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PROBLEMS OF LEARNING MATHEMATICS IN PEDAGOGY OF THE PROJECT¹

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Summary

The various statements of demotivation, growing disinterest of young people towards school and especially the concern for the appropriation of transferable school concepts in practical life are at the origin of our questioning. This approach to project pedagogy is inspired by the pedagogical current and socio-constructivist epistemological paradigm and we used the methods of the descriptive type and “*explicitation*” interview technique to carry out this study wisely. We have therefore discovered not only the richness of this new pedagogical approach, but also the major difficulties linked to the initial (or continuous) teacher training faced with the complexity of the various aspects of this pedagogical renewal.

Keywords: mathematical learning, socio-constructivist paradigm, project pedagogy, teacher interview, explicitation complexity.

Résumé

Les divers constats de démotivation, de désintéressement grandissant des jeunes envers l'école et surtout le souci de l'appropriation des concepts scolaires transférables dans la vie pratique sont à l'origine de notre questionnement. Cette approche de la pédagogie du projet s'inspire du courant

¹ Louise Poirier, Ph.D., full professor in the teaching department, research director during the presentation of the master's thesis in mathematical teaching at the University of Montreal.

pédagogique et paradigme épistémologique socioconstructiviste et on a utilisé les méthodes du type descriptif et de technique d'entretien d'explicitation pour mener à bon escient cette étude. On a donc, découvert non seulement la richesse de cette nouvelle approche pédagogique, mais aussi des difficultés majeures liées à la formation initiale (ou continue) de l'enseignant face à la complexité des divers aspects de ce renouveau pédagogique.

Mots-clés : apprentissage mathématique, paradigme socioconstructiviste, pédagogie projet, entretien enseignant, explicitation complexité.

Introduction

Modern societies have experienced major upheavals. Forced by many governments to introduce major reforms in their education systems, several governments of western countries such as England, Australia, Belgium, France, Switzerland, etc. noted flaws in their education systems. This is what has become inadequate to the realities of the modern world. These flaws have forced these countries to reform their education systems.

Quebec could no longer remain on the sidelines of this dynamic of change. He felt the need to adjust his education system to the realities of modern society. These problems often boil down to the growing demotivation of young people towards school. This is the first part of the study. The student can therefore participate constructively in the development of tomorrow's society. The second part will focus on the conceptual framework, which will develop the recommended educational approach negotiated by several countries. Through the training program which is focused on skills development. The learning of mathematics is supported by the pedagogy of the project. It is about studying how to go about developing a mathematical concept learning project with the teacher.

The third part deals with the research methodology used in this study. It is first about describing the target population and

presenting the outline of the planned course of the study experiment. Then, through this planned course of the experiment, we will present a basis for the development of a learning project and data collection tools. Such descriptive research methods and the research method based on the ‘*explicitation*’ interview technique will be explained. Finally, the qualitative method will make it possible to verbalize the actions.

The fourth part deals with data analysis. Interpretation of the results and conclusions are drawn from research. To conclude, we will approach the conclusion and we will be able to touch on new avenues that are emerging as a result of this research.

1. Problem

At the start of the third millennium, Bissonnette and Richard (2001) find that mastery of knowledge becomes essential. To live and integrate rationally into this world, human beings must possess knowledge of a higher level than that known to previous generations (Bissonnette and Richard, 2001). Through objectification, "The teacher encourages the students to name the important elements based on the learning activity that was carried out" (Gauthier, Bissonnette and Richard, 2016, p. 3). It is a century that requires human beings, as well as societies, immense capacities for adaptation, creativity and the search for adequate solutions to the problems that arise today. Also, research on teaching effectiveness shows that the teacher has a decisive influence on the academic performance of his students. They indicate that to "Effective teaching generally corresponds to a structured teaching approach of the type " instructionalist " (Gauthier, Bissonnette and Richard, 2016, p. 3). If faced with the rapid transformation of society, then the school is looking for ways to help the student. This helps to become, not only an autonomous human being, but more responsible beings.

It is true that things have changed: school, students, mores and values, the social and economic environment have changed

(Bissonnette and Richard, 2001). Likewise, this form of pedagogy centered on Greek and Latin culture more attached to the subject than to the manner has changed. This pedagogy became more and more narrow and inappropriate to the requirements of the various social, economic or cultural environments perpetually renewed (Bissonnette and Richard, 2001). This current will characterize the new pedagogy and propose that the school adapts to life.

As for Bordallo and Ginestet (1993) raise the difficulties for an education system and its learning methods to keep pace with a rapid change in society. Also, Dubois (2001) reflects on the teaching model. This model of teacher pretends to be the absolute master of the exchange "teacher - pupil". He exposes, speaks, transmits new knowledge. It offers student training exercisers, shapes what needs to be learned, and the student remains passive rather than active.

Modern societies have undergone significant changes in recent decades. They have led many governments to undertake educational reforms to meet new training needs. Global and diversified training in Quebec is long-term training and training open to the world (Gouvernement du Québec, 2003). As for Lasnier (2000), skills-based training programs as initiated in different countries such as England, Australia, Belgium, France and Switzerland meet different intentions and needs, depending on the specific nature of the environment.

Furthermore, in Quebec's ministerial policy statement, the mission of the Quebec school revolves around three axes: educating, socializing and qualifying (Gouvernement du Québec, 2003). In fact, the school will first instruct with a reaffirmed will, because in the current context of the knowledge society, every school has the primary responsibility of training the mind of each student. We must reaffirm the importance of supporting cognitive development and mastery of the student's knowledge.

Then the school must socialize to teach students to live better together. It will have to transmit the heritage of common knowledge, prepare young people to become responsible citizens while seeking to prevent the risks of social exclusion which jeopardize the future of many young people. Finally, the school will have to qualify the pupil in various ways, because it has the obligation to make possible the academic success of all the pupils and to facilitate their social and professional integration, whatever the path they will choose at the end of their training.

In the learning process, the Quebec Ministry of Education, Recreation and Sport (2000) expresses a desire to integrate the areas of life experience into school subjects. On the one hand, the dimensions of contemporary life must allow the student to better understand the various issues inherent in the evolution of the universe of which he is a part. On the other hand, to determine the fields of exercise of the skills likely to make disciplinary and transversal learning more meaningful for the student. The learning process will consist in establishing a new relationship between the acts of teaching produced by the teacher and the learning activities of the students. Learning interventions are now adjusted for students. These various areas of life retain eight skills associated with the vision of the world, including health, individual and collective well-being, vocational guidance, entrepreneurship, socio-relational development, the environment, consumption, everyday life "in diversity and citizenship" (Gouvernement du Québec, 2006; Lasnier, 2000; Legendre, 2002). This interaction of various areas of life constitutes a significant change in the learning process as usually experienced.

Although evaluation is an integral part of the learning process, we will deal with the concept of evaluation from the perspective of supporting the student. In its approach, it will allow the teacher to adjust his teaching interventions. It is undergoing a change decreed by the new study program. The assessment which formerly responded to a linear concept of learning,

controlled and directed especially from the outside by the teacher, confined the student to passivity in order to follow only a path previously marked out. With the new curriculum, formative assessment has become, by necessity, a formative assessment. "The formative evaluation is an approach of appreciation centered on the regulation ensured by the pupil himself" (Bonniol, 1986, in Francoeur Bellavance, 1997, p. 110).

We will briefly talk about currents of thought such as cognitivism, constructivism, the epistemological paradigm of knowledge called "socioconstructivism". In addition to these trends, we cannot ignore training strategies focused on skills development, cooperative learning and project pedagogy. The learning of mathematics will be supported by the pedagogy of the project. It will be a question of studying how to go about developing a mathematical concept learning project with the teacher.

The student, by his situation at the heart of the educational act, is fully committed to the construction of his learning on the intellectual, emotional and social levels in interaction with his peers. It is who enters his environment and invites the teacher to act as a pedagogical mediator. To assess present learning, the essential concepts in assessment shed light on the different aspects of teaching practice (Fontaine, Savoie-Zajc and Cadieux, 2013). Students are called upon to make decisions together, share their discoveries, manage their learning files, set goals, plan deadlines, work together while respecting the rhythms and learning styles of each (Arpin and Capra, 2001).

The teacher, for his part, acts as a mediator between the pupil and knowledge, as a learning guide, as an accompanist and demands from the pupil the best of himself. Indeed, the teacher, in his role, animates the different scenarios, joins the knowledge of the students in their experiences, interests and desires. Also, a quality of the "student - teacher" relationship is a good quality and characterized by the availability, warmth and proximity of

the teacher to the student (Plouffe, Couture, Massé, Bégin and Rousseau, 2019).

Faced with problems linked to perpetual and accelerated changes in society, the growing demotivation and disinterest of young people towards school, the constant inattention to the student's experience during the learning process, the appropriation of concepts and notional correspondence in school situations. What would be the pedagogical approaches and strategies for teaching mathematics through project pedagogy, best suited to deal with the multiple problems linked to school?

2. Conceptual Framework

Modern societies in recent years have undergone major upheavals and have forced many governments to introduce reforms in their education systems. These reforms have brought about new training needs for young people who were aiming for global and diversified training, long-term training and training open to the world (Gouvernement du Québec, 2006). These aims require human beings, like societies, of immense capacities of adaptation, creativity and search for adequate solutions to the problems which presently arise.

The question that often comes up is how can we train citizens capable of adapting to the various changes characterized by the explosion of knowledge and the accelerated development of technologies? Is the complexity of social life, while preserving economic and cultural wealth, characterized in each society? To answer these questions, school seems to be a suitable place to play this role of training people according to the realities of society.

Various economic, social and cultural milieus perpetually renewed (Gouvernement du Québec, 2006). The need is felt more for the arrival of another educational approach capable of overcoming the shortcomings decried by various educational foundations (Gouvernement du Québec, 2006).

In this part, we will discuss the currents of thought in education taking up the constructivism paradigm² when they speak of knowledge construction and development (Jonnaert and Vander Borgh, 2009). And, the epistemological paradigm of knowledge that drives thinking is "socioconstructivism". We will also talk about the skills training and pedagogy of the project.

2.1 Currents of thought in Education

Every study program is imbued with an underlying epistemology. The new training program of the Quebec Ministry of Education, Recreation and Sport is no exception. To better situate this new training program, we will briefly review the various currents of thought that have marked education. Some are centered on conservative perspectives known as "traditional pedagogies", thus corresponding to the knowledge-centered model. The others, by contrast, are centered on innovative perspectives of education called "active pedagogies" representing the education model centered on the actions of the person and on problems arising from society.

Indeed, traditional pedagogies are currents of thought in education centered on the transmission of knowledge and grouped into pedagogies called "the transmission of knowledge or footprint" (Altet, 1997, p. 5). Very often, these pedagogies are based on the behaviorist and associationist approach to learning. The question must be asked: what is the behaviorist approach? To answer this question, Charney and Mante (1995) find that the behaviorist approach allows the student to solve a succession of tasks guided by the teacher, either orally, or through a succession of question-criteria to resolve the difficulties. .

² The paradigm is "the set of theoretical, practical and ideological presuppositions that, in its history, adopted a scientific discipline. In other words, it is the reading grid through which a discipline studies the world and thanks to which it selects what interests it "(Fourez et al., 1997, p. 74).

Pedagogies based on student actions can take several forms: either they grant students freedom, or they plan, or they start from their needs. For example, the need to play where their interests are, that is, they set up free group work and the list goes on. As for Poirier (2002), these pedagogies have the characteristic of being more active and dynamic; they are moving towards the use of manipulatives and personal learning approaches. They now favor the construction of knowledge by the student himself instead of forcing them to assimilate ready-made knowledge. This is a novelty in education which promises to usher in the advent of two contemporary pedagogical trends, constructivism and socio-constructivism.

2.1.1 Constructivism

Constructivism, as a current of thought in education, arose in reaction to the behaviorist movement which limited learning too much to the association "stimulus-response". For Larochelle and Bednarz (1994), in general, the constructivism paradigm hardly seems to have changed the usual teaching protocol. Whatever the level of education involved. It is obvious that the pupil's point of view will have to ask more (current major effect of "constructivism" on pedagogy). In other words, the learning subject builds his knowledge at the same time through his own activity and the object manipulated is his own knowledge. The transmission of knowledge to a learner is not only done by thinking, that the subject integrates with a precise representation everything that is said to him or anything that he would like him to acquire (Lafortune and Deaudelin, 2001), but also according to his previous achievements.

The constructivist current is positioned closer to practice, in the sense that the knowledge of the learner is constructed by the subject through these experiences. As the pupil is in action to build his knowledge, the only reference to school curricula seems insufficient. So that its learning in this sense constructivism challenges the traditional approach, what pedagogy by objectives that define the learning content to

master, without taking into account the subject who is learning (Jonnaert and Vander Borgh, 2009). It is in this context that the teacher, as an accompanist, considers more of the concepts that are presented to the students. It's like concepts where each of them should make connections with their prior learning. For Lefebvre³ (2001), offers a synthesis of the basic principles to facilitate the application of the constructivism paradigm at school which can be summarized as follows:

- Learning is a personal and individual mental activity;
- The construction of reality depends on the environmental context in which there is learning (community) and the learner's interactions with this environment;
- Everything that is learned or constructed by the student is taken as open to negotiation and therefore depends on the sharing of meaning that emerges;
- Learning is influenced by the understanding of the previous situations that the student brings into the new learning situation;
- It is very difficult to transmit our construction of reality and check the degree of compatibility with those of others;
- The student plays a proactive role and is the decision maker for his own knowledge-building process.

As soon as the teacher takes these principles into account, in order to give a lot of chances to the application of constructivism in school (Lefebvre, 2001) propose some professional acts to be followed by the teacher, we shorten in these terms:

- The systematic, retroactive, non-linear planning process is sometimes chaotic;
- Developmental, reflective and collaborative planning;
- The objectives that emerge during a work process;
- Strategies for constructing concepts and challenging the student's meanings, for example cooperative learning,

³ A synthesis by Sonia Lefebvre of the University of Québec à Trois-Rivières, in Lafortune and Deaudelin, 2001, p. 77.

manipulation activities, active pedagogy, guided discovery, project-based approach, etc.

- His interaction with the student, but also between students in the same group;
- The attitude of a non-expert, supportive, supportive person who uses open-ended questions emphasizes understanding principles rather than memorizing facts and formulas.

We realize that the constructivism paradigm emphasizes the active role of the learner. The latter is considered the first agent of his learning.

2.1.2 Socio-Constructivism

The curricula of various countries register their remarks in this epistemological paradigm of knowledge called "socio-constructivism".

For these constructivists, knowledge is built by the subject himself through the experiences he experiences in his environment, his experience and interactions with others (Lefebvre, 2001). As for building this knowledge, you must learn. But how do you learn? The concept of "learning" is a need to go beyond or transcendence so that the subject who learns goes further in relation to oneself, to one's routines, to habits and to one's evidence (Giordan, 1998). In this context, the student invests his experiential knowledge and his concepts in practice. They are constantly evaluating, modifying, reconstructing them and constantly adjusting them in the light of new data. This is where St-Jean (1995) maintains that students learn to learn with their peers. As for having a satisfactory group functioning, working in collaboration with the other, interdependent to develop their ability to listen, help each other and respect each other.

The "socio" dimension, for its part, refers to the partners involved. The dynamics of exchanges with other learners or

interactions between peers, than the interactions between teachers and learners (St-Jean, 1995). This dimension is linked to social interactions. For Arpin and Capra (2001), Vygotsky's insistence on social interactions displayed in the form of exchanges, points of view, discussions, arguments and cognitive confrontations promotes a better understanding of the problem. A search for solutions and the acquisition of new knowledge is both collective and individual.

Finally, the last dimension of so-called "interactive" socio-constructivism uses the environment or the environment (Jonnaert and Vander Borght, 2009). Although learning is an individual process that develops through interaction with others. It can also be achieved thanks to the exchanges that the subject establishes with the environment. The socioconstructivist approach aims to achieve several objectives as regards the cognitive aspects, the affective aspects as well as the cooperative aspects.

2.2 Competency-Based Training

Although the concept of competence is used in several areas of life, what will be the meaning of competences that one can retain within the framework of training programs? In the educational sciences, the concept of competence evokes "knowing how to act based on the effective mobilization and use of a set of resources" (Legendre, 2004, p. 29). In other words, "a set of resources that an individual mobilizes in a situation to succeed in an action" (Jonnaert, 2002, p. 34).

- Disciplinary skills relate specifically to disciplinary study programs grouped into five areas. They are languages; mathematics, science and technology; from the social universe (history, geography, education for citizenship); arts (drama, visual arts, music, dance) and personal development moral education (or religious education), physical education and student health (Gouvernement du Québec, 2006).

- As for second order skills called transverse (or generic) skills, they do not fall within a specific disciplinary field. However, they sometimes make it possible to face complex problems with which the learner, citizen of tomorrow, will be confronted (Legendre, 2002).
- Intellectual skills relate essentially to the cognitive activity of the learner and to his attitudes necessary for the appropriation of new knowledge. It is through the various learning situations that the student faces. That the latter learns to use information, to solve problems, to exercise critical judgment and to use creative thinking (Legendre, 2002).
- As for methodological skills, they aim to foster mastery of the student's effective work strategies and methods (Gouvernement du Québec, 2006).
- Personal and social skills focus on building the student's personal identity, maintaining interpersonal relationships and working harmoniously by interacting with others, demonstrating an ethical sense (Government of Quebec, 2006).
- Finally, the competence of the order of communication makes it possible to share information, exchange messages in precise and appropriate language with others, either directly or through media vehicles. It is the basis of personal, academic, social and professional success (Legendre, 2002).

2.3 Project Pedagogy

In this section, the key word of the educational reforms of the governments of the western countries is the "pedagogy of the project". It brings together the various educational strategies and techniques. These adapt the learning to the reality of everyday life of young people, promote the success of young people according to their needs and provide openness to young people in this changing world.

For Vassileff (1988), the project concept is

a mental and pictorial elaboration of a chain of concrete actions to achieve, in the near or distant future [product] effects (written, verbal, physical economic, social) of any kind. It is also the exteriorization of a system of self-finalized values which consist in giving meaning to one's actions (in the broad sense: actions, speech, thoughts ...), from one's own values, one's own conceptions. The project gives the projection its social significance and the projection inscribes the project in a search for authenticity, in a process of empowerment (p. 35).

Several definitions of the project's pedagogy have been put forward, but for the present research, the ones that will catch our attention will more reflect the basic principles that contribute to skills-based training.

2.4 Learning Mathematics in Project Pedagogy

Today's world is marked by scientific and technological progress. These advances are among the testimonies, they are the most revealing of human genius and would no longer reach the level of development. What they know today without the help of mathematics. The use of mathematics has gone beyond the doors of the scientific and technological universe, it is widespread. "Innumerable situations force us to decode quantified information, to estimate, to calculate and to measure all the operations related to the mathematical universe" (Gouvernement du Québec, 2003, p. 122). The pressures exerted by the various societies which are in search of answers to various expressed needs make that mathematics occupies a place of choice, like basic discipline of the life of a citizen to be formed, whatever the environment in which it turns out that. For example, in Canada and more particularly in Quebec,

Mathematics, an important source of intellectual development, is a determining factor in academic success. His mastery is also a significant asset for integration into a society where his practical benefits are as numerous and diverse. The practice of mathematics calls for abstraction. Although his teaching [...] is based on concrete situations and objects, he must nevertheless give himself the objective of dealing in the abstract with the relationships between objects or between the elements of a situation (p. 124).

Learning mathematics will require the appropriation of discipline-specific concepts and processes, the ability to solve problem situations and the ability to communicate using mathematical language. This first passage linked to the appropriation of mathematical concepts and processes alludes to mathematical reasoning. In Quebec, for example, primary school aims to develop reasoning capable of establishing relationships, to combine them and to subject them to various operations that push mathematical thinking further. The appropriation of mathematical concepts requires the student to discover sometimes new vocabularies, sometimes a new meaning to known words. Familiarity with the concept justification process should be followed by explanations of a mathematical approach or reasoning. To construct concepts in mathematics (Caron and Lepage, 1985) find that teachers are powerless as to the strategies and adequate means to use in their educational interventions. As for these two authors, apart from the textbooks which are not always very explicit on this point. They relate to the construction of mathematical concepts by the pupils and their knowledge in mathematics also becomes limited (Caron and Lepage, 1985).

2.5 Specific Question

Given the scarcity of studies documenting the implementation of projects intended for the construction of mathematical concepts

by elementary school students, what was the contribution on the process of elaboration and the setting up of a mathematical project by pedagogy of an elementary teacher's project?

3. Research Methodology

In order to answer such a question, we must first identify our target population and describe their environment. Next, we will present the anticipated course of the study and the data collection tools. Finally, data collection will be carried out according to the qualitative research method of the descriptive type and “*explicitation*” interview technique. It was semi-structured interview in a classroom.

3.1 Description of the Target Population

From the point of view of geographic structure, the field of our research is in a primary school of the Montreal School Board. The class is 6th grade primary of the school is in the sector "Jean-Rivard". A sensitive sector of the Saint-Michel district in Montreal. The school is limited to the east by the city of Saint-Léonard and to the west by boulevard Pie-IX; to the north by the Canadian National Railway line and to the south by rue Jean-Rivard. The school is in a landlocked area where travel is very difficult. In addition, it is one of the poorest sectors in green spaces in Montreal. There is no library in the area, despite the approximately 8,000 residents.

3.2 Outline of the Planned Course of the Experiment

First, the outline of the planned course of the experiment, we will present the research according to the following stages:

- A meeting with the teacher and the educational advisor to secure. The teacher will be guaranteed by independent research that is not sponsored by various bodies of the ministry;
- Two meetings with the teacher to prepare and plan the different stages planned for the development of a mathematics learning project;

- The third session is for synthetic time and the last one is for communication time;
- A meeting with the teacher is scheduled after each session. In class, to take stock of the progress of the project in class;
- Four sessions classify it to observe it. The interactions between the teacher and the students, including a session for global time and for analytical time.
- A debriefing with the teacher to find out his impressions and comments. If asked to relive the project experience in his class, how would he behave?

Then, we will talk about data collection tools, descriptive research and interviews with the teacher. These interviews will take place on the interaction between him and the researcher. Finally, the researcher will take out his recording device to record the actions of the students in class. These interviews will lead the different possible phases of a mathematics project.

3.2.1 Basis for Developing a Learning Project

The learning project will start with the study of length measurements. To develop this learning project, we will use the Quebec school training program to specify the skills sought. As for managing and directing an educational project, the teacher needs some tools for managing educational projects. Several project management tools can be identified, but for the purpose of this research, we will briefly list and present five (5) essential and relevant tools.

3.2.2 Data Collection Tools

The choice of a data collection method depends on the level of research, the type of phenomenon and the instruments available (Fortin and Gagnon, 2016). To answer our research question, we are going to set up a device that falls under the research of the descriptive type and the “*explicitation*” interview technique (Vermersch, 1994).

3.3 Preparation and Description of the Material

We will collect and complete the data with notes transcribed from the elements collected in the field. The data are interviews in order to create an orderly database. The development of the project will consist in implementing the learning of mathematical concepts through the pedagogy of the project. The roles and tasks of the teacher. The role the teacher plans, his interventions in the classroom, the organization and the composition of the work teams. Class management to maintain discipline when carrying out the project. He will have to undertake the interest and motivation to complete a mathematics project with his students. Direct observation of the teacher's behavior during his interventions in the classroom and in the presence of the researcher will be noted and coded.

However, the teacher has limited experience in carrying out projects through the project pedagogy approach. He voluntarily agreed to live with us his first experience of developing and carrying out a project to learn mathematical concepts through the pedagogy of the project. After talking about the preparation and description of the material, we must address the point of reducing or compressing the data collected in the field in order to identify the components of the discourse and structure the information (Fortin and Gagnon, 2016) . This compression will be done by following the recommended steps.

4. Analysis of the Data and Interpretation of the Results

In this last part, we must analyze the data collected and have the results interpreted.

4.1 Qualitative Data Analysis

As for qualitatively analyzing the data, we must take into account several factors, including the consistency of the data, the fidelity of the traces during transcriptions, the recording of the data and the verification of the data transcribed by third parties. When the data are presented in the form of a speech, the qualitative analysis can include four stages: the preparation and

description of the material, the reduction of the data, the choice of modes of analysis and transversal analysis (Contandriopoulos, Champagne , Potvin, Denis and Boyle, 1990). It is important to reduce the researcher's influence on the data transcribed from the audio cassette data recording when transcribed into verbatim to verify the validity of data. As for the researcher, he validates the transcriptions made by the students by listening to the sound echoes of the audio cassettes. All this, in order to verify, whether the transcriptions respected the fidelity and the validity of the soundtracks.

4.2 Use of Grids and a Priori Didactic Analysis of a Measurement

Once we have extracted the coded analysis grids, we will have to discuss their use in the research present. These grids will first be used in a linear fashion. It all starts with the interview with the teacher, for the preparation (planning of the various actions of the teacher ...) of the project of learning mathematical concepts. Then, we will proceed with an analysis of the progress of the actions of the project in class (in the presence of the students) and we will end with a comparison of the elements collected or key themes presented in categories, subcategories and codes to facilitate the analysis of the data. of research in study.

In general, the concept of "measurement" is quite complex. To describe the complexity of this notion and its limits, proposed activities (Guay, Hamel and Lemay, 2003) find that "Teachers confine themselves to simplified or metaphorical situations [than] in calculation activities" (Guay, Hamel and Lemay, 2003, in Charnay, Mante, Douaire and Valentin, 2003, p. 360). The teacher must help the pupils to perceive the distinction between "an object", "a magnitude" and "a measure".

In addition, length is a concept whose learning is first in the pupil because it is a property of perceptible nature. For example, we can see which of two children is the larger, if they are side by side (by direct comparison: juxtaposition, superposition,

comparison of the two objects ...). If the two children are separated by a partition, they cannot move. So, it is necessary to use an intermediate object to "transport the length" of one and compare it with that of the other. If one leaves, then by indirect comparison is a recourse to an intermediate object, to a measuring instrument such as the length serving as a template. Likewise, if it were to order, for example, clothing for a child. It is usually necessary to measure the height of this child in centimeters (measurement activity). One of the main sources of error for students is therefore that they have difficulty understanding that one can associate several quantities with the same object.

4.3 Student Difficulties Related to Measurement

In the following, Poirier (2001) presents some of the main difficulties experienced by elementary school students when comparing measurements and quantities.

- Identification of the dimension measured: asking students to measure an object requires that the dimensions to be measured be specified. For example, if they are asked to measure their teacher's "Little Robert" Dictionary, then it is appreciable to indicate and specially to specify if it is about the weight, the height, the width, the length of the dictionary.
- Comparison of objects in relation to their length (by superimposition, use of an intermediate object): the main difficulties or errors of the students mean that some students are unable to identify the permitted transformations of the length measurements. These transformations can only be identified if the concept of measurement is established in the student. Students experience handling difficulties when using twine.
- Enumeration: when a given unit of measurement is postponed several times, the act of deferring this unit of measurement often outweighs the number of times it is carried over. For example, measure the outline of the classroom using a 30 cm ruler.

- Accuracy of length measurement: to measure length, students must use a common standard. Difficulties often arise from positioning the standard at the end of the object to be measured, because they slide the standard several times (Poirier, 2002).
- Measuring instrument: the use of the graduated ruler poses problems of positioning the double centimeter or reading millimeters. With the graduated ruler, the measurement is made from "0" and not from "1", while, when counting a collection, we start with "1".
- Estimation of the length of an object: due to lack of social or academic experience, the student has no idea of the measures of certain lengths. For example, estimating the length of a football, basketball, etc.
- Conversion of units of length measurement: errors related to the decimal writing of numbers (multiplication or division by 10, 100 ...) or misunderstanding of the relationships between the different imperial units (inch, foot, height rod, etc.) and units of the international system can intervene.

Thus (Poirier, 2001; 2002) predicted the difficulties experienced by students in taking measurements or quantities.

4.4 Contributions to Research

The realization of this research was rich in lessons, some of which may have consequences on our perception of the application of the new educational system in Quebec. The context of the problem, we are led to estimate the magnitude of the problems raised by the implementation of new pedagogical approaches in learning mathematics in Quebec. The feeling that animates by doing this research work, we give the opportunity to discover not only the richness of this new educational approach, but the difficulties related to this academic renewal in learning mathematics.

One of the fears expressed at the start of this research was the controversy surrounding the application of school renewal in Quebec schools. On the one hand, the policy requires teachers to apply the reform. And, on the other hand, the teachers' unions invite its members to isolate this school renewal. There is therefore fierce resistance from teachers to the process of change for obvious reasons of lack of adequate training. Who could better equip them, make them able to face the school renewal with serenity and make it successfully operational?

4.5 Limits and Criticisms of Research

Before approaching the point on the limits and criticisms of this research, let us remind readers that the results we are going to discuss concern research in which most students come from families living in vulnerable contexts. Despite the teacher's rich professional experience, he does not have adequate initial or continuous training in learning subject-disciplines according to the skills-based approach. His initial training is different from the new educational approach.

In the following, we will identify the various elements that influenced the research results and threatened the validity of the conclusions. This research has limits. Indeed, one of the limits of our research relates to the choice we made to focus exclusively on a single teacher with more than two decades of teaching experience. He has no experience in learning mathematics in project pedagogy, working in a school in an underprivileged area and holding a 6th grade class in the 3rd cycle of primary school.

We will therefore raise the limits linked to this sampling. Another limit of this research relates to the methods that we have chosen: the use on the one hand, of a questionnaire and on the other hand, a technique of interview and explanation of the actions of the teacher. As we are not going to dismiss the factor of social desirability, the answers that have been put forward must be taken with some caution. Also, the interview clarification technique of the teacher's actions, for its part, aims

to verbalize the tasks performed by the teacher, the implementation in the actual task and the description of the progress of this action as expected. This technique has not proven to be conclusive. It encountered difficulties in predicting the actions to be taken. Prudence recommends that this technique can only be viable and reliable when the teacher has mastery of the various learning sequences to be carried out in the project.

Another limit lies in the development of the mathematical learning project as initially planned with the teacher following the four-step approach (Francoeur Bellavance, 1997). The project was abandoned by the teacher after two effective sessions in the presence of the students. This limited our didactic analysis of the mathematical concepts to be learned and prevented us from identifying difficulties other than those which are generally known and linked to the learning of the concept of measurement. Therefore, the abandonment by the teacher of continuing the realization of the project, did not allow to make a more didactic analysis of our study. Finally, another limitation of this research is the inadequacy of the "recorder" tool, a data collection tool. This audio recording tool for interviews with the teacher and classroom sessions (in the presence of the students), forced us not to use the feedback and visualization of the various learning sequences for a faithful interpretation of our results.

4.6 Research Prospects

This research raises major difficulties related to the adequate initial (or continuous) training of the teacher who finds himself somewhat helpless in the face of the complexity of the various aspects required for learning mathematics in project pedagogy. This situation has only so far, apart from the few fragmentary information sessions for teachers, during pedagogical days. And, some documents on the stages of a learning project, neither initial training nor continuous training, no one had, it seems, set up a "Vademecum" that could serve as support for the teacher to set up projects to build mathematical concepts.

In addition, the reluctance and opposition expressed by teachers, teachers' unions as to the effectiveness of school renewal in resolving all the evils that are blamed yesterday school and the unfavorable perception of hasty relevance implement school renewal in Québec schools. From there demonstrate that important work and considerable effort will have to be carried out. An effort without which the pedagogy of the project could not acquire the place conferred on it by recent educational theories.

All the issues raised, seemed likely to guide and intensify the development of teachers. If we can expect the various specialized educational services involved in the coming of new learning approaches to bring concrete answers to the problems raised, likely to lead them and support the teacher in his pedagogical approach. So, we can hope from them that the teacher would have benefited from a solid adequate training. This training dynamic can only bear fruit to the extent that it is initiated by the people concerned. It will be more interesting for the teachers to feel supported in their approach in a favorable and harmonious context by the protagonist parties (school authorities and teachers' unions).

5. Conclusions

If some teachers say they feel comfortable in this new role as defined in the previous point of this work and manage with serenity and ease. The learning situations in pedagogy of the project, it is permissible to question the practical modalities put in place by these teachers. How do they organize their learning sequences? It would be more interesting to determine the reasons which encourage the mathematics teachers to tame the pedagogical approach of the project. There is therefore reason to wonder if they have developed structures specific to school, personal pedagogical skills or convictions favorable to alleviating something bad criticized by yesterday's school. Many issues are pending and may need to be explored further and more systematically.

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EARLY INTERVENTION SERVICES IN PAKISTAN

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Abstract

Intervention is a process concerned with the efforts for improvement of different disabled persons. Early intervention employs preventing strategies to reduce the occurrence of severity of disability or handicapping conditions in infants and toddlers. These preventing strategies are concerned with averting the condition which give rise to disabilities or handicaps and also the conditions which add further disadvantage to the precipitating cause of disability, leading to further handicap. A survey of special education in Pakistan reveal that the focus of special education is on school education and therapies and less importance is being given to early intervention and early education. Keeping in view this fact, the present work has been carried out.

Introduction

An early intervention programme does not necessarily reflect a consensus among service providers as to what comprises optimal service model. Indeed, existing programme are quite diverse with respect to their policies and practices in a whole range of areas, even in countries operating under quite explicit legislation guidelines. Thus there is heterogeneity in terms of the agencies which control the program, their climate, their mode of service delivery, assessment method, curriculum design, cultural sensitivity, staff training, relationship with parents, Evaluation procedures, approaches to advocacy and so on.

A Review of Special Education Policy and Practice reflects that Special Education is relatively a new field of study. In Pakistan

1985, the Ministry of Special Education, was established. The postgraduate teaching in the subject started few years after i.e., 1989. Although Non-Government organizations and volunteer welfare groups were serving some special need children in some parts of the country but government run special education centers for special need children were establishment in 1985-86 after the establishment of the Ministry of Special Education.

Later, another forum, the Directorate General of Special Education was formulated to function as coordinator between all institutions serving special needs. The Directorate General of Special Education, Islamabad framed the National Policy for Special Education in 1998. the provisions of the policy are consistent with the national with disabilities. The basic elements outlined in the policy include:

- Early detection and early intervention.
- Promotion of inclusive education at all levels.
- Special education component be part of teacher training.
- Training of special education teachers.
- Allocation of 5% seats for disabled students in tertiary institutions.
- Inclusion of special education as subject at middle and secondary level.
- Research in teaching aids and teaching methodology.
- Free education to the disabled children.
- Development of specialized and individualized curriculum.
- Vocational training centers for disabled persons.
- Collaboration with international organizations for an effective policy implementation.

A survey of the special Education services available in Pakistan indicate that major concentration in teaching of disabled is being placed on school education i.e., the services are available for the disabled between the age range of 6 to 14 years. Almost no provision is available for children under 6 years of age as well as for adult disabled in case of rehabilitation and career guidance.

Research studies have revealed that early intervention of disabled children not only prevents further deformity but also enables the disabled child to develop adjustment skills needed to cope with the academic and developmental needs of the environment. The child is responsive to the surroundings, learns to interact, and comprehend the situation and develop a readiness for school learning. By realizing the importance and need of Early Intervention services in institutions for special need children, numbers of students have been conducted by the University of Karachi, to investigate the existing facilities of early intervention in hospitals, institutions and community based centers of Karachi.

The Objectives of the study on early intervention conducted by Shagufta (2007) were to explore:

- The awareness of teachers, parents and professionals.
- Services extended for early intervention in the city of Karachi.
- Role of professionals, in early intervention.
- Parent's participation in early intervention.
- Provisions of training and its impact on attitude change.

Research methodology includes the following phases:

- Identification of provisions
- Investigation of awareness about early intervention services.
- Identify the needs of parents and professionals.
- Exploration of impact of training on enhancement of awareness level.

For the purpose of Identification of Provisions: a list of special schools, hospitals, and CBR projects dealing with education and rehabilitation of children were obtained. The respondents were approached using telephonic and personal contacts and the information about availability of early intervention services were collected.

For awareness study; through simple random sampling, teachers, parents and professionals were selected and data collected and recorded on structured questionnaire through interviewing.

The attitude towards early intervention was obtained via the following questions:

- Is early intervention important for the growth of younger children?
- How to start early intervention services at special schools?
- What role multi-professionals can play to contribute in the process of early intervention.

Teachers, parents and professionals were provided training in early intervention focusing the following areas:

- Child development
- Early intervention strategies
- Team working
- Need for parental involvement

At the end of training, impact of training was recorded by re-examining the trainees, to check the change in awareness level and attitude of the professionals towards early intervention and possibilities of its implementation in institutions.

Results indicate that only a few hospitals as well as special education center were appropriately providing early intervention services, is limited to physiotherapy or medical guidance though.

The concepts are not clear in the mind of the parent and teachers. Parents and teacher, while the professionals are somewhat acquainted with term.

Attitude towards implementing the concept looks like an unexplored area. Parents, very strongly feel that it should be available in all the institutions but teachers and professionals do not support the idea and worry about how it can be actualized.

The need for training was assessed and majority of the respondents were willing to attend the training.

Impact of training was assessed by re-assessing the participants to find out the difference between levels of awareness at pre-training stage and post training stage.

It was found that there was a great difference between the initial assessment, teachers, parents and professionals post training assessment.

Research findings indicate that the concept must be popularized among professionals, parents and teachers. The provision should be established in institutes but the institutions need guidance about strategies requested to actualize the provision of early intervention in schools, hospitals and community centers.

Conclusion

It is concluded that each special school should start early intervention services for young special needs children, focusing on the identification, treatment and therapy of special needs children at an early age. The needs of special needs children can be served better if it is identified and attended.

Recommendations

The special education system in the country should restructure the education of special needs children by starting from early intervention, school age education, career and vocational education and lifelong guidance to family support system.

Further to it, education of the teachers in SEN should also be targeted on early childhood education, school age education and adult rehabilitation, in order to develop focused professionals to serve in the field.

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FACTORS INFLUENCING ENROLMENT AND STUDY COMPLETION OF PERSONS WITH PHYSICAL IMPAIRMENTS IN UNIVERSITIES

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Abstract

This study sought to investigate the factors influencing enrolment and study completion rates of persons with physical impairments in universities. This study was based on quantitative research survey method. The population of the study consisted of the persons with physical impairments who completed their Inter or Graduation but did not take enrolments in universities and students with physical impairments who were studying in two government universities of Karachi. The sample of the study consisted of 20 persons with physical impairments who completed their Inter or Graduation but did not take enrolment in universities and 20 university students with physical impairments who were studying in two government universities i.e, Karachi University and Federal Urdu University. Snowball sampling was used to collect the sample of the study. Two structured questionnaires were developed to collect data from the respondents. Data analysis was done in the form of frequency tables. Results of the study indicated that environmental factors (85%), academic grades (85%), transport factors (85%) and financial factors (90%) influenced enrolment rates of persons with physical impairments in universities while environmental factors (75%), transport factors (75%), financial factors (90%) and lack of interest (90%) and will (90%) influenced study completion rates of university students with physical impairments in universities. It is suggested to make environment accessible, provide academic support, develop accessible transport, develop poverty reduction strategies and develop self-motivation in persons with physical impairments for high

enrolment and study completion rates of persons with physical impairments in universities.

Introduction

Almost 59,100 persons with physical impairments live in Karachi. (Awan,2012). But statistics is not available on educational qualifications of these persons. In the world, educational qualifications of persons with physical impairments are lower. (Mont & Viet Cong, 2011) In Australian higher education, persons with disabilities have low degree completion rates. (Australian beareu of statistics, 2016b) Several factors influence enrolment and degree completion rates of these persons.

Disability Factor

According to a study conducted by Tungaraza, (2018), in University of Dar es Salam on 19 students with disabilities, 12 students had physical impairments and 1 student reported that he knew 1 student who was not enrolled in university due to his physical impairment.

Environmental Factors

Students with physical impairments who get enrolment in universities also experience several barriers. It becomes difficult for a student with physical impairment to enter classrooms, washrooms and other places due to inaccessible structure. (Kabuta, 2014) According to a study conducted by Jali in Durban University of Technology, (2009) on 6 students with physical impairments of whom all students used wheel chairs, respondents reported that lecture rooms had stair steps and classes were conducted on second floors.

Fixed chairs, fixed desks and lack of space for wheel chair in the Computer or Laboratory also caused difficulties for these students. Another study conducted by Kienen, (2018), on 9 students with physical impairments, students reported that

classes were arranged on upper floors, students were given difficult task and they could not go on educational trips.

Bulidings, staff offices and libraries were also not accessible for these students due to stairs and narrow doors. (Jali, 2009) Most of the persons with physical impairments require lifts and ramps. But according to a survey conducted by Teferra, Desta, Maryam, Admas, Tsega, Achaw, Bekele & Mulat, (2014) in Euthopian universities, most of the students responded that there were no ramps and lifts in their universities. According to a study conducted by Klingler, (2014), on students with physical impairments, respondents reported barriers in using doors. Tunganraza, (2018), found that washrooms were inaccessible, dirty and harmful.

Many times these students require accommodations from university offices but Mutasa, Goronga & Tafangombe, (2013), found that regional offices were also inaccessible. Lifts were not available and student climbed stairs to go to regional office on third floor. (Mutasa, Goronga & Tafangombe, 2013) Students with physical impairments experienced difficulties in moving their wheel chairs in side ways due to grates, bricks, bumps and grooves structure. (Klingler, 2014). Drains, parking in sideways and Bikes also affected navigation of students who used wheel chairs. (Klingler, 2014)

Academic Factors

Mukhopadhyay & Moswela, (2014), found curriculum issues in the education of students with students with disabilities, student with walking difficulties reported that he reached classes late mostly. Jali, (2009), found that students who used wheel chairs reached classes late, requested the teacher to write in accessible avenues, extra time in exams and experienced difficulties in lab but teachers helped them. He also found that 1 student could not attend his semester because lecture avenues had steps and classes were conducted on second floors and another required the help of guard to lift his wheel chair in exams.

Students with physical impairments miss important points of lectures sometimes because due to their impairments they often need extra time for moving from one place to another. (Mose, 2013) Some teachers dictate them very fast which can be very difficult for these students. Students with physical impairments find it difficult to complete their exam due to their slow writing speed. Barnard-Brak, Lectenberger & Lan, (2010), conducted a study on 16 students with disabilities of whom 4 students who had physical impairments, 1 student reported that she used voice activated software but experienced difficulties in dictating, therefore, although she performed well in her class, she did not perform well in exams. Hadjidakou & Hartas, (2008), conducted a study on 10 students with disabilities, 4 teachers and 10 Head of the institutions, 1 teacher reported that one student with physical impairment had slow writing speed, therefore he was given extra time in exam or allowed to complete it at home. Mukhopadhyay & Moswela, (2014), found that students with physical impairments had to suffer from retakes of exams.

Academic grades of these students in the institution last attended also affect their enrolment in the universities. (Baur, Williams, Parker & Duffet, 2014) Materials and modified curriculum was not provided to students with physical impairments in Zimbabwe Open University. (Mutasa, Goronga & Tafangombe, 2013) Special equipment was also not available which 1 student with physical impairment required because he had Cerebral Palsy. (Mutasa, Goronga & Tafangombe, 2013)

Besides this, most of the students with physical impairments can not use libraries at the upper floors due to inaccessible stairs and narrow doorways. (Mwaiipopo, Lihamba & Njewe, 2013) According to a study conducted by Stillwell & Majinge, (2013) on 6 students who used wheel chairs in Nigerian university library, 4 respondents reported that they used libraries but 2 respondents reported that they did not use libraries because library was inaccessible for them.

Kavishe & Isibika, (2018) conducted a study on students who used wheel chairs in Ardhi University and University of Dar es salam and found that Ardhi University had no special section, lifts, standby staff, accessible toilets, automatic doors and low shelves for these students and University of Dar es salam had a small special section for students but no lifts, standby staff, accessible toilets, automatic doors and low shelves were available. Lawal-Solarin, (2012), conducted a study in eight universities on 24 students with physical impairments, there were no elevators and lifts in the libraries and libraries were on upper floors. Seven libraries had high shelves and only 1 library had low shelves. Seven libraries had comfortable chairs for students with physical impairments and 1 library had plastic chairs and desks.

In a study conducted by Kienen, (2018), respondents reported that chairs in the libraries were wooden or metal and not suitable, they could not use library for a long period, did not receive any academic support from the institution, faculty and department was not helpful, teachers gave no special support to students and some students reported that they could not use library easily and handout provisions and grading on assignments could help them but these were not available in Addis Ababa University.

Attitudinal Factors

According to a study conducted by Mose, (2013) of persons with physical impairments of whom students who used wheel chairs responded that they experienced negative attitudes from the teachers sometimes. This study also examined that insensitive attitudes of these teachers becomes a reason for not attending classes which affected their grades.

Jali, (2009), found that 1 student did not attend the semester due to steps in the lecture avenue and teacher refused to help him. Tungaraza, (2018), found that 1 student with physical impairment went to his teacher for a academic problem but his

teacher asked him to get out because he thought that he was a beggar.

Classfellows's negative attitudes also affect students with disabilities. (Deeboer, Pijl & Minnaert, 2012) Mukhopadhyay & Moswela, (2014), found several attitudinal barriers by classfellows and university staff. In this study, respondents reported negative attitudes from class fellows when they were given extra time in exams, undermining by people and no provision for arranging special paper wasted due to several papers on a same cloudy day.

Kienen, (2018), found that some class fellows were helpful, some were not helpful and some were fair but not very helpful. Moatona, (2014), found that students experienced discrimination and class fellows looked them with weird eyes and isolated them from these students but some students helped them and brought books for them. Jali, (2009), found that 1 people outside university looked at students with physical impairments with shock and laughed at them but some people helped them. Tungalaza, (2018), found that 1 student went to a priest for spritiual help but he thought that he was a beggar because he was crawling and 1 student was not allowed to enter Supermarket in Tanzania and guard pushed him out due to his impairment.

Transport Factors

Persons with physical impairments find it difficult to use government transport due to its inaccessible design. (Fuller, Bradley & Healey, 2004) Therefore they have to use private transport or depend on their families for convenience. (Englebrecht, 2014) According to a study conducted by Savill, Stone, Venter & Maunder, (2010), on 150 persons with physical impairments especially who used wheel chairs in Malawi, Mozambique and India, respondents reported that they used more expensive and accessible transport and mostly Rikshaws because it was accessible than other cheaper transports. But

Rikshaws charged extra cost for transporting their mobility aids. (Savill, Stone, Venter & Maunder, 2010).

According to Klingler, (2014), students with physical impairments did not use the campus buses of Kensas University and travelled with their families, friends or drove themselves. Student of Durban University of technology could not use shuttle bus of University and asked the guard to take him to another campus but guard did not help. (Jali, 2009) In a study conducted by Odame, (2017), University of Cape Coast had 18 shuttles but these shuttles had no designated space for wheel chairs. According to Tungaraza, (2018), University of Dar es Salam provided Taxi allowance and tricycles to all students with disabilities.

Financial Factors

Almost 80% of the persons with disabilities live in developing countries. (WHO, 2011) They have more costs and few resources. (Baur, Williams, Parker & Duffet, 2014) Jali, (2009), found that University of Durban Technology provided financial assistance to all respondents of the study through government offices. One respondent reported that although financial assistance took time, Department of Labour was a assistance. In a study conducted by Kienen, (2018), on 9 students with physical impairments, 4 respondents reported that they received limited financial assistance i.e, 120 ETB and Computer service by Addis Ababa University.

Personal Factors

Personal factors include the factors such as will, interest and passion for the studies. These factors can encourage or discourage persons with physical impairments to get enrolment in universities. In a study conducted by Jali, (2009), respondents reported that although they experienced difficulties in universities, yet these difficulties did not discourage them from getting education. Personal factors can be related to the attitudes of people. (Deeboer, Pijl & Minnaert, 2014)

In Pakistan, persons with physical impairments can get enrolment in universities after completing Inter or Graduation. This is the age in which most of their non-disabled class fellows are studying in higher education. But, unfortunately, higher education either becomes a dream or a painful experience for these persons. Very few students get enrolment in the institutions of higher education. Those who get enrolment, experience many barriers while studying in higher education.

As a result, enrolment and study completion rates of persons with physical impairments in universities are low. Many studies have been conducted on the educational experiences of persons with physical impairments but very few studies have addressed the enrolment and study completion rates of persons with physical impairments in universities and almost none of the studies have been conducted on the topic in Karachi. The aim of this study was to investigate the enrolment and study completion of persons with physical impairments in two government universities of Karachi.

Research Problem

There are many government universities and institutions of higher education in Karachi but enrolment and study completion of persons with physical impairments in universities are very low. This study will investigate the factors that influence enrolment and study completion of persons with physical impairments in government universities of Karachi city.

Research Objectives

To investigate the environmental factors that influence enrolment and completion of persons with physical impairments in government universities were:

- To find out the academic factors that influence enrolment and study completion of persons with physical impairments in government universities.

- To identify the attitudinal factors that influence enrolment and study completion of persons with physical impairments in government universities.
- To investigate the transport factors that influence enrolment and study completion of persons with physical impairments in government universities.
- To explore the financial factors that influence enrolment and study completion of persons with physical impairments in government universities.
- To explore the personal factors that influence enrolment and study completion of persons with physical impairments in government universities.

Research Questions:

- Does environmental factors influence enrolment and study completion of persons with physical impairments in government universities?
- Do academic factors influence enrolment and study completion of persons with physical impairments in government universities?
- Does attitudinal factors influence enrolment and study completion of persons with physical impairments in government universities?
- Does transport factors influence enrolment and study completion of persons with physical impairments in government universities?
- Does financial issues influence enrolment and study completion of persons with physical impairments in government universities?
- Does personal issues influence enrolment and study completion of persons with physical impairments in government universities?

Hypothesis

Inaccessible structure influences the enrolment and study completion of persons with physical impairments in government universities.

Academic factors influence enrolment and study completion of persons with physical impairments in government universities.

Attitudes of family, teachers and class fellows influence enrolment and study completion of persons with physical impairments in government universities.

Lack of accessible transport influences the enrolment and study completion of persons with physical impairments in government universities.

Financial factors influence enrolment and study completion of persons with physical impairments in government universities. Personal factors (lack of interest and will) influence enrolment and study completion of persons with physical impairments in government universities.

Limitations of the Study

This study was limited to the government universities of Karachi. Therefore, the findings of the study can not generalize to private universities. Another limitation of this study is the study difficulties in findings persons with physical impairments who completed their Inter or Graduation but did not get enrolment in government universities.

Methodology:

Type of the Study

This study was based on quantitative research survey method. Quantitative research was used because it allows for collection of numerical data. Survey research was used because it allows collecting data in a short period of time.

Tool of the Study

Two structured questionnaires were developed to collect information from the respondents. Questionnaire for the non-

students with physical impairments consisted of 35 questions. Questionnaire for the students with physical impairments consisted of 45 questions.

Population of the Study

The population of the study was the non-students with physical impairments who completed their Inter or Graduation but didn't get enrolments in universities and students with physical impairments who were studying in two government universities of Karachi i. e, Karachi university and Federal Urdu university.

Sample Organizations

In the first stage, 8 organizations working for persons with disabilities were contacted for this research i.e, Al-Ummeed Rehabilitation Association (AURA), Disabled Welfare Association (DWA), Association for Physically Handicapped Adults (APHA), Imran Rehabilitation Centre, Nowpdp, Muscular Dystrophy Association Pakistan (online) (MDAP), Darussukun, Pakistan Disabled Foundation (PDF), Aziz Begum Therapy Centre.

Three of these organizations provided lists of contacts of non-students with physical impairments i.e, Association for Physically Handicapped Adults (APHA), Nowpdp and Pakistan Disabled Foundation (PDF). In the second stage, different government and private organizations were contacted i.e, Karachi University, Federal Urdu university and Dow university. In the third stage, 3 hospitals were also visited for this research i.e, Liaqat hospital, Agha Khan hospital and Usmania hospital. In the fourth stage, Pakistan Physically Disabled Cricket Association was contacted for the contacts of non-students with physical impairments but only 2 members of Pakistan Physically Disabled Cricket Association had completed their Inter or Graduation. Therefore, only 20 non-students with physical impairments gave their verbal consent for the research. In the same way, in the first stage of sampling three government

universities of Karachi were selected i.e, Karachi university, Federal university and Madrassatul islam university but Madrassatul islam University had no student with physical impairment. Therefore, it could not be included in this study. Then, Dow university was selected for this research but Dow university imposed strict conditions for this research such as getting IBR, NOC and getting research instruments checked by its research board which were not possible in the short period of time. Therefore, it was not included in this study.

Sample Size

The sample of the study was 20 non-students with physical impairments who completed their Inter or Graduation but didn't get enrolment in universities and 20 students with physical impairments who were studying in two government universities of Karachi i. e, Karachi university and Federal Udu University. Snowball sampling was used to select both samples of the study.

Sample Criteria

The criteria for selecting non-students with physical impairments was the persons who completed their Inter or Graduation but didn't get enrolment in universities and had defects in their upper or lower limbs. The criteria for selecting students with physical impairments was the students who were studying in B.S or Masters degree and had defects in their upper or lower limbs.

Validity and Reliability

An expert opinion was taken regarding the validity and reliability of the questionnaires. Besides this, a pilot test and reliability test was also administered to check the validity and reliability of both questionnaires.

Pilot Test

Questionnaire for non-students with physical impairments was administered on the sample of 6 students in different areas of Karachi. Questionnaire for students with physical impairments

was administered on the sample of 6 students of whom 3 students were studying in Karachi University and 3 students were studying in Federal Urdu University.

Data Collection:

Data was collected from the non-students at their houses or offices. Data was collected from 18 non-students at their houses and from 2 non-students at their offices. Data was collected from students with physical impairments in two government universities i.e, Karachi university and Federal Urdu university.

Data Analysis

Data analysis was done in the form of frequency tables. KU indicates Karachi University and FU Federal Urdu University in these tables.

Ethical Consideration

Verbal consent was taken from the respondents of the study. Respondents were informed about the objective of the study. They were also informed that their information would be used for academic purposes only. Confidentiality and anonymity was also assured. Respondents were allowed to withdraw from the study at any time. Deception was also not used in this research.

**Table 1:
Characteristics of the Respondents:**

Responses:	Non-students:	Students:
Age:		
16-25	3 (15%)	9 KU 8 FU (85%)
26-35	11(55%)	1 KU 2 FU (15%)
36-45	6 (30%)	- KU - FU

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Gender:

Male	17 (85%)	5 KU 8 FU (65%)
Female	3 (15%)	5 KU 2 FU (35%)

Education:

Inter	14 (70%)	- KU - FU
Graduation	6 (30%)	1 KU - FU (5%)
B.S	-	4 KU 8 FU (60%)
M.A	-	3 KU 2 FU (25%)
D.Pharm	-	2 KU - FU (10%)

Institution:

Govt. institutions	3 (15%)	- KU - FU
Private institutions	17 (85%)	- KU - FU
Karachi University	10 (50%)	
Federal Urdu University	10 (50%)	

Impairments:

Polio	8 (40%)	3 KU 1 FU (20%)
Muscular Dystrophy	1 (5%)	- KU - FU
Post Polio defects	1 (5%)	1 KU - FU (5%)
Weak muscles	2 (10%)	- KU - FU
Amputations	2 (10%)	- KU 1 FU (5%)
Accidents	1 (5%)	- KU 1 FU (5%)
Others	3 (15%).	- KU 7 FU (35%)

Level:

Mild	9 (45%)	6 KU 3 FU (45%)
Moderate	7 (35%)	2 KU 6 FU (40%)
Severe	3 (15%)	2 KU 1 FU (15%)
Profound	1 (5%)	- KU - FU

Affected limbs:

One limb	14 (70%)	3 KU 9 FU (60%)
Two limbs	2 (10%)	5 KU 1 (30%)
Three limbs	1 (5%)	1 KU - FU (5%)
Four limbs	1 (5%)	1 KU - FU (5%)

Affected ability:

Walking	13 (65%)	5 KU 2 FU (35%)
Running	2 (10%)	5 KU 5 FU (40%)
Grasping	1 (5%)	1 KU 1 FU (10%)

Lifting	2 (10%)	1 KU 1 FU (10%)
Writing	1 (5%)	- KU - FU
Number of persons with physical impairments in family:		
0	16 (80%)	- KU - FU
1	2 (10%)	3 KU - FU (15%)
2	2 (10%)	- KU - FU
3	-	- KU - FU
Total	20 (100%)	20 (100%)

**Table 2:
Experienced Difficulties**

Responses:	Non-students:	Students:
Environmental difficulties:		
Stairs	12 (60%)	6 KU 3 FU (45%)
Narrow doorways	5 (25%)	1 KU 2 FU (15%)
Uneven grounds	10 (50%)	6 KU 2 FU (40%)
Footpaths	10 (50%)	- KU - FU
Academic difficulties:		
Late coming	-	Yes 17(85%)No3 (15%)
Writing notes	-	Yes 18(90%)No2 (10%)
Missing classes	-	Yes 15(75%)No5 (25%)
Using library	-	Yes 2(10%)No13 (65%)
Attitudinal difficulties:		
Family cooperation	Yes 17 (85%) No 3 (15%)	Yes 19(95%) No 1 (5%)
Teachers cooperation	-	Yes 16(80%)No3 (15%)
Classfellows cooperation-	-	Yes 19(95%) No1(5%)
Transport difficulties:		
Entrance	7 (35%)	4 KU 4 FU (40%)
Seats	7 (35%)	1 KU - FU (5%)
Handles	3 (15%)	1 KU 2 FU (15%)
Space for wheel chairs	5 (25%)	1 KU - FU (5%)

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Family monthly income:

5000-25000	7 (35%)	1 KU - 1 FU (10%)
26000-50000	7 (35%)	5 KU 4 FU (45%)
51000-75000	1 (5%)	2 KU 1 FU (15%)
76000-100000	1 (5%)	2 KU 1 FU (15%)
More than 1 Lac	1 (5%)	- KU 1 FU (5%)

Personal difficulties:

Lack of interest	Yes 5 (25%)	Yes10KU10FU(100%)
	No 15 (75%)	
Lack of will	Yes 5 (25%)	Yes10KU10FU(100%)
	No 11 (55%)	
Total	20 (100%)	20 (100%)

Table 3
Factors Influencing Enrolment and Study Completion Rates:

Responses:	Non-students:			Students:		
Envirtl. actors	17 (85%)	1 (5%)	1 (5%)	15 (75%)	3 (15%)	2 (10%)
Academic factors	17 (85%)	3 (15%)		14 (70%)	2 (10%)	3 (15%)
Attitudinal factors:						
Family attitudes	11 (55%)	6 (30%)	2 (10%)	11 (55%)	4 (20%)	2 (10%)
Teachers attitudes	-	-	-	12 (60%)	5 (25%)	3 (15%)
Class fellows attitudes	-	-	-	12 (60%)	3 (15%)	3 (15%)
Transport factors	17 (85%)	-	3 (15%)	15 (75%)	-	5 (25%)
Financial factors	18 (90%)	1 (5%)	1 (5%)	18 (90%)	2 (10%)	
Personal factors:						
Lack of interest	12 (60%)	5 (25%)	3 (15%)	18 (90%)	2 (10%)	
Lack of will	11 (55%)	6 (30%)	3 (15%)	18 (90%)	2 (10%)	
Total	20 (100%)				20 (100%)	

Results

Twelve non-students (60%) reported that they experienced difficulties in navigation due to inaccessible stairs, 5 (25%) non-students reported narrow doorways, 10 (50%) non-students

reported uneven grounds and 10 (50%) non-students reported footpaths. Nine (45%) university students reported that they experienced difficulties due to stairs, 3 (15%) students reported narrow doorways and 8 (40%) students reported uneven grounds. Seventeen (85%) university students reported that they reached their classes on time but 3 (15%) students reported that they reached their classes late.

Sixteen (80%) university students reported that they could write their notes themselves but 4 (20%) students reported that they could not write their notes themselves. Seventeen (85%) university students reported that they missed their classes frequently but 3 (15%) students reported that they did not miss their classes frequently. Two (10%) university students reported that they used libraries but 13 (65%) students reported that they did not use libraries. Seventeen (85%) non-students reported that their families cooperated with them and 3 (15%) non-students reported that their families did not cooperate with them. Sixteen (80%) university students reported that their teachers cooperated with them and 3 (15%) students reported that their teachers did not cooperate with them.

Nineteen (95%) university students reported that their class fellows cooperated with them and 1 (5%) student reported that his class fellows did not cooperate with him. Nineteen (95%) university students reported that their families cooperated with them and 1 (5%) student reported that his family cooperated with him little. Seven (35%) non-students reported that they experienced difficulties in transport due to entrance, 7 (35%) non-students reported seats, 3 (15%) non-students reported handles and 5 (25%) non-students reported space for wheel chairs. Eight (40%) university students reported that they experienced difficulties due to entrance, 1 (5%) student reported seats, 3 (15%) students reported handles and 1 (5%) student reported space for wheel chairs. Seven (35%) non-students reported that their monthly income was 5000-25000, 7

(35%) non-students reported monthly income 25000-50000, 1 (5%) non-student reported that their monthly income 51000-75000, 1 (5%) non-student reported that his monthly family income was 76000-100000 and 1 (5%) non-student reported that his monthly income was more than 10000. Two (10%) university students reported that their family monthly income was 5000-25000, 9 (45%) students reported monthly income 26000-50000, 3 (15%) student reported monthly family income 26000-50000, 3 (15%) student reported monthly family income 75000-100000 and 1 (5%) student reported family monthly income more than 100000.

Five (25%) non-students reported that they did not get enrolment in universities due to lack of interest and 15 (75%) non-students reported that they did not get enrolment in universities not due to lack of interest. All 20 (100%) university students reported that they had interest in their studies. Five (25%) non-students reported that they they did not get enrolment in universities due to lack of will and 11 (55%) non-students reported that they did not get enrolment in universities not due to lack of will. All 20 (100%) university students reported that they got the admission in universities on their own will. Seventeen (85%) non-students reported that environmental factors influence enrolment rates of persons with physical impairments in universities and 3 (15%) non-students reported that environmental factors do not influence enrolment rates.

Fifteen (75%) university students reported that environmental factors influence study completion rates of university students with physical impairments and 2 (10%) students reported that environmental factors do not influence study completion rates. Seventeen (85%) non-students reported that academic factors influence enrolment rates of persons with physical impairments in universities and 3 (15%) non-students reported that academic factors do not influence enrolment rates. Fourteen (70%) university students reported that academic factors influence

study completion rates of university students with physical impairments and 3 (15%) students reported that academic factors do not influence study completion rates. Eleven (55%) non-students reported that attitudinal factors influence enrolment rates of persons with physical impairments in universities and 6 (30%) non-students reported that attitudinal factors do not influence enrolment rates.

Twelve (60%) university students reported that attitudinal factors influence study completion rates of university students with physical impairments and 6 (30%) students reported that attitudinal factors do not influence study completion rates. Seventeen (85%) non-students reported that transport factors influence enrolment rates of persons with physical impairments in universities and 3 (15%) non-students reported that they do not know about it. Fifteen (75%) university students reported that transport factors influence study completion rates of university students with physical impairments and 5 (25%) students reported that they do not know about it. Eighteen (90%) non-students reported that financial factors influence enrolment rates of persons with physical impairments in universities and 1 (5%) non-student reported that financial factors do not influence enrolment rates. Eighteen (90%) university students reported that financial factors influence study completion rates of university students with physical impairments and 2 (10%) students reported that financial factors do not influence study completion rates.

Twelve (60%) non-students reported that lack of interest influence enrolment rates of persons with physical impairments in universities and 5 (25%) non-students reported that lack of interest does not influence enrolment rates. All 20 (100%) university students reported that lack of interest influence study completion rates of university students with physical impairments. Eleven (55%) non-students reported that lack of will influences enrolment rates of persons with physical

impairments in universities and 6 (30%) non-students reported that lack of will does not influence enrolment rates. All 20 (100%) university students reported that lack of will influence study completion rates of university students with physical impairments.

Discussion

This study found that environmental factors influence enrolment rates of persons with physical impairments. Academic factors also influence enrolment rates and supports the study of Mutasa, Goronga & Tafangombe, (2013), in which 80% respondents reported that many students with physical impairments could not get admissions due to lack of required entry qualifications. Transport factors and financial factors also influence enrolment rates but personal factors do not influence enrolment rates. This study also found that environmental factors influence study completion rates of university students with physical impairments.

The findings of this study is similar with the findings of Moatona, (2014), which identified that students experience difficulties due to infrastructure barriers but not similar with the research of Filmer, (2005), which found that due to inaccessible structure, students with physical disabilities are at increased risk of attrition. Findings of this study are similar with the result of Mwaipopo, Lihamba & Njewe, (2013) that most of the university students did not use libraries but not similar with the findings of Kienen, (2018), which found that difficulties in using libraries could affect the educational performance and study completion of these students.

Transport factors and financial factors also influence study completion rates. Personal factors also influence study completion rates and this study supports the results of Jali, (2009), which found that university students were happy in their education but academic factors and attitudinal factors do not influence study completion rates.

Conclusion

This study found that environmental factors, academic factors, transport factors and financial factors influence enrolment rates but attitudinal factors and personal factors do not influence enrolment rates. This study also found that environmental factors, transport factors, financial factors and personal factors influence study completion rates but academic factors and attitudinal factors do not influence study completion rates.

Recommendations

- Ramps should be made in universities for university students with physical impairments.
- Libraries should be accessible for university students with physical impairments.
- Special transport should be developed for persons with physical impairments.
- Government should develop poor reduction strategies for persons with physical impairments.
- Persons with physical impairments should self-motivate them in their education.

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DEVELOPING AWARENESS IN THE PARENTS OF CHILDREN WITH INTELLECTUAL DISABILITIES

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Abstract

The main objective of the study was to develop awareness in the parents about early intervention through workshop and to investigate its impact. The hypothesis formulated for the study stated that workshop will bring significant improvement in the awareness of parents of experimental group about early intervention. It was an experimental study for which thirty parents were selected as sample by using the purposive sampling method. Fifteen parents were included in the experimental group and the other fifteen were served as control group. A structured questionnaire based on lickert scale was designed for the study which was consisted on 10 questions. The questionnaire was used for both pre and post testing purposes for both experimental and control groups. A workshop on the early intervention was organized for the parents of experimental group as the experimental manipulation. After the time period of three months, the post testing was done on both the groups via using the same structured questionnaire. The results obtained through statistical analysis proved that the provision of workshop did develop differences in the awareness of parents of experimental group. It can be recommended that such awareness programs must be operated on mass level with the collaboration of both public and private sectors.

Key words: Awareness, Early Intervention, Intellectual Developmental Disorder IDD.

1. Introduction

Early intervention is not just a term but it is a whole set of services that helps children to grow and go through smooth development with little or no difficulties regardless of risk factor and nature of present child's disability. On the other hand the process of early intervention does provide support to families so they can provide help to their children during their early years of life. The Early Intervention is relate to the children who are school going or younger, children who are discovered or to have or to be at risk of developing handicapping conditions (Shahzadi, S. & Sheikh, A., 2011).

Early intervention for young children with special needs is crucial for their growth and development in terms of current functioning and future capabilities. Major goal of early intervention for young children with special needs is to removes all the barriers to development and learning that disability often impose. Early intervention is an environmental variable. He says that the children and their parents and their families are the recipients of many different kinds of social support that can often do function as a form of early intervention (Dunst, 2000). The apparent focus of early intervention services are children from age range of birth to three years. In many journals of Early Intervention this range extended to the age of eight years.

The process of early intervention can provide an extensive range of services to parents in terms of support. This process works for both medical and educational aspects, including early detection and preventions. It is not only helps parents to work for the improvement of their child's development and education, but it is also support them to reduce the cost of required special education program by using home remedies for their child's problems. The process also covers rehabilitation and health care needs. Though the parents are not the direct receiver of services as their children are but by becoming the part of it parents feel less isolated and stressed.

Parents have greater investment on their children, not only of time but also of emotions. No other person will know the child as well as the parents does.

Early childhood education has a history of being committed to parent involvement and family support. Thus it should not be surprising that parent education and involvement are also integral to services for young children with disabilities. A new trend has emerged in recent as to view a child within the context of family and to consider working with families as to be an essential aspect of early intervention. The main notion behind this approach is to serve young children with special needs on the basis of understanding that parents are the managers or decision makers for their children, and that the role of professionals is to guide and provide assistance to the parents.

Parents are equal status partners in the planning, implementing, and evaluating intervention services for their children (Vincent and McLean, 1996). The approach should focus on helping families to enabling and empowering them so that they need no to be dependent upon professionals for decision regarding the education, care and future of their children (Bailey, 1994).

Parents hold key information and have a critical role to play in their child's development and education. They have unique experience and knowledge to contribute to view the child's needs and the best way of supporting them. This particularly becomes more important if a child has special needs. The early intervention and early childhood education literature also indicate that the impact of intervention and educational programming will be last if the parents get involved. The following research study is an effort to design a frame work where family get involve for the intervention, gain awareness and support to raise their child with disability.

2. Methodology

2.1 Participants

Parents of children with Intellectual & Developmental Disabilities (IDD) were the participants of the study. Total 30 parents were selected by using the method purposive sampling. The selected participants then divided into experimental and control groups. Fifteen parents were included in experimental group, while the other fifteen were included in control group for the study.

2.2 Research Design

The research design of the study is experimental in nature in which selected parents were divided in experimental and control groups.

2.3 Instrument

A structured questionnaire based on lickert scale was used as both pre and post assessment tool for the study. The questionnaire consisted on 10 questions used to measure parent's awareness about early intervention. For the workshop; material about early intervention was prepared in Urdu language for better understanding of parents.

2.4 Procedure

For experimental group, pre- testing was done by using a structured questionnaire to measure the initial awareness level of parents about early intervention. A day long workshop based on the information related to early intervention was conducted for the parents of experimental group. Related material was also provided to the parents. After the pause of three months, post – testing was done to measure the difference in awareness level of parents about early intervention by using the same questionnaire.

For control group, pre-testing of parents of control group was carried out by using the similar questionnaire to measure the

awareness level about early intervention. No workshop, neither any material related to early intervention was provided to the parents of control group. Three months later, post-testing of control group parents was conducted by using the same questionnaire.

3. Findings

The data was gathered by using a questionnaire and then converted in the tabulated form. The drawn percentages of pre and post testing phases data of experimental group shows that there is difference in the awareness level about the early intervention process and needs of families. The proposed hypothesis was analyzed by using chi-square statistical method. The statistical analysis of data reveals that the chi-squares calculated value which is greater than the tabulated value i.e. (105.42 > 5.99). Therefore, the proposed alternative hypothesis has been accepted.

Table
Pre- and Post-test Observations

Description	Pre- test phase		
	Don't know	Agree	Disagree
Families are different and needs individual services	9 60%	1 6.6%	5 33.3%
Early interventionist are more realistic about child as compare to parents	10 66.6%	1 6.6%	4 26.6%
In recognition of child's need parents are equally capable as interventionist	8 53.3%	1 6.6%	5 33.3%
Parents make better decisions that which need of the child should be fulfilled immediately	9 60%	3 20%	4 26.6%
Learn to appreciate other families work as a family member	6 40%	2 13.3%	7 46.6%
Families tradition and norms effect daily routines	4 26.6%	3 20%	8 53.3%

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Early intervention process of particular culture family also suitable for other families of same culture	9 60%	3 20%	3 20%
Provided intervention services are useful for families	8 53.3%	1 6.6%	6 40%
The way family adapt define the way they rare their child	10 66.6%	2 13.3%	3 20%
To be realistic about child performance family needs professional opinion	8 53.3%	0 0%	7 46.6%

Description	Post- test phase		
	Don't know	Agree	Disagree
Families are different and needs individual services	3 20%	9 60%	3 20%
Early interventionist are more realistic about child as compare to parents	1 6.6%	11 73.3%	3 20%
In recognition of child's need parents are equally capable as interventionist	4 26.6%	10 66.6%	1 6.6%
Parents make better decisions that which need of the child should be fulfilled immediately	5 33.3%	9 60%	1 6.6%
Learn to appreciate other families work as a family member	2 13.3%	10 66.6%	3 20%
Families tradition and norms effect daily routines	2 13.3%	12 80%	1 6.6%
Early intervention process of particular culture family also suitable for other families of same culture	2 13.3%	10 66.6%	3 20%
Provided intervention services are useful for families	1 6.6%	12 80%	2 13.3%
The way family adapt define the way they rare their child	1 6.6%	13 86.8%	1 6.6%
To be realistic about child performance family needs professional opinion	5 33.3%	8 53.3%	2 13.3%

Description	Difference		
	Don't know	Agree	Disagree
Families are different and needs individual services	6 40%	8 53.3%	2 13.3%
Early interventionist are more realistic about child as compare to parents	9 60%	10 66.6%	1 6.6%
In recognition of child's need parents are equally capable as interventionist	4 26.6%	9 60%	4 26.6%
Parents make better decisions that which need of the child should be fulfilled immediately	4 26.6%	6 40%	3 20%
Learn to appreciate other families work as a family member	4 26.6%	1 6.6%	4 26.6%
Families tradition and norms effect daily routines	2 13.3%	9 60%	7 46.6%
Early intervention process of particular culture family also suitable for other families of same culture	7 46.6%	7 46.6%	0 0%
Provided intervention services are useful for families	7 46.6%	11 73.3%	4 26.6%
The way family adapt define the way they rare their child	9 60%	11 73.3%	2 13.3%
To be realistic about child performance family needs professional opinion	3 20%	2 13.3%	5 33.3%

The above tables show the number of pre and post responses and their percentages obtained by the parents of experimental group in the awareness about early intervention.

4. Discussion

Parental involvement is the key to success of any special education program. Though the parental responses for such services are not always be same and there are visible individual difference can be seen in their approaches (Bennett, 2012). But

the truth is many underdeveloped countries find much better solutions for the problems related to their disabled children just by including parents in the decision making processes. As observed factors used in the above study are very general carrying the experience of empathy which often overlook by most of the parents in the process of grievances.

After having a child with disability, parents get so depressed and isolated themselves which not only allows them to escape from the real needs but also they are unable to relate their situations with others. The situation can be changed of proper guidance provided to the parents. As the results revealed, that many parents were unable to relate themselves with the mentioned factors but after getting complete information they were not only able to claim what are true choices but they also showed courage to talk to other parents about the same. Due to societal taboos, parents who really interested in getting early intervention services or seek help from professionals were feared by being tag as of “frustrated parents” or “parents of a child who is not equal to the society’s standards” (Korfmacher, J., 2008).

Many researches revealed that families who are culturally diverse are not different from other families as they are equally interested in their child’s betterment as other parents (Lopez, 2001). Educated or non-educated, culturally diverse or same families do need assistance to support their child with disability (Epstein, 2001). It can be concluded that a society will only be benefited if professional, parents and other related community member work as a team to produce awareness and disseminate services without any difference.

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DISABILITY AND ASSOCIATED PROBLEMS AS PERCEIVED BY PROFESSIONALS

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Abstract

The study was designed to investigate the awareness level of health professionals: about disability and its associated problems, knowledge about literature, and rehabilitation services. The analysis of data reflects that health professionals are not fully aware about the concept of disability and its associated problems. Health professionals face many problems for interacting or treating person with disability therefore they need to know about techniques and specific knowledge about disability.

Background of the Study

Disability Concept and Classification: The term refers to the functional limitation of an individual's ability to carry out the normal activities of daily living caused by either a permanent physical or mental impairment or a chronic clinical condition such as epilepsy, bronchitis or schizophrenia.(Reynolds,1987).

The term disorder, disability, impairment and handicap are some time used interchangeably. But actually have different meaning (Williams, 1987).Disorder is a disturbance of normal academic, psychological, or social functioning. Disability is used to refer to a physical disorder, such as loss of limb or some other cripple condition. It is also used with learning and behavior problems that may or may not be due to a physiological cause. The term handicap is an environmentally related limitation. Children with, sensory, psychological or learning problems are handicapped in

a classroom environment that does not accommodate their learning needs. (Brolin.1982). The term impairment is usually reserved for sensory defects i.e. visual impairment and hearing impairment. Another important term used for disabled children is exceptional it is an inclusive word that refers to children with physical disabilities, learning and behavioral problem as well as children who are intellectually gifted (Hewad & Orlansky, 1988)

Classification of Disability: Disability categories recognized by the individuals with Disabilities Act (IDEA), the federal mandate to provide appropriate educational programs for children with disabilities include: Specific Learning Disability, Speech or Language Impairments, Mental Retardation, Serious Emotional Disturbance, Multiple Disabilities, Auditory Impairment, Orthopedic Impairments, Other Health Impairments, Visual Impairments, Autism, Deaf-Blindness ,and Traumatic Brain Injury (TBI)

Associated Problems: “Associated means joined in some kind of relationship” and "Problem is an issue which makes it difficult to achieve a desired goal”.

Associated problems of Disability include: ADHD, Multiple sclerosis, Epilepsy, Attention problems, Cerebral palsy, Spina bifida, Asthma, Childhood cancer, Cystic fibrosis, Diabetes, HIV and AIDS, Voice disorders, Prader syndrome, and Muscular dystrophy.

Awareness: the term awareness mean; Knowing or realizing, or to be informed.

Health professional: A health professional is a person who delivers proper health care in systematic way professionally to any individual in need of health care services e.g.;

Physician: one whose profession is to prescribe remediation for internal or medical disorders.

Health Professionals may include the following:

- Audiologist
- Dentist
- E.N.T
- Gynecologist
- General practitioner
- Nurse
- Occupational therapist
- Orthopedic doctor
- Pharmacist
- Psychologists
- Pediatrics
- Psychiatrist
- Physical therapist
- Speech and language pathologist

The prevention of disabilities, to a large extent, is the domain of the medical profession, family counselors, psychologists and social workers and has its basis in research and training within discipline. And reliable and accessible diagnostic system is a pre-required for the development of preventive and intervention strategies.

There is needed to make knowledge about genetic transference of disabilities available to the general public, in particular to parents and prospective parents. This responsibility is difficult to pin point in respect of the varies government agencies as it is to be shared by a number of department such as Ministry of Health and Ministry of Women Development, Social welfare and Special Education at the Federal level.

As in many countries, Pakistani health care professionals are the key people providing information and delivering medical and rehabilitation services to the disabled population. They play an influential role in determining the priorities and direction of

rehabilitation services. The quality of medical and rehabilitation services is influenced by the awareness of health professionals about disabilities and its associated problems. If Pakistani health professionals have misconceptions about managing disability, this could negatively impact on the quality of services provided to person with disability.

Statement of the Problem

The topic of the study is “Awareness of associated problems with disability among Health professionals”

Objectives of the Study

- To find out, the awareness level of disability among health professionals.
- To explore awareness about associated problems with disability among health professionals.
- To find out awareness of services provided for person with disability in rehabilitation centers/hospitals/schools.
- To explore the possible remediation for education and rehabilitation of disability.
- To find out awareness of health professionals about literature related to disability training, education & handling.
- To find out the needs of health professionals in care & handling of child/person with disability.

Assumption of the Study

- Health professionals may have very limited knowledge about disability.
- Health professionals are not fully aware about associated problems with disability.
- Health professionals are aware about rehabilitation services for person with disability.
- Health professionals are not aware about training, education & handling of person with disability.

Research Methodology

Use “Descriptive research” method for research study, and the data collection through a questionnaire survey only from health professionals. Using the “Purposive sampling method”, 40 health professionals, select from different hospitals, clinics, rehabilitation centers from different town of Karachi city for fulfill the requirements of data collection.

Summary and Results

The present study is a descriptive study of awareness of associated problems with disability among health professionals investigates the awareness of health professionals about disability and their associated problems. The study was conducted to explore awareness from health professionals. Use purposive sampling method for selecting sample from different hospitals/clinics/rehabilitation centers from different town of Karachi city. The study was used questionnaire as the tool for research data collection.

The awareness level of Health professionals have defined disability as “Inability to carry out normal social roles. The awareness level of Health professionals about associated Problems with disability reflects that for concept of speech problems” Any kind of speech difficulty that interferes with normal communication.; for concept of behavioral problems “General disturbance, destructive behavior”; for Concept of Exceptional Person “Those who are different from the normal either below or above average”; for Concept of Emotional problems of visually impaired” Feeling of insecurity”; for Educational method of visually impaired “Braille method. Special Education is perceived as “A Subject which deals in how to teach disabled people”.

For importance of identification of Special Educational needs “Disabled have a right to learn and study, regardless of their pace of achievement” .

Analysis of question containing about Rehabilitation services for Special person through institution reflects that most participants select “Special School” ; for Services for Person with disability “Therapies”; for Rehabilitation services for person with disability”; for importance of Vocational Education for Handicapped Child “It focuses on all the areas of the special person, so that entering the world of work and employment is easy”; for Importance of Rehabilitation for person with disability ” Better development”.

Identification for Needs of Health Professionals for treating, care, handling Person with disability reflect the Concept of treating Person with Disability “With love and affection”; for Health professionals problems faced for interacting for disabled “Misconception about disabilities of special person “; for Needs of Health Professionals for treatment of person with disability “Multi-professional team working training”.

Findings of awareness of health professionals about Literature related to disability indicates that for availability of related literature of disability, select option “Internet /Web”; for Language of Literature on disability select “English”.

Health professionals suggested that they should be “provide awareness through electronic and mass media”. Furthermore “University certificate courses", "awareness seminars” and “National &International conferences”, should be arranged. “Expo related to abilities or creativities of distillable" also be organized by government & NGOs throughout the century.

Conclusion and Recommendations

The research was planned to find out the awareness level of health professionals about disability. On the base of this objective an assumption was formulated “Health professionals may have very limited knowledge about disability”. Results indicate that health professionals are not fully aware about the concept of disability. Second assumption was “Health

professionals are not fully aware about associated problems with disability”, results reveal that health professionals not fully understand the associated problems with disability.

The following are the recommendations of the study:

- Medical colleges should add subjects related to disability in post graduate curriculum.
- Large scale workshops seminars, conferences should be arrange on awareness of disability.
- Held exhibitions related to awareness of disability issue.
- The mass media should provide knowledge about disability and person with disability through dramas, reports, documentaries, advertisements, articles. Computer programs etc., on a regular base.
- Production and discrimination of literature on disability.
- Public awareness programs may be started.
- Steps for changing the attitudes of the public may be taken both on individual level and Governmental level.

Future studies can be on any topic like:-

- Needs of health professionals for interacting with disabled
- Use of assistive technology for rehabilitation and educational remediation.

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