

PATHWAYS OF LEARNING IN VOCATIONAL AND PERSONAL DEVELOPMENT

Part I: Conceptual framework of systematic development in workshops for handicapped people

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The first part of this paper presents an account of the "Pathways Model" and of work with this model. Its main theme is the curriculum for the "work training programme" in "Workshops for Handicapped people" in Germany which was developed in Detmold. We are able to look back over experience extending over the last ten years. In the second part of the paper (to be published in July 1994, B.J.D.D., No. 79) the achievements will be discussed when applying this approach to the realities of workshop practices.

Introduction

The "Workshops for Handicapped People" ("Werkstätten für Behinderte") is one of the organizations in the Federal Republic of Germany aiming at the vocational rehabilitation of handicapped people - alongside "Berufsbildungswerke" (institutions for vocational education of disabled boys and girls) and

"Berufsförderungswerke" (institutions for the vocational retraining of disabled adults). These workshops for handicapped people grew out of the former "Sheltered Workshops". Today it is their task to give vocational training to those handicapped people who could not receive suitable instruction in other institutions. The aim is integration into the general labour market; if this is not possible due to the nature or the seriousness of the handicap, the alternative employment in the workshops (as a special labour market). For this reason, every workshop for handicapped people has alongside its "work training programme" ("Arbeitstrainingsbereich") a "work area" ("Arbeitsbereich"), where mostly contract work for industrial firms is carried out.

The former "Sheltered Workshops" catered almost exclusively for mentally handicapped people; the majority of these were people with Down's

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syndrome. In contrast, the "Workshops for Handicapped People" today must accept all types of handicapped people without exception, who, after completing the work training programme, should be capable of an output that is minimally economically worthwhile. In practice these are today people who are - alongside the "traditional" mentally handicapped - multiple handicapped, severely physically and increasingly physically handicapped. This very heterogenous group is to be given a vocational education tailored to individual needs within the "work training programme"; for this there is available a maximum of two years in individual cases. On the whole, the instructors are vocational experts from trade and industry, who have no previous specific training with handicapped people, but who obtain an extra "on-the-job" qualification in special pedagogics (for working with handicapped people).

Empirical basis of the "Pathways Model"

Work began in Detmold in the mid-seventies by considering how this complex and extraordinarily demanding vocational work in the "Workshop for Handicapped People" could best be put on a scientific basis and improved. Out of this developed the "Pathways Model" which, therefore, is not originally a scientific concept which was applied in practice. On the contrary, practice was first and subsequently went searching for a theoretical basis for its everyday work (Schmitz, 1981, 1985, 1987, 1988).

At the outset, this work was mainly concerned with the group of mentally handicapped people, and therefore the task was to find a concept to understand mental deficiency which could serve as a basis. Using everyday observations, the conviction grew that "mental deficiency" should not be conceived as a principal deficit, but rather as a deficiency in development - of a greater or lesser degree. This meant that goals of education and development work could be set out and also as many incentives as possible be established. The relevant guide line was Piaget's developmental psychology, and it was assumed that a mentally handicapped person in the workshop for handicapped people should "normally" have completed the "sensory-motor phase" - i.e. should have reached a stage of development comparable with that of a child at the beginning of kindergarten age (about 3 years old). (Greater developmental deficits will be discussed later).

These psychological considerations were to provide a pedagogical basis. The aim was to supply the instructor with material which would help him to

- proceed with the developmental work in clearly defined steps;
- to determine and adapt the difficulty level of each individual step;
- always document the level of development and progress of every individual handicapped trainee.

The principal item of these materials, the "Learning Objectives Catalogue", was first compiled between 1978 and 1980. On the basis of the experience gained in three workshops for handicapped people, two more recent editions with corrections and additions have been

published since then. The current edition was completed at the end of 1990 and is in use in an increasing number of workshops.

The first detailed account of the concept was presented by Deutsch (1982, 2nd ed. 1984) and the current situation has been described by Brackhane *et al.* (1990).

The "Learning Objectives Catalogue"

The "Learning Objectives Catalogue" comprises about 200 sequences of learning steps (or partial objectives) which are graded according to difficulty. Normally such a sequence is made up of five steps, though in some cases it is less. Each individual sequence should lead to the acquisition of a certain skill or understanding.

Example:

If the handicapped trainee is to learn, for example, how to work with tools in order to perform a particular job, the corresponding learning sequence will be as follows (Code P 2.02):

1. Can take up the appropriate simple tool for his area of work by the handle.
2. Can hold the appropriate simple tool in the proper way (e.g. knife: blade facing downwards).
3. Can perform the typical movements for simple tools (e.g. scissors: cutting motion; hammer: raising and lowering motion).
4. Can carry out this action on the corresponding material (e.g.

tightening screws, hammering, cutting, working pincers).

5. Can select his tool (same type in a different version) according to the material and work with it (e.g. larger screwdriver for larger screws, a smaller can for less liquid).

The above illustrates the point:

- "Tools" in general are mentioned, not any tool in particular (hammer, scissors). In this way the "Pathways Model" is applicable to all areas of work but needs to be put in more precise form for specific individual areas. The instructor himself must adjust the programme to the requirements of a specific job. Nevertheless, jobs that have different requirements, can be compared, provided they demand the same level of skill.

This example of a learning objective sequence is concerned with using a tool, that is with performing an action. Thus it is essentially a "psychomotor" learning objective sequence. There are also "cognitive" learning objective sequences: these are concerned with themes of information absorption and assimilation, namely with processes of perception and thought.

Example:

"Number material as a source of work information" (Code K 1.03):

1. Can differentiate digits from other signs (e.g. letters, symbols).
2. Can pick out the same digits in different form, colour and size from other digits.
3. Can show the appropriate quantity for the numbers 1-10 (e.g. for the

number 3 the appropriate number of fingers).

4. Can operate with the numbers 1-10 in everyday life (e.g. dial a telephone number).

Furthermore, there are "social" learning objective sequences where relationships and co-operation with other people are practised, as well as generally coming to terms with the work environment (e.g. working outside, influences of light and noise.)

Example:

"Personal contacts necessary for working" (Code S 3.19)

1. Always listens attentively to others.
2. Responds by nodding or answering when addressed.
3. Can respond to several partners simultaneously by letting them finish speaking.
4. Can react to a series of several questions or wishes by answering or inquiring.
5. Admits his own mistake and can express his regret.

We have also developed learning objectives aimed at achieving "general career proficiency". These are primarily of significance for the group of physically handicapped persons, that has grown larger in the past number of years, but can also be used for mentally handicapped people. These sequences are largely concerned with "virtues" such as staying power, punctuality and reliability.

Example:

"Punctuality: a person carries out actions as agreed" (Code A 14):

1. Complies with short-term arrangements.
2. Turns up regularly for work.
3. Performs given tasks over a span of several hours in the desired manner.
4. Generally shows by his behaviour that he does his best to adhere to arrangements and rules.

The basis for the learning objective sequences (with the exception of those concerning "general career proficiency") are the items of the "Fragebogen zur Arbeitsanalyse" (FAA), which was developed by Frieling and Hoyos (1978) as the German version of the "Position Analysis Questionnaire" (PAQ), developed by McCormack *et al.*, (1969). The FAA asks in 221 items about frequency or importance of certain requirements of work. Here it is a matter of a general standard psychological method, which was in no way designed to be handicapped-specific, but most of which can certainly be applied to workshops for handicapped people.

For every individual relevant item of the FAA a learning objective sequence was developed. Fundamental to this development work - in particular for arranging the individual steps according to the degree of difficulty - were, on the one hand, the experiences of the instructors, on the other hand, specific pedagogical concepts. Two empirical validations have also been carried out.

In practice working with the "Pathways Model" means that work analyses for individual areas of the workshop for handicapped people (kitchen, joiner's workshop, sewing workshop) using the FAA have been carried out, in order to establish relevant work requirements for the respective areas. According to the profile of requirements established in this way, the corresponding sequences are selected (using a computer programme) and are assembled in a "partial catalogue". The individual instructor works according to this partial catalogue - in which he can read

- what he has to teach and practice and
- which sequence of steps he has to adopt.

He can record the current stage of development of his handicapped trainees on corresponding documentation forms at any time. This form, used together with the "partial catalogue", shows him also the next steps to be tackled.

Problems in the realization of the "Pathways Model"

The efficacy of the "Pathways Model" depends, without a doubt, on its realism and its applicability in practice. An instructor is supposed to be constantly able to document progress and to give a clear idea of his handicapped trainees' functioning - how does he achieve the goal, how does the sequence work in practice?

In the Detmold "work training programme" every instructor is responsible for six handicapped trainees - this is

the official ratio which can be taken as having been achieved throughout Germany. We expect that every instructor repeatedly considers and reflects on what he wants to achieve in every individual case and what he has already achieved. Using our documentation forms his approach is systematic and differentiated. Our previous experience has shown that it is best if he "examines his conscience" - in two stages:

(a) "Look back": what have I achieved, how have my six trainees developed in the last 2-3 weeks? The boxes on the survey forms are marked accordingly.

(b) "Look forward": what do I want to practice with the individual trainees in the next 2-3 weeks, what would I like to place special emphasis on?

The key to the whole system is the connection between these two aspects: fully marked boxes are only of secondary interest - boxes that are empty or only partially filled are of much greater interest: these give, so to speak, concrete instructions how to continue with the next steps - individually for each handicapped trainee. It is helpful for the instructor to keep his six documentation forms almost constantly on the table - they should not be allowed to disappear from his sight. In this way he is always in a position to note down even relatively sudden developments and, at the same time, he is constantly reminded of the objectives of his labour by the "blank" spaces.

This procedure greatly facilitates the instructors' work, improving it and making it more systematic - he must be prepared, however, to come to terms

with these pedagogical and developmental ways of thinking. This is not very difficult for a large number of instructors nowadays - others do have real problems in suitably adapting their experiences of trade and industry. In this respect, working with the "Pathways Model" represents an investment of time and mental energy - the "ideal" instructor for our concept "thinks in learning objectives" and does not regard them as an extra obligation that is foreign to his nature.

Only very few instructors get to this stage without help, and rarely when only helped once - in the form of a one to two-week seminar; repeated, concurrent assistance is, in general, much more often necessary.

In our experience, this should have the following form:

(a) Every instructor receives a first introduction to the "Pathways Model" and its basic ideas lasting about 2-3 days. This can take place within the framework of the "Supplementary Training for Special Pedagogy" (for working with handicapped people), which is compulsory for all group leaders in "Workshops for Handicapped People" and is normally offered in co-operation with other organisations. An introductory course is also possible within the framework of a particular workshop, whereby the specific requirements of this workshop can be taken into account at the same time.

(b) The central point is the awareness that development of the individual trainee in the workshop is not only the task of the instructor in the group. He can only perform this work in co-operation with the colleagues from the "Supporting

Services" (especially social educationalists, social workers; also occasionally psychologists, special therapists). These colleagues are not only necessary participants in discussions, but also - because of their qualification of a different kind - pedagogical helpers and supervisors (not controllers). This can be realized in three different ways:

1) By means of a firmly established workshop-internal system of further training. The workshop should make available 1-2 days every six months when the colleagues of the "Supporting Services" together with the instructors - undisturbed by the daily routine - can reflect on and talk about their work. Here matters can be discussed in greater detail, problems be talked about, corrections be made and proposed solutions be elaborated. This procedure also offers colleagues who have recently joined the workshop team the opportunity of "getting straight in" to the system on a practical level and, at the same time, of benefitting from their colleagues' experience.

2) By means of firmly established discussion groups which meet about every four weeks. Instructors and colleagues from the "Supporting Services" could - again jointly - discuss with each other on a "middle level" problems that are not only specific to one area, provide mutual stimulation and further training; which standards of assessment should serve as a basis, how can individual learning objectives be made more precise, how, for example, can "measuring" be practically applied in the joiner's workshop - and what can the colleague from

the sewing workshop learn from this? Case discussions could just as easily be in the foreground - and so the pedagogical working group is also a team discussion group.

3) By means of the everyday work "on the job": a colleague of the "Supporting Services" who is aware of his responsibilities is not likely to sit in his office waiting for problems to come to him, but will actually accompany the work in the workshop. A walk through the workshop should be part of his daily routine - and this can include a look into the documentation forms about every 8-14 days. This is not in order to check up on the instructor, but rather because the form is the basis of discussion and planning for both people. The instructor can always rest assured that the work he is doing is sensible and necessary and is supported in the same way by his colleagues.

Because the "Pathways Model" is essentially a pedagogical and developmental-psychological concept, because its language and "philosophy" can present problems to the expert from trade and industry, an instructor should not feel left to his own devices. He must always feel certain that his daily work, which constantly demands a great deal of intuition, reflection, initiative and fantasy, is embedded in a rationale and that, for example, his colleagues from the Supporting Services not only stand behind him, but also pull together with him. We have already held further training courses where workshop directors or managers took part all day - purely and simply to make it clear that the proposed approach has their full support.

There is no basic problem in applying the "Pathways Model", though it must be emphasized that work with handicapped people in particular requires highly qualified personnel. Also in the case of severely handicapped persons mere care and charity are not sufficient: aim-orientated developmental education and training must be in the foreground. Unfortunately, in this area of sheltered workshops there are still far too many discrepancies between theory and practice - we consider it therefore all the more important to stress again this claim to training and its practical consequences. Most workshops have already introduced various forms of team discussions or working groups - and the "Pathways Model" could reasonably be embedded in such framework without much ado.

Concluding Remarks

This article has attempted to present a concept towards the systematic and comprehensive development of handicapped people. In Part II some of the practical results achieved by applying this model will be presented. The experiences that have been gathered over the past few years with the "Pathways Model" refer, for the most part, to the large group of mentally handicapped people for whom today's "sheltered workshops" in Germany were originally set up. In the meantime, because of complex developments, other groups of handicapped people have been admitted into the workshops, presenting them with new problems. Consequently, the

question was raised as to the suitability of the "Pathways Model" for other groups of handicapped people. We have, therefore, limited ourselves to the improvement of the original material, but have begun to apply this concept to multiply handicapped people, and especially to mentally handicapped people with additional physical, visual or hearing handicaps. The ever-increasing group of mentally ill people has also been included in our considerations; here we paid particular attention to considerations concerning "General Career Proficiency", as this presents completely different tasks from those for the mentally handicapped people.

Moreover, a very problematical new group are the severely mentally handicapped people who, in the past, instead of being rehabilitated in any way, were at best cared for and kept occupied. Here experience has shown that Günzburg's S/PAC 1 (1983a, b) has been particularly helpful for this group. As this curriculum is also - like the "Pathways Model" - based on a concept of development, we have worked out a bridge, a didactic connection between S/PAC and the "Pathways Model" which has proved to be helpful over the last few years and has resulted in a comprehensive concept offering assistance in ongoing rehabilitation work from the development of severely handicapped people to possible integration into the general labour force.

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