THE DILEMMA OF A THEORETICAL FRAMEWORK FOR THE TRAINING OF EDUCATION SUPPORT SERVICES STAFF WITHIN INCLUSIVE EDUCATION

J. HAY

Abstract

The medical biological and ecosystemic models are two paradigms which are currently making a huge impact on education support services on an international level. The medical biological model has been dominating the way in which multidisciplinary support has been delivered within 20th-century special education. However, with the advent of inclusive education, the ecosystemic model has initially been pushed to the fore as the preferred metatheory of support services. This article specifically interrogates these two conflicting paradigms in education support services within the South African schooling and higher education bands, as well as Bronfenbrenner's integration of these models with regard to the bio-ecological model. Finally, this article proposes the bio-ecosystemic framework according to which the training of multidisciplinary education support services staff should proceed in order to ensure a sound and less conflicting theoretical framework.

Keywords: medical biological model; ecosystemic model; bio-ecological model; education support services; inclusive education; bio-ecosystemic model

1. INTRODUCTION

Much has been said and written in South Africa about the change in paradigms that inclusive education has engendered for education support services (ESS) in school and higher education (Donald, Lazarus and Lolwana, 2010; Hay, 2009; Swart and Pettipher, 2005). However, little has been documented about the reality and dilemma of the seemingly dominant medical biological model within these services in the first decade of the 21st century. Implicit in the mentioned writings is the notion that the medical model would decline in favour of the ecosystemic model.

This, however, does not seem to be the case. It appears as if the majority of members of multidisciplinary teams that make up ESS within the South African context are still trained within a predominantly medical model and struggle to adjust to an ecosystemic or even bio-ecological way of thinking. Diagnosis and treatment are at the heart of the seemingly modernist medical model venture of classification in order to control (Swart and Pettipher, 2005:5). This model disregards the postmodern notion of doing away with classification (Steyn and Hay, 1999:125) and encourages a focus on the intensity of support needed (DoE, 2002).

The dilemma focused on in this article pertains to the roles of the medical and ecosystemic models within ESS of an inclusive education system. The researcher postulates that the medical model is standing its ground and seems not to be declining as a result of the ecosystemic perspective.

2. PROBLEM STATEMENT

A small number of paradigms have directed ESS internationally since its inception in the early 20th century, namely the initial focus on intellectual measurement (Fagan, 1986), the concomitant rise of the medical biological model (Gibson, 2006; Bootzin, Acocella, Alloy and Acocella, 1993) and the subsequent move towards a social and later ecosystemic model (Donald, et al., 2010). This article aims to interrogate the conflicting messages and focuses that the medical and ecosystemic models bring to the table. Finally, this article attempts to determine how these seemingly conflicting paradigms should be viewed and utilised in ESS and, especially, the training of ESS staff.

3. CONTEXTUALISING THE HISTORICAL ORIGINS OF ESS

The international origins of ESS can be traced back to the appointment of the first school psychologist in the USA, Arnold Gesell, in 1915 (Fagan, 1987), and in Britain, Cyril Burt, in 1913 (Lowenstein, 1984). The specific task of these school psychologists was to assess the intellectual functioning of learners. Up to 1930, their primary role developed into psychometrists or experts involved in the classification of learners according to intellect.

The establishment of the Child Guidance Council in 1928 in Great Britain signified the early beginnings of multidisciplinary teams. By 1935, 18 child guidance clinics had been established. However, in 1959, the British government recommended an extension of the service so that each local authority could establish a child guidance service comprising a child guidance clinic and a school psychology service. The staff of these child guidance clinics included an educational psychologist, a child psychiatrist and a social worker with primarily a medical orientation. The school psychology service, on the other hand, developed a primarily educational psychological orientation (Lowenstein, 1984).

At this point, it is significant that Lowenstein had already indicated a divide between the medical orientation followed by the child guidance clinics and the educational psychological orientation of the school psychology service. Lowenstein did not state clearly what was meant by the educational psychological orientation, only that it differed from the medical orientation of the child guidance clinics with regard to focus and intervention.

4. THE MEDICAL MODEL/ORIENTATION

The medical model within ESS originated from the medical and psychiatric perspectives on health and illness. According to this model, any abnormality or deviance from normal or good health is viewed as a disease which should be diagnosed and, hopefully, cured (Cohen, 2002). Applied within education, this meant that learners demonstrating abnormalities, such as disabilities and deviant behaviour, had to be diagnosed correctly and then treated appropriately by means of specialist intervention (Johnson and Green, 2007). This model poses that a correct diagnosis is crucial and determines the effectiveness of treatment (Naicker, 1999).

The medical model presupposes a biological connection underlying abnormality and deviance. With regard to abnormal behaviour and genetic factors, central and peripheral nervous system factors and endocrine functions are seen to be the cause of the person's behaviour in his or her interaction with the environment (Cohen, 2002).

This orientation mainly utilises linear reasoning, where cause and effect are directly and simplistically linked, which originated from the natural science foundation of the medical sciences. In the natural sciences, linear causality is implied consistently where, for example, the heating of iron will predictably lead to expansion every time (Donald, et al., 2010).

The philosophical basis of the medical model is often linked to 19th- and early 20th-century modernism, where the classification of objects and people (Steyn and Hay, 1999) was the mechanism used to ensure order and predictability while, at the same time, guaranteeing productivity.

5. PERSPECTIVES ON THE ECOSYSTEMIC MODEL

A leading exposition of the ecosystemic model is presented by Donald et al. (2010) in their book Educational Psychology in Social Context. One suspects that Lowenstein, when describing the educational psychological orientation of the school psychology service in Britain towards the 1960s, implied much of what is today understood under the ecosystemic perspective.

The ecosystemic perspective moved away from the linear causation model drawn from the natural sciences towards a human sciences model based on circularity. According to this model, an action in one part of a system does not cause an effect in another part of the system in a simple, one-directional manner, but instead influences it in a complex, multidirectional way. Proponents of this perspective argue that human behaviour is much more complex than direct causality found in nature, and cause and effect can seldom be described as linear within human systems.

The ecosystemic model is, in essence, a combination of ecological theory and systems theory (Donald, et al., 2010). It aims to describe how human beings interact with and influence one another in dynamic and complex ways. Ecological theory initially dealt with the way in which different, interdependent organisms function within the physical environment, and how crucial the concept of balance really is in ensuring homeostasis in nature. However, these ecological concepts were soon applied to human relationships and the interaction between different human systems as humans are also interdependent and strive for homeostasis in their relationships. Without the experience of homeostasis, psychological imbalance may easily develop in individuals and groups. Systems theory, on the other hand, focuses on the different subsystems that are a part of the social context. It has been applied to many fields such as physics, economics, medicine, psychology and education (Donald, et al., 2010), but is especially relevant to educational psychology when applied to our understanding of families, classrooms and schools.

Kaplan (2009) described ecosystemic thinking in the following way:

- It is a multiple causation, bidirectional model (rather than a uni-dimensional cause and effect model);
- It understands the complexity inherent in human lives;
- It outlines human systems as an ecology of ideas, intricately interwoven and consistently influencing the system to behave in certain ways;
- It views contextual factors as interdependent, interacting with the individual system;
- It understands that a new reality is co-constructed through language. Old problems become deconstructed and replaced through reframing. In this way, the original problem often ceases to be a problem;
- It emphasises that there is no right or wrong, only perceptions of one's own reality; and
- It reinforces that each person is a system unto him- or herself and becomes a participant observer in every interaction.

This discussion of the ecosystemic and medical models now needs to be placed within the changing context of special and inclusive education.

6. THE CONSEQUENCES OF THE SHIFT FROM SPECIAL EDUCATION TO INCLUSIVE EDUCATION

Special schools and specialised settings, such as special and remedial classrooms, have been a part of special education for the largest part of the 20th century. In most countries, churches initially established centres or schools for the so-called handicapped, which were later taken over by governments (Engelbrecht, Kriegler and Booysen, 1996).

The appointment of school psychologists in the USA and Britain further contributed to the formal institutionalisation of special schools and settings for the mentally disabled.

These schools and settings can be viewed as extensions of the asylums and psychiatric hospitals, which were established for the mentally ill, in the sense that deviant and handicapped children who did not fit into ordinary classrooms were moved to these institutions for specialised help. These systems of special education developed as a result of classifying learners based on grounds of disability. The rationale from a modern perspective, with its emphasis on human reasoning, is that it would be best to educate learners together based on the type of disability. Specific support could be arranged on grounds of the support needed by a homogeneous group of disabled learners (Steyn and Hay, 1999).

Inclusive education, which is the latest development in the field of special and regular education, completely overthrows the basic tenets of the specialised education system. The classification of learners on grounds of disability is not viewed as a helpful practice and inclusivity in the ordinary classroom, as far as possible, is encouraged. Referral to a specialised setting is mostly viewed as discriminatory and a single, fixed diagnosis is seen as detrimental as human beings are perceived to be complex creations (Steyn and Hay, 1999).

The features of inclusive education are firmly grounded in the post-modern movement. According to this movement, human beings are too complex to be classified according to one criterion, and classification is, at best, a fallible exercise. Fixed diagnoses should also be limited since these are often not as infallible as earlier presumed (Hay, 2003). All learners should be included in the same class because elitism is modernistic. Pluralism and equality of a 'flattened landscape' are the order of the day (McCracken in Steyn and Hay, 1999). Therefore, psychometry and edumetry should be abolished as they deal with measuring psycho-educational essences. According to Doll (in Steyn and Hay, 1999), a human being is too complex and ever changing to be measured in a structured test situation.

The roots of inclusive education are linked to other contributors to the post-modern perspective such as positive psychology (Compton, 2005), the asset-based approach to intervention (Eloff and Ebersohn, 2001) and the strength paradigm (Hay and Weyers, 2009). These influences focus on the strengths of human beings, and negate the predominant focus of the medical or needs-based model on deficiency and illness. The strengths of learners should therefore be actively sought and improved in inclusive classrooms, instead of classifying learners on grounds of medically diagnosed disabilities.

The question may now be rightfully asked as to whether the predominantly medical model, utilised in special education, is compatible with the ecosystemic perspective of inclusive education.

In this instance, an unplanned, single case study from the higher education band is used as an illustration, but with major similarities in respect of ESS in the school education band.

7. AN (UNEXPECTED) CASE STUDY OF INCOMPATIBILITY BETWEEN THE MEDICAL AND ECOSYSTEMIC MODELS

Case study research is a well-accepted methodology in psychology, anthropology and education and usually implies a planned, in-depth study of a single case, situation or event, or multiple cases, situations or events (Yin, 2009). A case study is predominantly interpreted in a qualitative manner and provides responses to the why and how of a phenomenon (Shuttleworth, 2008). In this instance, the case study was not planned, but the situation that occurred was utilised retrospectively to analyse the interaction of proponents of the medical and ecosystemic models in some depth.

A well-known higher education institution has a well-established Centre for Students with Disabilities, which has been operational for the past six years. For a number of years, the need has been expressed to develop a policy for students with disabilities or those experiencing barriers to learning, as the demand increased exponentially, but without a concomitant increase in the number of staff at the Centre.

The researcher was invited to be a part of the initial team which would have conducted widespread research within the institution to develop a policy for disability. Unfortunately, the Director of the Centre resigned during 2008 and the process of research to develop the policy came to a halt. At a follow-up meeting with the acting Director of the Centre later in 2008, the researcher was tasked to write a draft policy dealing with disability and barriers to learning, but without engaging in the research process which was envisaged earlier.

The draft policy was developed and distributed to the remainder of the initial team, including the newly appointed Director of the Centre and the responsible top management member. The researcher coined the draft policy 'Policy regarding the inclusion of and support to students who are experiencing barriers to learning and development'. A meeting was requested by the researcher to determine the sentiment of the team with regard to the policy's focus on the ecosystemic model and the absence of a pure medical model focus on disabled students only. The following members of the team attended this meeting: an occupational therapist, a minister, a sign language interpreter, a clinical psychologist and the researcher – an educator, educational and clinical psychologist.

During the meeting, it was decided that the policy should focus solely on students with disabilities and that the broader issue of students experiencing barriers to learning should not be addressed at this time.

The researcher, however, reasoned that the institution should utilise the more recent ecosystemic model, which is particularly relevant in the case of a developing country and a developing higher education institution. However, it seemed that the medical model of focusing only on intrinsic disability was preferred. Another member of the team subsequently offered to be the primary author of the policy.

While reflecting on the meeting, the researcher experienced a number of emotions and thoughts. First and foremost was that none of the other team members seemed to have a substantial grounding in ecosystemic thinking within special and regular higher education. Second, inclusive education was viewed as unrealistic and impractical. Third, instead of interrogating the concept of disability within a developing country and institution, it was taken for granted to be a solely intrinsic matter.

The researcher hoped (before and during the meeting) that a compromise could be reached with regard to the new policy, namely that disability would still feature strongly and have the primary focus, but that contextual and interpersonal barriers to learning would also be taken into account. However, this did not materialise, as the decision was taken that the policy should deal with disability only.

The real question that emerged after this experience was whether a compromise is, in fact, possible between the medical model and the ecosystemic model. It was clear that the majority of the team members were trained in the medical perspective and had little inclination to an alternative paradigm. Could this be ascribed to a lack of exposure to other models or did the other team members focus on what is practically attainable by zooming in on disabled students only?

The researcher was left with the impression that professionals trained within the paramedical field have little understanding of the more recent ecosystemic thinking, which implied a huge paradigm shift for professionals to think outside the medical-model box.

8. THE WAY FORWARD IN SOUTH AFRICAN ESS

Education support services consist of a combination of disciplines, namely specialist education, educational and clinical psychology, occupational therapy, social work, speech therapy/audiology, etc. Most team members who engage in these professions appear to have been trained within the medical model of correct diagnosis and appropriate treatment, as well as the removal of learners to specialised settings for more intensive support. It seems as if only educators and educational psychologists who have been trained over the last few years may have a feel for the ecosystemic perspective. Unfortunately, the messages that these two paradigms are projecting are apparently in conflict, as seen in the next table developed by the researcher.

Table 1: A comparison between the medical and ecosystemic models in ESS

Education support services issue	Medical model	Ecosystemic model
Focus	Illness or disability paradigm	Strength or ability paradigm
Diagnosis of learners	Yes, a precise diagnosis	Refrain from this if possible describe the situation in terms of external and internal influences
Range of education support service problems	Described i.t.o. intrinsic disability	Described i.t.o. contextual, interpersonal or individual difficulty, i.e. extrinsic or intrinsic difficulty
Treatment	(Often) remove from classroom and treat in specialised setting	Keep learner/student in inclusive classroom/lecture hall as far as possible, with necessary support
Leadership of multidisciplinary team	Psychologist or, if available, psychiatrist with experience of the medical model	Specialist educator/lecturer with experience of inclusive education
Management of diversity	Often viewed as problematic	Celebrated as far as possible
Mode of service delivery	Direct – mostly individual services to learner/student	Indirect – mostly consultation services to educators/ lecturers and parents

Table 1 indicates that the merging of the two paradigms may prove to be problematic, as the theoretical-philosophical points of departure differ substantially. These points of departure obviously affect the way in which proponents of the two models operate in practice. The crucial question in South African ESS is therefore whether and how some kind of merging or combination of these two strong voices is possible within a future education support service.

Uri Bronfenbrenner also struggled with this particular challenge, albeit in the field of human development. He coined the bio-ecological model (Swick and Williams, 2006) as a way of overcoming this impasse experienced in human development and in the context of ESS.

9. THE BIO-ECOLOGICAL MODEL AS POTENTIAL FRAMEWORK FOR THE TRAINING OF ESS PERSONNEL

The bio-ecological model is a later development of Bronfenbrenner's ecological model (Swart and Pettipher, 2005). Through this model, he tried to combine the strong voices of the medical biological model (the 'bio-' part) with the ecological model (which is the strong voice within the ecosystemic model). The intrinsic problem(s) that a learner or student may experience, such as a disability, is therefore firmly part of the broader ecology and wider systems that may have an impact on the learner/student, such as the family, classroom, school/university, local community and broader society. In a developing country, the ecology seems to be of particular relevance as the contexts surrounding a learner/student are often far from optimal.

The sentiments of the bio-ecological model resonate strongly with what Donald et al. (2010) imply when they divide the difficulties which learners experience into three major categories: contextual difficulties, interpersonal difficulties and individual difficulties. The individual difficulties are mostly intrinsic problems as diagnosed within a medical model of disability, while the other two categories deal with extrinsic difficulties which learners or other related systems may experience.

If we relate the bio-ecological model of Bronfenbrenner and the contextual, interpersonal and individual difficulties of Donald et al. (2010) to the experience the researcher had in developing a disability policy in collaboration with other team members of a higher education institution, it becomes evident that past and current training of paramedical and educational support service staff members is still indicative of a huge divide. Kneebone (2002), a medical doctor, refers to this specific dilemma of medical practitioners/medical educators who find it extremely difficult to make sense of educational paradigms. According to him, medical education is dominated by a positivistic (read medical biological) paradigm, which assumes 'the existence of a single objective external reality. This can seduce us into believing that positivism is not a paradigm at all, but simply how the universe really is' (p.514). He continues to describe the phenomenon of 'total internal reflection', which originated in elementary physics, whereby light is reflected from the surface of a liquid without penetrating it. An example to illustrate this phenomenon would be a goldfish in a tank that can only see clearly within the water in which it swims. It is physically unable to see what is outside, unless it jumps out of the water.

This implies an uncomfortable and hazardous process. Kneebone (2002) then suggests that a similar process of total internal reflection is at work in paramedical schools (or health science faculties) of higher education institutions, but that paradigms from the humanities, such as sociology, education and anthropology, are critical for the human side of medicine. He further purports that these paradigms differ fundamentally from the positivistic, medical model in the sense that they reject the classical positivism and replace it with a range of possible worldviews such as the bio-ecological or ecosystemic models. The exploration of these paradigms from the humanities seems to be an uncomfortable and hazardous endeavour for paramedical educators and students to engage in.

This finally leads to the research question which was asked earlier: How do we then proceed with the training of all the members that eventually make up a multidisciplinary team of ESS staff within an inclusive education environment? The following section is an attempt to answer this question.

10. THE BIO-ECOSYSTEMIC MODEL AS POTENTIAL THEORETICAL FRAMEWORK FOR THE TRAINING OF ESS STAFF

The researcher would like to propose a bio-ecosystemic model as an integrative theoretical framework for the training of all the disciplines that may be involved in ESS within an inclusive environment. This framework is an expansion and integration of the bio-ecological model of Bronfenbrenner (2005), the model of contextual, interpersonal and individual difficulties of Donald et al. (2010), as well as the meta-approach that Engelbrecht, Green, Naicker and Engelbrecht (1999) proposes. It differs from the bio-ecological model in the sense that systems theory is specifically indicated and emphasised. This is a crucial difference, as systems theory has contributed significantly to understanding within the educational sphere of cyclical contributory factors of the surrounding systems versus the linear causality of the medical biological model. Furthermore, the bio-ecosystemic model represents a concise terminological exposé of what Donald et al. (2010) are implying. Lastly, it adds the biological component very specifically to the meta-approach of Engelbrecht et al. (1999).

The bio-ecosystemic model lends itself particularly well to the challenges posed by inclusive education. In many instances, difficulties may be pertinent within and intrinsic to a learner or student (the 'bio-' component). On the other hand, the systems surrounding the learner/student may contribute substantially to learning barriers (the systemic component), especially in developing countries. In the middle lies the ecological perspective (the 'eco-' component) whose primary contribution is the emphasis on balance and homeostasis between the individual and surrounding systems.

The ecological perspective figuratively creates balance between the seemingly opposing paradigms of linear (bio-) and cyclical (systemic) causality, between fixed diagnoses and reversible labels, between removal from a classroom for treatment and continued inclusion in a classroom with added support.

In line with the above, the following measures are recommended for the training of all staff members who become a part of ESS:

- All staff members involved in ESS are to be trained in the bio-ecosystemic model. This will present a challenge, since many of the disciplines in ESS have paramedical staff members who did not have exposure to the educational environment prior to taking up a position within ESS. Faculties of education at higher education institutions will therefore have to make a deliberate effort to expose such disciplines to the bio-ecosystemic paradigm, which will imply cross-departmental pollination. The challenge is immense, as Kneebone (2002) so aptly describes: It implies that total internal reflection will first have to be overturned at paramedical educator level.

- The bio-ecosystemic model is to be used as basic paradigm to describe the focus of ESS, its diagnostic model, range of ESS difficulties, treatment, leadership of the multidisciplinary team, view of diversity and mode of service delivery. Again, this will prove to be a demanding imperative, and faculties of education will have to convince paramedical departments such as physiotherapy, occupational therapy and clinical psychology that the bio-ecosystemic model is to be utilised as paradigm of preference within ESS.

- The medical biological model is still to be applied for individual difficulties, where the difficulty is clearly a result of intrinsic debilitating factors. Diagnoses in this regard are, however, to be used very cautiously and always without permanent labelling.

- A further option, apart from the mentioned recommendations, is that all staff members employed in ESS be introduced to the bio-ecosystemic paradigm through a formal induction programme, lasting at least one year. This option may be the most realistic as most paramedical staff do not know before completion of their programme whether they will be employed in education. Though, perhaps the most realistic, is the disadvantage of the difficulty of overturning a fixed medical biological paradigm following four or more years of training.

11. CONCLUSION

It seems crucial that more common ground be found between the training of paramedical and education staff of multidisciplinary ESS teams. Currently, there seems to be a deep abyss between staff members – on the one hand, the positivistic, modernist medical orientation linked to the older special education paradigm, and on the other, the post-positivistic, postmodernist ecosystemic orientation linked to the current inclusive education paradigm.

The researcher has implicitly suggested in this article that none of these orientations are in a state of demise and that both seem critical even within the newer, inclusive education venture. A possible theoretical framework has therefore been suggested in the form of the bio-ecosystemic model to ensure improved integration of these orientations and to support trainers and trainees of multidisciplinary education services to make sense of support within inclusive education.

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