specifically, three basic research questions, each corresponding with issues of MED organization implementation and results effects are addressed:

a) Do University students and part-time faculty show a short-term outlook towards the MED organization with respect to its strengths and weakness*es*?
b) Does MED organization effect postgraduates' satisfaction?
c) Does MED instruction increase the knowledge and skills of postgraduates, according to the perceptions of stakeholders (postgraduates' peers and schoolboys and girls)?

2.   Theoretical framework

Novice special educators do not have meaningful patterns (e.g., personal beliefs and attitudes) that enable them to perform all tasks needed within the diversity domain (Zascavage, Masten, Schroeder-Steward, & Nichols, 2007; Forlin, Loreman, Sharma, & Earle, 2009). MED defines the competencies matrix that is intended as the core around which faculty members design course modules and evaluate the content of course modules (Table 1). This study is important because research in special education teacher education programs is almost nonexistent (Brownell, Ross, Colón, & McCallum, 2005).

Table 1. MED Competencies matrix

Core Competencies	Content courses (90 credits). Specific competencies	Practicum (30 credits). Specific competencies	Research project (30 credits). Specific competencies
Basic general knowledge in the field of study	Capacity for applying knowledge in practice: Interrelationship between school and society for all (Module 1)	Ability to identify potential connections between aspects of school and society, and their application in educational policies and contexts	Ability to work autonomously, preserving a community that values and celebrates ethnic, cultural, and socioeconomic diversity.
Ability to question concepts and theories encountered in special education studies	Ability to recognize the diversity of children with sensorial difficulties and the complexities of the learning process (Module 2)	Awareness of different multi sensory therapies	Demonstration of professional skills: Observation and measurement of stimulating activities
Capacity for analysis and synthesis	Ability to analyze concepts, theories, and issues of diversity related to motor and neuromuscular disorders (Module 3)	Information management skills (ability to retrieve and analyze information from different sources)	Ability to develop and evaluate motor function measures
Ability to foresee new rational and cognitive needs and demands	Ability to question concepts and theories encountered in rational-emotive and cognitive studies (Module 4)	Awareness of the different situations in which cognitive behavior therapy can take place	Measuring psycho educational change
Capacity to adapt to new situations	Ability to critically review studies dealing with attitudes towards self, social cognition, and psychological and psychiatric issues (Module 5)	Ability to communicate with experts in child and adolescent psychiatric care units	Capacity to work in an interdisciplinary team (child and adolescent psychiatric services)
Interpersonal skills	Special educational needs (SEN), and transition to adulthood for students with disturbances (Module 6)	Counseling skills and psychotherapy for children with mental retardation and borderline intelligence	Literacy in using assistive technology tools

Critical abilities in teamwork	Diversity issues for exceptional learners (Module 6)	Use of systematic screening and progress monitoring, providing specific activities and approaches with other professionals (i.e., caregivers)	Advanced methods in early childhood special education
Discernment of diversity, multiculturalism, and social marginalization	Capacity to learn cultural awareness (Module 7)	Capacity for generating new multicultural programs	Ability to explore educational programs with highly marginalized populations
Ethical commitment	Ethical climate and ethical culture in inclusion school centers (Module 7)	Inclusion and collaboration with social agents	Measurement of ethical climates of organizational commitment
Research skills	Developing a participatory multidisciplinary team approach (All modules)	Ability to manage projects for inclusion school improvement/ development	Ability to apply research methods in different contexts

3.   Method

In the two-year MED, the total number of University students enrolled over a period of ten years is 208 individuals. Part-time faculty taking part in this analysis (N = 235) come from several Spanish and international universities. Also, this study involves 135 postgraduate special education participants in order to examine their special education work experiences and career concerns. Finally, 707 stakeholders (students with disabilities who are receiving learning and professional support within general and inclusion-oriented classes, and other adult community personnel) are also surveyed.

4.   Data sources

To provide information about the processes and products of MED, a number of instruments are used as part of the evaluation: Student MED Assessment Questionnaire, Part-time faculty MED Assessment Questionnaire (FMAQ), Postgraduates' Satisfaction and Usefulness Questionnaire (PSUQ), and Stakeholder scale about the use of MED inclusion competencies FMAQ.

The process assessment method has two stages. The first stage involves using an internal evaluation of students' and part-time faculty's opinions on MDED quality criteria. The second stage of the analysis involves estimating impacts on postgraduates and stakeholders.

The researchers proceed from descriptive non-experimental research and explanatory non-experimental research to predictive non-experimental research. Chi-square statistics and *t* tests are used to examine differences in groups and MED quality criteria by demographic characteristics. Various exploratory factor analyses with a principal component analysis and varimax-rotation are conducted on the satisfaction variables. A regression model is used to control for differences in individual University student characteristics while measuring MED effects.

5.   Results

In order to examine the relations of demographic characteristics of MED agents, such as sex, age, degree, GPA, grant, employment, experience, and motivation (students) and sex, age, professional position, educational level, teaching experience, geographical settings, and development programs (faculty) with key MED components, the MED strengths and weaknesses responses of 443 individuals are examined (Table 2).

Table 2. Percentage of Strengths and Weaknesses in MED by University students and part-time faculty

Key MED components	Indicators	University students	Part-time faculty
Leadership	Management	S = 96.9%	S = 95.5%
Formative program	Relevance	S = 95.2%	S = 90,8%
	Coherence	S = 88.3%	S = 81.5%
	Adequacy	S = 87.8%	S = 88.1%
	Impact	S = 82%	S = 90.8%
Organization of teaching	Policies and Strategies	S = 93.6%	W = 71.2%
Human Resources	Part-time Faculty, counselors	S = 63.6%	S = 75.3%
Training process	Teaching Methods	S = 86.6%	S = 93.2%
	Tutoring System	S = 90.3%	S = 90.4%
	Assessment	W = 70.2%	S = 84.3%
	Practicum	S = 97.3%	S = 93.6%
	Research project	S = 91.3%	S = 91.3%
Results	Satisfaction	S = 89.3%	S = 84.0%

Note: S = Strength, W =Weakness

The results in Table 3 show the critical factor loadings of the current MDED model according to the perceptions of two groups: postgraduates and part-time faculty, for two sets of variables (PSUQ and FMAQ). To explore the factor structure of the PSUQ in postgraduates and the factor structure FMAQ in part-time faculty, two factor analyses on the items are conducted. A varimax orthogonal rotation follows the principal components analysis in both cases. Two criteria are used to analyze and interpret the factor analysis results and to determine the number of factors in the principal components analysis: (a) the root one criterion stating that factors with eigenvalues equal to or greater than one should be rotated, and (b) the "Scree Test" suggesting that factoring should cease when the plotted graph of the eigenvalues levels off, forming a straight line with an almost horizontal slope.

Table 3. Two factor analyses in two groups

Factor loadings	Postgraduates	Factor loadings	Part-time faculty
Factor 1: 3.463	Labor Market Access	Factor 1: 6.530	Perceived Relevance and Pertinence of MDED
Factor 2: 3.143	*Professional Competencies Learning*	Factor 2: 5.466	Information Channel
Factor 3: 2.732	Inclusive Education Relevance	Factor 3: 4.977	Relationships with Executive Chief
Factor 4: 2.643	Perceived Usefulness of Information and Content	Factor 4: 4.114	Relationships with Students
Factor 5: 2.005	New Perspectives on Diversity	Factor 5: 3.791	Impact and Effects
Factor 6: 1.793	Program Structure	Factor 6: 3.612	Treatment for Abroad Part-

			Time Faculty
Factor 7: 1.584	Social Relationships	Factor 7: 2.726	Working *Conditions* Assessment
		Factor 8: 2.447	Teaching and Communication Resources
		Factor 9: 2.374	Professional and Research Competencies
		Factor 10: 2.314	Classroom Physical Conditions
		Factor 11: 1.172	Genuine Information Giving

Together, the links between employee satisfaction and customer satisfaction that emerge from the regression analyses give the MED model its empirical substance. Six critical success variables (labor market access, professional competencies learning, perceived usefulness of information and content, new perspectives on diversity, and inclusive education relevance) yield relationships that fulfill the postgraduates' satisfaction criteria for specifying what is required for a model to be reasonable. Also, the stepwise regression identify six independent and statistically significant predictors of part-time faculty's intrinsic job satisfaction toward MED in the following order: information channel, impact and effects, working conditions assessment, teaching and communication resources, relationships with students, and perceived relevance and pertinence of MED, reflecting again the goodness of fit of the model (where $R^2 \geq 0$).

6.   Scientific significance of the study

MED become a microcosm of an inclusive society. This built confidence provides examples for attitude change. MED yields quantitative support for the competencies matrix framework. In addition to the proposed quality criteria and indicators, findings suggest that positive perceptions by University students and part-time faculty of the framework could make a positive contribution to postgraduates' sense of identification with MED. The fact that learning assessment was a weak indicator for students indicates a need to change students' operating definitions of assessment as a collection of information from a variety of sources (portfolio) in order to broaden their practices. Systematic adoption of master's degree competencies does not come easily. Now that the Spanish government has placed greater emphasis on supporting graduate and postgraduate competencies, it is the responsibility of universities to include special education competencies in their overall mission and goals. Finally, this study suggests that embedding core competencies focused on inclusive education in the MED content is an effective way to develop the knowledge base of general education teachers in the area of special education.

7.   Recommendations

Our research suggests that future masters in Educating in Diversity should be guided by these considerations:

- *Practicum eportfolio.* A serious concern to the success of a university student in any MED is the amount of time that he or she requires in completing the practicum eportfolio. The nature of a MED should be its flexibility and freedom provided to the university students as part of professional revalidation and appraisal to assess their professional competencies (Kossar, 2003). Furthermore, the complex process of

embedding and developing a MED practicum eportfolio should be evaluated, including the stages throughout the two-year MED where they are assessed.

- *Quality special teacher*. Without an approach to defining what a quality special teacher is universities and policymakers are unable to supply competent special education teachers. MED is an alternative preparation route with regard to improving the overall quality of the special education teaching workforce (Brownell, Hirsch, & Seo, 2004).
- *World of work*. Any framework of MED program should carefully consider ways to infuse transition practices to students into their curricula and training (Madaus, Zhao, & Ruban, 2008).
- *Research method*. Research on special teacher quality should also focused on understanding the complexity of special teachers' competencies and interactions with school children and other community contexts (Blanton, Sindelar, & Correa, 2006).

References

Blanton, L.P., Sindelar, P.T., & Correa, V.I. (2006). Models and measures of beginning teacher quality. *Journal of Special Education, 40*(2), 115-127.

Brownell, M.T., Hirsch, E., & Seo, S. (2004). Meeting the demand for highly qualified special education teachers during severe shortages: What should policymakers consider? *Journal of Special Education, 38*(1), 56-61.

Brownell, M.T., Ross, D.D., Colón, E.P., & McCallum, C.L. (2005). Critical features of special education teacher preparation: A comparison with general teacher education. *Journal of Special Education, 38(4), 242-252.*

Forlin, C., Loreman, T., Sharma, U., & Earle, C. (2009). Demographic differences in changing preservice teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education, 13*(2), 195-209.

Kossar, K. (2003). Graduate Practicum-Special Education: Assessment through Portfolio Development. *Teacher Education and Special Education, 26*(2), 145-149.

Madaus, J.W., Zhao, J., & Ruban, L. (2008). Employment Satisfaction of University Graduates With Learning Disabilities. *Remedial and Special Education, 29*(6), 323-332.

Zascavage, V., Masten, W.G., Schroeder-Steward, J., & Nichols, C. (2007). Comparison of critical thinking in undergraduates and graduates in special education. *International Journal of Special Education, 22*(1), 25-31.