CHAPTER 18

Facilitating the Development of Competence

John Raven

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An idea that has proved useful when thinking about, and organising material relating to, facilitating the development of competence is the concept of a "developmental environment."
In developmental environments people:

- have opportunities to consider their values and resolve value conflicts in an open and supportive atmosphere in which their views, concerns, and decisions are respected.
- have opportunities to experience the consequences of behaving in different ways with the assurance that mistakes will neither bring ridicule at the time nor have serious negative long-term consequences.
- are encouraged to evolve, and practise, new styles of behaviour while undertaking activities they are strongly motivated to carry out.
- can think about their organisations and their society and come to understand and perceive these institutions (and their operation) in new ways that have marked implications for their own behaviour.
- are given (or can evolve) new concepts to help them to think about their behaviour, the world in general, and the consequences of alternatives.
- are exposed to role models--either in real people or in literature--that enable them to see, and share in, other ways of thinking, feeling, and behaving; to observe the consequences; and to try the behaviours for "fit." (Exposure to others whose behaviour brings satisfactions that one wants oneself is a strong incentive to engage in the behaviour!)
- are encouraged to set themselves high (but realistic and measurable) goals, are encouraged to monitor progress toward them, and are helped and supported by others when they are unable to live up to their own expectations.
- are provided with support, encouragement, and help *when they make mistakes*. Under these circumstances, it is particularly important for colleagues to identify and encourage what was worthwhile in the activity and to refrain from threatening inquisitions into the causes of failure. Colleagues should, in particular, refrain from implying that they know better than the person concerned what he or she should have done. After all, the person who undertook the activity knew more about both the situation in which he or she was working and his or her own abilities and limitations than did the others.
- are encouraged by having their accomplishments recognised and commented upon.

We will put flesh on this skeleton in a moment. But first we should reiterate two observations made in earlier chapters. First, competent behaviour is very much dependent on an absence of inhibitions arising from motive or value conflicts. Second, the development of competence depends on opportunities to practise important components of competence while carrying out activities one cares about. Value clarification and value engagement are therefore

crucial to the development of competence.

The most systematic discussion of the features required in effective attitudinal and motivational change programmes is to be found in an article published by David McClelland in 1965. In it, he draws together, summarises, and builds on a great deal of previous research. He deals first with the legitimacy of trying to influence values. He meets the objection that explicit value-clarification activities consist of brainwashing by pointing out that such activities enable people to choose between outcomes that previously remained implicit or were made explicit only in the minds of orators, politicians, or religious leaders. In making such considerations explicit, one is, therefore, freeing people from the possibility of brainwashing. Knowledge of both the personal and social consequences of pursuing alternative values is, therefore, not only central to value clarification, it is also critical to the legitimisation of activities that clarify values and develop competence.

He then notes that people often have latent or relatively inarticulate values which they can be helped to articulate. Once brought into full consciousness they can be pursued more effectively. McClelland notes that the problem is not so much to *change* people's values as to discover, reinforce, strengthen, and expand relevant pre-existing thoughtways and associations. Providing people with the vocabulary they need to think about their values--and doing so in such a way that they can see that others who share their values also obtain other satisfactions they would like--can do much to facilitate the process. McClelland argues--again citing research evidence--that this can best be done in a warm, open, trusting, honest atmosphere that recognises the stresses involved in personal self-examination and that accepts, without pressure, personal decisions that go counter to those of the overall group. In the absence of such warmth and acceptance, people feel threatened and retreat into entrenched positions. In the absence of the leisure needed to formulate, and try out, new strategies, they fall back on thoughtways and behaviours which have met with at least some success in the past. What has to be done is to feed them information that enables conflicting beliefs (such as "I am not an achieving type" or "Achievers are nasty, personally motivated, and underhanded") to be resolved. This can be facilitated by providing those concerned with the concepts they need to think about their values, the components of competence, the institutional structures in which they live and work, and the consequences of their beliefs and actions. Although consequences are often anticipated but not valued, there is much to be gained from discussing the long-term social consequences of alternative courses of action--the moral consequences of the actions. This has the effect of reinforcing and strengthening people's awareness of the ways they feel they *should* behave. As Fishbein has shown, such considerations exert a powerful influence on behaviour.

Value change can also be facilitated by emphasising that people *can* and *do* change. Witness the efficacy of McClelland's own programmes (about two-thirds of the participants ended up thinking, feeling and behaving in ways which characterised only one-third at the beginning--see McClelland & Winter, 1969; Gorman & Molloy, 1972; Miron & McClelland, 1979) and the fact that people change their behaviour quite dramatically when they change the role they are enacting. The same person will behave quite differently when he says to himself "I am now being a parent," "I am now being a teacher," or "I am now being a manager." The label "I am behaving now as a parent, teacher, or manager"--or "high achiever"--has a marked effect on a whole range of behaviours. Words and ways of thinking about people, things, and situations exert a marked influence on behaviour. This is why the pen is mightier than the sword. Hence, it is important to introduce new definitions of the role of the worker and the manager and new understandings of

participation, delegation, and democracy into our everyday thinking. However, for such role definitions to exert effective control over behaviour it is necessary for those concerned to know a great deal about how people who occupy the relevant roles think, feel, and behave. Most people have just no idea how people with other motivations and dominant values think, feel, and behave. Those who run programmes to help people clarify their values must, therefore, supply the necessary information. This can be done with the aid of research findings and case histories, and it can be reinforced through role-playing. Such activities are particularly likely to be effective if they require the participants to invent the desired thoughtways for themselves rather than merely repeat what they have been told.

The salience of particular concerns can also be enhanced by determined, preferably collective, decisions to talk about such things as achievement issues, innovation, and so forth throughout the day and to minimise discussions of housekeeping issues, cost-checking, and risk-avoidance. This again results in raised consciousness about certain activities and further prevents the tendency to think about distracting issues in future.

In order to ensure that people have the detailed store of knowledge, feelings, and behaviour which is needed if they are to change their behaviour, it is frequently desirable to teach them *in detail* how to *assess* the nature and strength of value-laden competencies in others. This gives them the vocabulary they need to think about their overriding values and the components of competence they use to pursue them. The beauty of such frameworks is that they often enable people to put into words things they know but have not previously been able to articulate for themselves. In this way, it is possible to reinforce and strengthen existing thoughtways rather than seek to impose new ones The whole process can then be strengthened by encouraging those concerned to role-play a variety of styles of behaviour (including their cognitive and affective components) so that they can try them for fit and establish what sort of person they would like to be.

Following exercises in which those concerned learn competency scoring systems, apply them to case histories, and role-play the behaviours, they can practise them "for real" in educational simulations and "games." This provides them with a *real* opportunity to do such things as scan the environment for opportunities, plan challenging but realistic achievement programmes, monitor the effects of their actions to learn more about that with which they are dealing, and so forth. They are, once again, able to make these processes explicit and *label* them and their components so that they can think more effectively about--and monitor--their own behaviour in the future.

Such role-playing exercises are also important because they allow people to practise and perfect new ways of behaving in a situation in which the consequences of a mistake are not as serious as they would be in real life. To a degree, new habits--new ways of thinking, feeling, and behaving--can be practised and perfected in this way so that they can be produced smoothly in appropriate real-life situations.

The fact that we have once more emphasised the centrality of the *person*--his or her values, patterns of competence, thoughtways, and general patterns of behaviour--should again be underlined. This contrasts sharply with the widely held view that the function of vocational training is to foster specific skills. What we have argued is that *general* thoughtways and patterns of feeling and behaving come into play in *every* situation. Specific skills--such as keyboarding--are situation specific. Put another way, the exercise of specific skills is dependent on particular things (such as keyboards) being present in the environment. They are therefore unable to have a very

pervasive influence on behaviour. More generic competencies influence the tendency to obtain access to appropriate information technology and work out how to apply it effectively.

Having thoroughly reviewed a series of potentially enticing new ways of thinking, feeling, and behaving, the next step taken by those involved in McClelland's programmes is to make decisions about how they wish to change, to make explicit and rehearse the reasons for change, and, above all, to commit themselves to change, preferably with a specific action plan describing goals they are to achieve by particular dates. Beyond that, the establishment of a review mechanism whereby those concerned get together to monitor progress toward their goals, to see what can be done to overcome obstacles, and to provide support for persisting with the desired behaviour--almost certainly in the face of opposition from less enlightened colleagues--is essential.

Much of what has been said relates to off-the-job developmental programmes. But a great deal can also be accomplished on the job. Opportunities can be created to discuss values--on a group or individual basis--in many situations. People can be encouraged to make explicit and discuss their value dilemmas and, when they do, they can be supplied with relevant information on the consequences of alternatives. Opportunities can be taken to not only correct inappropriate expectations but also to do something about widely shared expectations that discourage desired behaviour. Managers can make their own values explicit and make it clear that pursuit of these values leads to satisfactions which others want. They can involve their colleagues in their own struggles to resolve value dilemmas. They can support and encourage colleagues and subordinates who are pursuing valued goals that they, themselves, believe are important. They can help their subordinates to make contact with a network of other people with similar values. They can move people with crucially important values into environments in which they will be supported, rather than derided, by others. They can influence the *overall* organisational climate of the workplace and the support provided by others for particular types of activity.

All these processes can be greatly facilitated if the group concerned collects data (perhaps using *The Edinburgh Questionnaires*) on shared values, perceptions, expectations, and definitions. They can then collectively examine these data--and their own personal contribution to it--with a view toward clarifying what the personal, organisational, and social consequences are likely to be. The implications of the data so collected can be highlighted by comparing and contrasting it with that obtained by others. In this way, those concerned can be encouraged to evolve *new* perceptions and understandings as well as clarify their own values. The effectiveness of these strategies can be enhanced if a deliberate effort is made to encourage the participants to use these data to develop a picture of how *an outsider* would see the organisation and its staff, how he or she would compare it with others, and what he or she would, on the basis of those results, expect the future to hold for the organisation and its staff.

This abstract description of key features of developmental environments will now be fleshed out from programmes of research and action research which I have carried out with businessmen, teachers, and parents.

Developmental Environments in Business Settings

In the course of McClelland's programmes for the owners and managers of small businesses, which are held with small groups in residential settings, participants are first taught the scoring system for McClelland's *Test of Imagination*. This deals with three major motive clusters (affiliation, power, and achievement) and with 10 major components of competence (including

anticipating obstacles, enthusiasm for the task, getting help from others, and monitoring the effects of one's actions). In this way, participants are provided with words they can use to think about and discuss motives, valued styles of behaviour, and components of competence that might be utilised to carry out valued activities effectively. They analyse their own personal patterns of values and motivation using this conceptual framework and, as a result, become thoroughly familiar with it. They also analyse case history material. They engage in educational games that are designed to emphasise what it feels like to behave in different ways and to experience the emotional and objective consequences of alternatives. Participants study research and case history material that illustrate the consequences of alternatives. They are encouraged to think about how they would like to change, the effects of others' behaviour on them, and the effects of their behaviour on others. At the end of the programme the groups arrange to continue meeting so that they can support each other when they encounter difficulties.

Raven and Dolphin (1978) examined naturally occurring work environments for evidence of the presence or absence of many of these characteristics. Environments which appeared to promote growth seemed to be characterised by such things as an effort being made to identify the motives and talents of each individual and take steps to recognise, develop, and capitalise upon those talents and abilities--an atmosphere in which there was an expectation of high standards and support for innovation but an absence of pressure for results (which has the effect of stifling the willingness to experiment with new ideas and new ways of thinking). Opportunities to participate in managerial activities, study the goals of the organisation, and influence decisions also seemed to be important. For that to happen it seemed to be necessary for the managers concerned to feel confident that they were in a growth situation in which their subordinates were not vying to do them out of a job. Managers also seemed to need time to develop confidence in their subordinates' goodwill and ability--and especially to decide which types of developmental experience would prove most productive.

Data collected by myself, Graham, Berrill, and others using *The Edinburgh Questionnaires* point to the widespread existence of environments which are barely developmental. In these environments, people are *not* able to go on learning new things; their talents are not recognised, developed, and rewarded; they do not have responsibility for their work and an opportunity to influence decisions or innovate; they are not credited with the specialist information which they and only they have; they are not viewed as people who have useful information to contribute; there is little variety in what they do and little opportunity to identify the types of task which lead them to be optimally motivated or to tap multiple motivations to perform any one task; they are not encouraged to try out new activities and new ways of thinking and experience the consequences; and their colleagues and managers do not portray, and encourage them to share in, effective innovatory behaviour.

Klemp, Munger, and Spencer (1977) and Jaques (1976) have shown that one of the most important sets of activities distinguishing more from less effective managers is the time they spend thinking about the talents of their subordinates, how to redeploy both those staff members and others to capitalise upon those motives and talents, and how to develop them. Graham and Raven (1987) showed that Japanese managers are much more likely than British or American managers to think that it is important to do these things, and Dore and Sako (1989) showed that Japanese managers do indeed spend much more time on it.

Klemp, Munger, and Spencer also showed that effective managers tended to encourage subordinates to participate in doing their own jobs. This enabled the subordinates to become

clearer about what was to be achieved and how it was to be achieved. The managers shared their concern with innovation--the thoughts, feelings, and anxieties involved in initiating behaviour on the basis of hunches--and then monitoring (in a feeling-based way) the effects of that action in order to learn more about the problem and the effectiveness of their strategies and then take further action to regain control of the situation. They shared their efforts to understand the wider socio-political situation which so much determined their behaviour and their attempts to think out how to get together with others to influence it. They shared their thinking and strategies dealing with the assessment, development and deployment of subordinates. In all these ways they enabled their subordinates to see and share in normally private psychological components of competence and see their effectiveness--and in this way develop those components of competence. Their subordinates learned *how* to adventure into the unknown, how to study social and political processes in such a way as to be able to influence them, and how to release the energies of, deploy, and develop subordinates.

Schön (1983) has provided somewhat similar accounts of how master architects and town planners developed the talents of juniors, of how research and development managers developed their subordinates, and of how psychotherapists developed their skills.

Developmental Environments in the Home

Further insights into the environmental factors which promote development emerged from our studies of child-rearing in the home. In our research at the preschool level (Raven, 1980), we found that mothers who valued the development of initiative, independence, self-confidence, the ability to make one's own observations, the ability to think for oneself, and the ability to achieve personal goals effectively explicitly and systematically set out to foster these qualities in their children. The developmental environments they created permitted their children to practise the qualities which have just been mentioned, together with other components of competence that were listed in my chapter on the nature of competence in relation to goals that the children personally cared about. They created opportunities for their children to find out what interested them and what they were good at, and discussed their children's feelings and behaviour--and the effectiveness of their behaviour--with them. They did not interfere in what their children were doing, but reacted sensitively, with a specific view to promoting their growth, only when they were having difficulties which they could not overcome on their own. They rewarded their children's success by sharing in their feelings of delight at accomplishments and by helping to create more opportunities for them to do the types of thing they enjoyed. They encouraged their children to set goals, plan the sequences of activities which would be required to achieve them, and to monitor their own performance. They gave their children a vocabulary for thinking about these processes: They talked to them about planning, experimenting, thinking about what had happened, trying to find out what went wrong, and how to do better next time. They encouraged their children to evolve goals as they went along and saw what "gave" in their environments and what interested them.

In addition, they set out to demonstrate competent behaviour to their children in such a way that their children could learn from them. They tried to create opportunities for their children in which the children could behave competently and they discussed their own behaviour with them. They tried to create opportunities for their children to take responsibility, manage others, make discretionary judgements, and follow up those judgements by activities which would keep the

programme of activities on target and lead it to reach its goals. They created opportunities for their children to share in their own, normally private, thoughts and feelings. Thus, they would talk about what they were doing, why it was important, and their feelings about it. They would create opportunities for their children to participate in their own attempts to clarify their goals and the route to be taken to reach them. Their children, therefore, shared in the process of clarifying values, prioritising goals, considering the long-term consequences of their actions, and reconciling value conflicts. They shared in the process of anticipating obstacles to goal achievement and planning strategies to reach them which involved getting help and cooperation from other people. They learned how to adventure into the unknown on the basis of initial insights and partial understandings, monitor the effects of their initial actions to learn more about the situation and the effectiveness of their strategies, and take corrective action where necessary. They shared their parents' feelings of frustration and misery at failure and delight in success.

The parents also set out to earn their children's respect instead of, as some other parents did, simply demanding it. In order to achieve this goal, the parents found themselves discussing the long-term social consequences of their actions with their children. To do this they shared with their children their understanding of the world, how it operated, and what they believed to be right and wrong. In order to justify their children's respect, they found it necessary to try to behave in ways that were above reproach. They, therefore, found themselves discussing not only the constraints on their behaviour but also the whole complex of factors which influenced decisions and the relative weights that have to be placed on alternatives (instead of merely laying down prescriptive moral codes which cannot be simply related to most of the day-to-day decisions which have to be taken).

The effects of attempting to treat children with respect--as people who were entitled to their own views and opinions--were also significant. They discovered how serious-minded and competent their children really were. This reinforced their tendency to rely on their competence rather than believe that children needed to be taught, restricted, confined, and disciplined. This created an ascending spiral in which they were able to create demanding opportunities for their children to adventure on their own, exercise discretion and initiative, and take responsibility for their own behaviour. This led to a further advance in their competence. There came to be less and less need for demeaning restrictive rules.

Insights from Studies of the Backgrounds of Creative and Innovative Individuals

The work we have just summarised dealt with the ways in which the child-rearing strategies of parents who wished to foster independence, initiative, and adventurousness in their children differed from the child-rearing strategies of others. Many of the same results have been obtained when studies have been made of the backgrounds of highly creative and innovative individuals in our society.

A study by Rosen and d'Andrade (1959) is of particular importance, but many others have been summarised by McClelland (1961, 1982) and McClelland and Winter (1969). There have also been a large number of studies of the background and upbringing of highly innovative and creative people. These include the studies made by MacKinnon (1962), Taylor and Barron (1963), Barron and Egan (1968), Bloom (1985), and Walberg and Stariha (1992). Since the composite picture emerging from these two sets of studies is very similar, they may be discussed together here.

Highly creative people, and people high in *need* achievement, tend, firstly, to have been encouraged to be independent at an early age, to go about town on their own, and to choose their own films and friends. Their decisions are not made for them; their parents have a great respect for their ability to think and decide for themselves.

Second, they are more likely than others to have been encouraged to try hard for things for themselves--as children they are given little assistance in doing things but are given strong approval when they complete them. In contrast, fathers of people low in concern with achievement tend to give explicit directions to their children, to interfere in what they are doing, and to express irritation when their children do not do what they want them to do.

Third, children who are highly motivated to achieve had been expected to develop their own moral code--none was forced upon them, although their parents did make it clear what their own code was. This code particularly stressed forthrightness; honesty; respect for others; pride, diligence, and joy in work; and making the most of one's abilities. In general, the parents seemed to have a remarkable respect for their children and their ability reason, act, and cope on their own.

Fourth, they had been exposed to models of intelligent, thoughtful, hard-working, and resourceful behaviour--mostly by their parents but occasionally by others in their environment. Effective achievement-oriented behaviour, including its thinking, feeling, and behavioural components was also often portrayed for them in great detail, and in a context of evident warmth and approval, in the stories that were read to, and told to, them as children. A well-known series of books that exemplify these characteristics are those describing the achievements of Babar the King (de Brunhoff, 1953).

It is important to distinguish between *achievement* training and *independence* training--both of which occur in the backgrounds of highly achievement-oriented individuals. Independence training consists of training people to cope on their own--to be independent of others. Independence training is often present in situations where it is important that the children learn to look after themselves--such as on public housing estates. Achievement training, on the other hand, involves a great deal of contact between children and parents, expectations of high levels of performance, and the willingness of parents to work with their children to help them to set challenging but realistic goals and help them to anticipate obstacles.

Facilitating the Growth of Competence Among Primary School Pupils

In our work in schools my colleagues and I have collected extensive evidence showing that the great majority of classrooms fail to promote the growth of the components of competence we have been concerned with in this book. Indeed, the majority of classrooms currently stunt the growth of these qualities. They therefore fail our children and our society (Raven, 1977; Raven & Varley, 1984; Raven, Johnstone & Varley, 1985; Raven 1994).

We have also described a large number of educational procedures that are intended to, and do, enable a number of teachers to nurture the wider aspects of competence. Relevant processes include project-based education, discussion lessons, and enquiry-oriented studies. We have described in some detail the work of a number of teachers who achieve these goals effectively (Raven, 1977, 1994; Raven, Johnstone, & Varley, 1985). Accounts of the ways in which activities such as project work can be used to achieve educational goals will be found in *Education, Values and Society* (Raven, 1977). Here it is more appropriate to summarise some of the results of our attempt to portray the processes used by one teacher to promote the general development of her

pupils.

In order to achieve the broader goals of which we have spoken, this teacher organised her entire programme of work around project-based enquiry-oriented activities carried out in the environment around the school. These enquiries were organised around a topic, or theme. One such theme covered "the local area and its surroundings." Under this umbrella pupils carried out a number of projects, some individual and some group. One group project involved a re-examination of a local archaeological excavation. Another involved a study of population movements over time, a study of the history of each house and the occupations of its changing occupants, a study of changes in patterns of agriculture, and a study of the current social structure of the area--who was related to whom and what they talked about. All projects involved original research. However, some also involved the initiation of social action--such as getting something done about pollution in the local river. Such a project might be used both as a tool of social research and as a means of promoting the development of the understandings and competencies required to initiate effective social action. Within each project, pupils had personal projects, distinctive areas of specialisation, and distinctive roles. Thus, one pupil undertook a study of butterflies and their habitats whilst another studied the history of a hay rake. The project work that was carried out did not consist--as it so often does--of merely looking material up in reference books, although carrying out an original enquiry or initiating and monitoring some social action might involve tracing and using *specialist* books, research reports, or original accounts of scientific investigations or archaeological excavations. More commonly, if information was wanted, it was obtained by interviewing "ordinary" people or from church records, tombstones, old newspapers, or catalogues unearthed in attics.

But all of this, although extremely unusual, was not what was most distinctive about the work of this particular teacher. Most striking were her unusual concerns. Like Barnes and Young (1932) and Curtis (see Cremin, 1961), she was not preoccupied, as were most teachers, with coursework--with covering a syllabus. But neither was she preoccupied with a particular process--such as creating a "democratic" classroom or encouraging an interest in architecture. Instead she focused on the high-level competencies which the pupils were to develop *in the course of their work.* These competencies included reading, writing, spelling, and counting. But they also included communicating, observing, finding the information that was needed to achieve goals (which often had to be collected by observation or by talking to people rather than reading books), inventing, persuading, and leading. In this context even the three R's took on a different complexion. Learning to read, for example, came to include such things as learning to use structure to locate material that might just possibly contain interesting information, learning to use what was read to stimulate lateral thinking, and learning to quickly discard what was not relevant to one's purposes. Writing came to involve such things as the use of allusion and innuendo to influence the reader. Communicating came to include gesture, artwork, diagrams, and body language.

Project work of this kind--though not other kinds of project work--was fairly typical of the relatively small proportion of teachers who successfully nurtured the kinds of competence we have been concerned with in this book. One key feature of the approach was that it enabled them to discover each pupil's distinctive interests and talents. These interests might lie in the types of behaviour that made them enthusiastic (such as finding better ways of doing things, getting people to work together, or getting something done about a particular problem--such as pollution) or they might lie in particular content (such as Celtic civilisation or aerodynamics). The approach

also enabled different pupils to learn to undertake different activities. It confronted the pupils with the fact that there are endless *new* problems out there waiting to be understood and solved: There is no need for them to be put in the position of having to master tired, out-of-date knowledge and the strategies to be used to reproduce solutions to problems that have already been solved. (Incidentally, one great advantage of tackling new problems is that the teacher cannot tell pupils how to act but has to show them how to be adventurers, learners, detectives, and discoverers. Another is that unique combinations of up-to-date, high-level, specialist [rather than out-of-date and low-level] knowledge are required if progress is to be made.) As a result of adopting this approach it was possible for the teachers to create developmental environments in which pupils practised and developed a selection of high-level competencies (such as leadership, initiative, the ability to observe and to think, or the ability to understand and influence society) in the course of undertaking activities they cared about. Since competence involves such things as the willingness to persist for a long period of time in the face of frustration--and often in the face of the scorn of others--it was important for the teachers to ensure that the pupils experienced the satisfactions which come from undertaking different sorts of task successfully. (Examples include conducting an experiment, putting a group at ease, persuading a local council to change its decisions, or communicating some important ideas to parents.) In this context the teacher's task was to notice what motivated each pupil, invent an opportunity for the pupil to pursue his or her interests (so that the pupil would, in the process, develop some high-level competencies), monitor the pupil's response to that experience and take corrective action when necessary, and to support the pupils by helping them to tackle problems which would otherwise have discouraged them and led them to give up. But they did not only create opportunities for their pupils to practice--and thereby develop--high-level competencies. They also, like good parents and good managers, coached their pupils by creating opportunities for their pupils to see the normally private psychological components of competence ... and the consequences. Thus, they created opportunities for their pupils to share in their own thinking and prioritising. They shared their hopes and fears. They talked about their hunches, the auras that excited and beckoned them, the cues that told them when things were going to pay off and when they were going wrong--and thus when corrective action had to be taken. They shared their constant re-formulations of their goals and the problems that needed to be surmounted to reach them--re-formulations which occur as a result of (often playlike) rumination and reflection on the effects of hunch-based actions or "experimental interactions with the environment" (Jackson, 1986). In all these ways they modelled components of competence in such a way that pupils could copy them, and they let the pupils see that these processes were effective in helping them to reach their goals (and Bandura, 1977, has shown that people are particularly likely to copy effective behaviours). Some teachers shared their planning and anticipations; their concern with excellence, innovation, and efficiency; their disdain for petty regulations; their anticipation of obstacles and their search for ways round them; their concern with aesthetics; and their feeling of being in control of their destinies. They demonstrated how to capitalise upon whatever resources were available--indeed how to select their purposes in the light of the resources that were available and achieve those purposes instead of, as was characteristic of many other teachers, complaining about the lack of resources to do what they wanted to do. In these ways these teachers communicated their values to their pupils and portrayed effective, competent behaviour in such a way that pupils could emulate it. It was not only the overt behaviour which was portrayed in this way for the pupils, but the entire pattern of thinking, feeling, and striving that normally lies behind it. By deliberately avoiding the role of expert and

provider of wisdom--by regularly (and successfully) trying to do things that they themselves did not initially know how to do--they showed their pupils how to be learners and innovators. By demonstrating in their own behaviour how thoughts, feelings, and persistence lead to satisfactions that the pupils also wanted, they strengthened the pupils' tendency to engage in the relevant behaviours. They portrayed the strategies of enquiry, anticipation of reactions, and experimentation that are required to build up an understanding of a complex biophysical or social process and the strategies required to intervene in it, anticipate the way aspects of the system would react, and take corrective action when necessary. By accepting pupils' suggestions, they showed them that authorities and leaders are not best regarded as sources of information and organisation, but as people who, at best, help other people to articulate and share what they know, to acknowledge what others have contributed (and lead others to feel capable of achieving), and to be motivated to achieve their own goals. Some of these teachers, like some parents, realised that, if pupils are to learn from mentors who portray the cognitive, affective, and conative components of high-level competence, mentor and disciple must share at least some enthusiasms, talents, and concerns (Gardner, 1990). Since there is no possibility that a single teacher's values could mesh with those of all his or her pupils, they realised that it was essential to place children with other adults outside the school who shared their values and to engage a range of other adults with them in the class's activities so that pupils could see people successfully exercising important components of competence whilst undertaking activities that they (the pupils) cared about. They also used stories, literature, and historical material to illuminate the intra-psychic, cognitive, affective, and conative components of competence and illustrate the personal and social consequences of pursuing different kinds of valued activity and deploying different patterns of competence in different types of society having different institutional arrangements and dominant cultural concerns. (One might add that they could, with advantage, also have prepared case history materials and materials derived from psychological research for this purpose). In a similar way, their pupils learned a great deal from, and came to rely more extensively on, their fellow pupils. They developed a partnership in learning. Aided by a vocabulary supplied by their teachers, they became able to think about, and value, the contributions of others. The teachers would encourage them to identify the particular talents and contributions of their fellows and enlist their help in trying to find ways of tapping the energies of other--perhaps in some ways disruptive--pupils. In this way the teachers helped their pupils to develop and use multiple-talent concepts of competence and ability instead of classifying their fellows only as "smart" or "dumb." They made explicit both the fact that not everyone contributes in the same way to a group process and also to the thought processes that contribute to effective leadership and management (that is, to the processes that are involved in identifying, developing, and using the talents of each member of the work group). By engaging their pupils in this process the teachers therefore helped them to develop the competencies required for effective leadership and management.

Fostering Competence in the University

In the most important study yet published of the ability of the university to promote value change and the development of competence, Winter, McClelland, and Stewart (1981) compared the effects of several different types of college in the United States. Unlike the researchers who conducted many earlier studies (summarised in Jacob, 1956) and the vast majority conducted since (Pascarelli and Terenzini, 1991), they used measures that were both tailored to, and

sensitive to, the effects that the educators concerned desired and to those that could be anticipated after examining the programmes. The study showed that the colleges had very different effects on their students. Ivy-league colleges (the equivalent of Oxbridge) bred a sense of importance, destiny, and leadership that was, in fact, followed through into activities that conferred major benefits on society in later life. They fostered the willingness and the ability to think critically and to handle cognitive complexity--especially the cognitive complexity involved in understanding social problems.

These colleges achieved such goals neither through academic course work nor through dormitory residence ("the enemy . . . of critical thinking is student social life centred in dormitories or other living units") but by:

- exposing students to diverse experiences. These experiences came, in particular, from contact with, and working with, others who had very different backgrounds, values, and preoccupations. These experiences were, however, only effective if the college insisted that the students analyse and integrate their experiences in an effective way instead of merely "accepting" them, chatting about them, and compartmentalising them.
- demanding that their students cope with new, unfamiliar, and, particularly, challenging experiences involving diversity, variety, and challenge to their assumptions and thoughtways. These demands could not, however, be general--they had to be in relation to areas of activity that the students cared about.
- creating a wide variety of opportunities for students to engage in types of activity (leadership, innovation, research, etc.) that were new to them and providing support while they haltingly tried out the activities they selected in relation to goals they cared about.
- establishing with the students new, personally challenging, tasks to be executed to high standards--but simultaneously providing support and encouragement to ensure goal achievement.
- insisting on high standards in *independent* academic work. This involved preparing theses or conducting seminars and participating in original research with faculty members.
- avoiding prescriptive rules that choked students off from particular types of experience or demanding that they cover prescribed content for vocational reasons: time to explore, daydream, reflect, and integrate is a crucial component of any effective educational programme that is too often missing because it is precluded by pressure for results.

It will be readily apparent that many current trends in university education are away from, rather than toward, the development of these features.

It would appear that we can again abstract from this study the importance of providing opportunities to explore and clarify values, to practise new styles of behaviour, to engage in independent study, and to develop relevant competencies in the course of independent study. We can also underline the importance of specialist information and the importance of contact with appropriate role models. Once again, however, opportunities to make a personal analysis of the workings of the socio-economic system and explore their implications seem to have been emphasised too lightly.

Conclusion

The creation of developmental environments in higher education will require staff to:

- change from a concept of teaching as "telling" to a concept of teaching as "facilitating

growth."

- focus on the competencies that are to be fostered instead of on the information (content) that is to be conveyed.
- think about students' "abilities" instead of their "level of ability."
- help students to study their incipient interests and competencies; help them to generate individualised, competency-oriented, developmental experiences to harness those interests and promote the development of those competencies; and monitor each student's reactions to those experiences and take corrective action when necessary.
- become specialists in human development and education instead of, or as well as, subject specialists.

Clearly, if competency-based education is to be introduced into higher education, radical change will be required in the roles of higher education staff, whether as perceived by t staff members themselves, students, or higher education administrators. Nevertheless, it is important to reiterate that Winter, McClelland, and Stewart's work shows that it is the adoption of precisely such a role--the *traditional* role of the university mentor--that distinguishes the staff of ivy league (Oxbridge) colleges from those who work in other institutions and that it is the adoption of this role that results in their differential effectiveness. By portraying such behaviour, higher education staff would incidentally help their students to develop a more appropriate image of effective management.

References

Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.

Barnes, E. A., & Young, B. M. (1932). *Unit of Work: Children and Architecture*. New York: Bureau of Publications, Teachers College, Columbia University for Lincoln School of Teachers College.

Barron, F., & Egan, D. (1968). *Leaders and Innovators in Irish Management*. Human Sciences Committee.

Bloom, B. S. (Ed.). (1985). *Developing Talent in Young People*. New York: Ballantine Books.

Cremin, L. A. (1961). *The Transformation of the School*. New York: Knopf.

De Brunhoff, J. (1953) *Babar the King*. London: Methuen.

Dore, R. P., & Sako, M. (1989). *How the Japanese Learn to Work*. London: Routledge.

Gardner, H. (1990). The difficulties of school: Probable causes, possible cures. In Literacy in America, *Daedalus*, *Proceedings of the American Academy of Arts and Sciences, 119*, 85–113.

Gorman, L., & Molloy, E. (1972). *People, Jobs and Organisations*. Dublin: Irish Productivity Centre.

Graham, M. A., & Raven, J. (1987). *International Shifts in the Workplace: Are We Becoming an "Old West" in the Next Century?* Provo: Brigham Young University Dept. of Organizational Behavior.

Jackson, P. W. (1986). *The Practice of Teaching*. New York: Teachers College Press.

Jacob, P. E. (1956). *Changing Values in College*. New York: Harper Bros.

Jaques, E. (1976). *A General Theory of Bureaucracy*. London: Heinemann.

Klemp, G. O., Munger, M. T., & Spencer, L. M. (1977). *An Analysis of Leadership and Management Competencies of Commissioned and Non-Commissioned Naval Officers in the Pacific and Atlantic Fleets*. Boston: McBer.

McClelland, D. C. (1961). *The Achieving Society*. New York: Van Nostrand.

McClelland, D. C. (1965). Toward a theory of motive acquisition. *American Psychologist, 20*, 32l–333.

McClelland, D. C. (1982). What behavioral scientists have learned about how children acquire values. In D. C. McClelland (Ed.), *The Development of Social Maturity*. New York: Irvington Press.

McClelland, D. C., & Winter, D. G. (1969). *Motivating Economic Achievement*. New York: Free Press.

MacKinnon, D. W. (1962). The nature and nurture of creative talent. *American Psychologist, 17*, 484–494.

Miron, D., & McClelland, D. C. (1979). The impact of achievement motivation training on small businesses. *California Management Review, XXI*, 13–28.

Pascarella, E. T., & Terenzini, P. T. (1991). *How College Effects Students*. San Francisco: Jossey-Bass.

Raven, J. (1977). *Education, Values and Society: The Objectives of Education and the Nature and Development of Competence*. Oxford, England: Oxford Psychologists Press.

Raven, J. (1980). *Parents, Teachers and Children: An Evaluation of an Educational Home Visiting Programme*. Edinburgh: Scottish Council for Research in Education. Distributed in North America by the Ontario Institute for Studies in Education, Toronto.

Raven, J. (1994). *Managing Education for Effective Schooling: The Most Important Problem is to Come to Terms with Values*. Unionville, NY: Trillium Press; Oxford, England: Oxford Psychologists Press.

Raven, J., & Dolphin, T. (1978). *The Consequences of Behaving: The Ability of Irish Organisations to Tap Know-How, Initiative, Leadership and Goodwill*. Edinburgh: Competency Motivation Project.

Raven, J., Johnstone, J., & Varley, T. (1985). *Opening the Primary Classroom*. Edinburgh: Scottish Council for Research in Education.

Raven, J., & Varley, T. (1984). Some classrooms and their effects: A study of the feasibility of measuring some of the broader outcomes of education. *Collected Original Resources in Education, 8* (1), F4 G6.

Rosen, B. C., & D'Andrade, R. G. (1959). The psychological origins of achievement motivation. *Sociometry, 22*, 185–218.

Schön, D. (1983). *The Reflective Practitioner*. New York: Basic Books.

Taylor, C. W., & Barron, F. (Eds.). (1963). *Scientific Creativity: Its Recognition and Development*. New York: Wiley.

Walberg, H. J., & Stariha, W. E. (1992). Productive human capital: Learning, creativity, and eminence. *Creativity Research Journal, 5* (4), 323–340.

Winter, D. G., McClelland, D. C., & Stewart, A. J. (1981). *A New Case for the Liberal Arts*. San Francisco: Jossey Bass.