

Master's Degree "Educating in Diversity" (MDED): Toward Inclusion Education Quality

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Special education master's degrees are proliferating, most probably in response to the requirement for all special education teachers to be highly qualified. The aim of the study is to evaluate the 10-year Master's Degree "Educating in Diversity" (MDED) at the University of La Laguna (ULL) and to examine the extent to which the development of diversity competencies in graduates is related to their perceptions of the overall quality of the postgraduate program. Two hundred and eight University students and 235 part-time faculty members evaluated the basic program indicators. Finally, MDED results gathered from 135 postgraduates and 707 beneficiaries indicate high levels of purpose achievement and satisfaction with the program, the faculty, and the curricular content. The framework for improvement in which the MDED is viewed as compatible with national and regional evaluation and accrediting agencies is discussed.

Since 1994, the University of La Laguna (ULL) in the Canary Islands, Spain, has offered a rigorous two-year, 150-credit-hour Master's Degree "Educating in Diversity" (MDED). The program has been developed with the fundamental aim of improving the quality of the special education teachers (SETs) for a broad concept of diversity education that includes issues in contemporary approaches to multicultural education (Pohan & Aguilar, 2001). As in many other countries, Spanish general education teachers (GETs) are teaching students with a wide variety of learning and behavioral needs in wide-ranging instructional situations. The Spanish school and curriculum normalization and mainstreaming movements that occurred in 1995 have made the inclusion of boys and girls with special educational needs in general education classrooms a compulsory approach. The enactment of the *Education Law* in 2006 paved the way for the mainstreaming of boys and girls with disabilities, requiring that they be placed in normal classrooms or special education units or schools. In addition, GETs are moving toward more inclusive educational practices, from simply providing special education students with learning opportunities to the provision of full inclusion services.

SETs' thinking is complex and may tend to focus on the needs of the individual student, as Stough and Palmer found (2003, p. 219), but they do not have meaningful patterns that enable them to perform all tasks needed within the diversity domain. The caseload (i.e., the type of school program, preparation and type of staff, student disability label, and grade level) is assumed to be one of the main determinants of what is required of qualified SETs in Canarian schools. The regional community has prescriptive regulations concerning caseload. However, how caseload influences outcomes for students with disabilities is supposedly unknown (McLeskey, Tyler, & Flippin, 2004). According to Rosenberg and Sindelar (2005),

teacher shortages in special education are due to insufficient supply of personnel with full academic credentials. This shortage of individuals is also happening in the Canarian general and special education schools. Unfortunately, more services such as "consulting teacher services, cooperative teaching in the classroom, supportive resource programs, and instructional assistants" (Idol, 2003, p. 90) are needed for GETs and SETs to work collaboratively. For SETs to collaborate effectively with other professionals requires competence in the general education curriculum as well as effective interpersonal communication abilities (Lovingfoss, Molloy, Harris, & Graham, 2001). Thus, the para-educator workforce may be a potential pool to meet the demand for highly qualified SETs who could address the scarcity of professionals in special education (White, 2003).

Recent investigation shows that carefully designed training programs help achieve the aim of reducing stress rates for new teachers (Brownell, Hirsch, & Seo, 2004). Successful training program indicators include thoroughly supervised field experiences, collaboration between personnel, and training program evaluation. Nowadays, most teacher education program principles include teaching competencies that students are expected to practice. The manner in which teaching competencies are delineated varies depending on the aims of the teacher education program. Upgrading the quality of special education teacher education programs requires the provision of SETs capable of adapting both their classroom instruction and out-of-classroom practices in response to changing special educational trends and policy demands. Those programs can be implemented by education training units providing short courses for SETs or by enrolling such teachers in postgraduate teacher preparation programs at universities (Boe, 2006).

Yet, research in special education teacher education programs is almost nonexistent (Brownell, Ross, Colón, & McCallum, 2005). Nevertheless, Brown, Welsh, Hill, & Cipko (2008), in a study realized in the United States, assessed teacher candidates' knowledge of and attitudes towards teaching students with learning disabilities and concluded "There is evidence in the literature to suggest, however, that one stand-alone course in this area may not be sufficient to increase the skill, competence, and confidence of the general educator when working with children with learning disabilities" (p. 2093). Generally speaking, a few studies conducted in several countries tend to support the view that special education qualifications acquired from pre- or in-service courses are related to less opposition to classroom inclusive practices (Avramidis & Norwich, 2002).

Spanish universities' initial training programs for SETs were established in 1991 but provided SETs with insufficient instruction to be successful in inclusive classrooms. Also, GETs are concerned regarding a lack of confidence in teaching students who are mainstreamed. At present, some universities are advocating an enriched model of special teacher education where students take a master's degree program that professionalizes them in special education issues. The ULL's MDED assumes a philosophy that considers the University student as both scholar and professional. The two-year MDED is designed to prepare GETs and SETs in 1,500 hours (150 credits) for positions within schools, vocational workshops, and residential settings that serve persons with mild to severe disabilities. The obtainment of an MDED is important because it is not only an indication that special education personnel are highly trained or qualified but also a necessary degree to increase the number of leaders in special education and related fields.

From another point of view, UNESCO notes that employability has recently occupied a better position in the European debate on the reform of higher education. It also contends that many professional master's degrees are proposed to make graduates more employable and are becoming more closely linked to labor market competencies (*Shared 'Dublin' Descriptors*, 2004).

MDED's students specialize in core competencies through elective coursework, practicum experiences, and defending a research project to make data-driven decisions to serve the community's students with disabilities. For this reason, the primary goals in the MDED are:

1. Provide advanced information and training to graduate students and in-service professionals in the field of Special Education for instructional

intervention, with outcome evaluation measured through systematic course exams and assignments (competencies # 1, #2, and # 8).

2. Address the requirements of recent Canary Islands legislation and provide training in research to prepare Special Education professionals to make data-driven decisions that lead to the best possible outcomes for students by carrying out applied research with human participants in various contexts (competencies # 3, #6, #7, and #10).

3. Allow the ULL to address the needs of persons with disabilities, participate in integrated and inclusive educational settings, and contribute to the improvement of local and regional communities by providing interaction with parents, children, and professionals (competencies # 4, # 5, and #9).

These goals are to be achieved through the guidelines of core course modules and elective seminars which insure that all general competencies are demonstrated and evaluated. Careful and complete practicum work with children or adults who have disabilities is required, integrated well with coursework, and supervised carefully. Finally, MDED defines general and specific competencies or abilities that effective special educators should possess by the time they leave the ULL training institution.

The competencies matrix is intended as the core around which faculty members design course modules and evaluate the content of course modules. Competency based grading is defined as a mastery of "carefully specified special education objectives." These general and specific MDED competencies are shown in Table 1.

Part-time faculty and students monitor the accomplishment of competencies for quality teaching. These MDED features are common to other effective indicators of teacher training programs (Brownell et al., 2005). MDED also provides assistance to students seeking employment in special education. To this end, guest speakers and external suppliers from 113 local public and private special education schools, government, or community organizations were supported by MDED's Chief Executive.

According to Delaney (1997, p. 242), "Historical analysis has revealed that assessment of master's degree programs in the United States was rarely mentioned in the literature until the 1970s." In response to this limitation, attributes of high-quality master's experiences that could form the basis for a quality assurance system based upon performance indicators have been identified in European higher education (Jeliaskova & Westerheijden, 2002) as well as in other countries (Hendry, Cumming, Lyon, & Gordon, 2001).

Table 1
MDED Competencies Matrix

Core Competencies	Content Courses (90 credits). Specific Competencies	Practicum (30 credits). Specific Competencies	Research Project (30 credits). Specific Competencies
1. 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.
2. 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
3. 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
4. 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 psychoeducational change
5. 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)
6. 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
7. 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
8. 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
9. 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
10. 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

The ULL's MDED has been consistently addressing a quality assurance system to determine its strengths and weaknesses. In one study, some MDED model dimensions were rated by 240 part-time faculty in the 1994–2004 period (Alegre, 2006). In order to safeguard minimum standards, a quality assurance exercise to evaluate the process accuracy was done by all currently enrolled students. Every two

years, overall MDED internal evaluations were also conducted to promote students' involvement.

We sought to test the basic hypothesis that personnel involved in the master's degree program will develop a better understanding of inclusion competencies through the implementation of MDED. Specifically, three basic research questions, each corresponding with issues of

MDED organization implementation and results effects, were addressed:

1. Do students and part-time faculty perceive short-term results concerning the MDED organization with respect to its strengths and weaknesses?
2. Are there linkages between customer satisfaction (postgraduates), employee satisfaction (part-time faculty), and MDED organizational measures?
3. Are core MDED competencies successfully delivered by postgraduates, according to the perceptions of postgraduates' peers and beneficiaries (adults and school boys and girls)?

MDED necessitated a closer communication between educators and labor organizations (i.e. labor market connectivity). This communication information was important because it can point to both the obstacles to building MDED–labor market connections and the responsibility for providing students with the competencies they need for the workplace.

Method

Participants

In the two-year MDED, the total number of University students enrolled over a period of 10 years was 208 individuals, with a greater number of women than men: 184 females versus 24 males. Part-time faculty taking part in this analysis (N = 235) came from several Spanish and international universities. Also, this study involved 135 postgraduate special education participants in order to examine their special education work experiences and career concerns. Therefore, postgraduates with labor market knowledge, including 70 individuals with social contracts or grants, were selected to answer some questions in a 10-minute interview. The majority of the postgraduates' peers were women, who represented 76.2% of 303 asked to respond. They worked in public and private special education schools, town halls, universities, hospitals, or community organizations. Finally, 707 MDED beneficiaries (students with disabilities who were receiving learning and professional support within general and inclusion-oriented classes, and other adult community personnel) were also surveyed, 465 of whom were female (65.8%) and 242 male (34.2%). The public and private special education schools, government, or community organizations that participated in this study were located in urban, suburban, and rural settings. Considered together, the largest age group of

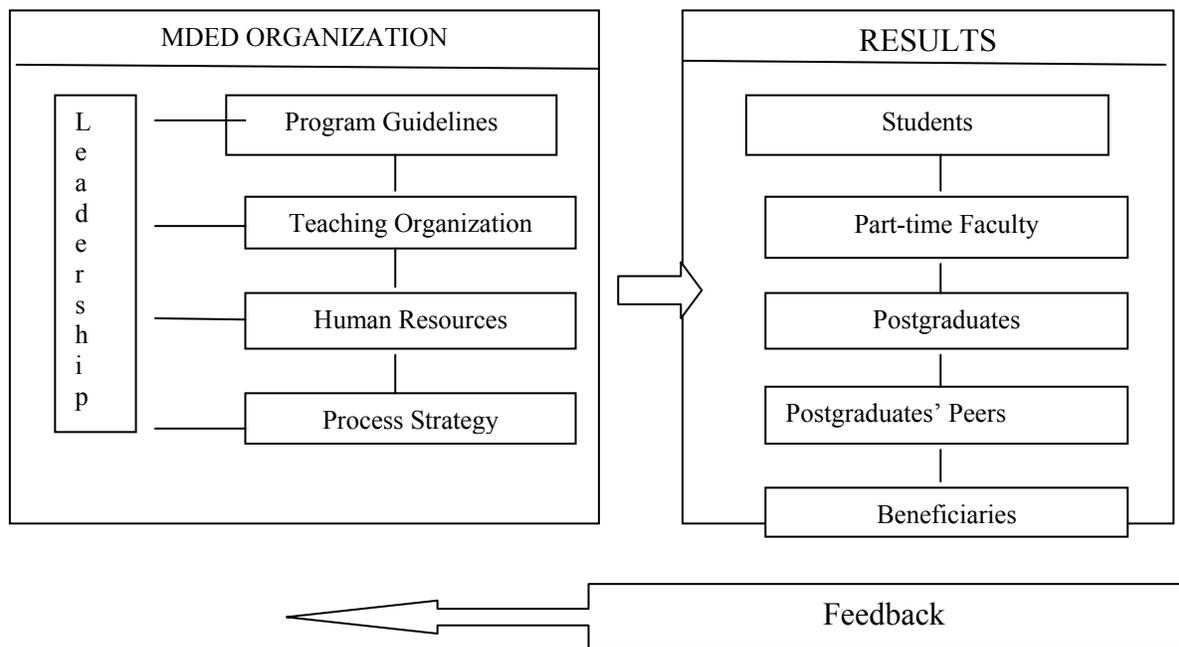
beneficiaries was the 16–19 year range (N = 201 students).

Data Collection Instruments

To provide information about the processes and products of MDED for 1994–96, 1997–99, 1999–2001, 2001–03, and 2003–05, a number of instruments were used as part of the evaluation. A database system was designed for structured data. This database application involved high-dimensional data and allowed precise data retrieval queries. Organization of the data followed a layered architecture that modeled separately the personal information, domain data, and application data. Data were also collected from academic records, academic staff's diaries, papers, photos, talks, cost expenditures, and so forth. Analyses of these data are published in a report and will be the basis of future investigations (Alegre & Villar, 2008). The tools had strong face and content validity and the reliability was high for each instrument. Determination of face and content validity involved evaluation of the tools by expert University judges. One of the basic aims of the MDED evaluation tools is simply to focus faculty and other beneficiaries' attention on some of the most important aspects of Master's degrees in Special Education. Evaluation tools were designed and conducted to assist students, faculty, postgraduates and other community beneficiaries (other practitioners and educational organizations) to assess MDED's merit and worth. We developed a multi-level evaluation strategy that sought to place differing faculty member's, students' and beneficiaries' expectations into complementary relationships, in order to enhance the development of MDED. The following evaluations were created:

Student MDED Assessment Questionnaire (SMAQ). A response sheet combining methods of evaluation (grading and open questions) attempted to qualify the MDED organization's value. Administered at the end of each course module, this instrument obtained students' demographic descriptions and judgments of the effects of MDED on special education and professional development. It was also used to rate the strengths and weaknesses of MDED on a five-point Likert scale (e.g., "Do you believe your learning has benefited from this teaching module?"). Items rated "1 = strongly disagree" and "5 = strongly agree" were considered as strengths and weaknesses, respectively. Specifically, the questions of the survey addressed (a) the management commitment of the director, (b) the relevance of the program guidelines, (c) the assessment of the teaching organization, (d) the assessment of human resources, (e) the routines generated that facilitated or hindered the application of competencies in the process strategy, and (f) the impact of MDED on its members (Q1).

Figure 1
MDED Quality Criteria



Part-time Faculty MDED Assessment Questionnaire (FMAQ). A response sheet was completed which provided demographic data and opinions about each MDED edition. Background variables derived from each specific response sheet included genre, age, expectations, perceptions, academic or professional experience, and so on. It was also used to assess overall satisfaction with MDED. Specifically, three dimensions were covered in the instrument including MDED organization (28 items) and self-assessment (20 items). It was also used to rate the strengths and weaknesses of MDED on a five-point Likert scale (e.g., "I reflect on my teaching on the module"). Items rated "1 = strongly disagree" and "5 = strongly agree" were considered as strengths and weaknesses respectively. Additionally, an ordinal variable was proposed to measure the following hypothetical construct: Item 49. "Rate from 0 to 5 your satisfaction perception of MDED teaching-learning processes." The reliability of the instrument was .890 (Cronbach's alpha) (Q1 and Q2).

Postgraduates' Satisfaction and Usefulness Questionnaire (PSUQ). Six dimensions were covered in the instrument including content, practicum, research project, competencies, professionalization, and general evaluation. A list of 50 items in the form of a positive Likert-type scale asked postgraduates to rate the perceived usefulness of specific MDED dimensions

ranging from 1 (poor) to 5 (excellent). An additional question asked about suggestions for improving MDED. It was a hypothetical construct continuous variable, measured on a five-point Likert-type ordinal scale (responses ranged from "strongly agree" (5) to "strongly disagree" (1) (e.g., "I am satisfied with my learning on MDED"). The reliability of the instrument was .912 (Cronbach's alpha) (Q2).

Beneficiary scale about the use of MDED inclusion competencies. An 11-item Likert-type scale called "Postgraduates' Assessment by Peers" (PAP) was circulated to all 303 peers of postgraduates to measure the perceived use of MDED competencies, from 1 (weakest capability) to 5 (strongest capability), with a reliability of .880 (Cronbach's alpha) (e.g., "I verify that he or she demonstrated professional competencies learned from the master's program"). The same scale was also passed to 225 beneficiaries (adults) (Cronbach's alpha = .857). Finally, the "Postgraduates' Assessment by Beneficiaries – Children" (PAS-C) was distributed among 482 school boys and girls. A 10-item Likert-type scale was used to measure the perceived usefulness construct (e.g., "My teacher enjoys teaching materials for children who have difficulty learning"). The items were scored on a five-point scale ranging from 1 (least capability) to 5 (greatest capability). Cronbach's alpha showed a high degree of internal consistency reliability (.920) (Q3).

While the SMAQ and FMAQ were distributed to all the new first year students and part-time faculty members in the participating courses during instruction, PSUQ and PAP were administered at the end of the final professional stage of MDED.

Procedure

The proposed method has two stages. The first stage involves using an internal evaluation of students' and part-time faculty's opinions on MDED quality criteria (Figure 1). In fact, the European Foundation of Quality Management (EFQM) model is followed as a means for measuring and improving the overall quality of MDED, as happens with other excellence projects in Western Europe (Westerveld, 2003; Calvo-Mora, Leal, & Roldan, 2005), because the EFQM Excellence Model is the most widely used model for self-assessment in Europe.

Five cycles of data collection are used to assess the 10-year MDED curriculum (1994–96, 1997–99, 1999–2001, 2001–03, and 2003–05). Each student and part-time faculty cohort assessed the quality criteria affecting each two-year MDED. The assessment of student performance on each module was conducted with reference to the competencies that are recommended by MDED program guidelines (see Table 1). Proposed program guidelines are aligned to general and specific competencies. The obtaining of general and specific competencies was determined by the compilation of a variety of evidences and products. The director, committees, and academic councils developed teaching guidelines, established relationships with organizations, contracted qualified part-time faculty, managed and improved teaching and learning strategic processes required for sustainable success, and implemented these via their actions and competencies in order to fully satisfy students, customers, and other beneficiaries. Student evaluations and part-time faculty evaluations were collected for each course module and practicum; the research project capstone was a thesis. However, there is no knowledge about the relationships between the MDED organization (enabler criteria) and the most crucial of the MDED results criteria, "people results" (students, part-time faculty, postgraduates, postgraduates' peers, and other beneficiaries).

The second stage of the analysis involves estimating impacts on subgroup members. These considerations suggest that there is a need for an MDED that links people results to the MDED organization that executive management can use in order to increase the satisfaction of the students and part-time faculty, and thus the satisfaction of postgraduates, postgraduates' peers, and other beneficiaries. Knowledge of the MDED learning

results is feedback from the special education workplace, which was used to improve MDED organization.

Data Analysis

Our approach proceeded from descriptive non-experimental research and explanatory non-experimental research to predictive non-experimental research. Values were imported from the Statistical Package for the Social Sciences (SPSS) 13.1 for Windows. Chi-square statistics and *t* tests were used to examine differences in groups and MDED quality criteria by demographic characteristics. Various exploratory factor analyses with a principal component analysis and varimax-rotation were conducted on the satisfaction variables. A regression model was used to control for differences in individual student characteristics while measuring MDED effects.

Results

Descriptive Results About MDED Quality Assurance

In order to examine the relations of demographic characteristics of MDED 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 MDED organizational strengths and weaknesses, the responses of 443 individuals were examined. To determine the quality service rates of the "units of goodness packed into the training service," we used simple percentage counts of the critical variables of MDED practices provided by students and part-time faculty through the SMAQ and FMAQ, and therefore high response percentages indicating strong personal support for MDED quality criteria and indicators are presented in Table 2. What are the individuals' characteristics that are able to capture the range of values (strengths and weaknesses) of an atypically insular MDED?

Students. Of the 208 students in the 10-year MDED, females made up 88.5% of the respondents ($N = 184$) while 11.5% were males ($N = 24$). Cramer's *V* was used for measuring the strength of association or dependency between two categorical variables in a contingency table. There was a smaller association between the categorical variables female \times male ($V = .245$). Moreover, based on the results of Levene's test, a *t* test shows there was a significant difference between female and male opinions with respect to the usefulness of MDED [$t(-2.713)$, $p < .008$]. By age group, 69.7% were 19 to 24 years old (the younger group), 16.3%

were 26 to 30 years old (the middle age group), and 13.9% were 30 years or older (the older group). With respect to University GPA, 44.7% of students had median performance and 37.6% had low performance, while high GPA students comprised only 17.8% of the sample. University tuition fees were paid by 94.2% of students, while 5.8% of students were entitled to a University grant. Approximately 27% of students were working while attending MDED, but the unemployment rate was high (38.9% of students), and 34.1% of students were not seeking employment. Therefore, 73.4% of students did not have professional experience, 14% reported having more than three years' experience, and 12.6% replied that they had less than three years' experience. Employability was clearly not the main motivation for students to obtain a master's degree. Almost 52.9% of current MDED students did not answer this question about motivation, 21.6% said that the most important reason to study was to learn more in-depth information, 19.7% were interested in inclusion content, and 5.8% wanted to learn about other educational contexts. It should be noted, however, that Cramer's V statistics revealed some significant interrelations among variables: student employment \times practicum qualification ($V = .163$) and research project ($V = .166$); participant's GPA mean level \times module 5 qualification ($V = .267$), research project presentation and defense ($V = .164$) and practicum ($V = .272$); student's degree \times labor situation ($V = .451$) and practicum qualification ($V = .226$); and students' age \times students' degree ($V = .284$), labor situation ($V = .326$), and practicum qualification ($V = .225$). The null hypothesis which stated that the two groups do not differ was accepted, and accordingly one t statistic was applied for age, degree, GPA, grant, employment, experience, and motivation.

Part-time faculty. In terms of staff characteristics, 52.2% ($N = 128$) were men. The total number of core faculty was divided by age into three different groups: 11.1% were 25–39 years old (novice faculty), 53.5% were 40–55 years old (mature faculty), and 35.5% were 55 years or older (older faculty). The majority of staff were professionals (61.6%, $N = 151$), and 38.4% were university teachers. A large number held PhDs: 51% ($N = 125$), while 37.6% held BA degrees, and an insufficient number percentage held diploma degrees (11.4%). There was tremendous variability in terms of teaching experience: 60.6% ($N = 57$) of participants had 13 years of experience or more while 39.3% of the faculty had less than 12 years of teaching experience. MDED provided faculty from different geographical settings: insular (80.4%, $N = 197$), national (14.3%), and foreign (5.3%). The overwhelming majority did not attend faculty development programs (78.7%, $N = 74$) and 21.3% received a type of academic support. To examine whether their MDED assessments were related with their social backgrounds, such as gender, age, professional position,

educational level, teaching experience, geographical setting, and development programs, Chi-square tests and the corresponding cross-tabulated tables were constructed. There was a significant association between males and females representing a weak association between variables (Cramer's $V = .258$), but the means of the two samples were equal (no significant difference). Also, there was a significant association between mature faculty and degrees (Cramer's $V = .167$). It was found that professionals valued the MDED teaching organization [$t(3.479)$, $p < .001$] more than University teachers. A t -test also showed that professionals had a better understanding of student behavior (MDED process strategy) [$t(2.175)$, $p < .000$]. Regarding degree types, faculty differed with respect to MDED teaching organization [$p < .002$ according to an analysis of variance (ANOVA)]. In determining which particular faculty degree groups have significant mean differences, post hoc Scheffé multiple comparisons were utilized, obtaining the expected BA degree faculty result. Levene's test was significant for staff development with respect to the way MDED information was managed [$t(3.860)$, $p < .000$].

Table 2
Percentage of Strengths and Weaknesses in
MDED by Students and Part-time Faculty

Quality Criteria	Indicators	Students	Part-time
Leadership	Management	S=96,9%	S=95,5%
Program Guidelines	Relevance	S=95,2%	S=90,8%
	Coherence	S=88,3%	S=81,5%
	Adequacy	S=87,8%	S=88,1%
	Impact	S=82,0%	S=90,8%
Teaching Organization	Policies and Strategies	S=93,6%	W=71,2%
Human Resources	Part-time Faculty, counselors	S=63,6%	S=75,3%
Process Strategy	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

MDED critical factors: two groups, and two sets of variables. 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).

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

Table 4
Linear Regression Results:
Postgraduate Satisfaction and MDED Structural Variables

MDED Structural Variables	R	R ²	F	gl	p	B	t	p
Labor Market Access	.733	.538	19.022	6.98	.000	.456	6.426	.000
Professional Competencies Learning						.312	4.474	.000
Perceived Usefulness of Information and Content						.174	2.290	.024
New Perspectives on Diversity						.216	3.038	.003
Program Structure						.180	2.586	.011
Inclusive Education Relevance						.179	2.564	.012

Table 5
Linear Regression Results: Part-Time Faculty
Job Satisfaction and MDED Structural Variables

MDED Structural Variables	R	R ²	F	gl	p	B	t	p
Information Channel	.757	.574	43.243	7, 225	.757	.453	10.399	.000
Impact and Effects						.366	8.419	.000
Working Conditions Assessment						.305	7.007	.000
Teaching and Communication Resources						.281	6.379	.000
Relationships with Students						.187	4.299	.000
Perceived Relevance and Pertinence of MDED						.132	3.031	.003

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 were conducted. A Varimax orthogonal rotation followed the principal components analysis in both cases. Two criteria were 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 1 should be rotated, and (b) the scree test criterion by Cattell (1966) suggesting that factoring should cease when the plotted graph of the eigenvalues levels off, forming a straight line with an almost horizontal slope. should cease when the plotted graph of the eigenvalues levels off, forming a straight line with an almost horizontal slope.

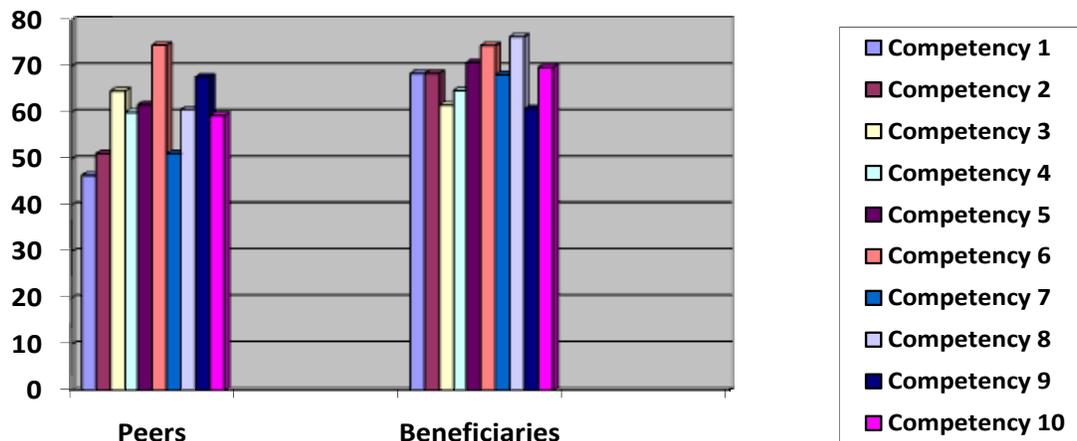
Because MDED organization ability requires that students, postgraduates, and part-time faculty at all levels engage in learning-based activities,

understanding why satisfaction occurs and the directions in which to implement changes are essential for MDED. To systematically examine the reasons behind postgraduates’ and part-time faculty’s expectations and satisfaction, several regression analyses were conducted. In the first regression model, the dependent measure was the continuous satisfaction variable, and the 7-factor loadings served as predictors (see Table 4).

In the second regression model, the dependent measure was also the continuous satisfaction variable, and the 11-factor loadings served as predictors (see Table 5).

Regression results are detailed in Tables 4 and 5. Together, the links between employee satisfaction and customer satisfaction that emerged from the regression analyses give the MDED model its empirical substance. As can be seen in Table 4, six critical success variables yielded relationships that fulfilled the customer

Figure 2
Perceived High Quality Use of Postgraduate
Competencies by Peers and Beneficiaries



satisfaction criteria for specifying what is required for a model to be reasonable (where $R^2 \geq 0$). Also, six independent variables from a set of variables were entered in the regression analysis that fulfilled the criteria of part-time faculty's intrinsic job satisfaction, reflecting again the goodness of fit of the model (where $R^2 \geq 0$) (Table 5). On the basis of these findings, we can now understand better the cause-and-effect linkages underlying our respondents' satisfaction perceptions.

Competencies critical for success. The response category 5 (best capability) of PAP and PAS-C was considered for descriptive analysis to indicate the respondents' attitudes and values regarding the 10 postgraduate competencies. Peer review is an alternative evaluation arrangement involving colleagues assessing the quality of their fellow teachers' competencies. The percentages shown in Figure 2 indicate that the majority of peers assessed 10 competencies as essential for postgraduates' success (above 50%). Specifically, 74.6% of peers considered that "postgraduates' formation has enriched them as professionals," giving "interpersonal skills" the highest rating for degree of competence practiced. Beneficiaries identified all competencies as critical for postgraduates' success. Particularly, 76.4% of respondents "observe that they [postgraduates] present a good attitude toward group work" when practicing "discernment of diversity, multiculturalism, and social marginalization." Beneficiaries of the community, adults (administrators and policymakers, hospital social workers, quality agency, and University personnel) and schoolboys and girls, have different opinions about the importance of the ten core competencies.

To determine the extent to which peers and beneficiaries (adults and schoolboys and girls) responded differently to the items of the questionnaire, an ANOVA was conducted for "social image" from several response items of PAP (items 6, 9, 10, and 11) and PAS-C (6, 9, and 10), the new construct being a dynamic perspective aimed at creating the conditions for observing how curricula and teaching practices are fostering social inclusion and influencing specific images of the future which are embedded in instructional and school practices. Thus, the dependent variable was the respondents' mean score on a subset of items, and the independent variables were the five-year analysis of all modules of the biennial MDED program, groups of boys and girls (aged 12–15) versus older children (aged 16 and above), and professional school role. Table 6 reported the results of a one-way ANOVA. Post-hoc comparisons using the Scheffé test showed that there were significant differences in the following variables: age, MDED biennial program review, and professional school role for social image.

Discussion

Revisiting the Research Questions

The essential point raised in this question centered on MDED playing a role in preparing for a special education career to ensure ongoing excellence in provision of SETs through meeting the changing demands of Canarian university standards. This question was also designed to examine the validity of

Table 6
ANOVA and Scheffé's Test Results for Social Image
Scheffé

	F	p<	gl	Levels	N	M (SD)	p
Social Image	32,321	.000	2	Boys and girls	259	4.85 (.47)	.000
			946	Youngsters	249	4.40 (.84)	
				Boys and girls	259	4.85 (.47)	.000
				Adults	441	4.56 (.59)	
				Youngsters	249	4.40 (.84)	.000
				Adults	441	4.56 (.59)	
	40,111	.000	4	MDED edition 1	182	4.57 (.63)	.000
			944	MDED edition 3	227	4.86 (.36)	
				MDED edition 1	182	4.57 (.63)	.000
				MDED edition 5	168	4.11 (.60)	
			MDED edition 3	227	4.86 (.36)	.000	
			MDED edition 4	137	4.54 (.60)		
			MDED edition 3	227	4.86 (.36)	.000	
			MDED edition 5	168	4.11 (.60)		
			MDED edition 4	137	4.54 (.60)	.000	
			MDED edition 5	168	4.11 (.60)		
5,126	.000	5	GET	484	4.54 (.74)	.005	
		943	Counselor	115	4.82 (.46)		

self-assessments for evaluating the quality of special educational interventions such as a master's degree. MDED engaged in a wide range of monitoring, reporting, management, and regulatory activities.

By investigating the reputation of MDED, this study only reveals program indicators' strengths for enrolled students and contracted part-time faculty. Similarly to other master's or university programs, part-time faculty and course offerings have been rated by students for each of the 10 years of MDED. Just as part-time faculty train SETs to evaluate their competence effectiveness with children, the special education part-time faculty at ULL consistently evaluates various aspects of MDED. Many important variables are related to the multidimensional construct of quality. To offer support and technical assistance to newly graduated teachers, as Lovingfoss et al. (2001) have suggested, adequate surrogate indicators of quality are needed. MDED can prepare graduates to accept teaching positions that are outside the parameters of their primary special education program preparation (diploma certificate) and for which they are not fully licensed. MDED matches graduate preparation and job assignment (Mastropieri, 2001). The relationship between master's degree quality and special education has received little attention, and few conclusions can be drawn so far. Billingsley (2004) argued that longitudinal studies of special education educators from their initial teacher training programs through their first

five years of teaching are desirable. The present longitudinal MDED study reflects graduates' commitment to competency teaching as a standard for SETs tied to districts' practices as a reform measure, which has been implemented in Canarian policy, as it has occurred in other states (McLeskey et al., 2004). To reform initial special training programs, a conceptualization of elements associated with quality has been proposed. Ordinarily, three components emerge from a quality model: structure, process, and outcomes. To be used as an excellence model, EFQM was the framework for continuous improvement of MDED. This approach to the master's degree stresses the concept that an appropriate management of students and part-time faculty within the postgraduate program was the key to success because structure and management processes would primarily impact the results of students, graduates, beneficiaries (as external customers), and the University (Calvo-Mora et al., 2005). Evaluation methods varied, focusing on indirect assessment techniques such as student satisfaction questionnaires and part-time faculty perceptions of the program scales (Brownell et al., 2005). In this study, we identify MDED's indicators of successful special education including meaningful leadership, rigorous program guidelines such as relevance, coherence, adequacy and impact, policies and strategies, human resources (part-time faculty, counselors), process strategies such as teaching methods, tutoring system,

assessment, practicum and research project, and quality satisfaction. These 10 criteria that we use to evaluate the MDED are represented by S, to indicate that the criterion is regarded as a strength, and W, to indicate a weakness. Other researchers have proceeded in similar ways to present criteria (Blanton, Sindelar, & Correa, 2006). Rosenberg and Sindelar (2005) concluded, among other eloquently expressed ideas, that special education teacher preparation is like an iceberg. This study has specified indicators for greater understanding of the nature and extent of MDED both above and below the waterline. We spent a considerable amount of time determining a general response database. This 10 year follow-up study examined the student and part-time occurrence rates that might have been of greater utility for monitoring. Assessment rates enabled a better understanding of students and part-time faculty concerning their own vision of MDED quality, and through the completion of instruments gave them an understanding of the strengths and weaknesses of some of the different components of the MDED structure. The most notable descriptive figure of MDED seems to be the total number of enrolled women and consequently of graduate women and the placement of women students in graduate training posts. The results also provided strong and consistent evidence that students were more likely to report perceptions of being against MDED assessment: i.e. meeting the criteria of a well-constructed portfolio (a collection of artifacts/examples of work documenting a person's competence and growth in the special educational program). Our approach also describes the part-time faculty in MDED: their numbers, gender composition, age, degree, occupational status, length of experience, geographical distribution, and the programs that trained them. Therefore, part-time faculty samples were scrutinized for evidence of quality criteria assessment.

Our second research question asked for the drivers of satisfaction that lead to retaining postgraduates and part-time faculty. To satisfy the needs and expectations of postgraduates or part-time faculty is not an easy university objective, as it is the postgraduates or part-time faculty who define quality rather than the University. Moreover, each postgraduate or part-time faculty member will define quality in a slightly different way depending upon his or her gender, age, education, and so on. Thomas and Galambos (2004) put it more bluntly: "General satisfaction is not the same as satisfaction with educational quality" (p. 257). To embrace the concept of MDED quality, the ULL needs to become increasingly customer-driven, responding to all master's degree postgraduates' or faculty members' needs rather than relying on their own perceptions of what a postgraduate or a part-time faculty member requires. This question demonstrates how two instruments can address a broad range of assessment

issues including job concerns, instructional values of the part-time faculty, learning of professional competencies, and particular dimensions of MDED. Reliability analysis confirmed the internal consistency of the two questionnaires. Students' perceptions of the importance of job access and learning professional competencies are similar to those found in other researches (Luckner & Sileo, 1984). These lists of students' 6 factors and part-time faculty's 11 factors represent conceptually meaningful dimensions related to their evaluation of MDED and impact on their subsequent professional experience. In particular, how well MDED factors helped postgraduates develop the capability to cope with various aspects of diversity was consistent with the findings of Delaney (1997). Also, a picture emerges from this analysis: postgraduates and part-time faculty endorsed MDED information as a "supportive cultural" factor (Brown & Reed, 2002). Furthermore, this question aimed to analyze more deliberately the impacts of MDED quality factors on postgraduates' and part-time faculty members' satisfaction. Each of the two equations presents the basic regression models: six causal effects for postgraduates and six part-time faculty effects upon the variable that they influence (satisfaction) were estimated. It is unsurprising that labor market access index makes the largest contribution to R^2 and the explanation of postgraduates' satisfaction, as other studies have found that the person-job fit index has contributed to job satisfaction (Ball & Chik, 2001). Finally, second question results show that postgraduates and part-time faculty did not appreciably vary in their assessment preferences.

Our third evaluation question asked about postgraduates' competencies according to peers and beneficiaries. Condensed MDED competencies were positively assessed by these two groups. The aim of MDED is to develop core professional competencies that will enable students to start their professional career successfully. Peers' and beneficiaries' responses ensured consistency and accountability across a manageable cluster of 10 competencies. Thus far, the results of this study depict the framework and foundation of MDED modules. Knowledge of peers' and beneficiaries' characteristics facilitates the usefulness of the competencies. Postgraduates' social image fosters realistic and recognizable descriptions of MDED competencies in professional situations. In one study, Lane, Givner, & Pierson (2004) asserted that "Teacher characteristics [are] predictive of teachers' perspectives" (p. 181). Based on the opinions of the respondents, peer GETs had different beliefs with respect to postgraduate competencies to school peer counselors.

Given the importance of evaluation done within university programs, this article provides a case on such

work. More importantly, it focuses on examining the MDED internal organizational program, processes and products.

Practical Implications

There are several implications of the proposed framework for master's degree quality assurance. The arrangements of five enablers and five results designed by MDED placed the prime emphasis upon indicators as careful statements that can apply to modules and other program components. Calibrating quality criteria across educational modules is intended to be concerned with exploration and discovering the boundaries of diversity and inclusion knowledge and understanding. Students should be able to demonstrate inclusion competencies which are at the forefront of the special education discipline. Core inclusion competencies are not measured by standardized tests. MDED prepares neither alienated executors of an inflexible curriculum nor behaviorally controlled task practices. This study provides quantitative support for the framework.

In addition to the proposed quality criteria and indicators, our findings suggest that positive perceptions of the framework by students and part-time faculty could make a positive contribution to postgraduates' sense of identification with MDED. The fact that grading 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. A general consensus regarding how to design and evaluate master's degrees does not yet exist in Spain. Now that the central 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.

References

- Alegre, O. M. (2006). Evaluación del programa de postgrado "Educar en la Diversidad" por los profesores. *Revista de Educación, 340*, 299-340.
- Alegre, O. M., & Villar, L. M. (2008). *Evaluación del Postgrado Universitario Educar en la Diversidad* (La Laguna, Servicio de Publicaciones de la Universidad de La Laguna).
- Avramidis, E., & Norwich, A. B. (2002). Teachers' attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education, 17*(2), 129-147.
- Ball, R., & Chik, R. (2001). Early employment outcomes of home and foreign educated graduates – the Malaysian experience. *Higher Education, 42*, 171-189.
- Billingsley, B. S. (2004). Special education teacher retention and attrition: A critical analysis of the research literature. *Journal of Special Education, 38*(1), 39-55.
- 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.
- Boe, E. E. (2006). Long-term trends in the national demand, supply, and shortage of special education teachers. *Journal of Special Education, 40*(3), 138-150.
- Brown, K. S., Welsh, L. A., Hill, K. H., & Cipko, J. P. (2008). The efficacy of embedding special education instruction in teacher preparation programs in the United States. *Teaching and Teacher Education, 24*, 2087-2094.
- Brown, R. E., & Reed, C. S. (2002). An integral approach to evaluating outcome evaluation training. *American Journal of Evaluation, 23*(1), 1-17.
- 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.
- Calvo-Mora, A., Leal, A., & Roldan, J. L. (2005). Relationships between the EFQM model criteria: A study in Spanish universities. *Total Quality Management, 16*(6), 741-770.
- Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1*, 245-76.
- Delaney, A. M. (1997). Quality assessment of professional degree programs. *Research in Higher Education, 38*(2), 241-264.
- Hendry, G. D., Cumming, R. G., Lyon, P. M., & Gordon, J. (2001). Student-centred course evaluation in a four-year, problem based medical programme: Issues in collection and management of feedback. *Assessment & Evaluation in Higher Education, 26*(4), 327-339.
- Idol, L. (2003). Toward inclusion of special education students in general education: A program evaluation of eight schools. *Remedial and Special Education, 27*(2), 77-94.
- Jeliazkova, M., & Westerheijden, D. F. (2002). Systemic adaptation to a changing environment: Towards a next generation of quality assurance models. *Higher Education, 44*, 433-448.

- Lane, K. L., Givner, C. C., & Pierson, M. R. (2004). Secondary teachers' views on social competence: Skills essential for success. *Journal of Special Education, 38*(3), 174-186.
- Lovingfoss, D., Molloy, D. E., Harris, K. R., & Graham, S. (2001). Preparation, practice, and program reform: Crafting the University of Maryland's five-year, multicategorical undergraduate program in special education. *Journal of Special Education, 35*, 105-114.
- Luckner, J. L., & Sileo, T. W. (1984). A comparative study of off-campus and on-campus Master of Arts degree programs in learning disabilities and emotional disturbance. *Innovative Higher Education, 9*(1), 42-47.
- Mastropieri, M. A. (2001). Is the glass half full or half empty? Challenges encountered by first-year special education teachers. *Journal of Special Education, 35*(2), 66-74.
- McLeskey, J., Tyler, N. C., & Flippin, S. S. (2004). The supply of and demand for special education teachers: A review of research regarding the chronic shortage of special education teachers. *Journal of Special Education, 38*(1), 5-21.
- Pohan, C. A., & Aguilar, T. E. (2001). Measuring educators' beliefs about diversity in personal and professional contexts. *American Educational Research Journal, 38*(1), 159-182.
- Rosenberg, M. S., & Sindelar, P. T. (2005). The proliferation of alternative routes to certification in special education: A critical review of the literature. *Journal of Special Education, 39*(2), 117-127.
- Shared 'Dublin' descriptors for short cycle, first cycle, second cycle and third cycle awards. (2004). Draft 1, working document on JQI meeting in Dublin on 18 October 2004 1. A report from a Joint Quality Initiative informal group (contributors to the document are provided in the Annex). Retrieved from [http://www.upc.edu/ees/contingut/arxiu/Descriptors_dublin\[1\]_2004.pdf](http://www.upc.edu/ees/contingut/arxiu/Descriptors_dublin[1]_2004.pdf)
- Stough, L. M., & Palmer, D. J. (2003). Special thinking in special settings: A qualitative study of expert special educators. *Journal of Special Education, 36*, 206-222.
- Thomas, E. H., & Galambos, N. (2004). What satisfies students? Mining student-opinion data with regression and decision tree analysis. *Research in Higher Education, 45*(3), 251-269.
- Westerveld, E. (2003). The project excellence model: Linking success criteria and critical success factors. *International Journal of Project Management, 21*, 411-418.
- White, R. (2003). The recruitment of paraeducators into the special education profession. A review of progress, select evaluation outcomes, and new initiatives. *Remedial and Special Education, 25*(4), 214-218.

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