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**VALIDATING A QUESTIONNAIRE EXAMINING TEACHERS’  
PERCEPTIONS OF INTEGRATING STUDENTS WITH SPECIAL  
NEEDS**

Iris Krawczyk Ulianitski (a)\*, Alina Roman (b)

\*Corresponding author

(a) Ph.D. Student, Babes-Bolyai University, Cluj-Napoca, Romania, Iriskk2007@gmail.com

(b) Aurel Vlaicu University of Arad, Romania

*Abstract*

This article addresses the subject of integrating students with special needs in the regular classroom, and focuses on developing and validating a questionnaire that forms the basis of this study. This study is a part of wider research that focuses on the hearing impaired population and examines the perceptions of special education teachers and teachers in regular education who integrate hearing-impaired students in their classrooms. The research tool used was a new questionnaire that examines teacher attitudes in the following five areas – Effect of integration on special needs children; effect of integration on regular children and the classroom; effect of integration on the teacher; acceptance of the integration principles; and willingness to integrate special needs children in regular classrooms. In the pilot phase of this study, 40 questionnaires were distributed to 2 teacher groups -teachers teaching regular classes which include integrated special needs students, and teachers trained in special education who teach dedicated special needs classes. The aim of the pilot study was to validate the new research questionnaire. The summary of the data that was collected from the pilot sample includes test of the instrument structure, test of distinguishable factors, and test of confounding effects. Results of the pilot study show that the questionnaire is reliable and valid to the extent that it can be used in the field in a large-scale survey and across different cultures, countries and types of special needs.

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## 1. Introduction

### **Integrating Children with Special Needs in Regular Education**

Children with special needs, who differ in appearance or behaviour from the rest of society, have always existed since the earliest days of humanity, but their needs were not always addressed. The attitude to children with different needs varied throughout history, and has ranged from the harsh approach that their actual right to exist to the humanitarian approach of understanding, acceptance, education, and integration into ordinary society. Until the year 500 BC, the goal of mankind was survival and preservation of life. Consequently, any member of the tribe that was different threatened the very existence of the individual and the group. Consequently not every different child with special needs could survive. In the Middle Ages, superstitions and fear of witchcraft dominated everyday life. Deviations in appearance or behaviour were unacceptable, and viewed as demonic supernatural powers. Such people were believed to be cursed and deserving of punishment. For example, they believed that a babe with different needs was really the son of the devil. As a result, the villagers would try to rid their village of such a creature, and try to replace it with another child. If that is not did not succeed, the child would be removed from society. (Hallahan & Kauffman, 1988).

The development of special education was begun in the 19th century by European physicians and educators, who promoted reform and special treatment for children with disabilities. In the 20th century, there was tremendous progress in all areas of the sciences and the arts, in technology, medicine, and research, and this contributed to developing tools and programmes to help with child and adult vulnerabilities and disabilities. However, the 20th century also faced two world wars resulting in many wounded soldiers and civilians. Paradoxically this also led to the development of tools, means and methods for treating and rehabilitating people with disabilities. Although a process of evolution has occurred throughout human history, its stages which appear with differing intensity in different periods, influenced economic, social, and other factors. For example, many of the European countries that succumbed to the Nazi regime, clearly regressed in their attitude to the disabled and the mentally ill (who were usually executed by order of the regime). Humanity at that time marched backward to the primitive era (Hallahan & Kauffman, 1988).

In the last decade, the number of children receiving special education services has increased significantly. Policies that are in place in many countries today include children with different needs in regular schools. This approach is prevalent in many countries in Europe, Australasia and throughout the US. In 1975, the United States passed a law requiring the integration of disabled children, no matter how severe their disability. In Israel, the Special Education Law, passed in 1988, emphasized that when looking for an educational framework for disabled children, the first option to be reviewed must be placement in regular schools. The integration policy was formulated at the same time that Israel was making changes to the definition of the special needs child and special education requirements in Israel. From the establishment of the State of Israel in 1948 until the mid-1970s, it was accepted practice to categorize children by their disability. According to this definition, children were divided into educational and treatment groups based on their primary disability, whether it be mental, emotional, physical or behavioural; and the type of disability determined the method of treatment. The underlying thinking behind this approach was that the integration program option that corresponded most closely with the child's disability "map" determined the

educational option that should be selected. It was felt that this option would generate the greatest benefit for the disabled child. Furthermore, it was felt that the child should be placed in the framework that would enable him or her to develop their skills and to best function as fully as possible in the present and in the future (Ronen, 1997). This applies more than ever to the integration of the hearing impaired student.

### **Integrating Frameworks for Hearing-Impaired Children around the World**

In the past, hearing impaired students were integrated into regular schools where, due to the absence of adjustments tailored to their individual needs, they were forced to cope with a relatively unforgiving reality. They were simply treated like all regular pupils. Consequently, it was the children who could lip read and had strong communication and language skills who were integrated. Over the years, pupils with various other impairments were also integrated into the school system which led the regular education system to introduce change and build programs that catered specifically to special needs pupils, including education for hearing impaired (Plaut, 2007).

In 1988, a law was passed making 10 years of school learning at elementary and high school compulsory for children aged 6 -15, after which pupils would have the opportunity to choose their preferred type of further education: tertiary education, practical training in a profession, or acquiring higher education at college and/or university. This variable introduced a reform in the education system that changed the concept of integrating deaf pupils and led to different interpretations. The first of these referred to the personal environment of each child in their home, in their residential area, and in their neighbourhood; the second referred to deaf children and the possibilities of various interactions available to them, to meet with other deaf children and adults who used sign language. In addition, study content was adjusted for deaf pupils in the fields of music, English, drama and sport, by adapting appropriate signs for music and English. In Norway, both deaf children and their parents, and their teachers were required to learn sign language. Only teachers, as experts in the field, were required to know sign language at the level equivalent to a half year university course (Hyde, Ohna, & Hjulstadt, 2005). Integrating hearing impaired children into educational frameworks with provision of assistance adapted to their special needs, was a significant step and various frameworks were adjusted accordingly.

### **Integrating Frameworks for Hearing-Impaired Children in Israel**

In Israel, there are three main models for integrating children with disabilities in the regular education system: individual integration, integration in special classes within regular schools, and integration classes.

#### **Individual Hearing-Impaired Children**

Individual integration: children with disabilities are integrated in regular classes and regular kindergartens. The children are integrated on an individual basis. Integrated children are mainly learning disabled, might have mild mental disability that slows their developmental progress, minimal mental problems, visually impaired, hearing impaired, or with a moderate physical disability. They receive extra help from a teaching assistant in the class or kindergarten (Har, 2000). In this framework, hearing impaired students are individually integrated into regular classes, study in the regular classroom, and study according to the regular curriculum, in spoken language. These students are allocated a number of weekly hours which they can spend working outside their classroom with a support teacher who specializes in teaching hearing

impaired students. In Israel, many hearing impaired students study in this way and are integrated in regular classes in a combination tailored to their needs. This individualized integration is the result of the Special Education Law and the Integration Law which grant students with special needs in general and students with a hearing impairment in particular the option to study in their natural environment in a regular educational framework while at the same time receiving adaptations to maximize their personal ability (Cambra, 2002; Wiesel & Zandberg, 2002).

### **Hearing- Impaired Students in a Special Class in a Regular School**

Special classes in regular schools: hearing impaired students are enrolled in a special class in a regular school. The students spend most of their study time in these classes but also spend a limited number of study hours in a regular class. This combination is adapted to each individual student and is determined by the student's achievements in class and his or her strongest subjects. On special occasions such as ceremonies, class trips, and social lessons, the hearing impaired students are included in a regular class (Plaut, 2007).

### **Hearing impaired students integrated in a regular classroom**

Hearing impaired students in a regular classroom: combined classes in which a limited number of children with disabilities study together with regular children in a regular class. Integration classes are staffed by two teachers – a regular education teacher and a special education teacher. Together they set the curriculum. Some of the lessons are for all students in the class and during other lessons the students with disabilities study with the special education teacher (Har, 2000).

### **Advantages / Disadvantages in Integrative Class**

There are advantages and disadvantages to integrating hearing impaired children in regular classrooms. Studies by Antia, Jones, Kreimeyer, Luckner, and Reed (2011) found that integrating hearing impaired students in regular classes improves their integration and social involvement with the hearing students. This combination enables the hearing impaired students to become involved in hearing society at an early stage, creates better classroom communication with the hearing population, and better access to auditory information. The integration of hearing impaired students in a regular classroom helps create positive social outcomes, and also contributes to positive academic results. A study by Angelides and Aravi (2007) show that hearing impaired students who attend regular schools develop better verbal skill and academic goals than they would if they were attending a special education school because they have more opportunity to develop their spoken language. However, despite the improved academic skills, it was found that studying in a regular school did not lead to better social integration because their communication difficulties limited their ability to participate in class discussions. Hearing impaired students struggle to acquire skills and develop language. They find it difficult to produce spoken language and communicate verbally with those around them, which has a critical impact on the child's emotional, social, cognitive and scholastic world (Ingbar, Anshen, Ben Yehuda, Eden, & Michaeli, 2008). Accordingly, hearing impaired children integrated in regular education are more exposed to different emotional experiences that affect their learning processes.

In the classroom, the hearing impaired child is hampered when it comes to group work, finds background noise and whispering disruptive, and can be frustrated by the lack of consideration of the teachers and other children regarding their special requirements. This makes learning difficult and may also add to a feeling of isolation from his or her peers. Additionally, communication difficulties and the unusual and unclear pronunciation of the hearing impaired pupil often provoke ridicule and/or rejection by other children (Eichengreen & Hoofien, 2009). These emotional experiences and learning difficulties experienced in educational frameworks available to the hearing impaired students led stakeholders dealing with integration to reconsider how to best integrate hearing impaired students into educational frameworks that would meet their needs while accommodating the importance of maintaining their different self-identity.

## **2. Problem Statement**

### **Gap in Knowledge**

Many studies focus on the inclusion of students with special needs in regular schools/classrooms, for example: learning disabilities, ADHD and hyperactivity, and hearing impaired from the aspect of language development and influence on the child's psyche (Eichengreen & Hoofien, 2009; Eliyahu, 2007; Katz & Schery, 2006; Most, 2007; Wiesel & Zandberg, 2002).

Only a handful of researchers explore integrating children with hearing impairments, and few of them focus on the social-emotional field. Few studies have dealt with teachers' perceptions of social, academic, and self-esteem development in children with hearing impairments, who are included in regular and special education programs (Gorni, 2001; Epstein, 2002).

## **3. Research Questions**

- 1) Are there differences between the perceptions of teachers who teach exclusively in special education and those who teach in regular education integrating students with special needs in their classes in the following five aspects: effect of integration on special needs children; effect of integration on regular children and the classroom; effect of integration on the teacher; acceptance of the integration principles; willingness to integrate special needs children in regular classrooms?
- 2) Is the questionnaire that was built for this research valid and reliable?

## **4. Purpose of the Study**

The pilot study aims at developing and validating a new questionnaire by quantitative means. The questionnaire was developed to track teachers' perceptions on special need students' integration in the regular education system, to determine (by using survey results) major advantages and disadvantages in the integration process, and to develop a set of recommendations for better implementation of the integration plan.

## 5. Research Methods

### Methodology: The questionnaire validation

The full field survey is a Mixed Methods study that combines in-depth interviews and questionnaire. The target population is teachers who practice, to a varying extent, the integration of children with special needs.

In order to make a quantitative assessment, a multiple instrument questionnaire was developed based on the original work of Shechtman (1993), who studied the integration of students with special needs in regular classes with normative students.

In the pilot phase of the study, the questionnaire was used to examine teacher perceptions in five areas as mentioned before. Forty teachers in two groups had participated in the pilot phase—regular teachers teaching regular classes that include integrated special needs students, and teachers trained in special education who teach dedicated special needs classes.

Each survey instrument in the questionnaire is a set of items (questions, statements) that are expected to cover one aspect of the study.

## 6. Findings

### Primary and secondary factor analyses

To test original theoretical constructs and to support their validity, we use the exploratory factor analysis technique in two steps. The first step, the primary analysis, looks at the dimensionality of each research instrument as originally proposed by theory and previous practices. That is, as the original theoretical content of the survey instruments is borrowed from previous work, the exploration across the items within each instrument is done to suggest sub-scales or to ensure the scale appears in one dimension only. Note that this validation step is limited due to the small size of the pilot sample. We use the Principal Axis Factoring extraction method, which is robust in cases of inability to confirm normal distribution of the items. To better interpret results, we followed the extraction with Promax rotation technique, which is used in cases where possible correlation between sub-scale is expected. The second step is complementary in the sense that it adds items which are not assigned to one of the instruments in the first place. The two steps are shown in Table 1.

**Table 01.** Original division into research instruments

Theoretical Construct	Items	Mean	SD	$\alpha$
Primary Analysis				
F1: The impact of integration on the child with special needs	q2, q13, q22, q28, q29	4.29	0.66	.63
F2: The impact of integration on the normative child	q3, q9 q12 q16 q19 q21	4.86	0.62	.75
F3: The impact of integration on the teacher	q1, q4, q5, q7	3.88	0.74	.63
F4: Perceived integration idea	q8, q11, q14, q23, q24	4.27	0.75	.64
F5: Willingness to integrate children with special needs	q26, q27	5.34	0.63	.92
Secondary Analysis				

F1: The impact of integration on the child with special needs	q2, q13, q22, q28, q29, q18	4.44	0.62	.67
F3: The effect of integration on the teacher	q1, q4, q5, q7, q6, q10	4.07	0.71	.69

Note: q15, q17, q20, q22, q25 were excluded due to either low loading on the original scale or multiple loading on more than one scale.

The upper part shows the results of the analysis by means of Cronbach's alpha, which measures the internal consistency of the suggested empirical indicator based on correlations between items. Value above 0.70 is considered good, whereas value above 0.6 is considered acceptable. The purpose of the second step is to find whether non-assigned items can be assigned to one of the original instruments based on possible contribution to their consistency. We see in the lower part of Table 1 that adding one item to factor 1 and two items to factor 3, increase the alpha from 0.63 to 0.67 and from 0.63 to 0.69, respectively. Thus, the factor analysis results in reasonable reliability of the five instruments. These reliability values provide preliminary construct validity. It means that a full survey can be conducted based on these questionnaire items.

In addition, Table 2 shows correlations between the five research instruments. One major objective of validation statistics is to ensure these instruments are distinguishable.

**Table 02.** Correlations between research indicators

	1	2	3	4	5
1. The impact of integration on the child with special needs	-				
2. The impact of integration on the normative child in the classroom	.68***	-			
3. The impact of integration on the teacher	.38*	.53***	-		
4. Acceptance of the principle of integration	.65***	.69***	.31*	-	
5. Willingness to integrate children with special needs into a regular classroom	.29	.49**	.21	.54***	-

\*p<.05. \*\*p<.01. \*\*\*p<.001.

The correlation matrix in Table 2 shows that, although correlated with each other to some extent, correlation coefficients do not exceed .69, thus the different instruments can be considered as presenting different theoretical contexts.

### Test of confounding effects

To finalize the validation test, we look at the association between the developed research indicators and teachers' characteristics. In this test we intend to ensure that if teachers' characteristics, e.g., seniority, have an effect on one or more of the research indicators, these effects must be included as controls in any further modelling. We present two sets of tests.

**Table 03.** Correlations between research indicators and teachers' characteristics

	Teaching experience (years)	Seniority in the current school	Years of Education
1. The impact of integration on the child with special needs	-.09	-.20	-.10
2. The impact of integration on the normative child in the classroom	-.35*	-.38*	.07
3. The impact of integration on the teacher	.05	-.08	.16
4. Acceptance of the principle of integration	-.17	-.27	.18
5. Willingness to integrate children with special needs into a regular classroom	-.05	-.19	.24

\* $p < .05$ .

Firstly, we correlate the five research instruments with measures of teaching experience. Table 3 shows that teachers with longer seniority at the current institution and teachers with greater experience consider the positive impact of integration on the normative children as lower ( $r = -.38$ ,  $p < .05$ ;  $r = -0.35$ ,  $p < .05$ ; respectively) in comparison to teachers with less experience. In other words, teachers with more experience see less impact of mixed classes on the normative children.

The division between males and females results in higher impact of the integration on the teacher among males in comparison to females ( $t(38) = 2.77$ ,  $p < .01$ ).

## 7. Conclusion

Several conclusions arise from these results:

1. The analytical exploratory model identified the original theoretical constructs with very little empirical adjustments. Thus, it can be argued that the theoretical constructs appeared in the actual empirical data. In other words, this means that the questionnaire is valid for use further in more studies in the field.

2. The five defined aspects of teachers' perceptions showed up clearly in the answers to the questionnaire, and that means that the questionnaire independently provides a tool to survey each aspect of teachers' perception on integration of students with special needs.

3. Teachers with longer experience or shorter experience have a small difference between them, especially those with longer experience who would perceive the integration as less harmful to the normative students. Males teachers perceived the impact of integration on themselves as more harmful than the way females teachers do.

This article presents data from a pilot study on the integration dilemma as perceived by teachers, who integrate these students in their class. The main goal was to develop a workable questionnaire, and this goal was achieved. The five aspects chosen to assess teachers' perceptions on integration are distinct and can be used in the questionnaire framework. Although correlations were found, they were not too high and supported the five-aspect structure of the questionnaire. These aspects stand independently of other background characteristics, except the perception of impact on the normative children.

Results of the pilot study show that the questionnaire is reliable and valid to the extent that it can be used in the field in a large-scale survey and across different cultures, countries and types of special needs, e.g., hearing impairment. The summary of the data that was collected from the pilot sample includes test of

the instrument structure, test of distinguishable factors, and test of confounding effects. Overall, The findings show minor problems with the data and the results provide justification for the next step of the research, that is the full field survey.

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