

**Studies in Teacher Education:
Psychopedagogy**

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ISBN 83-7271-355-3

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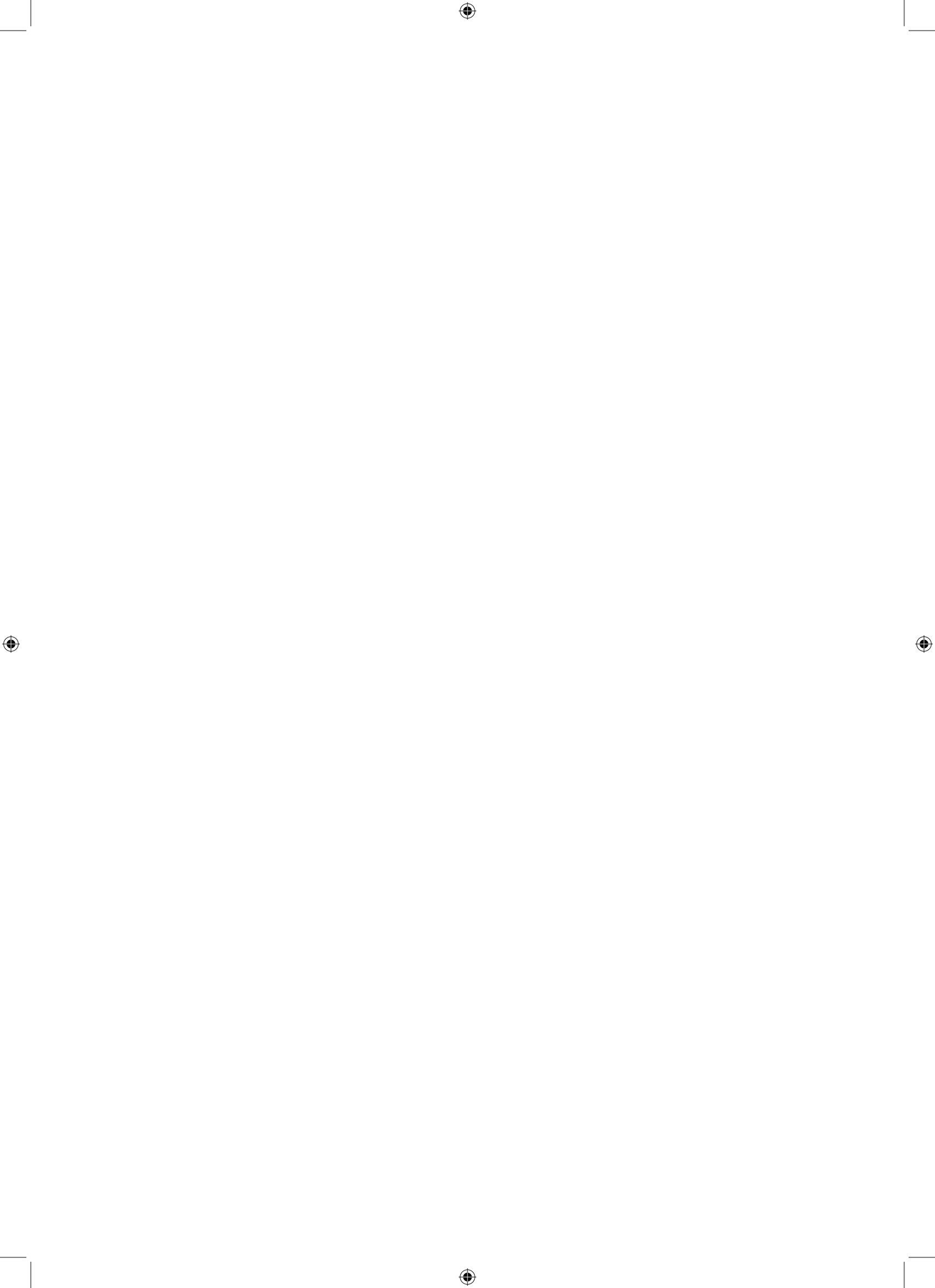
Druk i oprawa Wydawnictwo Naukowe AP, zam. 57/05

Studies in Teacher Education: Psychopedagogy

Edited by

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Wydawnictwo Naukowe Akademii Pedagogicznej, Kraków 2005



Introduction

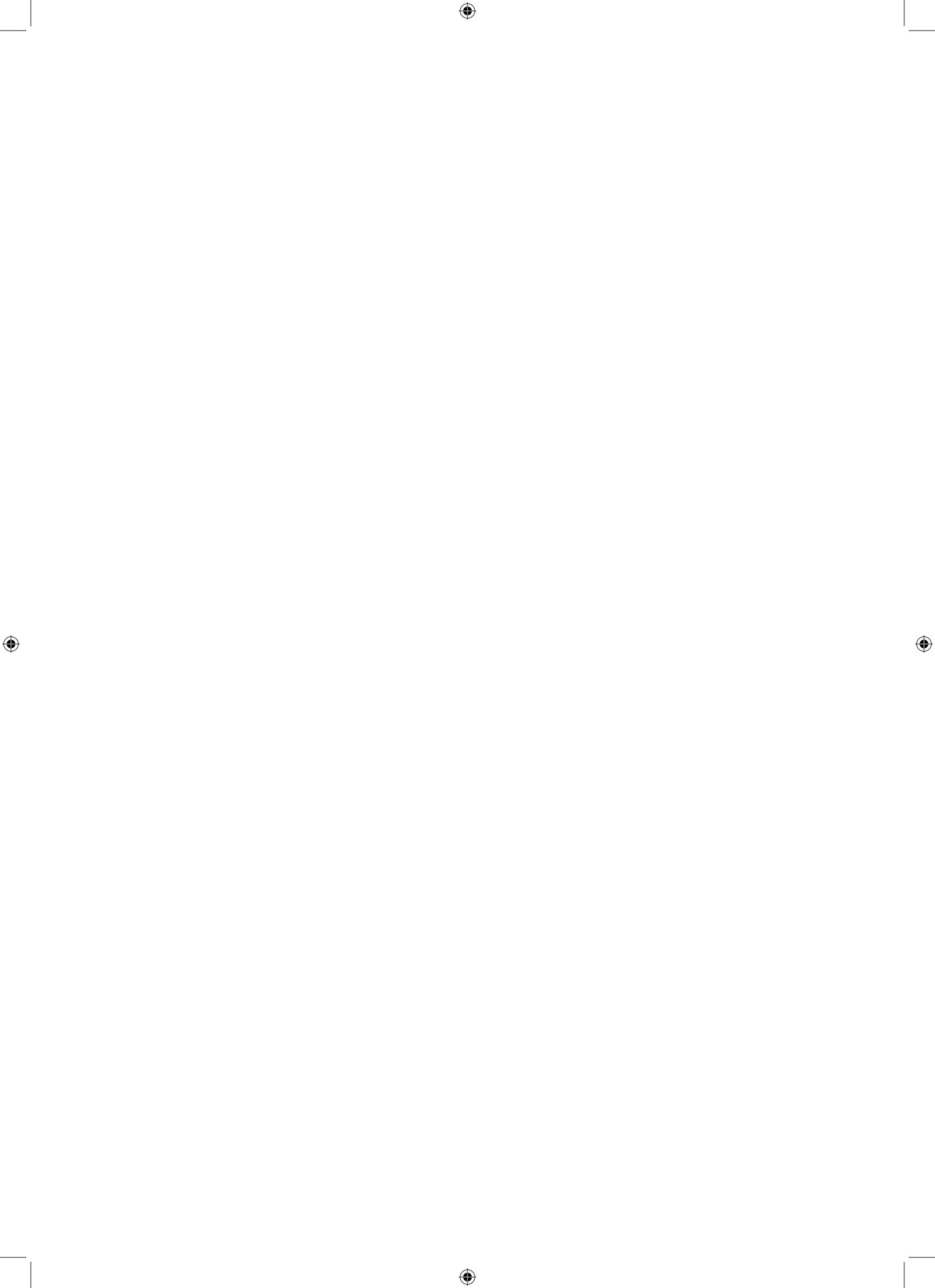
The papers presented in the current volume discuss different psychopedagogical aspects of teacher education.

The first are the papers which present a person of the teacher from different perspectives: his/her competence, the quality of his/her work, the teacher in the view of his/her students, and the possible solutions for a more successful teacher training.

Further texts are devoted to the analysis of different systems of teacher education prevailing in different EU countries and the impact of the integration on the national systems of education.

The final part of the volume is devoted to the pedagogical solutions designed for the specific groups of students requiring special attention of the teacher and also the pedagogical solutions designed for teaching highly specialised aspects of knowledge.

Mariusz Misztal
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PART ONE

Teacher Education



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The Weakest Links: Defining and Describing Teacher Incompetence

Introduction

This paper begins with a brief survey of the attempts to define teacher incompetence and comes to a decision to use one based on chronic failure in five areas – personal, ethical, administrative, technical and productive. Secondary school principals were asked to use this definition to estimate the number of incompetent teachers in their schools and to complete a sort of ‘census form’ describing each incompetent teacher. The survey dealt with many other issues such as the response of the teacher and the management strategies used by the principal and their effectiveness. The results of the parts of the survey relating to the definition are then discussed and the definition is then evaluated in the light of these results. The paper concludes by proposing a mechanism describing the way teaching incompetence manifests itself.

Attempts to define incompetence

Teaching incompetence is very difficult to define. There are varying degrees and varying emphases. Some authors don’t define it at all. Others rely on the idea that incompetence can be taken to mean whatever administrators judge to be the case. Lavelly *et al* (1992) performed an empirical assessment of the extent of the problem by examining previous research papers (Neil and Custis (1978), Elam 1979), Scholl 1988), Buellfield (1915), Good & Grouws (1977), Gudridge (1980), Johnston (1984), Bridges (1986), Haney, Madaus and Kreitzer (1987) and found that these researchers used differing definitions or none.

Several approaches to defining teaching incompetence have been tried. The legal route is one possibility. For example, ‘incompetence’ is specifically listed in the tenure/dismissal statutes of 25 American States, while ‘inefficiency’ is listed in 10 (Munnely, R.J. 1979, p. 223). However these legal statutes don’t actually define incompetence. They merely list incompetence as one of several reasons for dismissal. Another legal approach is to consider the actual results and judgements of court cases. Such case law arises where school boards have dismissed a teacher and the teacher then takes legal action and appeals the decision. Bridges (1985) makes the point that Judges generally accept the definition of incompetence presented by administrators. The

courts generally accept the judgement of school administrators but the cases generally stand or fall on the issue of due process and fairness.

So that leaves matters to the professional judgement of school administrators. However, as Ted Wragg of Exeter University put it, 'One person's "lazy incompetent" is another person's "unsupported victim" [...]' (Smithers, 1999), so this does not seem to help the quest for a definition of teaching incompetence. In 1998 the General Secretary of the National Association of Head teachers in England was quoted as saying that "Most people would define incompetence as being incapable of standing in front of the class and beyond redemption, [...]" (Carvel, 1998, *The Guardian* [online] p. 2). This is a somewhat circular definition since, if someone is incapable of standing in front of a class then he or she is incompetent, and if someone is incompetent then he or she is incapable of standing in front of a class. It doesn't progress the search for a definition very far since it doesn't say how one would know that someone was incapable of standing in front of a class. The idea of being 'beyond redemption' is interesting however. It suggests that incompetence is not simply a temporary condition such as might be precipitated by illness or personal problems such as marital disharmony. It suggests that incompetence is a condition arising out of some intractable series of problems or personality factors. This is an important point that will be developed later in the paper.

If the legal route and the personal opinion of administrators are both unsatisfactory is there another approach? Yes, the idea of chronic failure has merit. Bridges's (1990) approach is similar to that of Neil and Custis (1978) but he organises it differently. Bridges considers incompetence as involving different types of persistent failure for which tenured teachers had been dismissed. "Dismissal rarely stems from a single unforgivable, egregious error; rather, termination is based upon a pattern of mistakes and failure that persists over periods ranging from several months to several years." (Bridges 1990, p. 7). He specifies technical failure, bureaucratic failure, ethical failure, productive failure and personal failure.

This approach was the one eventually chosen for this research. Some slight changes in terminology were made and the idea of a 'critical mass' of these symptoms was included. The definition was as follows.

Definition of incompetent teacher used in this research

An incompetent teacher displays persistent failure in some or all of the following areas:

Technical: the teacher is deficient in discipline, teaching method, subject-knowledge, organisation, and planning.

Administrative: the teacher fails to comply with school rules and procedures (e.g. chronic absenteeism and tardiness) and possibly does not follow the curriculum in a sound manner.

Ethical: the teacher violates standards expected of the teaching profession – e.g. having a negative attitude to students, which could range from indifference all the way to physical abuse.

Productive: the teacher fails to produce desirable results in the classroom – e.g. there is little academic progress, students are not interested, they lack respect, and there is a poor climate in the classroom.

Personal: the teacher is deficient in judgement, emotional stability, self-control and strength of character; the teacher is 'difficult' and uncooperative with management and colleagues.

Clearly, most of us could be guilty of some of these failures at some point. I am interested in the cases where there is a sufficient and chronic amount of failure – a critical mass such that there is a persistent pattern of mistakes and failure.

Carlile (2000) based on Bridges (1990)

Having arrived at a working definition, a postal questionnaire was administered to every voluntary secondary school principal in the Republic of Ireland. The response of 325 represents a return rate of 75%. Principals were asked to accept the above strict definition of an incompetent teacher and then to estimate how many of their teaching staff fitted that description. Then they filled in a type of 'census form' describing the characteristics of each incompetent teacher, noting their effects and examining the attitudes and reactions of management and detailing the outcomes of interventions. The data were analysed using simple frequencies, descriptive statistics, cross-tabulations, chi-squares, ANOVA and T-tests.

Numbers

Approximately 78% of schools (242) had at least one incompetent teacher.

(N=319)

Incompetent Teachers	Number of Schools	Percentage of Schools	Cumulative Percent
0	71	22.3	22.3
1	69	21.6	43.9
2	87	27.3	71.2
3	38	11.9	83.1
4	24	7.5	90.6
5	16	5.0	95.6
6	4	1.3	96.9
7	1	0.3	97.2
8	5	1.6	98.7
9	2	0.6	99.4
12	1	0.3	99.7
18	1	0.3	100
Total	319	100	

Mean = 2.04
 S.D. = 2.06
 Mode = 2
 Median = 2

(Missing = 6)

The total number of teachers in the schools of the responding principals was 10666. Of these, 652 were considered incompetent by their principals. Thus the overall percentage of incompetent teachers was 6.1%. This result is similar to the results for other professions and so would indicate that the definition of incompetent teacher was a reasonable one.

Gender

Although the gender of the general body of teachers in the survey breaks down at 62% female and 38% male, this order is reversed for incompetent teachers – 54% male and 46% female.

	Women	Men
Teachers in general	62%	38%
Incompetent teachers	46%	54%

This is a significant difference and there are several factors at play, but space does not permit discussion. Although it is not that simple, one is tempted to conclude that women are just naturally better teachers than men.

Age Breakdown

The ages of incompetent teachers are approximately the same as the ages of teachers in general.

Age	Number	Percentage	Cumulative Percentage
25–35	40	10.0	10.0
36–45	101	25.2	35.2
46–55	187	46.6	81.8
56–65	73	18.2	100
Total	401	100	

This would suggest that it is not simply a matter of being young and inexperienced at the beginning of a career or being old and tired toward its end. This point is also supported by the results concerning competence in the past discussed below.

Subjects and training

Apart from the probability relating to its popularity, no subject was found to harbour more incompetents than any other. In Ireland, after their primary degree, Humanities and Science graduates take a one-year Higher Diploma in Education course. Those wishing to become teachers of practical subjects take a three or four-year practical subject course that is pedagogically based from the outset. Because of this difference in training it might have been expected that practical teachers would be more competent but that does not appear to be the case. Of course there are more incompetent language teachers than art teachers for example. That is simply because

there are more language teachers than art teachers. Practical subjects such as Home Economics, Woodwork, Metalwork and Art had proportionally as many incompetent teachers as more traditional Arts and Science subjects. This suggests that training is not the deciding issue. It seems to be that it is largely a matter of personality.

Teacher competence in the past

(N = 395)

	Number	Percentage	Cumulative Percentage
Yes	102	25.8	25.8
No	142	35.9	61.8
Don't Know	151	38.2	100
Total	395	100	

(Missing = 31)

If the 38% in the 'don't know' category are assumed to be similar to the 62% of whom principals were able to make a judgement the percentages of past competence become: 58% No and 42% Yes.

It is reasonable to assume, therefore, that 42% of incompetent teachers developed their incompetence over the course of time. There remain 58% who, in the opinion of principals, had never been competent.

	Incompetent teachers
Were competent once	42%
Never were competent	58%

This casts doubt upon the validity of the teaching diploma earned at the start of their career. It strongly leads to the view that personal factors are at play.

Other results related to the definition

Although space does not permit a detailed discussion, it is clear that the five criteria for incompetence were well met.

Technical failure: Discipline was generally very poor but subject knowledge was satisfactory.

Administrative failure: Not following the curriculum was the biggest indicator of administrative failure. Timekeeping and attendance were reasonable although some were 'chronic absentees'.

Ethical failure: Incompetent teachers have a very negative feeling towards students.

Productive failure: This is the most marked of all the symptoms. There is no doubt that students of incompetent teachers under-perform in examinations.

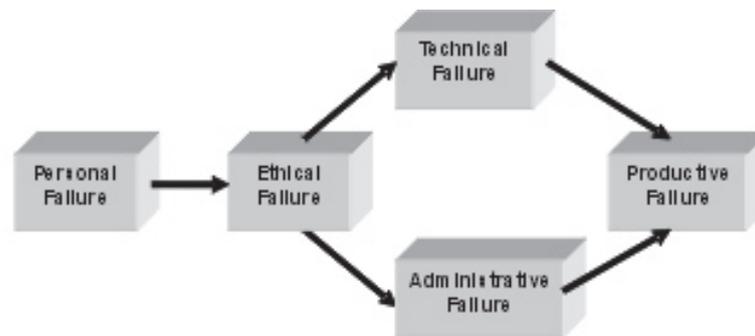
Personal failure: There is a weakness in the character of incompetent teachers that makes them uncooperative with management, difficult with colleagues and not totally emotionally stable.

A Theory of incompetence

On the basis of an overall impression of the data and the written comments of principals, the following is a reasonable hypothesis explaining the relationship between the five failures of the proposed definition of an incompetent teacher.

Incompetent teachers have a *personality failure* at the root of their teaching problems. They are constitutionally not suited to teaching. This personality flaw leads to an *ethical failure* where they have a negative or otherwise inappropriate attitude to students and to school. The ethical failure in both these areas leads to *technical failure* which often manifests itself as discipline problems and *administrative failure* where the course is not covered properly. Both these failures result in decreased learning so the final manifestation is *productive failure*.

Model of Teaching Incompetence



The above hypothesis is worthy of further exploration and could form the basis of more research.

If this is true then it casts doubt on the belief that an incompetent teacher was competent at one time and becomes incompetent over the course of time. If this were the case then retraining and/or in-service courses could repair the damage. However, knowledge and retraining does not change personality – and personality, mainly, is at the root of the problem. There are implications for selection of candidates for teacher training. There are implications for the training itself for the induction of new teachers, for mentoring and for continuing professional development of all teachers.

Although it does not offer a solution this study has at least identified the issue. If it is accepted that incompetence exists then there is a moral imperative to act. The action need not necessarily be aggressive but the problem cannot be ignored because of delicacy of feeling. The teaching profession needs to address the problem and not simply close ranks and deny its existence. Most importantly, a concerted effort is

needed by all partners in education to help those incompetent teachers who can be helped and to find a dignified way out for those who can not. For people involved in pedagogical training and research this work asks very hard questions and offers a challenge that needs to be addressed.

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Graduates, Labour Market and Teaching Quality

The discourse of quality in education

The reorientation of the official discourses about education has been prominent recently. This reorientation practically affects all dimensions of the teaching system: from the debate on State responsibility for educational provision to the definition of teacher's work. In addition, what is considered an adequate curriculum or the attention to diversity in the classroom should also be taken into account (Bonal 1998: 188).

The greater emphasis on the quality of educational systems has entailed a redefinition of the equality principle. Moreover, flexibility has also become an updated topic.

The theory of human capital reflected the public (social) and private (individual) confidence in the educational system in the Sixties as a factor of development and progress. This theory insisted mainly on the "quantity" of education: the better prepared the workers were, the higher work productivity and economic growth would be. However, the over-education and the unemployment of graduates implied the partial invalidation of the theory and a smaller increase of the public expenditure on education (Bonal 1998: 172). Nevertheless, the recent resurgence of education as a fundamental factor for economic growth and international competitiveness has appeared. The recovery of the economic importance of education can be observed in all educational reforms in all countries and in the reports of international agencies (Bonal 1998: 172).

The main factor of change marked as responsible for this orientation is the technological, economic, social and cultural change that is taking place and that has originated the so called "*society of information*". The technological revolution in information, due to its capacity for penetration into all fields of human activity, is a starting point in the analysis of the complexity of the new training economy, society and culture. However, this does not imply a new technological determinism (Castells 1999 vol. 1: 31). On the one hand, the technological revolution in information has allowed a fundamental process in the reorganization of capitalism starting in the Eighties. This has caused, among other things, new forms of work reorganization. On the other hand, the transformations of the Information Society do not only affect the economic and labour fields but also social and cultural relations and likewise power relations among social groups. Probably one of the most debated phenomena of the

new society is Globalization. Globalization affects all spheres and also all groups and individuals, but not equally because it generates new forms of social exclusion. What has really produced the new technological change is the rebirth of a political discourse of human capital revalorisation, the debate over the impact of new technologies on the quantity and quality of the employment generated or destroyed by them. What is doubtless, though, is the impact that the new post-Ford regulatory forms have now and will have in the future on educational systems. These are modifications that affect the four message systems of educational knowledge: curriculum, pedagogy, evaluation, and management and organization (Bonal 1998: 174–176).

Educational reforms in contemporary societies can be placed in this context and likewise their discourse focused on quality and flexibility (Bonal 1998: 177).

The relation between education and employment

According to a functionalist current of thought known as the “theory of human capital”, the existing differences between individuals and groups when searching for a job, as well as wage differences, are established as the basis of their educational and formative level. Depending on this perspective, the functioning of the labour market depends to a great extent on the process and results of the information received in the educational system. The observed differences in the occupation index as well as in the salary structures at sectoral and intersectoral levels depend on differences of human capital and the productivity of workers (Álvarez Aledo 1996: 27).

The higher and better the formation is, the greater and higher productivity and salary are. Nevertheless, in practice, the differences in the occupation index and the differences in the types of contract and salaries in the different sectors, and even within the same sector, cannot be explained by their specific backgrounds.

If we analyse the labour market we can observe that it is divided into sectors, that is, there are workers with very different labour and salary conditions. In addition, there are no institutional possibilities of competing among themselves.

So, for instance, if in some professions there is a higher degree of occupation and higher salaries than in others it is not because in the former there is a higher and better background but because of the labour market structure. This structure does not depend only on supply and demand. However, there are other factors that converge in as decisive a way as the institutional and technological ones. With regard to institutional factors, not all groups have the same capacity to negotiate their labour and salary conditions in the work market.

Randall Collins, one of the most important authors of the so called credentialist current of thought, points out that education is not directly related to productivity in the workplace and also that “the specifically professional background seems to be obtained more from the experience acquired in the own work place than from the formal training at the school” (Collins 1986: 131–132). Education would mainly provide some *credentials* (titles) that would have the function of making possible the exercise of specific competencies in the society with the corresponding achievement of prestige and *status* level. The prestige and power positions are acquired by means

of the differentiation among groups and not only in their knowledge but especially in the ways of life. Weber pointed out two social functions of education: training for bureaucratic aspects (and the division of work) and the cultivation of some ways of life and some cultural styles.

According to Collins the educational system has been developed more for the competence of the different social classes and status groups in their fight to impose a determined way of sharing out wealth, power and prestige than in the function of the objective technical and economic needs of society. This does not mean that there is not a relation between formal education and employment; the relation exists, but the relational key is not based on the greater or smaller knowledge of the students but on the different existing academic cultures. Thus the main thing is not so much the transmission of knowledge and abilities as the transmission of values, beliefs, habits and social forms corresponding to the particular culture of the privileged social groups¹ (Jerez Mir 1990: 390–391).

Social communities tend to extend their advantages, limiting access to the resources they control to a restricted number of candidates. This implies the need of appointing certain physical or social attributes as a justification of such exclusion (Parkin 1999: 264). The theory of social “closure” consists of this. Traditionally, the forms of exclusion were simply ascriptive, while in modern societies criteria based on individual achievement have progressively gained weight.

The success of groups establishing a solid monopoly depends at the same time on the successful expression of the idea that their educational credentials certify the existence of some value, ability or knowledge to which they are not able to accede without those specific qualifications. Such capacities can be of three types: *cultural*, being linked to the development and diffusion of the knowledge of and utilisation of symbols; *technical*, that allows the use of a knowledge applied to the using and manipulation of objects; and *political*, related to the capacity for fixing regulatory rules. Sometimes, groups can be defined according to all three elements: engineering or medicine, for instance, are fundamentally defined by a technical capacity that bears, likewise, a cultural and political capacity.

In education social closure would consist of the maximization of the rewards that the owners of scholarly or educational titles possess through a process of professionalization, lying in the limitation of the attainment of those titles, converting them into a scarce resource and so increasing the opportunities of the restricted group that has the legitimate privileges associated with the title. From this point of view, the main role of educational titles would be to control the entry to key positions in the division of work. Therefore, the titles simplify and legitimate the process of exclusion. In this way, education can become and, in fact becomes a mechanism of defence that protects its own market share.

According to the previous ideas, in the competition for work places education has not a formative function but a certificating one. The educational system does not qualify so much the employment but gives some credentials that, according to their level, allow individuals to place themselves in what Thurow (1983) has called *employment queues*. It is into these employment queues that individuals enter, and once they get the first job they will continue receiving further qualifications.

¹ So, for instance, as Collins (1986) points out the growing importance that educational centres attribute to sport and to other out-of-school activities.

Labour insertion of graduates

As we have seen previously, in the work market university graduates do not all compete with each other. The professions more institutionalized and clearly defined from the legal point of view (that correspond to the traditional liberal professions, such as medicine, architecture, engineering and law) have the advantage. Here, at least in theory, only those that have the same title compete with each other. This is also the case with the teaching profession. Therefore, the grade of labour market insertion of graduates mainly depends on these two things:

- number of graduates;
- number of places offered in the work market.

The number of graduates is based on the number of places offered by universities and the demand of students, as well as on the rate of success. A form of achieving a high grade of labour insertion would be to diminish the number of graduates, either diminishing the offered places, or diminishing the rate of success. This is the case with some elitist professions. Certainly it is not the case of teaching, at least in Spain whose studies are, in absolute terms, those that offer the provision, demands and registration of a total of 112 degrees imparted in all Spanish universities (Grupo de Magisterio/ Aneca 2004: 29).

Therefore, the proportion of graduates that obtain a job as school teachers depends on the work market, that is, on the structure of employment in the educational system, and does not depend on the quality of teaching. Now, the rate of labour insertion of graduates can change according to universities and centres, because all of them can compete with each other in the educational work market. Hence the differences in the insertion level could be attributed to the quality of the received teaching. But, in practice, this is not true. That competition would be real if the conditions of mobility of graduates were perfect. This is something that doesn't happen in any sector of the work market. Barriers that hinder this mobility will always exist: linguistic, economic, informative, etc. Mobility is in a direct relationship with the available resources for graduates. It depends more on the resources of graduates than on the quality of the teaching given by university centres. Therefore, the centres that attract the students with more economic, social and cultural resources are those that will receive higher marks.

Outdoor pursuit programmes of graduates as a mechanism of educational quality improvement

In spite of that, the elaboration of an outdoor pursuit programme for graduates on the part of the centres is considered necessary for the improvement of educational quality, but without being centred exclusively on the level of labour insertion. The studies of pursuit of graduates cannot be based only on surveys of labour market insertion.

The pursuit studies of graduates should be one of the fundamental instruments for the self evaluation of the degrees of the centres. These studies should investigate, in addition to the grade and type of labour market insertion of graduates:

1. The knowledge and real capacities acquired by graduates.
2. The real professional profiles of graduates.
3. The functions and tasks really made by graduates in the exercise of their profession.
4. The profiles and capacities demanded for employers, institutions and other interested parties.
5. The valuation of the employers, responsible for institutions and groups of interest related to the knowledge and capacities of graduates.
6. The assessment of the graduate's background (difference between the knowledge and capacities valued by graduates and those really obtained).

This way the execution grade and the relevance of the fixed degree profiles could be assessed in order to find out whether the profile, knowledge and capacities of the graduates correspond to the market profiles foreseen in the formative programme. It would also be useful to show whether these profiles are the most appropriate to complete the social function assigned to the profession. These studies should be used to evaluate whether the syllabus is consistent with the objectives of the formative programme and with the fixed market profiles. The graduate pursuit studies have to measure the results of the formative program (results in graduates and results in society), and these results have to be kept in mind for the improvement and revision of the formative programme. These studies can and should also be useful for the elaboration of professional orientation programmes for the student.

The opinion of graduates on their studies and teaching received, the difficulties that they find in being inserted in the work market and, finally, the effective exercise of their profession, are considered fundamental. So we must ask for information from graduates about the performance of their functions and tasks like teachers (in case they really teach), as well as their assessment on the adaptation of the received teaching to the exercise of their profession and their proposals to improve it.

Apart from graduates, the point of view of other social groups, involved in the profession, should be also kept in mind. In the case of teaching these could be practising teachers, school headmasters, inspectors, educational administrators, union and professional organizations and parents.

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Two Cheaters' Game. The Hidden Curriculum in Private (non-public) Institutions of Higher Education

This paper was inspired by an event which occurred in one of our private (non-public)¹ institutions of higher education. A young teacher holding a PhD degree, having worked at the school for one year, and having received no complaints concerning their teaching, informed the students that he/she would introduce stricter assessment criteria. The students were soon to be awarded MA degrees, yet quite a majority of them showed an embarrassingly low level of knowledge in the subject that they would be entitled to teach in the near future. They evidently fell years behind in their academic work, including other subjects as well. The teacher's announcement hurt them. The new requirements were perceived as excessive and the students were none too happy with the idea of having more work to do in this particular subject while writing their MA theses. Thus their representatives approached the dean who was told about the doctor's "sky-high" demands, terrorizing the students with threats of not giving them credits for the semester; an atmosphere of horror and terror. To make the picture clearer, the students informed the dean about the doctor's cocky declarations – apparently, they had heard him/her saying that "he/she would destroy the school". In due course, the dean made the only sensible and rational decision in his opinion, namely he fired the teacher, having not even tried to examine the situation or check the students' reliability.

The story quoted illustrates the rules which govern some of the non-public schools. The way in which these institutions operate differs to such an extent from their official declarations that Z. Kwieciński (2000) named the sphere of their activity "the market of appearances" encompassing schools which apply the "strategy of two cheaters". The strategy is anchored in the awareness that "both those who run the school and its learners harbour no illusion that they sell and buy faulty or falsified goods" (p. 104). To illustrate the mechanism of this strategy Kwieciński quoted the opening words of the MA seminar, uttered by a professor and dean at the same time: "You want to get diplomas, I want money, so let's not cheat one another in the belief that there will be real classes and real academic work done here" (2000, p. 104). "Two cheaters' game" is based on a simple principle: "You give us money, we give you diplomas – easy to get but not backed up with qualifications" (p. 297).

¹ In Poland a private school is synonymous with a non-public school, that is one in which students pay fees for their education.

The above examples give rise to suspicions that the actual teaching process in some of the non-public schools has nothing to do with what they offer in their advertising and marketing campaigns or on their web sites. The aim of the present study was to identify the teaching practice of non-public higher education institutions and to evaluate to what extent it differs from officially declared goals described in the teaching standards. The study and analysis of its results have at their core the concept of the hidden curriculum of educational institutions since this notion best applies to the problem of concealed issues communicated by the school and values introduced by it.

The concept of the hidden curriculum entered education through the works of Ph. Jackson (1968, in: Meighan, 1993; Janowski, 1995). It comprises everything that the school provides (communicates, teaches, gives) for the pupils or students, although it has not been planned (included in the curriculum). The actual impact of the school operates through, in Jackson's view, rules, routine activities and regulations. These elements are much more significant than the official curriculum. Students have to adapt themselves to the educational reality and this adjustment takes place through developing a mentality and behaviour which are contradictory to the school's official goals. The adaptation to the school's rules concerns teachers also, who, just like students, develop certain behaviours called "survival strategies" (Janowski, 1995). Survival strategies stem from teachers' attuning to situations and tasks which they need to face and may be treated as one of the elements of the school's hidden curriculum.

The construct of the hidden curriculum has been often reviewed and interpreted. On the basis of its many interpretations it is possible to demonstrate the most important characteristics of the hidden curriculum (Lis-Kujawski, 2005):

- it is based on unwritten rules which are never explicitly communicated;
- it comprises the school reality hidden behind official curricula and mission statements;
- it is manifested through various aspects of the way the school functions;
- it is connected with stereotype-like values and messages communicated by the school;
- it can be measured by the gap between "what should be" (has been planned) and "what is" and has been in fact achieved;
- its results are negative.

It is often silently suggested that the hidden curriculum of educational institutions is the same or similar in each of them, thus creating "the school essence". A different approach was presented by J. Martin (1983, in: Janowski, 1995), who rejected the idea that one universal hidden curriculum existed and functioned everywhere where any teaching process took place. If we are to talk about the hidden curriculum – he emphasised – we should talk about one definite, concrete curriculum of a given institution which functions in a given time and place, among given people. Thus the researcher's task is to uncover it and assess its negative results, giving up on abstract deliberations as to whether the effects are "generally" positive or negative. Accordingly, it should be assumed that the hidden curriculum can be only analysed through discovering and interpreting various aspects of educational practice in concrete institutions. This assumption was realised through devising a survey form to analyse the hidden curriculum in non-public institutions of higher education, which comprised 56 questions concerning the practice of the teaching process. Another source of information was the web sites of private schools of higher education.

16 teachers employed in 4 non-public higher education institutions of the Warmia and Mazury province participated in the study. Among the surveyed teachers there were: 1 with higher vocational education (licencjat), 10 holding MA degrees, 4 holding PhD degrees and 1 doctor habilitated. Of the 16 “subjects”, 14 worked simultaneously at public (state) higher education institutions, whereas for nobody was the private school the only workplace. The studied sample is not representative, consequently the results should be treated exclusively as a kind of exploratory study enabling only rough insight into the problem discussed. For the same reason the results should not be generalised to include all private higher education schools. There were cases when teachers refused to fill in the survey form as they were convinced that the survey would not guarantee their anonymity, and consequently were afraid of losing their jobs. Given the way the survey was constructed, such fears must be treated as irrational, yet they clearly show how powerful the prohibition of discussing certain subjects is.

I. The results of the study

The most important results of the study shall be presented in thematic blocks. Whenever the total score does not equal the number of the surveyed teachers it means that the subject ticked more than one possibility or omitted an answer. Because of the small number of the studied group we dispensed with providing percentages of the results.

1. Finding a job in a private school and regulating work relations

Of the teachers studied, 11 were employed in the private school thanks to the recommendation of friends, 4 found a job as a result of independently submitted applications and 1 was contacted by the school and asked to conduct classes. An example illustrating the scale of getting employed due to personal connections may be the fact that one of the private schools employs as its teaching staff of one faculty: 5 married couples and a father and son.

Only 1 of the teachers studied had an employment contract, 14 worked on the basis of the contract for a specific task or fee-for-task agreement and 2, being self-employed, made out bills for conducted classes. For 14 people the financial incentive was the sole motivation to be employed in the school. Asked by the school, 1 teacher agreed to work in it, and only 1 had a different motivation: the chance to conduct interesting workshops, to work in an institution well-equipped in educational aids and providing ideological freedom.

2. Devising syllabuses and their approval by the school

Prior to their employment, 5 teachers were presented with the scope of the curriculum, 1 implemented the curriculum devised by the Ministry of Education and Sport, and in 10 cases the school offered total freedom of teaching content. Having submitted their syllabuses, 3 teachers were informed about their approval, 2 were asked to introduce changes (in 1 case factual changes), and 10 received no feedback. In

9 cases the school did not demand the submission of any criteria which would form the basis for giving credits for the course.

3. Teachers' requirements and their implementation

Of the 16 teachers surveyed, 2 described their academic requirements as higher than at a public university, 4 as identical with those at a university, and 9 as lower. Interestingly, however, 4 teachers believed that the level of teaching achieved in a particular private school was comparable to that of state universities, 3 did not provide an answer and 9 were convinced that the achieved level was lower.

Only 2 teachers declared that there were no difficulties in implementing their requirements. Those who noted the difficulties enumerated the following reasons for the problems: lack of preparation on the part of the students, their absences and missing previous classes, disrespect, lack of discipline, students' lower intellectual abilities, pressure concerning giving credits and submitting works at the very last moment (last day of the last teaching session). 1 teacher mentioned powerlessness implementing his/her requirements and disciplining the students for fear of not having his/her contract prolonged, which can be treated as an example of a survival strategy.

6 of the surveyed teachers never faced a situation in which they would not give the students credits for their course. 1 teacher unveiled another survival strategy: "I always conduct the course in such a way that everybody receives a credit, devising re-sits which lead to nowhere is a waste of time. Some students pretend that they are "unteachable". 7 teachers happened not to give credits for their course. In such cases the student would finally receive the credit by attempting to pass 4 or 5 times, which was against regulations (6 cases), and in 2 cases supervisors conducted "warning talks" with the teachers concerning their "exaggerated" criteria of assessment. 5 teachers were confronted with various suggestions on the part of the management to lower their academic requirements or give a credit to a student who did not deserve it. Additionally, 5 teachers stated that the school did not require the filling in of records of final marks in their courses. In 10 cases the school did not compel the teachers to be available for office hours, and 6 teachers declared that there were no academic staff meetings.

4. Students' pressure and teachers' reactions

7 teachers' experienced explicit pressure and suggestions made by the students to lower the requirements or withdraw from their implementation. Pressure occurred in various forms: suggesting to prepare term papers in order to get a credit for the course, asking for positive marks or easier topics, assessing teachers negatively in teacher's evaluation forms. Students provided the following arguments: private school "by definition should demand less of the students" or "others do not demand as much, after all I pay for my education". 2 teachers discovered that students put pressure on their supervisors concerning their teaching.

Of the teachers studied, 8 reacted to students' pressure in an unambiguously assertive way and 3 unveiled further survival strategies. The first strategy was to clearly define minimal requirements for the lowest mark and then to limit the teaching content for the students less interested in the subject. The second strategy was to lower the required level of knowledge to 50 % of the material covered and to allow the students to take several re-sits in order to get credits. The third strategy, enforced through

management as a result of students' pressure, was to organise successive re-sits with the same or slightly lower criteria of assessment.

5. Conducting classes

14 teachers stated that students often or very often left classes before they ended (the main motivation was bus or train timetables). It was noted that occasionally the classes began in a group of 24 students and ended in a group of 8. 12 teachers allowed the students to leave earlier with no consequences following. In 5 cases the teachers did not require the students to be present during the classes, and 7 teachers did not react in any way to the absences. During one teaching day teachers usually worked from 4 to 6 teaching hours, and the longest teaching day consisted of 12 hours. 5 teachers shortened their classes when asked by the students to do so, similarly 5 shortened the breaks so that the classes could finish earlier.

14 teachers noticed that the time of the day when the classes were conducted evidently impacted on the students' intellectual abilities by lowering them (irrespective whether the classes were conducted in the morning, afternoon or evening [sic!]), and 12 confirmed that students used the time of the day as an excuse to lower their activity even more.

6. Reasons for terminating cooperation with private schools

In 6 cases the private school terminated cooperation with the teacher. The reasons included: regular termination of the contract, change of the programme of the studies and so limiting the number of groups to be taught (2), the teacher's disagreement to receive decreased hourly payment (1), requiring too much of the students academically (3). On the other hand, 3 teachers terminated their employment in a private school of their own accord. Basic motives included: unfairness of the school, poor relationships with the management, low level of the students, meaninglessness of the work and inability to enforce knowledge.

II. Review of the results of the study and their interpretation

The study unveiled certain phenomena that can be collectively named the hidden curriculum of the studied private institutions of higher education. Its most important manifestations can be grouped in the following way:

1. Short-term nature of the school-teacher relationship. Schools tend to make "economical" contracts which do not require of them the payment of Social Insurance Company fees (ZUS). This weakens the school-teacher relationship and the teachers' feeling of responsibility for the work undertaken. For none of the teachers surveyed was the private school the only employer. Private schools are workplaces in which teachers earn extra money to supplement their university salaries, and motivation other than financial is a rarity.

2. Employment due to personal connections. Such a mode of employment creates a situation in which connections may be more important than qualifications, thus influencing the academic level of the teaching staff.

3. Providing teachers with freedom as to factual teaching content. Possible consequences of this situation include: the impossibility of comparing courses conducted at various institutions, not fulfilling teaching standards, choosing topics which teachers like and realise with the lowest possible amount of effort and no need to prepare themselves for the classes. In the majority of cases teachers receive no feedback concerning the quality and factual content of the syllabuses they implement.

4. Lowering the level of teaching. The majority of teachers require less of the students than at public universities, and in a concealed form they make it easier for the students to get credits or explicitly increase the number of re-sit attempts. Consequently, it is practically impossible not to get a credit or complete the studies. If a student is unable to meet the teacher's requirements it is the instructor who faces troubles since he/she is the reason why the school would potentially or actually lose a client. The school's authorities put pressure on demanding teachers, including dismissing the teacher from the school. Students can critically and negatively assess such teachers' work, which achieves the same effect. A situation in which the student is more important for the school's management than the teacher leads to the lack of security of the latter and creates another obstacle to enforcing proper teaching standards. Another factor which may influence the lowering of the teaching level is the limited possibility of a personal contact between a student and a teacher during office hours.

Another phenomenon connected with the problem discussed is an unbalanced ratio between the number of supervisors and BA and MA theses. On the web site of one of the schools there are listed the names of 14 professors and 13 doctors, thus 27 potential supervisors. Given an estimated number of students of 510 (30 students per group on average, per 17 groups), the supervisor-student ratio is 1:18.8. However, when we deduct the number of academic staff who do not conduct diploma seminars, the ratio is a bit different. One specialism employs 10 supervisors per estimated 210 BA students (1:21), and 8 supervisors per 180 MA students (1:22.5). Yet it must be noted that supervisors of BA and MA theses are the same teachers. Consequently, in reality 8 teachers supervise on average 43.5 theses and 2 supervise 21 theses each. We want to clearly emphasise, however, that we are describing here a concrete case only to show the scale of the problem.

5. Diminishing learning discipline. This can be observed through leaving the classes frequently before their end, a lack of reaction to students' absences or shortening the classes and breaks. Similarly, the learning discipline is loosened through increasing the number of attempts to get a credit and an occasional lack of proper care to record the students' marks. In schools which do not require record sheets of final marks, the best policy for the students is to lose their record books. It is virtually impossible to re-create the data, especially when a particular teacher who taught the student is no longer employed by the school.

6. Treating knowledge and education as a commodity to fulfil economic aims. The teachers surveyed were asked to provide their opinions on the statement "Knowledge and education is the same kind of commodity as any other goods and thus should be governed by the same market laws." 6 teachers agreed with the statement, 9 disagreed. Those who supported the view used the following arguments: only then will good teachers be properly rewarded financially, everybody is entitled to gain education, education opens better chances in life for the graduates. Those

who opposed the idea pointed out that gaining knowledge is connected with meeting certain requirements, and that getting an education should not depend on an economic transaction, since the most important factor in education is its quality. So the low level of students and the lack of proper pre-requisites of some of them is masked by “buying higher education diplomas”. We have decided to quote two statements uttered by the teachers as especially characteristic of these hidden curriculum symptoms:

Knowledge should not be on sale in such a sense that the bigger the number of higher education schools the more competitive are those which offer the lowest requirements, meaning the easiest way to buy a diploma.

Market rules turn the school into an educational wholesale – larger groups, lectures for 300 people, the necessity to examine 800 students. In such conditions (noticeable more often in state universities) it is impossible for the students to develop and work academically.

Even if the majority of the teachers surveyed disagreed with treating knowledge like any other commodity, indisputably the only aim of a private school is its financial gain through selling educational services. A non-public school participates in a market game and competes for the client, and one of the results of this game is the hidden curriculum.

The first manifestation of the hidden curriculum that the prospective student meets is the lack of proper selection during the recruitment. The actual implementation of the slogan “School for everyone” leads to a situation in which, among students, there may be people who, for different reasons, should not study at all. It can be assumed that there is a kind of self-selection among the candidates. Initially they try to get to state universities in order to get free education, which is achieved by the best and the most talented ones. Then the market receives the candidates who did not successfully go through “the sieve” of state schools and they are competed for by private schools. These fulfil their economic ends and are interested in teaching the biggest number of students. The competition among schools is, of course, achieved through the competitiveness of their offer, which is sometimes executed through lowering the fees and requirements. The realisation of short-term aims through attracting a big number of clients of uneven academic level actually initiates the implementation of other elements of the hidden curriculum.

Having admitted as large a group of students as possible, the next aim of the school is to maintain the number of clients on whom it is financially dependent. This sets in motion activities which together act as a singularly understood “care for the client”, that is lowering the level of teaching and discipline. The financial dependence of the school on the student creates an environment in which students feel that they are teachers’ direct employers and thus treat them consistent with the notion “I pay, so I demand”. Such an attitude justifies, in students’ view, putting pressure on the teachers. Students’ demands are met by the school’s management, which acts in line with the principle “we owe something to the client”. This can lead to a paradoxical situation in which a demanding teacher will be treated as an enemy both by the students and by the school itself, which was actually described in the introductory section.

Another manifestation of the hidden curriculum, that is teachers’ survival strategies, results from their adaptation to what they encounter in the school, to the academic level of students with whom they work and from trying to compromise the realising of teaching tasks with their own, the school’s and the students’ interests. The

teacher, having no influence on the school's policy and the selection process, may only adjust to the state of affairs and the level of groups, which most often requires him/her to lower academic demands and assessment criteria.

Summing up, the hidden curriculum of private institutions of higher education has at its core economic calculation, where the main aim is to gain maximum profit. It is manifested through the following practices: cutting costs through economical employment contracts, the lack of selection and maximizing of the number of students and seminar students, specifically understood "care for the client" and limited supervision of the teachers. Such a "corporate culture" is to a great extent independent of the teachers, yet it makes it easier, and occasionally unavoidable, for educational abnormalities to occur.

The assumed effect of the hidden curriculum is the lower level of the teaching process and consequently of the students. In order to get some tentative idea of the level of graduates of private and state schools, we have analysed the results of the entrance exams for the supplementary MA degree studies in English Philology at the University of Warmia and Mazury in 2004. The total number of candidates was 103, of whom 51 graduated from non-public teacher's training colleges or similar schools, and 49 completed BA education at state schools (in 3 cases it was impossible to find out what school the candidate completed). Having taken a coded written test examination, 36 people were admitted. Out of this number, 30 candidates (83%) completed BA studies at UWM and only 6 (17%) at non-public language colleges (although the candidates held diplomas of the University of Warsaw and Gdańsk). This example should illustrate quite clearly the outcomes of the hidden curriculum of non-public schools. In the context of such results one should not be surprised by the aspirations of some private schools to provide MA degree complementary studies.

It is possible to envisage long-term effects of the described hidden curriculum such as a lower quality of teaching and widening of the gap between the competence that the students gain in the course of their studies and the one that they have in their own opinion. Another result may be called the "devaluation of diplomas". The graduate who completed 5-year-long regular daily studies at a university, and one who completed II-level (BA and MA) studies at a private school (including extramural studies!) receive identical diplomas, although the level of their knowledge and competencies are incomparable. This is possible because some private schools operate under the educational and academic auspices of state universities. The last of the long-term effects is the message that the schools communicate. The described educational practice leads to making the students believe that it is money and not knowledge and competences that solve the problems of status and promotion, including during the period of studies.

The mentioned elements of the hidden curriculum were shown through the example of private schools because the aspect of financial dependence and the outcomes of the hidden curriculum are more explicitly visible there. Such phenomena are not present in the operation of public schools, at least as far as free daily studies are concerned. However, we are perfectly aware that at state universities the teaching practice may be quite similar, and their hidden curricula deserve a separate study.

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What the Students of Teacher Training Think about Their Studies and Don't Dare to Say

Introduction

We are living an important changing moment. In the very near future – before the end of the decade – the European Union and the countries that will join it soon will have created a European Space of Higher Education. Within this educational context principles like quality, adaptation to the labour market, the free movement of students and professors, compatibility of qualifications, etc., will have to be common to all European Institutions of Higher Education. In this adaptation process, developments in the different countries have been initiated which suppose a logical change towards common structures in the training of European students.

Nowadays the teacher training schools of Spain are in a moment of reflection before this scene. Its character of deeply rooted studies in the university system means that the change will be complex, with difficulties and conflicts.

Teacher Training is usually the object of very harsh criticism. We can see this from proposals for important changes in the methodology and contents of initial training programs, and the increase in the number of training years. At the same time the symbiosis between theory and practice is another important question, together with the educational context in which this training is developed (Jimenez and Santos 1999).

At the present time there is assumed an innovative conception of the teacher-figure as facilitator, mediator and stimulant of the student's learning. This leads us to the need of training them as reflexive autonomous professionals, able to plan, to develop and to evaluate their own work (Rodríguez 1995).

We are still far from finding a solution that allows us to speak of an initial training of the teachers in accordance with the role that they really have to carry out in the Educational System (Lorenzo 1998).

Many conferences, debates and inquiries have attempted to obtain the maximum possible information to contribute ideas to the decision making process. But maybe

one of the most outstanding and significant, though less considered, aspects has been the opinion of students. The main figures of the university training are the students who, through their experience during the years of study, discover the shortcomings of their training, especially when they face their first teaching practice.

From this point of view, it is not always possible to get trustworthy information from the student. We know that it is not easy to get their sincerity; a lot of aspects will not appear if confidentiality is not assured or the evaluation instrument does not allow the free expression of opinions

This communication only claims to pick up the opinions of students of the Teacher Training School of Cuenca in relation to their views about the initial training that they are receiving.

Objectives of the investigation

To pick up information about what the students of the Teacher Training School of Cuenca think about their training.

To categorize the different opinions collected.

To meditate on the information contributed by the students.

To suggest possible lines of improvement in the development of Teacher Training.

Collection of data

From the first moment, any standard questionnaire type for the collection of information was discarded. We thought that they could limit the reality of the school and fail to reflect more interesting and varied opinions.

Therefore, we used as an alternative; informal documents generated by the students. We requested that they expressed anonymously any opinion, idea or disagreement in relation to their studies. The document could be worked on during a period of 30 minutes. The initial presentation was the same for all groups.

Participating students

A total of 125 students took part in the investigation. They were from six class groups of the Teacher Training School of Cuenca, on second and third year courses.

Analysis of results

The opinions collected from the works were very abundant and rich. It is important to emphasize a great involvement from all the students in this task. It is an important sample of their interest in the most conflicting aspects of their initial training.

Once we concluded the process of the collection of anonymous opinions among the six class groups selected, we proceeded to study the opinions.

The opinions were classified around three big blocks or categories:

- The curricular dimension, in which the aspects related to programs, objectives, contents, etc. were enclosed.
- The dimension of the teacher that imparts the initial training, including all those opinions that referred to the teacher of the training school in connection with their teaching work.
- The organizational dimension, that picks up those opinions expressed about questions of the organization of the school and the university life.

The total number of opinions collected in the 125 works issued by the students was 577. The frequency of appearance and percentage of the total of the survey is summarised in the following tables of contents

CURRÍCULUM	191 answers	33,1%	
		Frequency	% of the total of the survey
More teaching practice		56	44,8
Fear of exercising their career because of doubts about their training		24	19,2
More importance to psychology and the subjects of their speciality should be given		19	15,2
Suppression of any unnecessary subjects		18	14,4
Repetition of contents in some subjects		16	12,8
Unnecessary subjects		15	12,0
The content of subjects is reduced too much		11	8,8
Some optional subjects are not very useful		9	7,2
Few years of training		8	6,4
Free configuration		6	4,8
Interest in their studies but disappointment with their training		4	3,8
Speaking in public is not taught		3	2,4
It is necessary to learn a foreign language		1	0,8
Validation		1	0,8

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TEACHERS	267 answers	46,3%	
		Frequency	% of the total of the survey
Few practical classes		55	44,0
Too much theory		36	28,8
Too many papers that generate little learning		34	27,2
Inappropriate methodology		29	23,2
Evaluation only based on theoretical contents		19	15,2
Limited didactic contents		17	13,6
Insufficient preparation of classes		16	12,8
Little adjustment to the reality of school		14	11,2
Lack of interest		11	8,8
Not making curricular documents		10	8,0
Monotony in the classes		9	7,2
Participation in class is not favoured		8	6,4
Accessibility to the treatment		6	4,8
Negative attitudes		3	2,4

ORGANIZATION	119 answers	20,6%	
		Frequency	% of the total of the survey
Bad distribution of timetables		45	36,0
Attendance is obligatory		22	17,6
Need of more professional and labour guidance		18	14,4
Attitudes characteristic of previous school stages		11	8,8
Favouritisms		6	4,8
Exams		6	4,8
Ignorance credits ECTS		5	4,0
To improve new technologies		4	3,8
Limited cultural acts		2	1,6

Conclusions

Taking as a reference the objectives of this investigation, and through the answers of students that have taken part in this work, we can establish the following outstanding conclusions:

It seems that the tendency inside teacher training schools continues to be based on an excessively theorist tradition. The most important thing to teach is to know the contents that are necessary to transmit and that is enough. Theory is completely separated from practice. In the classroom there are not the conditions to get the right balance between them. We need a true integration of theory and practice in the initial training.

In relation to teaching practice in schools, it is necessary to look for a way to organize the curriculum so that these practices are not only carried out after the end of the initial training in teacher training schools. Progressive teaching practice training is demanded from the beginning, more extensive in time. We should not forget that the practice supposes an approach to the school reality. The student can begin to establish relationships between theory and practice.

Another important conclusion, in relation to the opinions expressed by the students, is the need to include in the training more contents related to psychology and pedagogy, basic subjects for the development of their profession.

The results also show the necessity of important changes in relation to teachers. It is essential to listen to the ideas of the students about their training. Several opinions have been expressed about methodological and didactic aspects. It is advisable to carry out appropriate changes to the needs that are generated inside the classrooms. It is necessary to work with the future teachers on values, team work, conflict resolution, innovation plans, capacity of "learning to learn" and the use of new pedagogic tools attached to new technologies of information and communication.

It is detected in an alarming way that, among the students, many fear to enter the profession due to inadequate training. There exists an incompatibility between theory and school reality. Then it would be necessary to adapt this training to the reality, making the mechanisms of exchanging information with schools easier.

A great disruption appears among the teacher's profile formed in the university and the teacher's profile needed in the school. Teacher training schools should become a focus of innovation for the educational process.

There is a real demand in connection with the future exercise of their profession. The students don't know the access to competitive examination systems and other works related to teaching. The organization of information about these topics appears as an important service inside the teacher training schools.

Of a great majority of the expressed opinions, we can deduce that three years of studies are insufficient for the training of a professional that is able to face the important mission of teaching.

Teacher training schools should adopt an active role in the improvement of teaching. It is necessary to find alternative training strategies to form teachers able to carry out a deep analysis of that particular context in which the theoretical knowledge learned will be applied.

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The Role of Teachers' Education and Training in the Prevention of Burnout Syndrome

In recent decades, professional burnout syndrome has been discussed as a problem affecting people performing various jobs, and especially those who work in the so-called "caring professions." Most researchers present professional burnout as a psychological syndrome characterized by emotional exhaustion, depersonalization and reduced personal accomplishment, which can affect persons working with other people (Sęk 2000, p.15). The components of professional burnout can be defined as follows:

- **Emotional exhaustion** – as a person's impression that he/she is emotionally overburdened and his/her emotional resources have been considerably depleted.
- **Depersonalisation** – as a negative, heartless or too-indifferent attitude to other people, usually a person's clients: the population a person serves.
- **Reduced personal accomplishment (achievement)** – as a feeling that one's professional competence and success decrease.

On the basis of recent research, Farber (2000) supplemented the above professional burnout components with one more dimension which can be called inconsequentiality, an illogicality of action experienced mainly by persons whose work is connected with broadly understood human services. They have a feeling that their actions are ineffective and never-ending and the results of their work haven't materialised yet. According to Farber, this sensation affects primarily domineering people who are additionally overridden with increasing inner tension caused by limited promotion possibilities and a discrepancy between demanding workload and inadequate pay.

Professional burnout is a syndrome that frequently, and to a considerable degree, also affects teachers. Teaching is one of the caring professions, so teachers are exposed to the risk and effects of professional burnout.

Stages and types of professional burnout

Because professional burnout is actually a process, it can be divided into basic constituent stages (Olech 2002, p. 2):

First stage – is a specific warning stage. To return from this stage to proper functioning is not very difficult; frequently a short rest, doing a hobby and/or a temporary reduction of workload suffice to eliminate burnout symptoms.

Second stage – takes place when the syndrome is more permanent and lasts longer; its typical symptoms include outbursts of irritation, contemptuous treatment of others, and worse performance on the job. Elimination of these symptoms requires a longer period of rest (more than a weekend-sometimes a vacation or leave is necessary) and the development of an interest in something other than work. The assistance of other people, friends rather than professionals, can be also very helpful.

Third stage – takes place when the syndrome becomes chronic and a person develops physical, mental and psychosomatic symptoms. Therapeutic help is then difficult and not always successful.

Studies of burnout conducted among Polish teachers in recent years (Sekułowicz 2002, Tucholska 2003) have yielded a typology of burnout observed in this professional group. It turned out that the results obtained differentiate four types of teachers in the context of professional burnout. According to Sekułowicz (2002) (who analysed the population of 687 teachers) the types are as follows:

- Type I – teachers who do not experience burnout and who are not likely to face the risk of it in the future (13.8% in mass education and 32.2% in special education);

- Type II – teachers likely to be exposed to the risk of burnout if their occupational situation becomes unfavourable and problems occur in their personal lives (29.4% in mass education and 35.9% in special education);

- Type III – exhausted teachers, who lack professional help and rest and experience organisational difficulties will develop all of the symptoms of burnout (39.4% in mass education and 17.6% in special education);

- Type IV – teachers diagnosed with all burnout symptoms, scoring especially high on emotional exhaustion and depersonalisation, and low personal accomplishment and commitment (6.4% in mass education and 14.2% in special education).

According to Tucholska (2003) (who analysed a population of 256 teachers) the types are as follows:

- Type I – disappointed teachers (20.7%). They score average on emotional exhaustion and depersonalisation and high on personal accomplishment. According to Tucholska, these teachers are inclined to underestimate their achievements, and teaching does not give them enough satisfaction;

- Type II – adjusted teachers (32.8%). They do not display burnout symptoms, and the author suggests that they can be called not-burned out;

- Type III – detached teachers (25.8%). These teachers display relatively a low level of emotional exhaustion and average scores on the personal accomplishment scale, but they score high on depersonalisation. According to the author, this type includes people who detach themselves from problems and tend to reify their students;

- Type IV – burned-out teachers (20.7%). In this group all burnout components are intense, which suggests a full-blown professional burnout syndrome.

Though they differ slightly, both typologies suggest that the problem is important, if the percentage of teachers endangered with burnout or already burned-out is taken into account. The typology thus necessitates analysis of the symptoms essential for diagnosing the syndrome.

The burnout symptoms most frequently observed in teachers include psychological and physical symptoms which make it difficult or even impossible for them to work. The most frequently reported ones are: chronic fatigue, irritability, sleeplessness,

dreaming of rest, tension and an inability to relax. Also noticeable are the questioning of one's own competence, decreased self-assessment and lowered self-esteem.

Farber (1991) reports, in addition, numerous somatic ailments, emphasising that those commonly recurrent are: stomach ache, nausea, breathing problems, tachycardia, headaches, dizziness, loss of appetite, excessive muscle tension, sweating, and back pain. Additionally, teachers' frequent complaints include ulcers, kidney problems, circulation problems, hypertension, digestion disorders, weepiness, nightmares, and sexual dysfunction (impotency, frigidity and lowered libido). Importantly, the author notices that physical and mental disturbances which result from work-related problems also influence other spheres of a teacher's life and produce various interpersonal problems, which manifest themselves in different professional and private relationships. The most frequent are marital problems or conflicts with the closest relatives. Quite often relationships with friends are loosened or completely broken. Additionally, persons displaying burnout symptoms repeatedly return to work problems in their conversations, which raises interpersonal barriers in conflicts both with family and with colleagues. Teachers gradually lose the motivation to work. They grow impatient and less optimistic in respect to their work. Increasingly frequently, they limit their interactions with students and react to them with aversion. Their relationships with colleagues and supervisors also deteriorate, and they perceive work as tiring and unsatisfying. They come late to work, their absenteeism increases and they start considering changing jobs, even when realistically they do not stand much chance of doing so.

As the above description indicates, professional burnout is a phenomenon that seriously affects a person's life both in its professional and in its private aspects. Undoubtedly, the situation cries for appropriate help and first of all for effective preventive strategies. This is a very important aspect of burnout analysis since burnout in educators, teachers and therapists is a threat not only to the teachers themselves, but also—and perhaps first of all—to the children and adolescents they are supposed to take care of and educate.

Considering the theories of how burnout mechanisms work, we must also pay attention to the direct influence of depersonalisation on the relationship between teachers and students. Cold, dehumanized behaviour on the part of teachers not only triggers objections but may also contribute to serious disorganisation of their students' functioning, to shaping wrong patterns of behaviour and to suppressing the students' needs and schools skills. Of course, there are many more similar side effects of burnout in teachers. The teacher not only has bad relations with the students but also enters into conflicts with parents. That is why it is so important to design effective intervention methods which could prevent burnout.

Intervention strategies

Although most papers on and analyses of professional burnout mention ways of helping people affected with burnout, there are few sources which address this issue systematically (Huebner 1993). Intervention strategies that can be suggested

to teachers to improve their condition can be analysed on three levels: the intrapersonal level, the interpersonal level and the organisational level.

Intrapersonal strategies recommended by many authors (Shin, Morch 1983, Kahill 1988, Huebner 1993) are supposed to minimise stress and burnout. They comprise additional training, attending courses and workshops which improve a teacher's qualifications. According to these authors, the application of various relaxation techniques and sensible free time management (e.g. short outings, called mini-vacations, when exhaustion is particularly severe) can improve a person's functioning. It is also very important to formulate realistic goals and fully concentrate on a given task, which is in accordance with Lazarus and Folkman's (1984) self-management theory, pointing to such actions that reduce the harmful consequences of work-related stress. On the other hand, it is not recommended to focus on emotions, especially if the sources of stress are external and cannot be controlled (Huebner 1993). If a person exposed to burnout is a caring professional, it seems very important to realize primarily that the risk of burnout exists at all. In such a situation, a competent person will stand a greater chance of avoiding the drastic consequences of burnout because he/she will be able to diagnose symptoms in time. According to Jenkins and Calhoun (1991), psychologists are in the best situation because they are able to deploy individualised procedures of stress assessment.

Interpersonal strategies (the most frequently recommended) include participation in professional support groups. People working in the caring sector, unfortunately, are not very willing to take part in such activities. As Kilburg (Huebner 1993, p. 25) notices, professionals are their own worst enemies. Trained to be independent, creative, assertive, competitive and perseverant in their efforts, they are not prepared to accept that they are in trouble and, consequently, that they themselves need help. Far more frequently, socialization combined with character traits leads to their wrestling with problems individually, when others would already have asked at least family and friends for help. Solitary battles are most destructive because it is easy to lose the right perspective in them. Despite doubts about the effectiveness of support (cf. Sęk, 2000a), most stress and burnout scholars highlight the important role of help rendered by others in both technical and emotional senses.

Organisational strategies applied in the workplace are considered to be one of the ways of reducing professional burnout. It has been demonstrated (Huebner 1993) that intrapersonal and interpersonal interventions lead to changes in individual emotions and perception of stress and burnout, while, according to the author, it is also absolutely necessary to implement systemic changes which would transform the work environment. Changing the post or administrative position of an employee and/or modification of administrative activities (e.g. reduction of paperwork) seem very important, as well as raising the employee's role with adequate pay. The change of organisational management so as to prevent conflicts among staff is also an important strategy. So far, however, research conclusions about employees' opinions have been rather pessimistic, which is reflected in the frequently recurring formulation that "nothing can be changed for the better, and this whole commotion can do no good; just the contrary, it makes work even more difficult".

According to Sęk (2000 a, b), in the face of burnout various combinations of positive and negative strategies can be used. The positive approach (that is consolidation of the available resources) would consist in equipping the professionals exposed to burnout

and candidates for such jobs with general skills of stress management. Academic preparation and training for the job should include social skills, communication and proper deployment of empathy and engagement. According to the author, it is also essential to pay attention to the positive evaluation of previous life experience and to controlling work situations. Consolidating control mechanisms can reduce the risks caused by a growing sense of dependence and helplessness in the face of stress. Self-knowledge and knowledge of the essence and specificity of the chosen profession can become foundation of personal and professional growth.

The negative strategy, which minimises the risk factors, should concentrate on reducing or eliminating work nuisances as well as on lowering the intensity and duration of stress. According to Şek (2000 a, b), burnout can also be prevented owing to the active approach to professional tasks and difficulties. One of the best forms of burnout prevention is the development of preventive professional competencies.

Preventing burnout in teachers

Currently there are many therapeutic suggestions which can serve to prevent professional burnout or to help if professional burnout has already developed. Prevention is based on two factors; awareness and behaviour. Awareness makes the person realize risk and danger. That is why it is so important to know precisely the causes and symptoms of burnout. Knowledge in this field facilitates undertaking proper preventive actions in time, for example using one's own individual resources of resistance. Very important are also relaxation and deep reflection upon one's own actions, professional self-fulfilment and the causes of job dissatisfaction. One should also analyse one's attitudes and behaviours towards students and supervisors. Based on introspection as well as on the scrutiny of sources of irritation and anger, self-assessment is the indispensable condition of any exercises designed to reduce stress. Additionally, it is very important to realize that one is not able to do everything on one's own; such an attitude prevents the setting of over-idealistic and unrealistic goals. Self-scrutiny helps also to notice that everybody has a right to make mistakes and realize at the same time that one is not able to influence the whole education system, which is in itself defective. Helpful, too, is finding additional things to do, which would be conducive to relaxation (practising sports, going hiking, gardening, etc.). It also seems essential to abstain from work on days off (weekends, holidays, etc.).

Many authors (Zins et al. 1988, 1989, Williams et al. 1990, Cesarone 1999, Anderson 2000) suggest applying various preventive strategies in cases of constant, pervasive stress and burnout. The most frequently recommended individual strategies include institutionalised social support (optimally, sessions for teachers-colleagues at workplace) as well the support of family and friends. Scholars suggest also doing physical exercises (especially gymnastics in the morning), developing positive attitudes towards reality, first of all to colleagues and supervisors, and also approaching the future with optimism and leaving the primary stress behind.

Fontana (1986) and Kyriakou (1987) also propose developing the sense of humour as a means to reduce tension. The sense of humour provides a broader perspective on

problems and makes life more realistic. Retaining the sense of humour is undoubtedly difficult when one faces serious problems. Smiling and laughter, however, not only help one forget about trouble, but are also a form of self-acceptance and an endorsement of reality.

According to Kliś and Kossewska (1998, s. 139), preventive actions should have a twofold nature. First, they should be undertaken to modify stress-inducing situations related to the teacher's work and, additionally, done in a way that would be adjusted to permanent personality features. Secondly, they should be undertaken to adaptatively modify those features of teachers' personalities that can be modelled and are related to the development of burnout symptoms observed in this group.

Professional burnout poses less of a threat to teachers and educators who believe in the importance of constant training, read professional literature and participate in various courses (not only those directly related to their jobs) (Żłobicki 1999, p. 25). Undoubtedly, the most effective burnout-preventing actions are those that concentrate on one education institution and not only support overburdened teachers but also promote their relaxation. Unfortunately, research shows (Sekułowicz 2005) that teachers, even those who feel exhausted and disappointed with work, are quite strongly opposed to and rather unwilling to participate in such activities. According to them, this attitude is caused by a lack of trust in their colleagues. That is why even the most effective forms of help are rejected by teachers in advance. Despite a considerable lack of trust in the effects of collective actions, it is just team work that conditions the effectiveness of preventive intervention. Establishing teachers' groups within one educational facility can imbue them with a sense of being more able to influence the life of the school as well as their own lives. Participation in the process of solving a school's problems makes teachers feel like agents and doers, which promotes constant professional development and makes the work itself valuable. Owing to their participation in the activities of the group, teachers can satisfy their higher needs (acceptance, self-realisation, respect). Thanks to working together, it is possible to diminish the distance between teachers and supervisors, which is conducive to better communication and understanding. Moreover, due to team work the atmosphere in the facility improves and conflicts among teachers subside.

On the basis of her research results, Krawulska-Ptaszyńska (1996) suggests that teachers' situation can, essentially, improve if the number of students in a class is lowered. In this respect, it is important to implement certain legal regulations in school administration as administrators are not always able to understand teachers' difficulties. Additionally, the tightness of the state budget enforces economizing, which is directly opposed to Polish teachers' needs and health demands.

It should be stated here that only adequate professional training and preparation can really effectively help eliminate the consequences of burnout, and above all make the syndrome afflict only few teachers. The incidence of burnout is to a large extent dependent on the ways in which future teachers and educators are educated themselves. Adequate education, ongoing training and developing teachers' knowledge and competencies all contribute to a successful struggle with burnout in teachers. As has already been stated, awareness and behaviour are most essential in the prevention of burnout. These two elements can be achieved only if teachers' education is not limited to training them in a set of practical and technical skills alone, but if it comprises also stress management strategies, which can be aided by self-reflection.

This is the aim of various workshop exercises, whose key objective is equipping teachers with adequate relaxation techniques. But such activities are still by nature of practical and technical. The most important objective of good professional training and preparation, which could reduce burnout risk, is educating teachers to become reflexive practitioners. The starting point for developing such a model of the teacher is reflection on the relationship between the theoretical knowledge and the practical teaching work. The theory of a reflexive practitioner (Schön 1983) derives from an opposition between theory and practice. The teacher's role consists in perceiving his-her own experience as a source of knowledge necessary for carrying out teaching tasks and responsibilities. Fulfilment of the teacher's role requires that teachers 'know what, how and why', as only such ability guarantees repeated reflection and interpretation of the educational situation (Kwiatkowska 1997, Nowak-Dziemianowicz 2001). A conscious decision about ways of performing one's role is a basis for the rational, consistent and responsible planning of one's work and its systematic assessment (Czerepaniak-Walczak 1997, s. 25). It is possible only due to a teacher's reflection supported by solid, complete and professional knowledge, which enables a teacher to construct his or her own educational theory. Consequently, a teacher is able to cope with difficulties to be encountered during the professional career, including burnout, by means of all of the preventive strategies mentioned above.

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Conference of Classroom? The Place of Pedagogy

Introduction

This paper deals with the place of learning theory in the lives of practising teachers. Learning theory has a bad name; it is seen as the material that trainee teachers have to get out of the way before they start the real work of teaching. The Anglo-American empirical tradition tends at any rate to be scornful of metaphysical ruminations. Our European colleagues may be more open to the value of theory. Research on the life history of teachers suggests that 'classroom survival' is the priority for beginning teachers, whereas theorists are concerned with 'student learning', and there is an obvious mismatch of focus.

Another reason for antipathy to theory is the abstract and conceptual nature of the subject, emanating as it does from the disciplines of philosophy, history, sociology and experimental psychology. It may be seen as the stuff of academic papers and conferences where theorists speak to themselves but not to the broader educational community of classroom teachers.

However, it has been claimed that there is 'nothing as practical as a good theory' (Lewin, 1943, p. 35) and practitioners base their professional practices on some aspects of theory, however derived. Educational theory may be considered as the distilled experiences of others (Carlile et al, 2004 p. 4) and the purpose of this paper is to support this position.

Whereas the empirical tradition in education is in danger of losing the benefits of theory, European rationalist traditions are in danger of losing the benefits and reflexivity of experience and practice. Practising teachers need to listen to theorists and conversely, theorists need to listen to classroom teachers in the interest of synergy.

Table 1. Benefits of Theory

<p>Insight and Affirmation</p> <p>It can validate existing practice and become self-affirming.</p> <p>Reflection</p> <p>Having theoretical concepts will allow teachers to manipulate and develop them in a reflective process.</p> <p>Problem Solving</p> <p>A theoretical understanding offers teachers a tool for recognising, analysing and dealing with the issues in a more focussed, logical and effective manner.</p> <p>Sharing</p> <p>Shared reflection, needs a shared theoretical vocabulary in order to explore epistemological and pedagogical issues.</p> <p>Scholarship</p> <p>A shared discourse and communication of ideas is also necessary to engage in the scholarship of teaching.</p> <p>Justification</p> <p>Theory can justify practices to other stakeholders such as administrators, academic managers, and policy makers.</p> <p>Power</p> <p>Knowledge is power. The communication process is a key instrument of learning and personal and group empowerment.</p>
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Different Theoretical Positions

This paper offers a number of key theoretical perspectives, each of which implies a different definition of learning. For a Behaviourist, to learn is to demonstrate a more or less permanent change in behaviour; for the Constructivist, to learn is to see the meaning or significance of an experience or construct.

Consciously or unconsciously, all teachers hold theories of learning since all action is based on assumptions which may or may not have been articulated or tested.

It may be the case that on reflection, theories may be complementary. For example Constructivist and social theories of learning support each other. Constructivists believe that meaning is constructed through experience which may be mediated by others, such as parents and peers. For the social learning theorist, learning is above

all a social and cultural activity leading to the induction of the learner into a culture (Bruner, 1996). Both theories are mutually enriching.

Alternatively teachers may hold scraps of theory that are incompatible. An obvious example is the lack of interest of Behaviourists in mental processes, whereas for Cognitivists, mental processing is precisely the factor that merits most attention. It is important not to have principles which clash; bringing them to light will help organise them more coherently so that they can be used consciously in classroom practice and in ongoing conference enquiry. For example, Bloom's Taxonomy of Cognitive Objectives (Bloom, 1956), which stresses the stages of cognitive development, can coexist with Maslow-type hierarchical theories of individual needs which state that lower-level and safety needs must be satisfied before intrinsic actualisation needs (Maslow, 1970).

It is not possible to state that particular theories are correct or incorrect, though theories that do not work are gradually discarded. For example, traditional theories of harsh discipline and corporal punishment as an aid to learning have given way to a focus on the importance of reward and self-esteem.

It is important here to distinguish heuristic from theoretical approaches to pedagogy. A heuristic approach is a trial-and-error or intuitive method which has been found to work and may then become enshrined as cognitive strategy, e.g. the importance of preparation for classroom survival. Theory is more reflective and has explanatory and predictive power.

Philosophical Approaches Underlying Theory

Idealism

There is a long-standing tradition in Western thought of valuing ideas over experience or action. The Idealist tradition finds its clearest exponent in the philosopher Plato who claimed that ideas constituted reality, and that sensory experience was suspect. The value placed on ideas is shown in the way that principles are traditionally presented before practice.

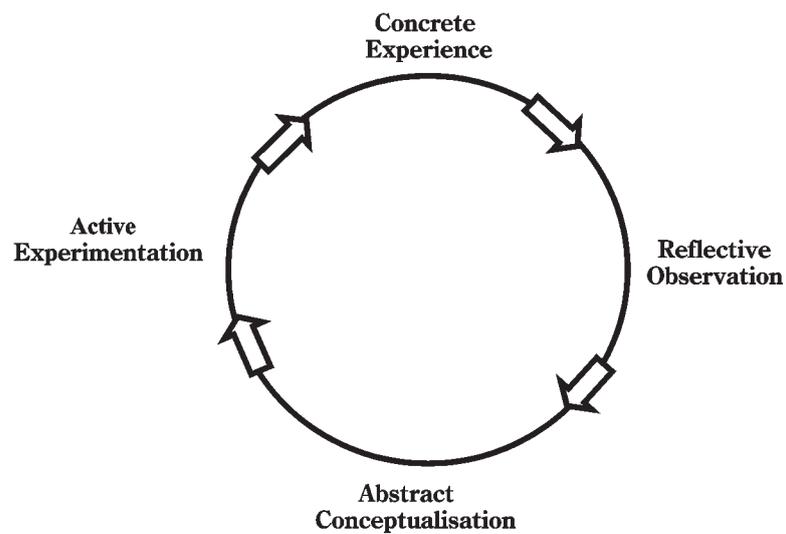
A standard view of theory of curriculum is that knowledge consists of knowing the subject epistemology. For example, there is a different 'way of knowing' in Chemistry than there is in History. The aim of teaching, on this view, is that a student must acquire the specific way of knowing and the principles of the discipline studied.

Empiricism

Empiricism stresses the role of experience and active learning. The scientific revolution of the 16th century led to a new interest in the observable world. The argument that ideas are developed from experience was pursued by Rousseau who claimed in *Émile* (Rousseau 1763) that, instead of formal education, children should learn from nature and the real world.

A modern version of this stress on active learning is provided by the American educationalist Kolb (1984) who suggests a cycle of learning which begins with experience and progresses to reflection on that experience. The next stage of the cycle is that of conceptualisation which may arise from reflection or established theory. The synthesis of experience, reflection and theory leads to a modification of the learning cycle. The iteration of the learning cycle leads to a growth in knowledge, depth of understanding and improved practice. The empirical emphasis of 19th century experimental psychology led to the first major scientific theory of learning – that of Behaviourism.

Fig. 1. Kolb's Learning Cycle



Source: Kolb (1984)

Behaviourism

Behaviourism concentrates on observable behaviour without considering motivation or other mental processes. It argues that any organism can be 'conditioned' or trained by sequencing events or 'stimuli' to bring about an association between the stimuli and the subject's response. It stresses the importance reinforcement by means of feedback and reward in motivating the learner (Skinner, 1968).

Table 2. Key Principles of Behaviourism

<p>Reinforcement Feedback which will lead the learner to form a strong association between the stimulus and the desired behaviour</p> <p>Contiguity The more immediate the feedback, the stronger the association</p> <p>Repetition The more frequent the stimulus-response, the more likely is the desired outcome</p> <p>Variation Varying the pattern of the stimulus generalises the response</p> <p>Intermittent reinforcement Not rewarding the response every time was found to be more effective than constant reward</p> <p>Extinction If the stimulus-response bond is not reinforced the association will die</p> <p><i>Source:</i> Carlile et al (2004) p. 9</p>
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One implication of Behaviourism is that the learner or subject is completely passive, and the teacher, or more correctly ‘trainer’ holds the key to learning success. The influence of Behaviourism on education has been both malign and benign. Behaviourism assumes, at its most sinister, the kind of authoritarian manipulation of learners allowing little room for creativity or independent learning. In its favour, Behaviourism builds on aspects of practice that are effective. These include the importance of repetition in learning, of presenting strong and varied stimuli, of careful planning and the sequencing of learning events. Behaviourism works best in the teaching and assessment of competencies and psychomotor skills. Some of the key developments in modern curriculum planning are Behaviourist. In the 1950’s Bloom categorised the different worlds of learning into the Cognitive, the Affective and the Psychomotor Domains, as demonstrated in observable behaviour (Bloom, 1956). The writing of objectives or goals in the form of tangible learning outcomes, a key element of modularisation is a consequence of Behaviourist thinking (Moon, 2002).

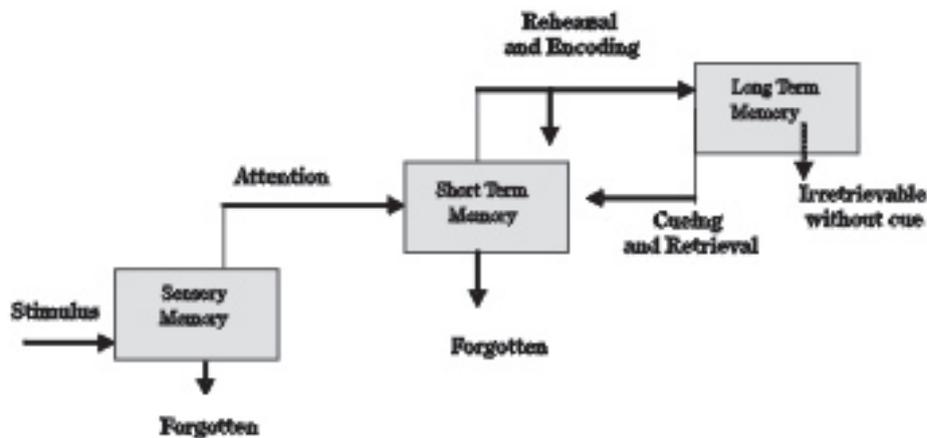
Table 3. Implications of Behaviourism for Practice

<ul style="list-style-type: none"> • List the learning outcomes (Bloom’s Taxonomies show how these can be categorised) • Assessment must be based on these learning outcomes and nothing else • Break the material down into small units • Carefully sequence these units according to the desired learning • Present the rules for learning the topic • Ensure that the learner actively responds (does things) • Provide opportunities for frequent learner feedback • Reinforce correct behaviour with immediate rewards. <p><i>Source:</i> Carlile et al (2004) p. 10</p>

Cognitivism

Cognitivism, based on an investigation of human thought processes, is diametrically opposed to Behaviourism. Cognitivists however, like Behaviourists, still place the teacher or curriculum designer firmly in control. Cognitivists focus on the ways that learners gain and organise their knowledge and they have developed 'information processing input-output' models of learning. The following diagram illustrates the way that sensory input may be processed through short-term memory, and organised or 'encoded' before being lodged in long-term memory, and learning takes place.

Fig. 2. Mental Processing



Source: Carlile et al (2004) p. 12 (adapted)

Many current ideas intended to facilitate student learning draw on our awareness of the mental processing outlined above. For example, Ausubel (1968) recommends the use of 'advance organisers' which present a patterned preview of material to students drawing on the importance of encoding material prior to transfer to long-term memory. The concept of 'Mind-mapping' as a form of effective note-taking developed by Buzan (1974) draws both on concepts of encoding and those of dual coding (presenting material in more than one medium to increase learner retention).

The most famous Cognitivist was Piaget (1990), who argued that knowledge is acquired by the natural development of mental structures as the child responds to experience. While Piaget's work concentrates on child learners, there has been more general interest in his concept of 'de-centring' or being able to see the world from different points of view - an important stage in the development of abstract thinking.

The Accelerated Learning movement is a late Cognitivist development which draws on recent developments in neuro-science and the underlying physical processes which affect brain functioning and cognition. (Bourne, 2003)

Table 4. Implications of Cognitivism for Practice

<ul style="list-style-type: none"> • Promote active listening • Don't overload short term memory by presenting too much material at once • Don't lecture for more than twenty minutes without a break • Chunk material into groups or categories to facilitate retention • Make the structure and patterning of the material explicit for learners • Present material in more than one form to facilitate transfer to long term memory • Give learners the opportunity to revisit topics to strengthen retention • Use key words and terms as memory cues • Outline the meta-cognitive strategies needed for the subject

Constructivism

Constructivists see learning as a dynamic process whereby learners ‘construct’ their own meaning by building on their previous knowledge and experience. New ideas and experiences are matched against existing knowledge, and the learner constructs new or adapted rules to make sense of the world. These are used to measure and validate current experience and to predict new experience. Whereas the Cognitivist tries to take charge and direct the students’ thinking, the Constructivist teacher accepts the autonomy of the student, and instead acts as a facilitator or mediator.

Teaching in higher education is increasingly concerned with adult students who construct knowledge in a different way from children. Knowles (1980) states a number of different ways in which adult learners are different from child learners.

Table 5. Pedagogy v. Andragogy

Child learners	Adult learners
Rely on others to decide what is important	Decide for themselves what is important
Accept information at face value	Use experience to validate information
Don't expect learning to be immediately useful	Expect what they learn to be immediately useful
Have little or no experience to draw on	Have much experience
Cannot act as resource to group	Significant ability to act as resource to group
<i>Source:</i> Knowles (1980)	

Learning Style theories also demonstrate diversity in claiming that there are clear individual preferences in learning styles (Honey and Mumford, 1992). These preferences are influenced by effective past learning, by habit, or the learner’s own strengths. Learning Style theory implies that the teacher should adopt a range of teaching strategies to build on learner’s strengths and challenge established learning modes.

An interest in diversity in intelligence rather than a single unitary intelligence comes from the US Harvard-based psychologist Gardner (1999) who explicitly claims a Constructivist perspective. His Multiple Intelligence (MI) theory posits a number of intelligences rather than one over-arching organising intelligence.

Table 6. Gardner's List of Intelligences

- Linguistic Intelligence
- Logical-mathematical intelligence
- Spatial intelligence
- Bodily/kinaesthetic intelligence
- Musical intelligence
- Interpersonal intelligence
- Intrapersonal intelligence
- Naturalistic intelligence
- Existential or spiritual intelligence (under consideration)

Source: Jordan (2003)

Whereas Cognitive Science researches measurable cognitive processes, Constructivism is interested in the whole mind, and the affective domain, including the place of volition and emotion in learning. Barnett (2004) claims that, in learning, volition is more important than intellect. It requires an interest in strategies designed to strengthen volition and motivation in learners, and in the part played by values in learning.

Table 7. Implications of Constructivism for Practice

- Approach material from the learner's perspective and values
- Acknowledge and accommodate student diversity (ability, age, gender, culture, nationality)
- Encourage reflection through the use of learning journals etc.
- Present an overview of the topic including purpose and objectives
- Explain the relevance of the topic
- Build on what it is already known
- Encourage active and discovery and independent learning
- Give timely feedback on performance
- Constructively align objectives, strategies and assessment

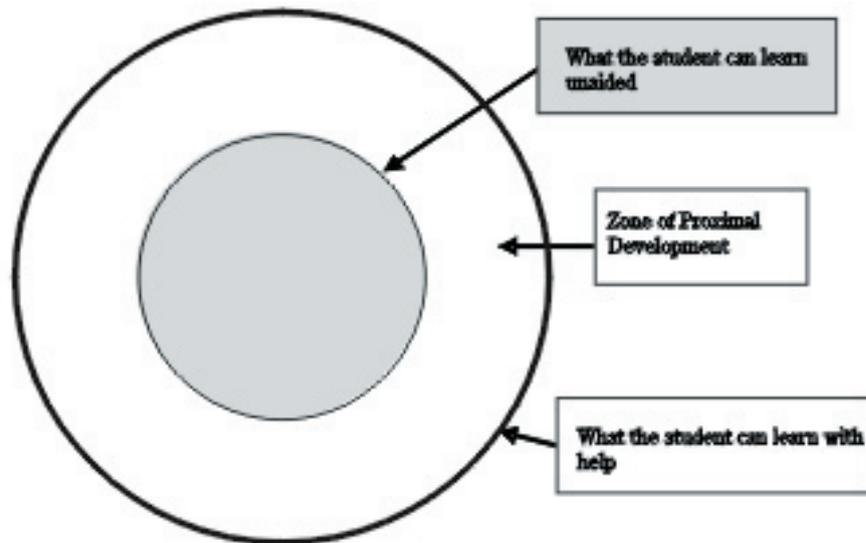
Source: Carlile et al (2004) p. 17

Social Constructivism

Western theories of learning have tended to focus on the individual rather than the group. However, some key insights on the social aspect of learning are now emerging.

The research of the Russian psychologist Vygotsky (1934) demonstrated the importance of parents, siblings and peers as key mediators in language and concept acquisition. Vygotsky claimed that mediators guided learners through the ‘Zone of Proximal Development’ (ZPD) as shown below:

Zone of Proximal Development



Source: Carlile et al (2004) p. 20

With help, more can be learnt. The teacher/mediator can offer suitable material, encouragement and prompts (scaffolding) to move a learner to the next level of learning. Collaborative learning and peer tutoring, where students in the same group tutor one another, are manifestations that may promote ZPD together with social skills and a sharing of culture.

For Bruner (1996) the intellect of the learner is framed by the surrounding culture and learning is a sharing of that culture. In Bruner’s view, to be culture-free is to be intelligence-free.

A key topic in modern educational discourse is educational exclusion, and there are some theorists whose work can be used to conceptualise the debate. For example, the French sociologist Bourdieu claims that just as some social groups lack economic capital with which to invest for the future, so others lack ‘cultural capital’ which can be used to take advantage of learning opportunities which they can pass on to the next generation (Bourdieu and Passeron, 1970).

Table 8. Implications of Social Constructivism for Practice

- Encourage team working and collaboration
- Promote discussion – even in lectures
- Involve students in project work
- Set up study groups for peer learning
- Allocate a small proportion of grades to peer assessment and train students in the process and criteria
- Show students models of good practice in essay writing and project work
- Be aware of your own role as a model of ‘the way things are done around here’
- Know your students as people, develop relationships and build trust
- Be emotionally aware and intelligent
- Be explicit about your professional values and the ethical dimensions of your subject

Conclusion

In this chapter we have provided some reasons why a knowledge of learning theory is important, and how it could apply to practice. We have briefly outlined two philosophical approaches before going into detail about the three major theories which influence current principles and practice. There has been a recent move away from the dominance of psychological theories which claim a scientific and objective explanation of the learning of the individual learner. There is now an increasing awareness of the role of philosophy and sociology in examining learning as a moral and a social activity which cannot be divorced from purpose, value and context.

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A Study about the Concept of “Bad Education” in Future Educators

Introduction

There is no doubt that in all societies school is the main institutional agent aimed at socializing its young members through a systematic educative process. Nevertheless, to speak about the phenomenon of education, it is necessary to go beyond the limits of educative institutions and take into account other socializing elements as important as those considered traditional, that is, family and school, which would lead us to speak about the group of “equals”. Then there are the media and, nowadays, the influence of new technologies such as the Internet.

From this point of view, we can consider that the whole society is educative and that school is just one element, though a very important one, which society uses among a great variety of means through which it tries to guarantee the survival of the group. In this respect, Durkheim (1996) considers that an educated man or woman is just like society wants him/her to be, because it is precisely society that establishes the models and the ideals as well as the characteristic types of personal development adapted to a historical epoch and to a social context. Consequently, the educative process can be defined as a vehicle for the transmission of culture: the tool that society itself uses to assure its survival.

When we speak about education, we are referring to an eminently social phenomenon that, on the one hand, is concerned with the individual personal development and, on the other, supposes an process of adaptation by means of which persons learn both the meanings and the customs of the group they belong to, receiving influences that will mark, in one way or another, their mood of observing and interpreting the happenings of the world surrounding them (D’Andrade and Strauss, 1992).

Apart from this, we found that the concept of education has a multidimensional character and its definition changes according to the researcher. From our own perspective, education is a very important social phenomenon which takes place beyond the boundaries of the school system, taking into account that to educate is not the same as to teach classes.

In addition to stating that the whole of society is educative, we think it is appropriate to consider as **educative** all that influences or can influence, directly or indirectly, the development of the human being, no matter if these influences come from internal, external or environmental factors.

According to these aspects, Yubero, Larrañaga and Morales (2003), in a research project concerning students from careers related to education – namely Teaching, Psychopedagogy, Social Education, Social Work and Humanities – analyzed the concepts these students had about education.

The results showed the following: in the first place, the students consider that education refers to the learning of the norms necessary to live with others, the beliefs and values of society and socially accepted behaviours. In respect of their consideration concerning the educational level of the students, about 90% consider that they are well educated. When asked their opinion about the main agents of socialization they referred, in order of importance, to school and parents.

This description of the results we obtained in our investigation is an example of the general vision the students have about the concept of education and of the socializing role (educative) of other means, such as for instance television. The fact that many of the subjects studied are future educators highlights the need for deeper analyses of the potentials of formal and informal educative sectors.

This investigation emerges as part of these analyses and is concerned with the concept of “bad education” held by university students whose careers are directly related with education (Psychopedagogy) or indirectly related with it (Social Work).

Taking into consideration our first statements, for its correct understanding the term **education** directs us to the terms “bad education” and “good education”. It is obvious that the definition we give of bad education depends on the concept we have about education in general and on the educative praxis we analyze. Besides, it is necessary to consider that “good” and “bad” educations are changing concepts of relative character, depending on historical or contextual moments and on the educative model studied.

Nevertheless, if we take into consideration that the **educative** is all that influences the development of persons, independently from its origin and the moment in which it is produced, we think it is necessary to state what is understood by a process of “bad” and “good” education. We are also interested in the possible influence of “bad education” on the students, with the objective of obtaining a general vision of the educative process of future educators and also about what they consider to be possible influences on future social and cultural constructions.

Method

Participants

Altogether 80 college students, 73 women and 7 men from the University of Castilla-La Mancha, participated in the first part of the present study. These college students were chosen from two different careers that have a relation with education: Social Work and Psychopedagogy.

Data collection

Data was collected by focus groups with the college students. Prior to the focus groups, participants had to write a paper about their own conception of bad and good education. The definitions provided us with information about the ideas that the students participating in the study had about education. The number of definitions collected was 88, because some students wrote two different concepts of “bad education” and we registered both concepts. A content analysis was made of the definitions (the result of this analysis is described in figure 1). Among the total number of definitions, 12 were chosen that we considered representative of the categories. The objective of this selection was that each student chose six definitions: three more acceptable and three less acceptable definitions of “bad education” (the data is summarized in Figure 2).

Focus Groups: There were 4 focus groups in total, two for each career. In the first focus group, we discussed the concept of “bad education”. The second focus group was useful in developing the categorisation map of the definitions of “bad education” (Map 1). The groups were made up of 10–12 participants, with a total of 43 participants (38 women and 5 men) in this part of the study. All the groups were made after a discussion about the educative processes in which people can be involved.

Procedure

Focus Groups: The groups were carried out in the university and were conducted by two of the authors of this paper. A discussion was stimulated by watching Almodovar`s film “The bad education”. This film tells the story of two school friends who re-enter each others` lives twenty years after they were sexually and psychologically abused at a Roman Catholic school in the 1960s. The aim of this example was to facilitate the expression of initial thoughts without the personal involvement of the moderator and the participants.

After viewing, very general questions were put forward (e.g. Why did Almodovar call his movie “Bad Education”?) and also questions referring to the protagonists of the movie, in order to propose later specific questions about their own concepts of bad education and then (in a different focus group) about the categorisation map of the definitions. The topics that formed part of the focus groups were tackled during the 35 minute class.

Analytical Process

Once the transcripts had been made, the content of the information was then analysed, following intuitive and intersubjective processes. The categorisation and codification processes correspond to what is called a “field format” (Anguera, 1994). By starting with an organisation consisting primarily of the categorisation map of the

definitions, an inductive process was initiated to create the categories and sub-categories that we can see in the conceptual maps (see map 1). The relevant conversational units were grouped together in accordance with those aspects that were repeated in the conversational fragments of the participants. The Cmap Tool v3.6 programme was used in order to develop the conceptual map in which the conversational fragments are summarized.

Elements for judging the accuracy of the investigation

The scientific precision of the investigation can be validated through the use of criteria that also complement the investigation. The criteria used to judge the accuracy of this investigation are those defined by Guba and Lincoln (1989), and we have also followed the observations of Crawford et al (2000).

Results

Because of the descriptive characteristics of this research work, the following results should be considered as an approximation to the meaning that future educators give to the concept of “bad education”. The results are organized in two sections, bearing in mind the different methods used to access the information.

Content analysis and selection of the More and Less acceptable definitions

For the elaboration of the map of categories we started out from the concept of education as it is stated in the World Draft of UNESCO, directed by J. Delhors (1996). The different categories should make references to the four types of learning stated in the document: learn to know, learn how to do, learn to live with others and learn to be. Nevertheless, the codification process to which definitions were submitted generated a number of changes until we obtained the resulting map; these changes included the information gathered in the discussion groups.

In figure 1 can be observed the map of categories, together with the percentage of answers that were grouped in each of the established categories. 42.02% of the coded definitions were gathered together within the group in which we find the definitions that tell us about bad education as a process, and 69.31% of the definitions were coded within the group that understand bad education as a product. On the other hand, 5.68% of the definitions could not be coded because they made reference to very general aspects or very concrete ones that were not relevant to the global discourse of the students.

Figure 2 shows the results related to the percentages of election that the students themselves made according to the list of 12 definitions they were given, the ones that the authors of the work considered representative within the map of categories.

Fig. 1. Map of categories

<i>Thematic Blocks</i>	<i>Categories</i>	<i>Description</i>	<i>%</i>	
Block I: <i>Bad Education as negative stimuli in the development process.</i> (Process)	Obstacles to the personal development and the self-sufficiency..	(Influences that are an obstacle to the human being)	15.90%	
	Bad Experiences that are negative influences	(Negative Experiences in the development. But we don't know the specific consequences)	4.54%	
	Transmission of inadequate values, attitudes and behaviours.	(Opposite values to the actual social models)	17.04%	
	Authoritarian Socialization Process.	(Strict educative processes)	4.54%	
Block II: <i>Bad Education as outcome of negative influences.</i> (Outcome)	Social Level	Inability to adapt themselves to the social and cultural models.	(Break in the social norms and cultural requirements)	20.45%
		Obstacle to the social progress.	(Learning that are curbed the social charge)	4.54%
	Individual Level	Problems to the social coexistence.	(Relational problems between people in the society)	28.40%
		Limits to the individual freedom.	(Difficulty to solve the life problems)	6.81%
		Lack of abilities to the future.	(Lack of theoretical and practical learning to do the social tasks)	2.27%
		Self-concept problems.	(Experiences that attack our personal value)	4.54%
		Others individual consequences.	(Definitions that cannot be sorted in other categories)	2.27%

Fig. 2. More acceptable and Less acceptable definitions

Definitions	Election Percentages “More acceptable”	Election Percentages “Less acceptable”
1	2.5%	37.5%
2	20%	33.75%
3	21.25%	10%
4	22.5%	57.5%
5	67.5%	1.25%
6	17.5%	8.75%
7	40%	15%
8	43.75%	3.75%
9	10%	46.25%
10	36.25%	20%
11	13.75%	22.5%
12	3.75%	91.25%

The definition of “bad education” that the majority of the sample accepts (67.5%) is the one coded with number 5: “Those leanings that influence negatively in the development of the human being”. The participants seem to understand that an inadequate education is one that transmits the kind of teaching that affects the development, evolution and growth of people and, in a given way, could hinder the individuals to reach a normative model of development. Apart from that, it is a definition with a markedly unspecific character, because it does not list which those influences are, so it can be interpreted as a sign of the difficulty the students have in specifying when a given educative process can be classified as “bad”. This definition has been placed within the category “Obstacles in the process of development, growing and self-sufficiency.” It demonstrates that the students guide themselves by a definition that implies a process, even when the majority of the definitions are set within the product, and more specifically, in those aspects that have caused an imbalance in social coexistence (28.40% of the definitions).

The second most accepted definition is number 8: “Bad education limits adaptation to the socio-cultural environment and presupposes the lack of personal and human progress.” It was chosen by 43.75% of the sample. Once again, the students give importance to the limitation of personal development as a consequence of a process of “bad education”, including aspects related to the lack of social progress and also poor adaptation to the social context.

The third most accepted definition by the sample (40%), is the one which states that “Bad education generates individuals that do not fit to the explicit social model of persons that society seeks in a given moment”. The lack of fit with what society hopes for from its citizens would be the basic characteristic of this definition; this must be taken into account at the time of analyzing the discourses produced in the focus groups and the definition of “good education”. Through these definitions, it is understood that the persons who have taken part in an “adequate” education process will adjust to the normative social model and, at the same time, should have the critical judgment to question some aspects of these social demands.

The definition of “bad education” that the sample selected as the least adequate is number 12: “It is the type of education that leads certain persons to commit some of the capital sins”. This one was chosen by the largest percentage (91.25%). The majority of the subjects seem to reject very clearly the link between religious aspects and education. According to the more accepted definitions, education could be especially associated with personal development, social progress and to adaptation to the socio-cultural model, setting aside the concept “to sin or not to sin”.

The second most rejected definition (57.5%) defines “bad education” as “Negative influences that do not guarantee the social coexistence”. This definition clearly refers to aspects related to imbalances in social coexistence. Its rejection attracts our attention because of the high percentage of definitions that the students place in this category. This could have more to do with the way in which it was formulated than with its content, because as we will see later in the information obtained within the focus groups, the students pointed out that the relation with the group is vital to avoid what they believe is the last consequence of bad education: social exclusion.

The last rejected definition is coded within the category “Lack of competence for the future”: “it does not make reference to the type of education by means of which a person can take self care, nor can he take care of the values surrounding him”. This definition was chosen by 46.25% of the sample. It seems that the participants do not consider an inadequate education to be one which does not give the necessary abilities for self care or for taking care of others, even when these abilities will guarantee social integration and, consequently, conformity with social expectations.

Focus Groups

The resulting transcription has been considered as a global discourse, because it offers us a general representation of our object of investigation.

The information gathered has been graphed in a conceptual map in which conversational fragments are shown, related to the concept of “bad education” given by the sample and complemented with the description and explanation that they made in the map of categories mentioned above.

The conversational fragments analyzed show that an educative praxis could be considered good or bad depending on the place in which it occurs, the importance of the tradition of those praxes and, even, on the point of view of the person who judges it. In the same way, they say that it is difficult to establish a close definition of what they would consider by “bad education”. They argue that, on some occasions, it can be positive if it produces social changes through the rupture of traditions and social models considered obsolete. Nevertheless, among the negative aspects, they pointed out that the processes of “bad education” are not always conscious and the different agents of socialization could be transmitting, implicitly and unintentionally, inadequate values or behaviours such as sex, drug consumption, etc. Besides, they describe the family context as the most important aspect in the learning of these behaviours, even more important than other contexts and educative influences such as school and television.

In the other part, we placed those discourses in which they pointed out the importance of individual responsibility in their own educative process, mentioning the social context as a source of influence, but having in mind that the individual is able to change his situation.

When the groups were asked to give explanations to the conceptual map in which their definitions had been grouped, the discourses about “bad education” centered again in the explanation of what the causes of such education processes would be. They said that for these consequences to be produced, there must be a process in which the transmission of inadequate values, attitudes and behaviours is determinant and helps us to understand why people suffer processes of social exclusion, and consequently have difficulties in their interpersonal relations. The conversational fragments analyzed in this respect pointed out that the final goal of education would be that the individual who forms part of educative processes fulfilled the cultural demands that integrates persons to the social context and makes society survive. This coincides with Durkheim’s ideas (1976).

They lived this fact with uncertainty because, while they saw as a positive aspect the fact that the subject was not socially excluded, the fact that we have to fulfil social demands obliges us to adapt to what society asks; emerging from this is the concept of social reproduction. For them education not only supposes a process that permits the potential development of persons, but also a process of the acquisition of doctrines. In fact, they say that education conceived of in this way represents an attack against individual freedom and, consequently, a loss of values – something they consider, also, as a process of “bad education.” This result seems to be contradictory, but it coincides with the concept of D’andrade and Strauss (1992), which states that education is a continuing interaction between personal development and adaptation to the group.

Discussion

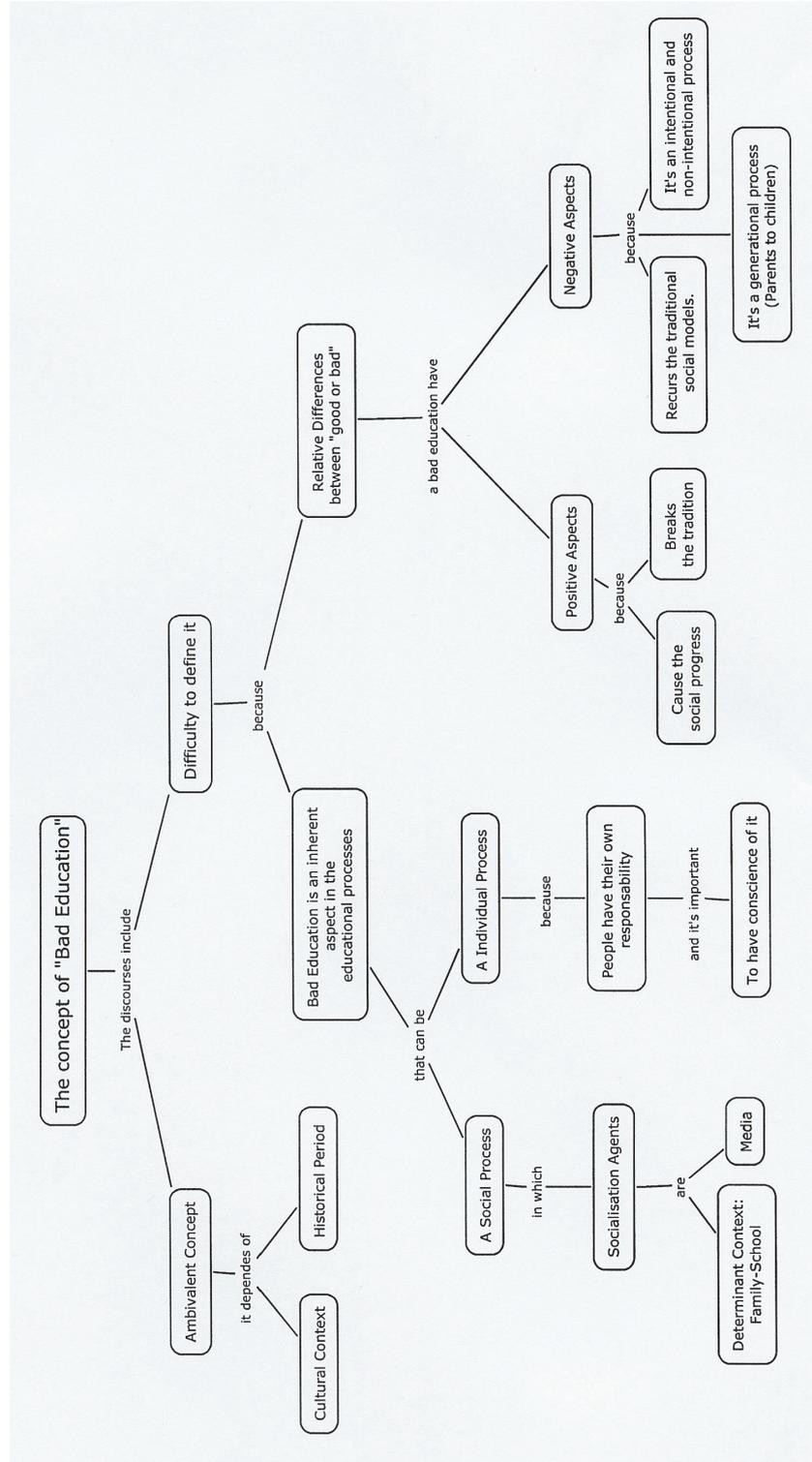
From its design, the interest of this investigation centered not only in knowing how university students understood the concept of education, but also in finding out the way in which the concept could be influenced within the educative process itself, of which the university students form part.

The clearest conclusion in this respect is that the individual socialization to which the participants were submitted is more relevant than the socialization produced in the university. It happens that the university has helped them handle theoretical references with which they can give form to their own opinions. We started out from the concept that all that influences us is educative; nevertheless, the participants consider the family context as a determinant fact, and also the school context as an agent that promotes “bad education”, but they forget, in a given way, the influence of the media.

The fact of describing “bad education” as an inter-generational praxis gives us information about the importance they give to its transmission from parents to children, attributing less importance to other types of contexts.

The analysis of the definitions of “bad education” that were not described in this paper showed that one of the characteristics of an ideal educative process is belonging to a family context in which social norms are transmitted. It also calls the attention to the great importance the definitions and conversational fragments give to social exclusion as a cause of “bad education”. Probably, it is not difficult to understand in

Conceptual map 1. Concept of bad education



a career in which the group subsumes individuals and where the educative functions are focused to the achievement of processes of inclusion (Social Work). Therefore, in a career such as Psychopedagogy, with a marked teaching character, it is significant that the students speak about this consequence as the worst product of a "bad education", not mentioning academic aspects related to the lack of knowledge, as was expected.

A more detailed analysis of the information obtained could perhaps help to determine which would be the negative influences pointed out within the more selected definition, and how they explain the difference of election between the definitions and the discourses in which they explain the lack of adaptation to the social environment as the most important category.

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Teacher Training at University: Methodology for Needs Analysis

Nowadays, the main aim of European education systems is to fulfil the agreements reached by all member states in order to build a common area of Higher Education for all. The role of teaching staff is considered to be fundamental in the construction of this new system, hence the importance given to teacher training. For these reasons, the TeMCU initiative (Training Teachers for the Multicultural Classroom at University) was submitted to the European Commission with the general purpose of promoting better teaching practice among university staff who receive incoming European exchange students. This final purpose will be materialised in the design of a training module for helping teaching staff meet potential needs with regard to multiculturalism in the university classroom at European level.

In the present piece of work, we are dealing with the research methodology we have followed in the TeMCU project for needs analysis. Mainly based on quantitative data, this methodology will also be accompanied by a qualitative stage which will help us consolidate data gained through surveys. Moreover, this paper will describe the first phase of the research, commenting on the resulting products (survey instruments) and the main dimensions of the different questionnaires.

TeMCU: Research Methodology

With regard to research methodology, partners agreed on certain research methods and guidelines, which are followed in the different partner institutions, taking into account their own particularities, resources and possibilities. Partners consult each other, exchange information and share the results of their individual research.

On the other hand, it is understood by the project members that all survey stages and their corresponding products are a means to attain the project's main objective, and are not objectives in themselves. Therefore the questionnaires are the instruments for needs analysis.

Bearing this in mind, regarding research methodology, two different approaches have been adopted for needs analysis. First, a qualitative approach, through focus group meetings held with small groups of subjects from the populations under study

(exchange students, teaching staff and exchange programmes coordinators). Secondly, a quantitative approach, through survey instruments (three sets of questionnaires, one for each of the sample groups).

First stage: review of the literature to define terms and justify the theory underlying the questions

Apart from members' different experiences (research, publications, projects, dissertations) in the main fields of the project, each participant institution carried out a bibliography review to identify what has and has not been done to date in the field of multicultural education and mobility programmes.

European legislation, projects carried out on these topics, specific institutions and organisations working in the field of multicultural education, web pages offering interesting and useful links, etc. were consulted and the bibliography was streamlined and circulated among partners. It will also be available for public consultation on the project's website, with links to their corresponding sites and access to PDF-format documents where possible.

Second stage: Qualitative data collection and questionnaire design

Focus group meetings were conducted in the institutions to identify the main issues to be addressed in the survey. These were semi-structured interviews where the main topics of the study were introduced and subjects were encouraged to talk and comment on their experience dealing with exchange students in the case of teachers and coordinators, and studying in host institutions in the case of exchange students.

The first focus group meetings involved groups of teaching staff from different academic fields and the main points covered were: 1) main ideas on Multicultural Education; 2) their experience in dealing with exchange students and the main difficulties students have to face (enrolment in the host institutions, language barriers, different teaching-learning styles and traditions, the process of adaptation to a new context, teacher-student relationships, subject recognition, assessment methods and criteria, etc.); and 3) possible solutions and improvements.

The second focus group meeting involved exchange programme coordinators working at different levels: central and faculty or department International Relations Offices. Here, the main points covered were: 1) main ideas on Multicultural Education; 2) their experience in dealing with exchange students and in coordinating exchange programmes (i.e. the main difficulties they, as coordinators, have to face – lack of human resources and infrastructure, language barriers, lack of management models, etc); 3) main difficulties exchange students have to face (language barriers, academic issues, enrolment systems, different academic requirements such as class attendance, assessment methods and criteria, certificates, etc.); 4) exchange students' satisfaction with their experience abroad; and 5) possible solutions and improvements.

Finally, meetings were held with groups of exchange students from different faculties and countries, in order to ensure language and culture dissemination. The

main points of these encounters were: 1) their experience as exchange students at the host institutions (previous information and guidance from their home universities, support infrastructure and guidance from the host university, problems they are facing – language barriers, enrolment, different teaching-learning styles, the treatment received from teaching staff and home students', teachers' equal or unequal treatment of exchange students compared to home students, assessment methods and criteria, separate groups of exchange students, etc.); 2) things they like most and things they like least connected with studying at the host institution; and 3) possible solutions to these problems.

These meetings were recorded aurally and transcriptions carried out in every case.

Survey Instrument design: Questionnaires

In the case of teaching staff, it was decided that all teaching staff having exchange students in all partner institutions in 2004–2005, and coming from all fields, are our sample subjects in this case.

With regard to the students to be considered in the survey, they are those SOCRATES-ERASMUS students from any EU country (future members included) studying in any partner institution in 2004–2005, from any field. Figures for teaching staff and incoming exchange students in each partner institution were provided by corresponding International Relations Offices.

Finally, identification of the last group of survey subjects presented more difficulties, especially due to the definition of “administrators” itself. Under this term, all teaching staff coordinating exchange programmes, as well as institutional staff with decision making powers working at a University (International Relations Office) have been included. It was also decided that (student) assistant personnel working in International Offices would also be included in the sample, as they usually have the most direct contact with the exchange students and get straightforward information from them.

Survey instrument preparation

In order to carry out survey instrument preparation, previous instruments related to TeMCU main topics were looked at. At the conclusion of this stage, the group determined the following to be relevant to our research:

- Tsokaktsidou, Dimitra (2001): the author designed a set of questionnaires as part of a project aimed at describing the current situation in translation faculties, these being very multicultural and multilingual. She also aimed to determine the main challenges faced by teaching staff in responding to this diversity. Tsokaktsidou's work was actually the origin of the TeMCU proposal.

- Maiworm, Friedhelm; Steube, Wolfgang and Teichler, Ulrich (1993) and Teichler, Ulrich; Gordon, Jean and Maiworm, Friedhelm (2001): General evaluation reports of the SOCRATES Programme, presenting a significant number of surveys of different types addressing the different aspects of the programmes.

- Castillo Pérez, Remedios (2001) presents a study on the impact of Granada being an attractive tourist city for exchange students; the author analyses the characteristics

of the exchange students, their motivations for choosing Granada as the destination for their period of stay abroad, as well as some academic and other related issues.

Questionnaire Design

A list of the main subjects arising from all focus group meetings was prepared and revised to prepare the first draft of the questionnaire for teaching staff.

The working group met to read and introduce comments and modifications in the instrument, taking into account survey samples as well as the main objective of the project: designing a training module.

The following decisions were taken during this stage:

- The questionnaires only include closed questions to help us in interpreting results, as well as to permit us to read them optically. Open questions leading to an in depth discussion are dealt with in the focus group meetings to be held in all partner institutions.

- Regarding multiple-choice answers, the group wanted to avoid the option where people could ascribe when not knowing what to answer or when trying not to give their actual opinion. Therefore, it was decided to offer four possible answers (from 1 – strongly disagree- to 4 – strongly agree-, avoiding the middle option) and to include an N/A (not applicable) answer, taking into account that there are certain questions specifically inserted into the survey for certain institutions which make no sense at all in some of the project's other institutions). The Likert scale was then applied, and survey subjects are required to express their agreement or disagreement with a set of statements.

- Regarding survey subjects' personal details (sex, age, field, university teaching), the work group wanted to avoid subjects' fear of being "identified". It was decided therefore to include this data at the end of the questionnaire.

- With regard to survey instrument languages, just two versions of the questionnaire were prepared: English and Spanish; Spanish to be applied only at UGR, English to be applied in the other partners.

- Questionnaire distribution also presented certain implementation difficulties. At the beginning an online version of the instrument was considered to be a good alternative to facilitate data reception. Moreover, the questionnaires would ultimately be optically scanned, so they were only distributed in a written version. Spanish and English versions were both printed by UGR, who sent via postal mail the corresponding copies to the rest of the partners.

- Codification and data analysis will be carried out only at the UGR to ensure homogeneous criteria.

In order to check the validity of the survey instruments and to avoid any information loss or question ambiguity, and also in order to check relevant content and the time needed for filling in the questionnaire, questionnaires were piloted. The Spanish version was tested with teaching staff from UGR and modified accordingly. Also taking into account the difficulty of finding teaching staff willing to participate in survey research on two different occasions, the English version of the questionnaire was tested during the second plenary meeting in Cyprus, as all members to the project are teachers at university with recognised experience dealing with exchange students in their classes. TeMCU members commented on certain aspects of the questionnaire,

leading to a new drafting of the questionnaire, which was re-written in a simpler form, facilitating subjects' reading and completion of the instrument. Partners agreed on the need of drafting a glossary on certain terms which might cause problems for survey subjects completing the instrument, in all participant institutions and according to their specific needs. This is the case of: "host institution", "home institution", "faculty", "department", "institution", "subjects", "modules", "course structure", "permanent students", etc. Moreover, participants detected that certain aspects need to be clarified to subjects as they will not be considered applicable to their own contexts. Covering letters, accompanying the questionnaire, were also drafted by every partner institution, clarifying these issues.

From the comments introduced in the English version, the Spanish one was modified accordingly.

As above, from the main points set out in the focus groups, a first draft instrument was prepared and then revised and modified in different meetings of the working group. In general, the same guidelines as those set for the teaching staff questionnaire are followed.

Nevertheless certain issues, exclusive for this group of subjects, were pointed out:

- Questionnaire drafting: It was taken into account that sample subjects are students, whose level of the official language of the host institution might not be high (especially in the case of institutions when the survey language is not the same to that of the host institution: UCY and ULJ), so drafting is made as easy as possible to help them understand every question.

- As in the case of teaching staff questionnaires, instruments are prepared in English and Spanish. In the case of UGR, questionnaires for students are also available in English, as certain students prove to have certain problems with the Spanish language.

- Questionnaire distribution: Every partner institution asks their incoming exchange students to attend a meeting in order to fill in the questionnaire. Administrative staff as well as students' associations are key instruments in contacting the students and encouraging them to attend the meeting. Students are informed, in advance, about the aims of the project and the relevance of their participation to its implementation. TeMCU members attend the meetings and explain what the project is about and distribute questionnaires among the class. The students have a certain period of time to fill the survey in and hand it out to the TeMCU member.

- Glossaries were also prepared to help students understand the meaning of certain terms in the host institution/country.

As in the case of the teaching staff instrument, groups of incoming exchange students were formed to test the instrument in every partner institution. Students came from different fields: Experimental and Health Sciences, Humanities, Social Sciences (including Law) and Technology, as it is believed that students of language would have fewer problems in completing a questionnaire in a foreign language than students from other fields; and from different countries, as it is considered that teaching-learning traditions and education systems differ from one country to another and have a great influence on exchange students' adaptation to the host university context.

As optical reading was chosen, there were certain limitations regarding survey instrument drafting and text organisation; for that reason and, to ensure optical scanner

was duly working, printing tests were carried out so that it could be guaranteed that there would be no problems when reading and interpreting survey results.

The teaching staff questionnaire finally consists of four numbered pages (from 0 to 3), and the exchange students' questionnaire of three pages (from 0 to 2). Moreover, for the scan to read each page as belonging to the same survey subject, a key code was assigned to each questionnaire, so that identification of questionnaires from each institution will be facilitated.

Main dimensions of the questionnaires

Due to our limitations, this paper is only presenting the dimensions of the first instruments designed during this first research stage: teaching staff and exchange students' questionnaires, which apart from the personal details, consist of the following dimensions presented in the following diagrams:

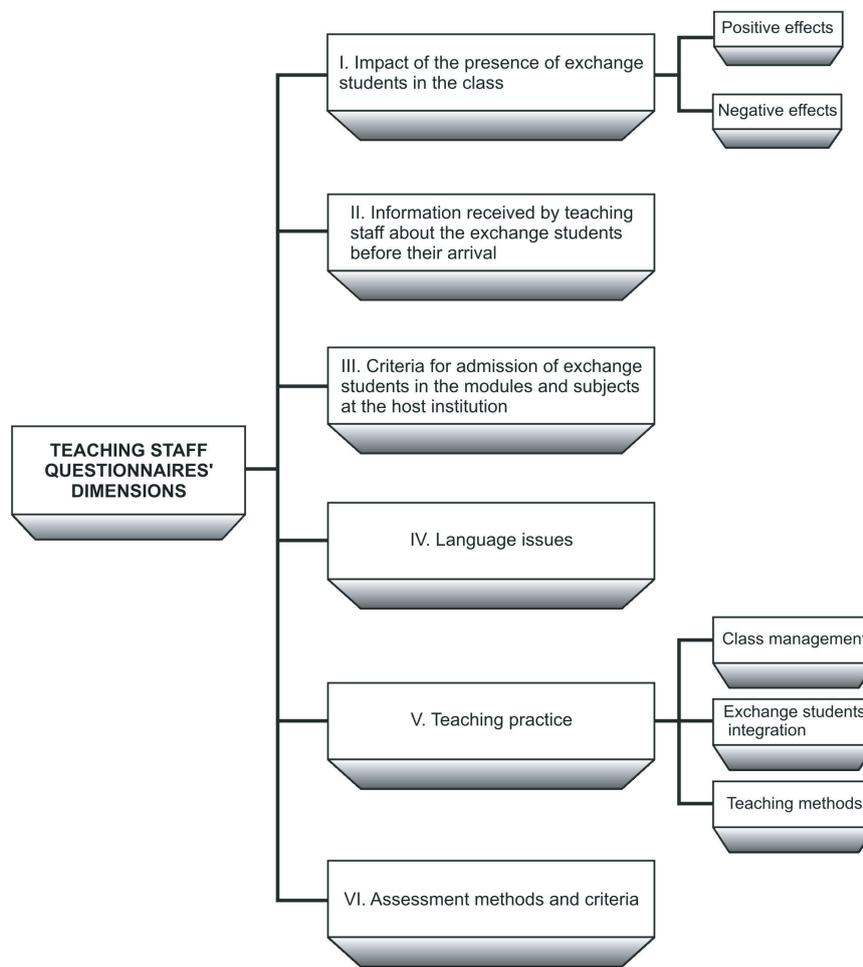


Diagram 1: Dimensions of the Teaching Staff Questionnaire (TeMCU)

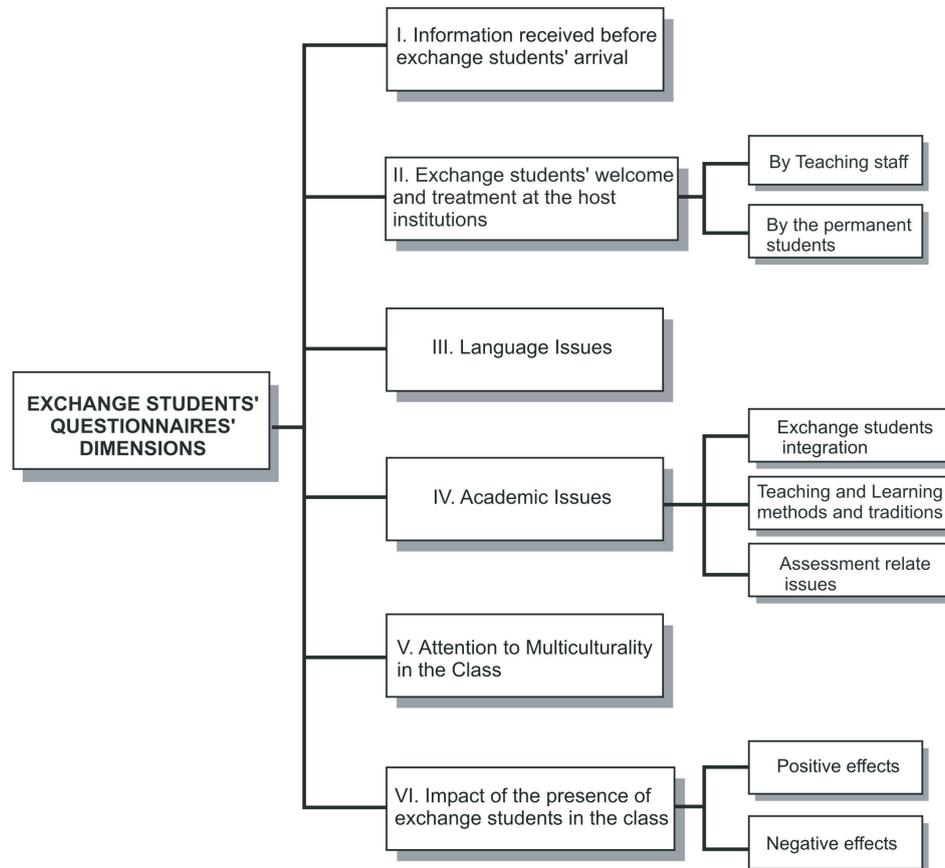


Diagram 2. Dimensions of the Exchange Students' Questionnaire (TeMCU)

Final stages for needs analysis: completion of the Qualitative Stage

The qualitative stage is completed by individual video-recorded interviews carried out with exchange students from the different partner institutions. These interviews are mainly based on topics not addressed explicitly in the survey instrument, as they are considered to be too controversial and in need of in-depth attention. Excerpts from these interviews will be chosen in order to offer examples to participants about certain relevant issues in the training module. In these interviews, partners were encouraged to interview students from minor language EU countries, in order to get representation from as many cultures and countries as possible and help in communicating the existing multicultural nature of the university class. English subtitles will be provided for the final video excerpts to be included in the module.

Moreover, a video-recorded exchange students' discussion group meeting is also scheduled in all partner institutions to address certain issues not included in the survey instrument, consisting as it does of only closed questions.

Conclusion

In this paper we have presented the research methodology followed by the working group for the conclusion of the first stages of the project. TeMCU project involves both quantitative and qualitative research, as a means of identifying actual teacher training needs with respect to multicultural issues in university classrooms all over Europe. This project is currently underway. The team is currently working on the interpretation of the first survey instrument results and editing video materials to be included in the training module. Information can be found in the project webpage: www.ugr.es/local/temcu.html

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Professional Deontology for Future Teachers

The Philosophical Basis of *Professional Deontology*

In the following text, we proceed to the presentation of educational provision in terms of the personal, social and professional development of Pre-Service Teacher students that is provided in the discipline of *Professional Deontology*, which takes place in the 4th year of their training courses at ESEC.

The main idea supporting our educational work is the acceptance as a starting point that education presupposes an axiological orientation, which structures the whole practice tending to implement the project that it contains and assumes. Education is not neutral and the intention to present it as such carries in itself an ideology, pursuing specific objectives to be reached by their dissimulation (Freire, 1974, 2003). Educational agents – teachers, in particular, and regardless of the schooling level in which they are active – are a very special kind of conveyers of values and their personal ethical development ought to be considered as a central concern of teacher training programmes. As such, those agents have a particularly relevant impact on the development of their students and of the community of which they are part, while they carry out their life project development, in which professional training and career plays a very special and significant role in contemporary society. The teaching profession poses particularly relevant ethical and deontological demands concerning the personal and professional development of its agents. Therefore, the person of the teacher should be the direct object of the Training Practice to a considerable extent, both in Pre-Service and in In-Service Training. Authors like Gusdorf (1970), Reboul (1982), Torres (2000) and Veiga (2005) insist on the role of the person of the teacher as an irreplaceable factor in pedagogical relationships and encounters.

The philosophy of education underlying the Portuguese Education Act sees education as a remarkably significant phenomenon in terms of personal development objectives.¹ To educate is much more than developing, acquiring abilities or competencies, socializing and – surely – much more than teaching or merely conveying information (Reboul 1982). Although implying all these aspects, education is still – and

¹ LBSE (1986/1997). In it we are able to see a major concern about the personal and social development of the students. A simple quantitative analysis shows us that 50% of the general objectives of the Portuguese Educational System correspond to this issue, while the specific objectives for Basic School include 36% of references and in Secondary School the number is of 21% (Comissão de Reforma do Sistema Educativo, 1988: 119). The Teacher's personal and social formation is also aimed at art. 30th, nº 1, a). The rest of the legislation embodies this perspective.

above all – a global and integrated project of forming the personality of the students, as well as a project for the development of their communities (Freire 1974).

Having this in mind, the programme proposed for the Curricular Unit of *Professional Deontology*, included in the 4th year of the Pre-Service Teacher Training courses (Pre-School and Basic Education) as an optional discipline, is organised on the basis of the following presuppositions.

Education is seen as an intrinsically social phenomenon, based on a relational structure, in which individuals, groups and communities develop actions of reciprocal influence. This social structure is situated in two dimensions, one ontological (Heidegger 1994) or metaphysical (Levinas 1965, 1974), the other phenomenal. Societies lie on the ontological structure that constitutes human being and in which an inter-subjective causality works (Nédoncelle 1963, 1974, 1977). From these educational actions follow consequences that are able to determine the specificity and the complexity of the nature both of its agents and its communities. That's why it is considered that education constitutes not only an important factor in students' development (and, correlatively, teachers'), but also a determinant feature of the development of the community.

Education is also defined as a phenomenon of modeling, for the interactive dimension of its actions contribute decisively to the configuration of its own essence. Seen as a self-regulated system, education produces results that, by its reintegration in the system, modify it, thus giving birth to dynamics that confer on education a character of permanent openness and renewal. Consequently, education may be addressed as a fundamental way of emphasizing and promoting the politics of change; i.e. innovative and personal, economic, social and cultural – but not in a technocratic manner (Freire 1974).

With the development of new social configurations, dynamics and values, the promotion of reforms and revision of educational systems takes place, in a permanent and continuous process. These changes, generally, have two goals. One is to bring up-to-date the educational propositions of institutions in which the birth of new necessities occurs. But they seek also – and above all – to generate within the very bosom of the educational system forces that are able to raise new values and dynamics to be introduced in society. Thus, social and individual change takes place from the convergence of the definition of new realms of possibilities to be, the desire of individuals to reach them and their social praxis.

A strong professional conscience and its correlative deontology should assume the previous aspects as an essential dimension that Teacher Training should include. Teachers should be seen, in this perspective, as particularly relevant agents of social transformation through the educational relationship in which they exist. Assuming this, a Curricular Unit of *Professional Deontology* (Reis I.; Ramos F., 2004) in the Curriculum of Pre-Service Teacher Training Courses (Pre-School and Basic Education) was included in our educational offer in order to achieve the relevant training quality of our students as far as their personal and professional development is concerned. Also pertinent is the use of teaching and learning methodologies that promote not only an integration of the theoretical contents of the sciences of education, but also a mutual integration of theoretical preparation and pedagogical practice, both of them continuously linked to a process of reflection upon the professional life project of the students.

Entering the teaching profession poses its future actors particularly relevant ethical and deontological challenges concerning their personal and professional development. As such, an essential reflection about the training of teachers is required. Its object should be the conscience of professional identity, as well as its transposition into a Deontological Code (explicit in the official normative documentation regulating the profession in our country) and to a Personal, Professional and Civil Ethics (which is frequently non-thematised) (Braga 2001; Cunha 1996; Estrela 1991; Monteiro 2004; Reis 2001).

To give future teachers categories and means of action in this field is a transversal demand of our Pre-Service Teacher Training Courses. This is also focused by the articulation of the Curricular Unit of *Personal and Social Development* (Reis I.; Ramos F., 2004a), which is administered in the 1st year of these courses. The pursuing of such objectives has played an important role in our educational offer for many years. It has been revealing its pertinence, if we consider the increasingly relevant attention that these objectives deserve from other institutions in other kinds of courses (v. g., Harvard University – Faculty of Arts and Sciences 2004: 22; Buckeridge & Grünwald 2003). In a recent study intending to establish strategic guidelines for the development of ESEC, we have also met the necessity felt by our potential public for ethical formation (ESEC 2005).

The positive effects of our use of the Non-Formal Education approach have been shown in our previous research and studies. As a matter of fact, the results of the trainees' evaluation of the training administered in this area allows us to conclude that it is pertinent and necessary. One of these pedagogical experiences is shown.

Programme of the Curricular Unit/Development of the Course

During one semester, with 45 hours of training in the classroom and an estimated further 45 hours of independent work by the students, the Curricular Unit of *Professional Deontology* is aimed at achieving the following objectives.

The first is to allow the students the opportunity to reflect on their personal experience as students, both in Basic and Secondary School and in Higher Education. Thus, the discipline is supposed to give birth to a process of personal and professional growth. The ideal conditions to achieve this would be to turn the discipline into a one school-year module, but the present legal definition does not allow it.

The students are also supposed to evaluate their training as Pre-Service Teacher Trainees. The situation of the discipline in their last year of training gives them an opportunity to look back on their previous learning experience and reflect upon their expectations and projects, doubts and certainties, abilities and motivations, hopes and fears. By creating such conditions, students are also given the space and time for sharing experiences. This way, the frequent personal and professional problems that often arise at the beginning of their career (Simões C.M.; Santos M.L.; Gonçalves J.A.; Simões H.R., 1997: 255; Braga 2001: 57–73; Serrazina & Oliveira 2001) may be avoided or at least diminished in their effects. Particularly important to this action is the fact that our training courses set the students in professional contexts from

the beginning of their enrollment: by doing this, they have a deeper awareness and experience of what the profession and its concrete conditions are.

Another objective is to recognise the importance that personal and social development has in the Portuguese Education Act, both in relation to teachers as well as to the students, as we have referred to previously. To make this explicit, and to become aware of their projects as a Person, a Citizen and a Professional, is another important objective we try to achieve with the discipline.

The core value of the concepts of *Citizenship*, *Democracy*, *Duties*, *Rights* and *Human Rights* as an ethical founding platform for contemporary educational praxis is also intended.

Finally, the development of competences in interpersonal relationships in different contexts is also an objective to be reached.

The Programme deals with the following items and subjects:

a) Basic notions of *Deontology*, *Ethics*, *Moral*, *Profession*, *Deontological Code*; the specificity of a Deontology of the Teaching Profession; School as a significant space and time for the construction of an ethical and social project;

b) Main documents that regulate the duties and rights of teachers in the Portuguese education system or that allow their definition and explication;

c) Being a Teacher and the Nature and Meaning of Education and Educating – for a critical and reflective praxis; Teaching Profession and Citizenship – Duties and Rights of the Teacher/Educator-Citizen; Professional Ethics and/or an Ethical Profession.

The methodology presupposes the establishment of links with the previous training of the students, in other curricular units of the course as well as in pedagogical practice. Therefore, the classes are run both by the professor responsible and the students, with the use of exposition and dialogue (vertical and horizontal), the simulation of group dynamic situations, group work/cooperative and meaningful learning, development of projects, production of research papers and a reflective portfolio about their personal and professional development.

The use of this methodology is based on a training strategy that *combines intellectual and practical* strategies (Estrela, 1991). The students deal with theoretical notions and the contents of Ethics, Human Rights and Philosophy of Education, and apply them reflectively to the documents/texts/works they produce. This task is always guided by the deontological focusing of the issues and subjects that are dealt with. Discussions and reflection are also driven by philosophical texts in which the essence of being a teacher is the major theme.

This strategy is mainly justified by the intention of providing the students with a critical view of educational and pedagogical issues.

No less important, the absence of a specific professional order and a consequent Deontological Code in the Portuguese Education and Labour System advises choosing an approach to the legal regulatory texts which is as critical as possible. With this we aim at developing as much as possible the students' autonomous thinking, allowing them the opportunity to get from those texts their spirit and to be able to transfer and apply their content to new situations and circumstances. More than acquiring a "recitative" knowledge of these legal documents, they are expected to produce a critical, well-based and justified reasoning susceptible of guiding their practical choices and courses of action and even to create new solutions and ways of solving practical deontological issues.

Besides participation in the classes, the students are expected to produce two different works.

One, in groups or individually according to their own choice, is oriented to be presented in a session. It is supposed to produce a group dynamic whose issues are dealt with in whatever manner the students think will be able to produce the most convenient activity so their fellow students can attain the programme's objectives. Each work produced and performed by the students was driven by their own interest in the subject, that is to say that they choose to investigate and work with what was or has become an issue for reflection for them. As such, they have to make explicit their own questions regarding them and the profession, to investigate its aspects and bring them into the classroom. The presentation strategies and activities are also chosen by them and have to be dynamic, learner-centered and use meaningful and cooperative learning. The Non-Formal Education approach and its methodologies of promoting values and personal development are given a relevant place in this curricular unit.

The other work, mandatorily an individual one, consists of a reflective portfolio, in which their student experience and teacher training, seen from the deontological perspective, is the major concern. Its structure is as follows:

- Chapter 1: Characterisation of my whole professionalising and academic training.
- Chapter 2: Expectations towards my training – What has been achieved or not, difficulties found,
- Chapter 3: My personal and social development in Higher Education – Values I brought, I've achieved, I've set apart,
- Chapter 4: My experience as a Basic and Secondary Student – Experiences, values,
- Chapter 5: My projects as a Person, a Citizen, a Professional.
- Chapter 6: Works produced in the Curricular Unit of *Professional Deontology*.
- Chapter 7: My path in *Professional Deontology*.

The Unit was launched in the previous semester of this school year. 23 students enrolled the unit and finished it with proficiency; 22 were female and 1 male.

Evaluation of the training by the students

To evaluate the results of the course in terms of the personal and professional development perceived/acknowledged by the students, we chose to collect material from the 7th chapter of the portfolio – “My path in *Professional Deontology*” –, which furnished the *corpus* that was submitted to Content Analysis. Nevertheless, some pertinent data for this purpose may be collected from other parts of the portfolio, since they have a direct correlation to that chapter. The collected data were evaluated from a qualitative perspective (Vala 2003).

The evaluation objectives and the respective categories of analysis were defined *a priori*, and then applied to the *corpus*. The categories respect the demands of fidelity, exhaustivity and exclusivity in order to be internally valid (*id.*, *ib.*).

The objectives of the analysis were the following:

- a) To detach the students' perception/acknowledgement of their personal change;
- b) To detach the revelation of meaning (personally/professionally) perceived/acknowledged by the students.

They are correlated with these two categories of analysis:

a) Category 1 – *Personal change*. Within the range of this category are included data concerning aspects correspondent to a perception/knowledge of some change of the students' person due to the work done during the semester of *Professional Deontology*.

b) Category 2 – *Meaning revelation* (personal/professional). Under this category we gather those elements susceptible to the revelation that the sense of what it is to be and work as a teacher – considered simultaneously as the Person and the Professional – were enlightened by the learning process that took place in *Professional Deontology*.

Once we have analysed the material gathered in these two categories of analysis, we may conclude the following.²

In a brief overview of the whole of the material produced within the context of the portfolios, we are entitled to say that the training reached very satisfactory results according to the self-perception of the trainees. They were faced with an experience that surprised them positively. A proposal of turning the discipline into one that lasts for a whole school-year was made by many of them, recognising the importance of time in the growing process of the person and the future professional. This is an experience that we have had for many years in the frame of the Curricular Unit of *Personal and Social Development*, also administered in our institution, and which has a whole school-year for its functioning. For the moment, this change is not possible for *Professional Deontology*, but it will be taken into consideration in future curricular changes.

More specifically, looking at and taking into account the material gathered within the range of the Content Analysis' categories, some conclusions may be drawn as follows.

Given the nature of the discipline's programme, we expected to have more registration units under Category 2 than Category 1. This was what happened. Category 1 registers 21 entries, while Category 2 shows 38 entries. This may be interpreted as meaning that the training was perceived as having some effect on personal change, but the most considerable effects were felt in the understanding of the meaning of the profession the students are about to enter, after their long training (between 3 and 3 and a half years).

If we pass on to the consideration of the specific categories' entries, the following conclusions are possible.

The first category's registration units show us some relevant issues such as the recognition of a contribution of *Personal Deontology* to:

- Self-knowledge, both in terms of process³ and products, like knowledge⁴ and competencies⁵;

² The material supplied by the portfolio is immensely rich and it would provide many other possibilities for study and training. We will come back to it on other occasions.

³ Entries 1, 3, 6, 8, 9, 11, 12, 13, 15, 17.

⁴ Entries 7, 19, 20.

⁵ Entries 2, 4, 19, 21.

- A conversion in the way things are seen⁶;
 - The development of the critical spirit⁷.
- As to the second category, we may detach the recognition of:
- The importance of the development of the Teachers' person to the profession⁸;
 - The relevance of the discipline for the profession⁹;
 - The structuring of their conceptions of the profession¹⁰;
 - The role of the teacher in the students' personal development¹¹.

(Not) To conclude

It seems to us that this experiment allows the extraction/consolidation of a fundamental idea which is able to give education a critical practical sense. Through the development of the programme of *Professional Deontology* and its results, the need to stress the importance of the person of the teachers and its personal development has become clearer to us. Once this development is a never-ending process, it has to be combined with their professional development, which may be attained by the introduction of a critical deontology. Within this framework, Non-Formal Education processes are to be implemented and promoted.

This is also a way of giving education, through its professionals, the ability to develop a critical reflective practice, enabling it to produce the necessary and required changing of reality, without which it loses its fundamental sense. As a matter of fact, if education was to be seen just as a means of adapting people to the existing reality, this would only allow us to be the prey of reductive, dominant neo-liberal and technocratic ideology. We would be totally unable to become conscious of its dominance and unable to say the word capable of overcoming it and liberating people (Freire, 1974). For this process, an inter-subjective founding of education provides the necessary philosophical basis (*id.*).

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⁶ Entries 5, 14, 16, 18.

⁷ Entries 2, 10.

⁸ Entries 1, 6, 7, 10, 11, 12, 13, 15, 16, 19, 21, 22, 27, 28, 30, 31.

⁹ Entries 3, 4, 8, 9, 12, 18, 23, 26, 32, 34, 35, 38.

¹⁰ Entries 5, 14, 20, 24, 25, 33.

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Tendencies in Mentoring in England: The Benefits of Discursive and Collaborative Practice for Student Teachers

Introduction

Much of the driving force for the United Kingdom government's changes to teacher education in the 1980s came from the development of a National Curriculum for schools and from writers associated with the New Right, such as O'Hear (1988), the Hillgate Group (1989) and Lawlor (1990) who argued that student teachers should be sent into the classroom to learn to teach, to 'develop the characteristics of the good teacher' and use 'common sense and acquire confidence, rather than be taught generalised theories irrelevant to good teaching' (Lawlor, 1990: 21). Subsequently, statutory education Circulars 9/92 (DfE, 1992) and 4/98 (DFEE, 1998) established and consolidated an era of competence-based (latterly Standards-based) teacher *training* that required substantial elements of courses to be based in school. Therefore, as well as the university tutor developing new ways of working, the class teacher also needed to develop the knowledge and skills required for the new role as 'partner'. Subsequently, changes in nomenclature in university course documentation such as a move from: 'teaching practice' to 'school experience'; 'teaching practice school' to 'partnership school'; 'class teacher' to 'mentor', indicate the change in philosophy and pedagogy of Initial Teacher Education (ITE) courses in England.

Since 1992, the discourse of government policy on teacher education and training has been conducted in terms of 'competences', 'standards', 'skills' and 'outcomes'. Such terms have become central to the language of teacher education; so, too, has terminology of widely differing meaning, such as 'apprenticeship' and 'reflective practice'. On the one hand, teacher development is characterised as the acquisition of skills and content, while on the other hand teacher educators argue that teacher development is concerned with developing the processes of critical thinking as a reflective practitioner. Structured, guided reflection on a student teacher's own practice begins to develop initial competence in the context of a particular school-experience classroom.

McIntyre's (1993) research identifies three levels of reflection: the *technical* level – concerned with the attainment of goals; the *practical* level – concerned with the 'assumptions, predispositions, values and consequences with which actions are linked';

and the *critical* level, where concern ranges to wider social, political and ethical issues that include 'the institutional and societal forces which may constrain the individual's freedom of action or limit the efficacy of his or her actions' (McIntyre, 1993: 44).

Tendencies in Mentoring

The years 1992–1997 saw a rapid expansion of literature mapping the developing field of mentoring, for example Wilkin (1992), Hagger, Burn & McIntyre (1993), Watkins & Whalley (1993), Glover & Mardle (1995), Kerry & Shelton Mayes (1995), Furlong & Maynard (1995), Stephens (1996), Tomlinson (1996), and Arthur, Davison & Moss (1997). Most texts focused upon management issues and *generic* practices in mentoring. The work of Arthur, Davison & Moss (1997) coined the term *subject mentor* and was the first to give an account of the underlying processes of subject mentoring. Their study established what has become the dominant paradigm of mentoring – subject mentoring – and highlighted two distinct approaches to mentoring – *pragmatic* and *discursive* – that reflect the contrasting approaches to initial teacher preparation – *training* and *education*. (Table 1 Pragmatic and Discursive Tendencies in Subject Mentoring below indicates how these tendencies are represented in a particular set of subject mentoring attitudes and practices.)

Pragmatic Mentoring

Observation of classroom practice by and of student teachers linked to feedback and debriefing are central to school-based teacher development. While all mentors are positive about the effectiveness of lesson observation in developing student teachers, it is clear that practice and expectations are very different. Some subject mentors focused on the *pragmatic* by drawing attention most frequently to matters such as classroom management issues with immediate technical application. They indicated that they saw their teaching role as transmitting knowledge about what practice works and what does not. They described their assessment function as monitoring the development of student teachers' skills or competences (Arthur, Davison & Moss 1997: 95).

There are several reasons why subject mentors may tend to adopt pragmatic subject mentoring practices. Today many mentors will have 'trained' as teachers before school-based ITE was introduced. Teachers whose implicit or explicit learning theory is that 'you learn only by doing' may believe that the most important function of school experience is to face and overcome problems: therefore, enabling student teachers to work independently is an important priority. Some teachers also believe that time for reflective practice and reading about 'theory' are not realistically available in school. Additionally, some student teachers like pragmatic subject mentoring. They relish the opportunity it gives them to 'stand on their own feet' and take on the challenges of being a *real* teacher. The sense of difficulty they feel in attempting to solve problems on their own, demonstrates to them that they are working like 'real' teachers.

Such approaches reflect McIntyre's *technical* level of reflection. However, the limitations of pragmatic subject mentoring are apparent if we consider the mentors' impact on student teachers. Their student teachers are likely to see 'theory' as a single undifferentiated block of ideas that has little classroom relevance, and written assignments that call for the consideration of theoretical perspectives as 'university work'. They are also likely to experience dialogue with subject mentors which so privileges classroom management that once a degree of classroom control has been achieved, they feel competent. It may also be the case that while student teachers recognise the importance of teaching the National Curriculum, they are unable to make an effective critical interpretation of it. They are likely to perceive the support they receive as encouraging them to *copy* practice, to teach as they are told or what they have been shown: in other words, to 'deliver' a curriculum.

Beyond Pragmatism

The idea that teaching can be narrowly based on producing quantifiable learning outcomes, which constitute the major criterion of teaching competence, is questionable. The teacher's contribution is not simply limited to the systematic transmission of knowledge – despite the National Curriculum's central metaphor of *delivery*. The demonstration of professional values, knowledge and skill goes beyond the demonstration of classroom competence in achieving pre-specified Standards (for a full discussion of these issues see Arthur, Davison and Lewis, 2005). By concentrating on practical teaching skills and methods it is possible to produce a trained teacher who is able to manage a class and instruct pupils competently. However, educated teachers are aware of the larger social setting, have the flexibility to anticipate change, to adapt their methods to new demands, and, indeed, sometimes to challenge the requirements placed upon them. To produce such teachers, there is a need to strike a balance between a focus on the development of competence to achieve Standards and raising student teachers' awareness about the meaning of their role. This fact was recognised in the Circular *Qualifying to Teach* (TTA 2002, revised 2003), which introduced a new section of *Professional Values and Practice* in the Standards required for the award of Qualified Teacher Status (QTS) – encouraging student teachers to see their teaching in the perspective of larger theories of human development and social policy.

Nevertheless, during the past decade, it has been common to find in official documents and texts on teacher development the terms *teacher education* and *teacher training* used as if they are interchangeable. Furthermore, in 2004, Politeia, a Right-wing think tank, comprising some of the academics who influenced the Conservative governments' education policy of the 1980s and 1990s, published *Teaching the Teachers* (Lawlor, 2004), calling again for their model of teacher training proposed fifteen years previously. However, *education* and *training* are two very different processes. Plants and trees are *trained* to grow in certain predetermined ways. Performing animals and police dogs are *trained* to respond in specific ways to given stimuli. While it cannot be denied that beginning teachers may need training to develop some specific skills (use

of the voice, for example), student teachers should be *educated*. Working in school, they need to exercise judgment related to teaching and learning that is a synthesis of their experience, skills, knowledge, understandings, values and beliefs anchored in the field of educational discourses.

The Field of Educational Discourses

Accounts of the knowledge student teachers need to access in order to teach effectively have typically described a number of 'knowledge domains' (Furlong and Maynard, 1995) within which formal debates and more informal conversations take place. These debates must be acknowledged if the most appropriate ways for student teachers to interact with them are to be determined. The term 'discourse' has been used to denote any 'coherent body of statements that produces a self-confirming account of reality by defining an object of attention and generating concepts with which to analyse it. . . . the term denotes language in actual use within its social and ideological context and in institutionalised representations of the world' (Baldick, 1990: 59). The 'object of attention' of student teachers is teaching, but they have access to numerous 'bodies of statements' that contribute 'concepts with which to analyse it', each of which also uses language in a way that is linked to a particular kind of 'institutionalised representation of the world'. There is overlap of many such 'bodies of statements' that are relevant to the practice of teaching, but if mentors and student teachers are to be able to share a useful map of the field of discourses within which their professional thinking takes place, it is necessary to try to identify each 'social and ideological context' that generates a 'body of statements' about teaching as a separate discourse. (See *The Theory-Practice Continuum in a Set of Educational Discourses*, shown as Table 2 below.) It is important to acknowledge that while student teachers interact with all these discourses, they do not do so consciously at all the levels of theory and practice indicated. The educational discourses listed may be defined as follows:

The discourse of the theory of education is a conversation among philosophy, sociology, psychology and history, which compete to provide insights into the meanings and effectiveness of education.

The discourse of pedagogy explores what is meaningful and effective in education, as this can be understood from the development and analysis of educational aims, theories of teaching and learning, and the examination of individual needs in a wide range of academic and pastoral contexts.

The discourse of the academic subject explores the character, content, processes and purposes of that subject, what its meanings are, and how they are constructed.

The discourse of subject pedagogy explores how the meanings of the subject can be made accessible and taught effectively.

The discourse of the subject curriculum explores how the meanings of the subject curriculum are determined and how its effectiveness is assessed, at national, local and departmental levels, through agencies such as legislation, policy, operating procedures (including schemes of work), assessment mechanisms (including school inspections and national tests) and resources.

The discourse of the school curriculum explores how the ethos, policies, management and operational structures of the school and the subject department contribute to the meanings and effectiveness of the education of pupils in the subject.

The discourse of the classroom explores how the words and actions of the teacher and those of pupils, seen here as manifestations of their culture, knowledge, learning needs and interests, interact.

The discourse of teacher development explores the methods by which teachers become more effective. It is a discourse in which the ethos, practices and structures of an ITE course are defined. It is important to note that in the context of ITE, the discourse of teacher development is a metadiscourse: it draws attention to the concepts and practices that determine the nature of the interactions student teachers have with the other educational discourses.

The Theory-Practice Continuum

Educational discourses are individually highly complex: for example, they are conducted in terms that range from the relatively theoretical to the relatively practical; they have ideological, social and personal dimensions; they are locations for controversy about key matters such as the nature and development of knowledge and understanding. In *Table 2*, this complexity is indicated by examples of matters that access each discourse at different points on a theory-practice continuum.

The four sites owe a debt to Furlong, Hirst, Pocklington & Miles's (1988) description of 'levels of professional training' or 'domains of professional knowledge' (Furlong & Maynard, 1995: 52–3). The four sites also refer to the work of Zeichner and Liston (1985) that identified four types of discourse. The term 'site' indicates that each access point to the field of educational discourses is of neutral status. Points of entry are determined by where an academic, a teacher or student teacher is metaphorically 'coming from' and points of departure are determined by numerous factors, including his or her intended destination, and the time, resources and people available for thinking and discussion. Some encounters with the field of educational discourses will take place at one site in one educational discourse; others will consist of journeys across many discourses and between many sites. We should recognise that it is the travel that is enriching; not that any particular discourse or site is somehow better than another.

At a *Practical Site* practical experience is questioned to reach practical conclusions, through e.g. the planning of a lesson based on the factual description of what took place in an observed or taught lesson. At a *Practical (-Theoretical) Site* questions that interrogate practice are used to begin to generate embryonic principles, through e.g. the comparison of different examples of practice, seeking practically applicable generalisations. At a *Theoretical (-Practical) Site* discussion contributes to the development of educational principles, or questions their application in practice, through, say, the development of a set of principles that could be used to drive planning. At a *Theoretical Site*, principles, theories and concepts are questioned with reference to other principles, theories and concepts, through e.g. analysing whether the explanation of particular educational events in one theory is adequate.

Dart and Drake (1996:63) observe that: 'a student must possess certain beliefs about the subject, beliefs which are acted out in the way the student teaches, manages the classroom and establishes relationships with pupils.' A student teacher's position in relation to the discourse of the academic subject taught is intimately linked to his or her position in relation to more general pedagogical discourses. Student teachers perceive that discourses vary in the extent to which they are significant to particular teaching decisions and actions. It is important to stress that student teachers and mentors participate in a series of written and oral interactions together and with other people, including government, researchers, policy makers, mentors, colleagues, parents and pupils through which parts of educational discourses are monitored, explored and developed. These discussions are the essence of discursive mentoring.

Discursive Mentoring

At the opposite end of the spectrum from *pragmatic* mentoring are subject mentors whose practice focuses on the *discursive*, who make reference to a wide range of educational considerations. They see their teaching role as one of guiding *collaborative enquiry* into educational theory and practice; and who see their assessment function as developing critical thinkers or reflective practitioners. Student teachers who are supported by discursive subject mentoring practices are likely to perceive their subject mentors as explorers of subject teaching issues, and to value intellectual and practical activities that enable them to make connections between the discourse of their academic subject, subject teaching pedagogy, the subject curriculum and the classroom, and to believe that their PGCE course has given them access to many different theories and viewpoints. They are likely to perceive their experience of the course as successfully integrated. They are likely to see tutors and subject mentors as having overlapping, rather than discrete, expertise, and will consult either, both about classroom teaching and written assignments with a theoretical bias. They are likely to see any teaching strategy they adopt as one of a range available to them. They are likely to question anything that is presented to them as certainty, to want to consult others and to investigate matters themselves. They are likely to develop the perspective of critical interpreters of the school curriculum: to operate at McIntyre's *critical* level of reflection.

Discursive subject mentoring recognises the functions of dialogue in learning. In particular, discursive subject mentoring recognises and makes extended reference to important subject specific discourses. Discursive subject mentoring provides a means of encouraging student teachers to seek access to the more theoretical aspects of educational discourses, in a manner that is appropriate to school-based ITE. These features make discursive subject mentoring a significantly political activity. It encourages teachers to make connections between the postmodern definitions of meaning in the academic disciplines they have studied as undergraduates, which will have taken account of social, cultural and historical contexts, and meaning in the subject curriculum as it is defined in the National Curriculum. It equips them to question the appropriateness and effectiveness of particular pedagogical strategies, and to take an active role in the evolution of subject teaching.

Discursive subject mentoring takes time and must be conducted by reflective subject specialists who are capable of guiding student teachers in their exploration of educational discourses. Planning discussions and lesson debriefings that access a number of educational discourses are inevitably time consuming. Schools with developmental cultures in which departmental policy and practice are developed through dialogue will provide events that stimulate the kinds of thinking that discursive subject mentoring can build upon. They may also be able to provide subject mentoring departments whose members can share the role because of their joint participation in the dialogue that develops the work of individual teachers and the school. Since they value the contribution of dialogue to the development of their own practices, they are also likely to respond to the need which subject mentors have for time for dialogue.

Conclusion

It should be recognised that pragmatic and discursive tendencies in mentoring are not necessarily polarised or fixed, but represent ends of a continuum along which mentoring practice might be located. Nor should a subject mentor's practice be regarded as necessarily fixed. Many subject mentors suggest that they operate a more pragmatic model of subject mentoring at the beginning of their work with student teachers and when supporting those whose development is slow, moving towards a more discursive model with time, and as student teachers progressed. It is important, however, for mentors to be aware of pragmatic and discursive practice and engage with their students in the dialogue of educational discourses in order to *educate* rather than simply *train* them.

Table 1: Pragmatic and Discursive Tendencies in Subject Mentoring

Mentoring Feature	Mentors working pragmatically tend to	Mentors working discursively tend to
Subject Mentor Training and Meetings	believe that initial mentor training on procedures was adequate; prefer meeting agendas limited to course procedures;	perceive opportunities to share mentor experiences as training; want to use meetings to explore subject teaching issues;
Communication	welcome partnership communications in the form of brief reminders about procedures;	value partnership communications which address current subject teaching issues, and seek to contribute to them;
Liaison with Subject Tutors	consider the subject tutor role in school to be to check student teacher assessment;	expect subject tutors to be involved in collaborative activities in school; want to contribute to HE teaching sessions;
Student Teacher Support	present student teachers with documents such as schemes of work and then expect them to take initiative in seeking further advice;	initiate discussion of the principles informing department documentation made available to student teachers;
Lesson Observation and Debriefing	prefer competence based pro formas for lesson observation; initiate the discussion in lesson debriefings;	prefer open ended and timeline approaches to lesson observation; encourage student teachers to initiate discussion in debriefings;
Prioritisation of Educational Discourses	place emphasis on classroom management skills in discussions with student teachers;	place emphasis on pupil learning and subject teaching issues in discussions with student teachers;
Use of Own Teaching in Mentoring	use their own lessons to model practice for student teachers to observe and emulate;	use their own lessons as a basis for dialogue about subject teaching which student teachers are expected to lead;
Collaborative Teaching	move student teachers quickly towards independent 'solo' teaching;	make use of collaborative teaching throughout student teachers' school experience for the benefit of pupils and teachers;
Contribution to Student Teachers' Non-teaching Work	believe student teachers' written assignments are 'college work' to be undertaken independently;	want to discuss the theoretical issues student teachers address in written assignments, and help find practical focuses;
Weak Student Teachers	expect the HE institution to take quick, firm action on 'weak students', such as transferring them to another school;	negotiate and monitor informal targets with 'weak student teachers' before instigating formal procedures;
Subject Knowledge	interpret subject knowledge mainly as the knowledge needed to teach the National Curriculum and/or school schemes of work.	regard subject knowledge as a multi-faceted discourse, which student teachers can explore with department members.

Table 2: The Theory-Practice Continuum in a Set Of Related Educational Discourses

Discourse	Theoretical Site (example)	Theoretical Site (example)	Practical Site (example)
Discourse of Aspects of the Theory of Education (e.g. history)	Critical analysis of the historical influence of the educational theories of Rousseau	Analysis of the means of applying Rousseau's theories to practice	Analysis of a particular teaching situation in which Rousseau's theories were applied
Discourse of Pedagogy	Comparison of Vygotskian 'scaffolding' with other theories of learning	Analysis of the effectiveness of 'scaffolding' as a means of determining practice	Devising of a teaching situation making use of the idea of 'scaffolding'
Discourse of the Academic Subject (e.g. English)	Comparison of reader response theory with other theories of the relationship between texts and readers	Devising a set of principles for using reader response theory in teaching situations	Evaluation of a lesson in which pupils were taught to apply reader response theory to a text
Discourse of Subject Pedagogy (e.g. English)	Critical analysis of the concept of collaborative writing in relation to cognitive theories	Critical analysis of the effectiveness of collaborative writing in terms of its impact on learning	Dialogue with pupils about what they have learnt in a lesson incorporating collaborative writing
Discourse of the Subject Curriculum (e.g. English)	Analysis of ideological influences on definitions of Standard English in different NC documents	Devising a set of principles to guide practice implementing NC requirements in relation to Standard English	Evaluation of an attempt to assess pupils' use of Standard English in the outcomes of a scheme of work
Discourse of the School Curriculum	Consideration of positive discipline in relation to findings of educational psychology	Analysis of the interpretation of positive discipline in school policy documents	Discussion of ways in which positive discipline practices were reinforced in a mentor's lesson
Discourse of the Classroom	Analysis of the history of the development of equal opportunities awareness in education and society	Devising a set of principles for writing schemes of work which take equal opportunities issues into account	Analysis of response when a pupil prompted a classroom decision about an equal opportunities issue
Discourse of Teacher Education	Critical analysis of the concept of 'reflection' in comparison with that of 'Standards'	Analysis of the contribution of reflection to one's own development as a teacher	Use of reflection strategies in evaluating a scheme of work

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From Bad to Brilliant: an Analysis of the Characteristics of Effective Mentoring

In this abridged version of an article currently in press, Fiona Rodger uses the issues to illustrate two mentoring approaches and their subsequent effect on one Business and Economics beginning teacher.

Introduction

'... at the end of the day, it's the quality of teachers in the classroom that matters.'
MacGilchrist (2003)

These words spoken by the Deputy Director, Institute of Education (IOE), University of London, surely reflect the thoughts of those who work in Initial Teacher Education (ITE), and who have a vested interest in the future of education.

Business and Economics Education Beginning Teachers (BTs) in London are particularly interesting. They vary in age (generally from 24–55), background, experience and cultures. Many decide to come into teaching from a long career in industry and have financial security. Some are simply bored with the culture of the City and would like a more fulfilling and rewarding career. A significant number have travelled and worked overseas. Others find working with young people in a voluntary capacity gives them the desire to work in a more formal setting. Despite the fact that many have been in high-level managerial positions and are *au fait* in dealing with people and difficult situations, they are often concerned about the quality of mentoring they will receive.

The IOE offers courses for mentors allowing them to become familiar with the Institute procedures and mentoring practices which create opportunities for BTs to achieve the required standards (Teacher Training Agency 2003). IOE tutors liaise closely with schools assessing the quality of mentoring. However, approaches do vary. My decision to examine conceptions of the mentoring role, and to establish how crucial the quality of mentoring is for BTs to become successful, arose on discovering one particular BT was not developing. I needed to know why.

Case Study

Amit*, at 27, was one of the youngest members of the PGCE course in 2003–2004. An Asian graduate, British born, he had worked as a sales assistant, an accounts clerk and, immediately prior to starting the PGCE, in the family grocery business. He had volunteered as a classroom assistant and youth worker, gaining experience with young people. His many interests meant he appeared to be a well-rounded individual; however, he was quiet and lacking in confidence and I surmised he would need good support to become an effective teacher.

Amit completed his first placement in a school close to his home. Too close it transpired. The family shop was in the locality and a considerable number of pupils knew Amit – they did not take him seriously as a teacher and discipline became difficult.

In discussion with Amit, it emerged he was not being well supported. If the BT and the mentor are following the IOE procedures, BTs will observe different lessons and teachers for an initial period before gradually taking part in lessons. Also, BTs must be observed in every lesson and given oral and written feedback. It is a requirement that trainees and mentors will meet regularly to discuss progress. This was not happening in Amit's case.

BTs are prepared by the IOE for their placements. They are made fully aware of IOE procedures and documentation. I arranged an early visit to observe Amit, meet the subject mentor and discuss his progress. On arrival Amit did not have a clear lesson plan. He had no objectives for the lesson, no resources and no clear idea of what the pupils were to do during the lesson. There was no class information, therefore no differentiated materials. There were no records of observations and no targets had been set. Neither Amit nor the mentor had engaged with the procedures. I had nothing with which to gauge progress.

There appeared to be confusion about rooms and the lesson was late in starting. Amit found another room and the lesson began without a clear plan or focus. I had not yet met the mentor. Amit turned his back to the class and wrote on the board. What was the class doing during this time? His approach was didactic for the entire lesson. No questions were asked. The pupils had no worksheets, no textbooks. Amit talked to the board, excluding the pupils, ignoring the antics going on behind. The pupils became restless and behaviour deteriorated. The subject mentor arrived late and assured me observations had taken place – but they had not been filed.

At the debriefing, clear targets were set for Amit and the mentor and a follow up visit was arranged. Assistance with beginnings and endings of lessons, lesson planning, preparing and using resources, classroom management, body language, voice projection, board work, question and answer technique were all required. Amit needed to be observed in every lesson and given appropriate feedback. I telephoned regularly and was assured everything was now in place and progress was being made.

It became clear there were staff shortages within the department. The mentor had other responsibilities and was rarely in the department. A second visit revealed little improvement. As Watkins has shown us 'it's a hard job at the best of times to help

* Names have been changed for reasons of confidentiality.

another person learn, and the contextual pressures on teachers do not make it any easier' (Watkins 2000: 67). Clearly mentoring becomes difficult when teachers have so many other pressures.

It also transpired Amit's expectations had been unrealistic. He assumed schemes of work, lesson plans and resources would be handed to him. While these should be available for BTs to learn from, the IOE recommends BTs learn to plan part of a scheme of work, create resources and set up lesson plans as part of the learning process. Amit lacked initiative and confidence and was unaware of the enormity of the teaching process and the importance of the wider school community. In a related study Nias (as cited in Maynard and Furlong 1993: 77) identified this when she told us '... the trainee also finds that teaching makes demands upon the 'self'. Teaching is a personal activity and as such exposes and makes calls upon the personality; it is an occupation that is felt as well as experienced'. Strong interpersonal relations ensure a supportive and trusting relationship is established thus aiding the mentoring process and the overall development of the BT. In this case relations had clearly broken down.

A Different Experience

The situation in a school nearby was very different. I was met by the mentor and escorted to the staffroom. The BT's file contained full and informative feedback for all lessons and records of weekly meetings. The plan for the lesson to be observed was available. I was taken to the classroom where the BT was waiting. Lesson objectives were written on the board, the plan, resources and materials were organised and laid out ready for the lesson. The BT appeared calm and confident and ready for the lesson to proceed. The level of support here was outstanding. The lesson was excellent.

This was a mature BT coming from a career in Marketing. She was keen to learn, had shown considerable initiative in the placement and the quality of the mentoring was enabling her to reach her full potential. Could Amit reach his full potential here? It was agreed he should complete his second placement in this department.

As part of my research I interviewed the subject mentor during Amit's second placement. During the course of this interview, it became clear she felt 'the BT had never been in a school as anything other than a pupil' and had gained little from his first teaching practice.

When I visited, Amit's file was very clear and comprehensive, containing feedback for every lesson. Clear targets had been set and regular meetings had taken place. I was given a copy of the lesson plan and resources. Amit was in the room waiting for the class to arrive. He looked completely different. He was smartly dressed and appeared confident, the lesson objectives were written on the board and his materials and resources were organised and ready. The class arrived and it was clear from their demeanour that Amit had built up a good rapport with them. He faced them all during the lesson, asked appropriate questions at the start to recap on previous knowledge, gave good explanations, had a strong mix during the lesson of didactic teaching, student activities, student discussion and high quality lesson evaluation. The pace and level were appropriate to all pupils. Amit's body language was positive and confident and his voice projection was much better. All targets had been met – it was a transformation and good to see someone with potential being given the opportunity to succeed.

He was later asked to reflect on the lesson and what had contributed to its success. He noted that the pupils had been engaged throughout which avoided classroom management issues. He was able to find out how much the pupils had learned and how much they enjoyed the lesson. He learned the benefits of being well prepared. Amit had become involved in the pastoral work of the school and in the English as an Additional Language (EAL) department, which allowed him to be involved in the wider school community.

Reflections

What can be learned from this case study? I interviewed Amit to establish his view on what had enabled his success. First, the mentor realised he needed lots of support. Clear targets were set for him and followed through. All lessons were observed, feedback was full and constructive with comments ranging from the sharing of subject knowledge to voice projection and body language. He felt the mentor had a strong desire to work with him and help him succeed. Second, plenty of resources were made available to him and the staff in the department worked very much as a team. He was included in all departmental meetings and became involved in the wider school community.

Similar themes emerged from the mentor. Realising there were difficulties from the beginning, a clear plan was set out involving regular meetings, lesson planning and observations. Amit was encouraged to reflect on lessons and look at the potential for possible improvement or alternative methods of teaching and learning. We can see here the difference quality mentoring made. I therefore agree with Maynard and Furlong (1993:69) when they suggest that 'In these times of rapid change in teacher education it is more than ever necessary to have a clear and principled understanding of the rationale for each aspect of training'. They cite McIntyre (1993:70), who suggests that 'trainees need access to different forms of professional knowledge and practical knowledge of teachers must be a central part of that training process' Maynard and Furlong (1993).

The Good Mentor

In order to extend my research I conducted some further investigations, interviewing two University tutors and a very experienced subject mentor. Also the opportunity arose to discover what some new mentors thought was expected of them and what problems experienced mentors encountered.

Three key themes emerged:

First, personal qualities seemed to be prevalent. Patience, communication skills, understanding BTs, an awareness of workload, a willingness to remember 'I was once a BT', ability to give honest and constructive criticism, a good listener, a critical friend, give praise when due and give direction for improvement, enthusiasm for teaching, pleasant personality and, perhaps most importantly, a sense of humour were all listed.

Second, professional issues emerged. In order for a mentor to have credibility, secure subject knowledge and expert pedagogic knowledge were key. It seemed

generally from BTs' responses that this is what they were looking for. Of significant importance was the feeling that mentors would have good classroom management skills and relationships with pupils, that they would be willing to share good practice and ideas, have clear objectives and be able to give clear instructions, team-teach and be a team player, have good organisational skills and most of all be experienced teachers.

Third, the interest 'to promote genuine pupil/BT learning'. The overwhelming response was 'don't do it unless you are really interested in it'.

Sadly we are not always able to find all these qualities in all mentors. Who is going to be a subject mentor is connected with staff availability. Therefore is the subject mentor someone who has the time, energy, desire and personal qualities to fulfil what is required or is it merely 'the only person left in the department who can do it'? Clearly the first mentor, due to staff shortages and other responsibilities within the school, was unable to give the BT the mentoring he deserved. Should the school have agreed to take him on? In placement two the mentor had many of the qualities required and gave the BT the best possible chance of success.

The Problems

The main problem to emerge from my investigations was the time factor. New mentors did not have a realistic idea of the time needed to fulfil the role. Mentoring comes on top of all the other responsibilities of being a teacher (Watkins 2000). Many new mentors thought one hour per day or even two hours a week would be appropriate. The reality from the experienced mentors was that it took up a great deal more time and this was often difficult to find. There was a strong desire for schools generally to be more supportive towards mentors and to create time for mentoring to take place. It was encouraging to discover in some schools mentors were being given 1–3 non-contact lessons per week for mentoring – a generous model and one to be recommended. If schools are to be more involved in the training of teachers then time should be made available for the process to happen effectively.

Other problems raised were to do with the BTs themselves. If they lacked motivation, were unreliable, disorganised or unable to grasp the wider issues and the complex nature of the job.

Cultural and language differences were highlighted as problems and mentors found these took much time, effort and diligence to overcome. The amount of administration involved was an issue. This could be made easier if time was allocated for the job.

The Way Ahead

My research points to three ways forward

- Selecting the most appropriate person for the job.

Despite the IOE offering a structured mentoring framework, the first mentor was not able to take time to become familiar with it. She was not using a structured approach and in the circumstances appeared to be crisis mentoring. The mentor in the

second school had clear aims and objectives, together with strong interpersonal skills and a desire for the BT to succeed. The evidence has shown this was most effective and crucial to the success of the BT.

- Appropriate time allocation

It is evident the role of mentoring is time consuming (Watkins 2000). The IOE recommends BTs meet with mentors each week to discuss lessons, schemes of work, teaching techniques and other related issues. This on top of attending professional development conferences, formal and informal observations, feedback, discussion, future planning, administration and liaising with university tutors would indicate that for effective mentoring to take place time must be allocated to it. Given that the role is unpaid, the reward of extra non-contact time may act as an incentive for potential mentors.

- Recognising mentoring as an important area for career development.

Mentoring is clearly an area of professional development and many teachers gain job satisfaction from being recognised as good practitioners who are able to pass on knowledge and share good practice. The mentoring role also allows for reflection on their teaching and the opportunity to listen to and try out fresh ideas is often found to be stimulating and rewarding. I believe that being a good practitioner, together with well-developed interpersonal skills, indicates that effective mentors are a unique group of people and should be recognised as such. Mentoring is a partnership between the schools and universities where the school mentor shares good classroom practice underpinned with the academic knowledge and experience of the university tutors. The two combined should lead to high quality teachers in the classroom (MacGilchrist 2003) and so mentoring should be given the status and salary it deserves.

Conclusion and Recommendations

In conclusion, as a result of the lessons to be learned from the case study and related research, I will present recommendations for further professional development together with suggestions for raising the status of mentoring, given the contribution it makes to achieving high quality in the profession.

First there is the possibility of distance learning. The IOE provides handbooks and peer observations in schools are encouraged where colleagues can learn from one another. Discussions before and after lessons can be useful. It is interesting that the mentor in placement two of the case study had never attended a course. She felt she had learned the role from colleagues and from experience (Watkins 2000) even though at times it could be difficult.

Second is the opportunity to gain accreditation for this aspect of professional development. The Institute of Education now offers a new qualification – The Professional Diploma in Learning and Teaching**. This qualification consists of a number of modules – one module being *'Mentoring: Supporting Colleagues' Learning'* (Brooks

** Further details can be had from Dr Eileen Carnell, Institute of Education, University of London (e.carnell@ioe.ac.uk)

and Rodger 2003). London Providers are currently working on awarding certification to all mentors in London schools.

Third, time should be allocated to this role like other management roles. If schools were given the financial means to allocate time and remuneration then they could select the most appropriate person and the role would immediately have more kudos. It is clear that good mentoring is very important and, certainly in the case of Amit, can make the difference between a failing teacher and a great teacher.

Finally, I would recommend greater financial investment from government agencies to allow for professional development to take place and for remuneration*** to be given. Teachers interested in mentoring should have the opportunity to take part in training prior to working with a BT. The responsibility of the role would be made known and this way they would be prepared and would not be learning 'on the job'. Further research would show that these are necessary ways forward if we are to continue to provide our schools with the best quality teachers. Yes, it would be difficult to implement these recommendations, but if we are to achieve Barbara MacGilchrist's aim, then aren't they worth serious consideration?

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*** Since completion of this paper, it has come to light that a number of London schools are allocating additional salary to their mentors.

PART TWO

Teacher Education in the European Union



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Subject Knowledge, Pedagogy and Effective Teaching: an English Perspective

Introduction

McIntyre (1993) states that *theory* has been in danger of becoming a 'dirty word' in initial teacher education as initial teacher education courses in England have focused so much on the practical aspects of teaching. The term 'pedagogy' has recently slipped into usage in England, but it is still an under-used and partly misunderstood concept. Arguably pedagogy has been under-conceptualised, perhaps because teaching is undervalued but also perhaps because of the tacit nature of a teacher's expertise there has been a lack of recognition of teacher knowledge and teacher expertise (Van Manen 1999).

Shulman and Shulman (2004) aver that teaching makes extraordinary performance demands of teachers, and Eraut (1994) states that effective teaching involves utilising a whole range of different types of knowledge and expertise. The knowledge that teachers need is multi-faceted and a teacher needs a deep understanding of several different knowledge bases together with acquired professional expertise. Shulman (1987) suggests that there are seven such categories of knowledge base: content knowledge; general pedagogical knowledge; curriculum knowledge; pedagogical content knowledge; knowledge of learners and their characteristics; knowledge of educational contexts and knowledge of educational ends. He identifies pedagogical content knowledge as being of special interest: the blending of sound subject knowledge with an understanding of pedagogy.

Lawlor (1990) describes the medieval view of teaching as one where only subject knowledge is necessary, i.e. where a deep knowledge of subject content is of primary importance. She adds that the university sector and the public school sector have subscribed to this conceptualisation until relatively recently. Bolhuis & Voeten (2004) argue that secondary school teachers have traditionally conceived subject matter as a static body of knowledge to be transmitted to students. When the teacher is 'imparting' such facts and procedures, then learning takes the form of passive absorption of knowledge. The work of social constructivists such as Piaget, Vygotsky and Bruner has led to a more student-centred approach to teaching that depends largely on learners' activities and within which the pedagogical skills of the teacher can actively promote better learning. This conceptualisation of teaching requires learners to be independent

thinkers and to critically examine the procedure of knowledge construction. Classroom activities devised by teachers subscribing to a social-constructivist conceptualisation of teaching are more likely to require students' reasoning, discovery learning, problem-solving, data gathering, applying and communicating ideas.

In looking at the classroom context of knowledge, Eraut (1994) argues that a teacher is not so much in a 'knowing' environment as in a 'doing' environment. While classroom research may describe and interpret teaching activities, one still has to acknowledge that seeing like an observer cannot be the same as seeing like a teacher, for a teacher sees from within an action and not from outside it. Moreover, the classroom is an ordered environment in which norms and routines play an important part and teachers develop implicit theories of action in order to make their professional lives more manageable. In teaching, there are so many variables to take into account at once that teachers develop routines and decision-habits to keep their mental effort at a maintainable level.

Huberman (1983) conceptualises teachers' knowledge as craft knowledge, which he describes as largely idiosyncratic and non-theoretical. Some authors are disapproving of teachers in this respect; for example, Jackson (1968) criticises teachers because their language is conceptually simple, because they seem uninterested in causes or underlying patterns, because they prefer intuition to analysis and because, in spite of their lack of analysis, teachers are opinionated. But Huberman is supportive of craft knowledge and argues that improvements in teaching come from tinkering rather than from systematic reflection. Kennedy (2002) argues that the acquisition of craft knowledge is motivated largely by dissatisfaction with events and a desire not to repeat the same mistakes again. However, if teachers routinely notice problems (in their classrooms) and generate ideas for how to handle these situations better in the future, then a great deal of learning could follow from the process of self-evaluation (Huberman 1983).

Fenstermacher and Soltis (1998) categorized knowledge into formal and practical knowledge. They describe 'formal knowledge' as resulting from the process-product studies on effective teaching and 'practical knowledge' as practical, personal, situated, local, relational and tacit knowledge. Fenstermacher and Soltis consider both kinds of knowledge as important in understanding how teachers learn to teach. Teachers will acquire systemic knowledge mainly through study at university, the reading of research articles, and the reading of professional journals. This knowledge tends to be theoretical, codified and abstract. In contrast to Eraut, Kennedy (2002) reports that many teachers are emotionally committed to what they had learnt in this way and that, as a source of ideas, systemic knowledge provides a unique contribution to teaching. Prescriptive knowledge is generally acquired through institutional policies and is characterised by 'should' and 'ought' statements. Kennedy suggests that many teachers show a complacent acceptance of prescriptive knowledge. While they show a sense of responsibility to ensure that students learn whatever content is required of them so that they will be adequately prepared for public examinations, teachers do subvert public policy legislation by filtering the stated requirements through their own prior beliefs and value systems. Each type of knowledge described above offers its own benefits to teachers, and teachers need an understanding of all of them. Acquiring new ideas comes from many sources and a consideration of one kind of knowledge certainly does not invalidate other types.

Knowledge bases and teachers' ability to transform knowledge for students

Turner-Bisset (2001) states that teaching is not a matter of skill or competency alone as teachers need a deep understanding of several different knowledge bases to develop sophisticated professional expertise. Shulman (1986a) argues that the literature on teaching focuses on management of classrooms, organisation of activities, allocation of time for activities, assessment, praise, and questioning technique whereas the consideration of lesson content is under-conceptualised. Shulman (1986a, 1986b, 1987) states his interest in questions teachers ask and the explanations they offer. He is interested in where teacher explanations come from and how teachers decide what to teach, how to represent what they teach, how teachers question students about subject content and how teachers deal with problems of pupils' misunderstandings. Shulman observes that new teachers begin with expertise in the content they teach and an important issue for him is the transition they make from expert student to novice teacher. Fuller and Bown (1975) articulated a three-stage model of student-teacher development. They aver that the concerns of student teachers shift outward from an initial pre-occupation of self to a focus on tasks and teaching situations, and finally to consideration of the impact of their teaching on pupils. However, subsequent studies have challenged this model of discrete stages (see Burden, 1990 and Guillaume & Rudney, 1993). These studies show that it is possible to discern a number of types of progression amongst beginning teachers and that there were no common starting points for all beginning teachers. Furthermore, beginning teachers showed different rates of development.

Nevertheless, the issue of transition remains and Shulman (1986) ponders how beginning teachers transform their content expertise into a form that secondary students can understand. For example, when faced with unclear texts from books, how does a beginning teacher generate new explanations, representations and clarifications? What are the sources of analogies, metaphors, examples and re-phrasings? How does the beginning teacher draw on expertise in the subject matter in the process of teaching? And what pedagogical prices are paid when a teacher's subject matter competence is itself compromised by deficiencies of prior education or ability? Shulman (1986a, 1986b, 1987) rejects the usual pedagogy-content dichotomy as ineffective and takes an in-depth look at content knowledge, which he breaks down into a number of constituent parts.

Subject content knowledge is concerned with the subject matter to be taught, and it encompasses what Bruner calls the structure of knowledge: the theories, principles and concepts of a particular discipline. It is concerned with the organisation of basic concepts (substantive structures) and the ways to validate them (syntactic structures). Teachers must be able not only to define and explain the subject content that they are teaching to their pupils but also to explain why a particular proposition is deemed warranted and worth knowing (Shulman, 1986b). General pedagogical knowledge is the generic knowledge about teaching gained from practice. The sort of knowledge to which Shulman is referring is knowledge of, for example, how to settle a class, how to attract and hold the attention of the class and how to manage educational resources. Much of general pedagogical knowledge appears to be procedural and

learnt from practice; yet it is also likely, given that it is grounded in practice, that general pedagogical knowledge is constructed from innumerable 'cases' of teaching, and has a substantive base (Turner-Bisset, 2001). It follows that an understanding of pupils' learning is a necessary requirement for good teaching to be possible and that consequently the expert teacher will have a pedagogical repertoire of teaching techniques.

Shulman (1986b) describes curriculum knowledge as the 'tools of the trade' of teachers. Curriculum knowledge is knowledge of the curriculum in its widest sense, of the whole curriculum laid down for pupils, the programmes of study, and the kinds of curriculum materials used to teach each subject. Curriculum materials from other subjects are included to enable the creation of cross-curricular connections. Teachers should also be familiar with what has been studied previously and what will be studied in the future. Shulman (1986a, 1986b, 1987) reports various studies showing that teachers possess high levels of pedagogical content knowledge. For Shulman, pedagogical content knowledge conceptualises teachers' expert knowledge and in a sense it is an amalgam of various teachers' expertises. Teachers construct versions of reality that fit the experience of the context. Pedagogical content knowledge is knowledge that is constructed from knowledge of environmental contexts, knowledge of students, knowledge of pedagogy and of subject matter. It is knowledge that has been specifically crafted by teachers for fitness of purpose. In the early days of one's teaching, a fundamental concern for a teacher is how to communicate their own subject knowledge. The problem is one of representation: communicating the concepts and processes of a subject discipline. For Shulman, representation is the process of turning subject knowledge into knowledge for teaching which lies at the intersection of subject knowledge, pedagogy and knowledge of one's students as learners.

Shulman (1986b) offers additional categories of knowledge bases that contribute to pedagogical content knowledge. Knowledge of learners includes general knowledge of what pupils of a certain age are like and specific, context bound, knowledge of a group of learners, i.e. 'my class'. Knowledge of educational contexts is in the broadest sense knowledge of all settings where learning takes place. Teaching contexts may have a significant impact on teaching performance, and there are a range of contextual factors that affect teachers' development and classroom performance. These include the socio-economic level of the catchment area; the type and size of school; the class size; the amount and quality of support that teachers and other colleagues give to each other; the feedback teachers receive on their performance; the quality of relationships in the school; and the expectations and attitudes of the headteacher.

Shulman (1987) states that the key to characterising the knowledge base of teaching lies at the intersection of content and pedagogy in teachers' capacities to transform content knowledge into forms that are pedagogically powerful and yet adaptive to the variety of student abilities and backgrounds. Shulman describes five sub-processes in the transformation process: 'preparation', 'representation', 'instructional selections', 'adaptation' and 'tailoring of instructions'. Preparation involves examining and critically interpreting resources that will be used in the lesson in terms of teachers' own understanding of the subject matter. Representation involves thinking through the key ideas of the lesson and identifying alternative ways of representing them to students. This includes analogies, metaphors, examples, narratives and simulations that can help to build a bridge between the teacher's comprehension and that desired

for the students. 'Instructional selection' occurs when teachers draw upon a range of approaches for teaching and learning, such as Socratic dialogue, discovery learning, project methods, learning outside classroom settings. Adaptation is the process of fitting the represented material to the characteristics of the students so as to reflect the characteristics of the students' learning styles. Tailoring of instruction entails fitting representations not only to particular students but also to a group of a particular size, disposition, receptivity, and interpersonal 'chemistry' (ibid).

Treagust and Harrison (1999) argue that expert explainers use imaginative and expressive devices to make sense of abstract, difficult and non-observable science concepts; in so doing they provide explanations that accommodate the explainer, the audience, the content and the context. Effective pedagogical explanations make use of language that makes sense to the audience by means of metaphors, analogies and stories. Russell and Shawl (1999) argue that teachers' knowledge is personal, context-rich and elusive.

Reflection

The reflective process includes reviewing, reconstructing, re-enacting and critically analysing one's own teaching abilities and then grouping these reflected explanations into evidence of changes that need to be made to become a better teacher (Lave and Wenger, 1990). Reflection is widely recognised as a crucial element in the professional growth of teachers. It is assumed that reflection is intrinsically good and that reflective teachers will improve as teachers (Calderhead and Gates, 1993). McIntyre (1993) describes three levels of reflection: the technical, the practical and the critical. He suggests that in the early stages of their teaching practice, beginning teachers reflect mainly on the technical, for example in achieving certain goals such as the management of group work. The practical level is more general and concerns articulating the development of one's own practice. Critical reflection concerns wider political, social, cultural and ethical issues and is, according to McIntyre, rarely practised even amongst experienced teachers.

Schon's (1983) argument is that professional expertise does not depend on the application of general theoretical knowledge but that what is important is experience-based knowledge. Schon distinguishes between knowing-in-action and reflection-in-action; if a teacher views reflection only as a means of judging his or her performance, then his/her prospects for improvement are somewhat stunted. If, on the other hand, he or she views reflection as a way of increasing his/her understanding of teaching and of themselves as a teacher then he/she will possess a powerful tool to help them improve (Schon, 1983, 1987).

Reflection *on teaching* focuses on what happens in a lesson and why it happens in that way. A teacher might focus on the way that a group of students seemed to struggle with an idea that he or she was trying to help them to understand. There are many different types of explanation that could be offered for this kind of problem: for example, teachers might explain it by arguing that the students had been ill-prepared or poorly motivated. Teachers might think that the students are simply 'weak students' and their

failure to understand can be taken as evidence of their lack of ability. Alternatively teachers might look for explanations in the way that they taught the lesson. Teachers might think about the way they communicated ideas: for example, 'Was my presentation clear?' or 'Did I rush through the steps in the reasoning?' Teachers might think about their assumptions about the readiness of the students to understand this idea. What was assumed about their previous thinking and their ability to process information that was presented to them? What was assumed about their prior experience and what opportunities were given to them to work out relationships between new and old information? Each of these questions focuses on what happened and why it happened. Some beginning teachers will tend to explain the problem in terms of the students' abilities, some will explain the problem in terms of their communication of the idea and others will tend to explain the problem in terms of the assumptions they had made.

Shulman and Shulman (2004) argue that critical reflections are at the heart of learning and that reflection is the key to teacher learning and development. In relation to reflective practice, Eraut (1994, p71) discusses beginning teachers' disposition to theorize: "If beginning teachers acquire and sustain this disposition they will go on developing their theorizing capacities throughout their teaching careers, they will be genuinely self-evaluative and they will continue to search for, invent and implement ideas. Without it they will become prisoners of their school experience".

Discussion

There is a growing literature that recognises the expert knowledge that teachers bring, in engendering students' learning for understanding rather than passive learning for recall of propositional knowledge. Despite the recognition of the link between teaching and learning, teaching itself is often undervalued and other professionals often do not understand much of the knowledge on which teachers draw. The research community does not articulate or document this knowledge well, partly because this knowledge tends to be tacit in nature and it is often difficult to make this explicit. There are a number of issues when attempting to document teachers' expertise. First, the problematic nature of seeing knowledge in practice; secondly, the working life of most teachers does not systematically include times for connecting with advances in the knowledge base of their own profession; thirdly, the social culture of teachers does not create an expectation to discuss practice in ways that demonstrate such knowledge; and finally, teachers do not necessarily take their own knowledge seriously, leaving it untapped and known only to the beholder.

There is an old adage that one never really learns something until one has to teach it. Through teaching whatever the concept or idea may be in question, one has to struggle to find out what the concept really means and how to deal with the questions and problems that are likely to arise. This 'struggle' is a necessary and important element in the work of teachers, especially at the lesson-planning stage. But understanding subject 'content' is only part of the story. Teachers need to transform subject content knowledge in a way that makes it interesting and comprehensible to their students and in a sense this is the 'bread and butter' of teaching. Much of this expert pedagogical

subject knowledge that teachers possess is tacit and it is thus a challenge for teachers and researchers to make it explicit and consequently in a form that is transferable, so that other teachers may learn from their more experienced colleagues. The concept of an expert-teacher knowledge base is one that has not been fully articulated in the research literature and therefore one that warrants further research and investigation. While consistent with a social constructivist framework, the concept of an expert teacher knowledge base does not imply a style or recommended approach to a teacher's repertoire of approaches. Rather it suggests optimism, in the sense that teachers can make a difference in the pace and progress of their students' learning.

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The European Dimension: Implications for Teacher Training in Higher Education

Introduction

Higher Education in Europe is about to undergo a crucial transformation in the coming years through the Bologna Process.

The Bologna Process is considered to be the most important and wide ranging reform of Higher Education in Europe in recent years. Its ultimate aim is 'to establish a European Higher Education Area by 2010 in which staff and students can move with ease and have fair recognition of their qualifications' (Council of Europe, 2004).

One of the implications of the Bologna Process is the provision of a European dimension to Higher Education, promoting students' European identity and citizenship. The key to assemble that European identity and citizenship is mobility, a transversal element in European education.

With this objective in mind, this paper will analyse how this European dimension, together with mobility, are going to affect teachers' role in Higher Education and the specific needs of teacher training as a result of it.

The Bologna Process¹

The Bologna Process aims to set the basis for the above-mentioned European Higher Education Area, which should be established by 2010. This general aim can be divided into specific goals, which can be summarised as follows:

- To adopt a system of easily readable and comparable degrees.
- To adopt a system with two main cycles (undergraduate/graduate).
- To establish a system of credits.
- To promote mobility by overcoming obstacles.
- To promote European cooperation in quality assurance.
- To promote a European dimension in Higher Education.

¹ For more and detailed information on the Bologna Process, see, for example, <http://www.bologna-bergen2005.no/> and <http://www.europa.eu.int>.

The Process underlines the following as important elements of the European Higher Education Area:

- Life-long learning.
- Involvement of students.
- Enhancing the attractiveness and competitiveness of the European Higher Education Area to other parts of the world (including the aspect of trans-national education).

The Bologna Process is now underway, with the countries taking part in it adapting their systems in order to comply with all the requirements and to make the European Higher Education Area a reality by the agreed date.

The Meaning of Mobility

The trans-national mobility of people is recognised by the European Commission as something beneficial, being one of the key aspects of the Bologna Process. According to the Commission, mobility 'enriches national cultures and enhances the cultural, educational and professional experience of those taking part. Such experience is increasingly necessary given current limited employment prospects and a labour market that requires more flexibility and greater adaptability to change' (Communication from the Commission, 2004: 9). This is the reason why mobility is encouraged for all those involved in education and training, and now becomes the key element necessary to understand the new concept of education in Europe.

Implications of the european dimension for teacher training

The modernisation of European education and training will have a series of consequences as far as teacher training is concerned. Most of these consequences derive, as stated above, from the new significance given to mobility and will mainly affect the following aspects:

- Real involvement and commitment of students in the learning process, self-learning of students.
- Life-long learning.
- Student training for the labour market.

As a consequence of the importance given to these elements, teachers will necessarily have to adopt a new role. This new role will affect European teachers in different degrees, depending on the teaching and learning traditions existing in different countries.

The three aspects pointed out will mean that the teaching and learning process is going to be centred on the learner and not on the teacher, the latter merely being the guide through the whole process. How is this going to affect both students and teachers?

Regarding students, on the one hand they will assume a new role as they will become the persons responsible for their own education. On the other hand, they will also be affected by the new importance given to mobility, where a double generation of students will be created: mobile and non-mobile students.

Mobile students will be the ones most directly benefiting from the implications of mobility. In this sense, a new 'Integrated Programme' for mobility and cooperation is planned to be in force between 2007 and 2013, given that the current implementation stage of the existing programmes in the field of mobility and cooperation expires at the end of 2006 (see Communication from the Commission, 2004). The new Integrated Programme will cover both education and training and is called on to replace the Socrates, Leonardo da Vinci and Tempus III programmes. The key aspect of the Integrated Programme is cooperation in education and training, as it is thought that major benefits are to be gained from bringing together the fields covered by the above-mentioned programmes into a single structure. The fact that training has somehow been added to education is a response to the goal of making Europe a more competitive knowledge-based economy with more and better jobs and greater social cohesion. This is why the programme targets both education and training for the labour market.

The Integrated Programme aims to triple the number of students and trainees who benefit from mobility every year, so that the goal of three million Erasmus students per year can be reached by 2010, and so that mobility can be a reality for more.

But the new European policy in education and training also targets non-mobile students, who should have the same opportunities as the mobile ones. On the one hand, these students will benefit from the presence of international students in the classroom, for which an awareness of the importance of multicultural education and respect of diversity is to be raised. In that way, non-mobile students will have to apprehend the importance of what the European identity means: what is common and what is not among European citizens, what does diversity mean, etc. On the other hand, with regard to the new role of teachers, they will have the task of bringing non-mobile students closer to the reality of other European contexts, to which end the teachers themselves should also take advantage of mobility, this being one of the main goals set by the Integrated Programme.

As far as teachers are concerned, their new role places them not in the centre of the learning process but turns them into the guides or tutors of their students. This will affect different countries in different ways, depending on the teaching and learning traditions of each of them. As commented above, the teacher will now have to be a flexible tutor guiding the learning process, and supporting students throughout it. Being the tutor, not the teacher in the traditional sense of the word, will mean:

- To promote students' responsibility and commitment to life-long learning.
- To be aware of diversity and benefit from it, showing it to students and raising awareness among them, and to bring mobility closer to those students who can not benefit directly from it.
- To implement new teaching methods based both on individual and team work, in order to develop the required competencies for the labour market.
- To know the professional options for students, as well as to develop the skills needed for the labour market, which will have to be done through the putting into practice of new teaching methods.

- To prepare students to be flexible, not only in their training for the labour market but also when they become part of it. In this sense, a new meaning is given to mobility: today, the students benefiting from mobility programmes usually spend just that particular period of study abroad, normally staying in their countries of origin not only for the rest of their training period but also for the length of their professional lives. Students have to develop skills to easily adapt to different countries, to deal with different people, to react to specific needs in their professional development, etc., for which mobility has proven its impact on students. One of the main aims of the Integrated Programme is to extend those benefits to the labour market, a market in constant change and evolution, not only nationwide but also worldwide, so that students would need to be trained to respond to these changing demands. In this regard, labour mobility is given the utmost importance not only within national borders but also, and especially, outside one's country of origin.

To make this possible, teacher training will also have to be reviewed. The main implications are that teachers should be mobile, will necessarily have to promote autonomous learning and will have to know and to update their knowledge on the labour market and on the professional world. In order for this to be a reality, as teachers will be faced with a more demanding task, one of the objectives of this new European dimension of education is to make the profession of teacher/trainer more attractive (Communication from the Commission, 2003), which focuses directly on the motivation and quality of the training of education and teaching staff. According to the Commission, 'steps must be taken to attract the best talent to the teacher/trainer profession and to keep them there. They must also be prepared for their new roles in the knowledge-based society and in transforming the education and training systems' (Communication from the Commission, 2003: 13).

Another aspect of the new dimension of European education, as mentioned earlier, is life-long learning. This concept acquires a new consideration in the Bologna Process. The fact that the new paradigm of learning places the learner at the core of the teaching and learning process, and emphasizes the importance of equal opportunities, extends the learning process from pre-school to post-retirement and embraces a whole range of formal, non-formal and informal learning. In this sense, European countries have committed themselves to recognising any conception of learning and training, even outside the standard training at university. The transferable skills that teachers should provide their students with throughout the learning process play an important role in this conception of life-long learning: if students learn how to interact, how to be motivated and how to be responsible, they will benefit from it all their lives, also in long-life learning.

Besides, mobility being available at all stages of the learning process is also a possibility for those involved in long-life learning.

But the proposed reforms will also find obstacles to their implementation, as will presumably be the case regarding language learning. Language learning is one of the objectives underlying the whole reform of European education. It is a goal to be achieved for all, both students and teachers, and for which three main areas are highlighted: extending the benefits of life-long language learning to all citizens, improving language teaching and creating a more language-friendly environment, all of this in order to guarantee linguistic diversity (Communication from the Commission,

2004: 9). A main tool for language learning is, again, mobility. But how is it going to be possible that all the citizens of the union (as the Commission states) become promoters of linguistic diversity? In some countries, such as Spain, most teachers not involved in the teaching and learning of languages and related subjects do not speak a language other than their mother tongue. In this case, not only is mobility going to be difficult, as in most cases they would most probably be reluctant to take part in mobility programmes if they do not speak the language, but also they would hardly be the actors involved in the teaching and learning process that the European dimension requires.

Paradoxically, and in contrast to European interests in the promotion of language learning through mobility, there seems to be a recession in the interest for languages all over Europe, especially worrying in English-speaking countries, where fewer and fewer students embark on mobility programmes. On the other hand, these countries are the leading ones regarding the applications of non English-speaking students as the interest in learning English is increasing every day. Mobility programmes being reciprocal, that is, approximately the same number of outgoing and incoming students being desirable for each country and institution, will put in peril the possibility of learning English in English-speaking countries under the umbrella of the European mobility programmes. Maybe new formulae will have to be found to mitigate these difficulties.

Conclusions

The new dimension of education and training in Europe will mean a revolution in teaching and learning structures across the continent. Its accomplishment will have a series of consequences affecting all the actors involved in the teaching and learning process and some traditional conceptions of education will have to be reviewed.

In this sense, different teaching and learning traditions in different countries will be affected in various ways. In Spain, where the teaching and learning process is mainly centred on the teacher as sole conductor of the class, responsible for everything taking place in it, teachers will have a challenge to meet in the promotion of autonomous learning and of a learner-centred approach to the teaching and learning process.

But the Bologna Process is not without difficulties. It is doubtless a huge process and in all probability several problems will be found in its implementation. From a theoretical point of view, the new dimension given to Higher Education in Europe is viable but one must keep in mind that countless initiatives will have to be accomplished in a short period of time. These initiatives affect all sectors of Higher Education. Some of them are as follows:

- The structure of Higher Education institutions in Europe.
- Curriculum design and contents.
- Recognition of degrees and skills.
- A new conception of teaching and learning, which implies different teaching methods and approaches, evaluation techniques, students' role and so on.

And all these changes will have to be made in a Europe of heterogeneity, where all teaching and learning traditions respond to different criteria and are the consequence

of the evolution of every society. The progressive implementation of the reform, for which every country will follow a different pace, will also affect mobility as the case might be that students coming from an institution which still has not been adapted to the Bologna Process will be incoming students in another one which has totally adapted to it, with the implications and consequences that may derive from this. And let us not forget that teachers will have to follow a parallel adaptation to the process, as there is no time to prepare for it before, as would be desirable. Beyond question, a huge challenge is ahead of us.

Hopefully, this radical change in education will build a new European dimension demanding of active citizenship, personal fulfilment and social inclusion. The key element of this process, without which it will not be accomplished, is, without a doubt, cooperation and networking between Higher Education institutions.

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The Multidisciplinary Model of Education versus Foundations of Teacher Training in Poland and Other European Countries

Examples of multidisciplinary integration in connection with the realization of selected biological teaching contents

Contemporary tendencies of overcoming the boundaries between particular areas of science (genetics, medicine, physiology, embryology, ecology or philosophy and psychology), and the intensive development of science at the borderline between various fields affect the process of teaching and learning biology. They enforce the integration of knowledge acquired by students.

One of the aims of education is finding a balance between regular science in a given area of knowledge and learning in an interdisciplinary way. While learning these interdependencies students gain the opportunity to perceive associations between these and their own, everyday problems, which are often complicated and exceed the boundaries of single subjects as traditionally understood (Potyrała 2004).

The interdisciplinary teaching of genetics in these new aspects means the integration of contents from various areas of knowledge (chemistry, medicine, mathematics, physics) and biology itself (cytology, embryology, microbiology, immunology, morphology) in order to lead to a better understanding of biology by students (Scheme 1).

Looking for methods of realization of educational paths' contents, two kinds of inter-subject integration are differentiated: content integration, which emphasizes the factual issues common for several subjects, and methodological integration, which underlines mutual research methods characteristic of the integrated subjects and leads to forming the same skills (competencies) in the student.

In Table 1 there are examples of both types of inter-subject integration in connection with the realization of a medical and pro-health educational path in a multidisciplinary way (divergent model) or an interdisciplinary way (flow model).

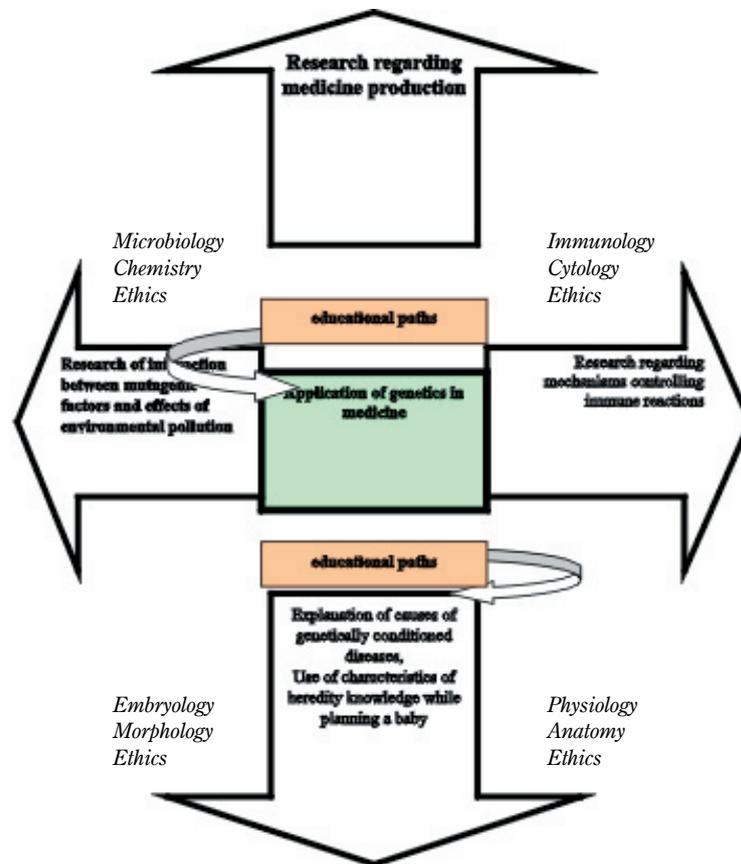
In the first case the topic connected with applied genetics is worked on independently, in several subjects, without time synchronization. In the second case, the realization of the topic by teachers of given subjects takes place simultaneously.

In view of the highly diversified level of issued medial communications, it is observed that there is, frequently, a lack of knowledge and understanding of basic

biological terms is as well a tendency to use scientific notions without understanding them. There are also questions about the ways of deepening knowledge on scientific subjects regarding biology, and the latest achievements in this area, on the basis of reliable sources of information, using information technology. Hence integrating the assumptions and aims of medical education, and the realization of educational aims in biology, seems justified (Potyrała 2005b).

The suggested approach is conducive to revealing and deepening scientific interests and offers a unique chance to find and apply in practice the newly acquired knowledge and skills in various situations, both in particular teaching subjects and in educational paths.

The potential of information technology as a teaching and learning tool keeps changing. The omnipresence of computer networks has opened up the world of knowledge. The theory of cognitive teaching, which puts emphasis on information searching, has emerged. Changes have occurred which mean that society is defined at the beginning of the 21st century as the information society. Information technology allows for the formation of learning environments that are available for individual users of different learning styles, at any place or time.



Scheme 1. Interdisciplinary nature of genetics using the example of issues connected with the application of genetics in medicine. Ethical problems in genetics may constitute the leading thought in interdisciplinary teaching (Potyrała 2005a)

Table 1. Inter-subject integration in the realization of topics regarding the application of genetics in view of the realization of medical and pro-health educational path realization (high school level)
 → Divergent model – → Flow model (increase of knowledge and skills)

Subjects	Examples of contents	Students competence in medial and pro-health education
Biology →	<ul style="list-style-type: none"> ▪ Knowledge of possible applications of genetics achievements in medicine, animal breeding and plant growing ▪ Knowledge of the purpose and course of research on the human genome ▪ Possibility and directions of plant and animal genetic engineering applications ▪ Benefits and threats connected with genetics achievement applications ▪ Worldwide contemporary genetics problems in available sources of information. 	<ul style="list-style-type: none"> ▪ Use of multimedia tools in information searching ▪ Analysis and evaluation of situations on the basis of various sources of knowledge ▪ Analysis of publications devoted to selected issues, copying and creating of database, use of ready materials, note taking ▪ Independent editing of medial information ▪ Using electronic communication in order to exchange information ▪ Evaluation and presentation of results on the basis of computer tools ▪ Activity aiming at formation of pro-health attitudes, and through formulating conclusions and generalizations, forming a system of convictions leading to healthy lifestyle. ▪ Understanding one's own responsibility for one's health protection ▪ Understanding interrelations among health aspects, e.g. physical, psychological and spiritual ones.
Geography →	<ul style="list-style-type: none"> ▪ Computer tools enabling data analysis regarding the structure of atmosphere and degree of biosphere contamination and reasons for menaces to the natural environment ▪ Demographic explosion in developing countries in the media. Reasons for famine and health problems in various regions of the world – possibilities of improving the existing situation thanks to e.g. genetics achievements ▪ Modern forms of plant growing and animal breeding – benefits and threats in connection with application of genetics achievements in solving the problems of feeding the world, food and drug production. 	
Information Technology →	<ul style="list-style-type: none"> ▪ The Internet as a communication tool ▪ The Internet as a source of knowledge on contemporary health problems, their causes and on new achievements in biology. Internet as a source of knowledge on contemporary genetics issues. ▪ Knowledge of proper Internet domains and possibilities of using them in the process of acquiring knowledge on genetic knowledge application. 	



Chemistry →	<ul style="list-style-type: none"> ▪ Mutagenic factors: physical and chemical. Air components, disappearance of atmospheric ozone. ▪ Knowledge of laboratory equipment and possibilities of using it in various experiments, among others in the area of biotechnology and genetic engineering. ▪ Knowledge of basic methods, tools and research techniques used in scientific laboratories. 	
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SUMMING UP OF THE PATH'S SUBJECT

Tendencies in biology teachers' training in Poland and other European countries

Teacher training at university level should take into account the prospective aspect of qualifications, that is the future as educational category (Kwiatkowski, 2001); it should meet the reform objectives and contribute to the understanding of the reform's philosophy (Cichy 2001).

Changes in teacher training should be introduced in accordance with the continuity of education, prevalence of skills over knowledge as well as innovative learning. It must be associated with the simultaneously realized restructuring of extra-educational areas of social life – economics, culture and modern technology (Kupisiewicz 2003 after Husén 1983).

New civilizational challenges, the social and economic changes taking place in Polish and European reality and the transformation of student teaching and educational systems make the teacher face new problems as far as the realization of educational aims at various levels of education is concerned. Meanwhile, generally, teachers are educated in the same way as before the reform process, which makes them vulnerable to the criticism that they are insufficiently prepared for new tasks (Konarzewski 2003). During recent years we have been witnessing sharp criticism of the quality and outputs of teacher education in many European countries, in the USA and elsewhere: *Prospective teachers do not acquire adequate professional competence as a result of their study* (Prucha 2003).

Education has to create conditions for the future development of society, and the school is expected to promote specific changes: denouncing stereotypes, offering new identities, preparing for new economic and social duties, leveling some inequalities (Konarzewski 2003).

The priority is defining a canon of teacher skills in view of these changes: the development of a knowledge society; the development of an information society; a new balance between the basic and key skills; the necessity for continuing education; the new role of the teacher; increased connections between education and economics; promoting enterprise; promoting the exact sciences and technology; developing foreign language learning; strengthening democratic and citizenship attitudes; an interdisciplinary approach to educational aims and contents; and an interdisciplinary model of education assuming cooperation between teachers of different subjects.

Due to the new strategic aims, attempts at specifying the key competences of a science teacher have been undertaken. Subject methodical knowledge is to equip a science teacher with such competences as, for example, an ability to perceive the world holistically, prepare him/her for module teaching of science content, carrying out field classes along the didactic path in accordance with the formula of new reform tasks, preparing students for the use of scientific knowledge as well as the ability to communicate and work with microscope, media and the Internet.

Teacher tasks should be reflected in the content, forms and methods of teacher training. Banach (1997) underlines the need for innovation and research activity aiming at the use of scientific and technological information and the revolution in the humanities. In the report *Education – the national priority* we read as follows: “The deep reform of national education system must be preceded by the thorough repair of teacher training system, with simultaneous improvement and further education of active teachers (...) devising and implementation of a modern education doctrine and improvement of teachers” (Internet).

As early as in 1993 J. Niemiec raised the issue of teacher training in connection with integration processes occurring in Europe, as global problems and phenomena have been reflected in educational contents for several years. It is also important that global problems should not eliminate the contents that are relevant to the given country and region. According to Domka (2001), Polish educational authorities should aim at the preservation of national identity combined with the equipping of students with competence for solving the problems of the whole continent and the co-forming of a harmonious global community.

According to these worldwide tendencies, biology teaching is to assist students in learning about regional and local social, health and environmental problems and solving various civilizational issues (Cichy 2001).

Conclusions

It seems that tendencies regarding changes in teacher training impose the need for developing active methods of training in the various subjects covered by the course of studies, an increase in the flexibility of education through constant education, forming the expected professional skills through raising the status of particular didactics with attention drawn to the role and importance of professional practice at selected educational institutions under the supervision of experts, so that the teacher's competence is formed in conditions similar to labour market requirements and can be monitored continuously. In teacher training quality improvement particular emphasis must be placed on the quality of professional proficiency in practical and multidisciplinary aspects. And so, in accordance with European Union educational policy, an improvement of teachers' professional competence is proposed in respect of its didactic, pastoral, research and innovative functions.

Teacher education must match school reality and educational needs.

Changes occurring in the European Union countries are of considerable importance for the condition and state of Polish education. The new strategy for

teacher training should be of primary importance. Also, due to the approaching low birth rate it seems well justified for Polish teachers to specialize in many subjects, and at least in two of them.

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A Proposal for the Adaptation of the Obligatory Subject “Sciences of Nature I” to the European Credit Transfer System (ECTS) in the Specialty of Primary Education of the Teacher Training School of Cuenca (UCLM)

Introduction

From 1998 with the Declaration of The Sorbonne (combined Declaration for the harmonization of the design of the European System of Higher Education, The Sorbonne, Paris, May 25 1998) and later on with the Declaration of Bologna in 1999 and the declaration of Prague in 2001, the European Union has approached a process of reformation of university teaching, guided towards the construction of the European Space of Higher Education (ESHE). In order to build this space, the European Credit Transfer System (ECTS) has been adopted. This pursues the harmonization of the careers studied for in the different countries of the EU inside the ESHE.

At the moment in the Spanish university system, a teaching credit corresponds to 10 real hours of class. In the ECTS a new system of credits is contemplated. In it, each credit represents between 25 and 30 students’ working hours. These working hours include the class hours and the students’ personal work, which is to say that, all hours the students dedicate to the study and preparation of the subject. This methodology obliges the teacher to consider aspects of the traditionally omitted students’ work at higher education level. Thus a new conception of university teaching that considers all the aspects of the students’ learning is necessary (Castaño et al. 2005).

This paper presents a proposal for the adaptation of the obligatory subject “Sciences of Nature I” to the European Credit Transfer System (ECTS) in the European Space of Higher Education (ESHE). The teaching/learning process based on the constructivist approach is mainly based on students’ personal work guided by the teacher (Gil and Guzmán, 1993; Doménech, 1999).

Characteristics of the subject

“Sciences of Nature I” is an obligatory subject of 6 current credits, corresponding to the 1999 syllabus. It is delivered in the second year of the Primary Education

specialism. It has a total number of 60 hours of teaching and takes place in the first semester, with four hours a week. The teaching activities of the first semester of the Teacher Training School in Cuenca for the course 2004/05 cover the period from September 27th up to December 22nd and from January 9th up to January 21st. Thus, this semester includes 14 teaching weeks, plus the period of exams.

The program of the subject consists of seven parts:

Program

1. Introduction to Physics. Magnitudes and units. Equation of dimensions.
2. Heat and Temperature. Temperature scales. Calorimetry. Heat capacity and specific heat capacity.
3. Effects of heat. Dilation of bodies. Description of changes.
4. Heat and Work. First Principle of Thermodynamics.
5. Second Principle of Thermodynamics. Entropy. Thermal machines.
6. Concept of Pressure. Hydrostatics. Archimedes' Principle.
7. Ideal gases. Kinetic theory.

Objectives of the subject

We have divided the general objectives of the subject into three sections on the basis of their relationship with the three types of content: conceptual, procedural and attitudinal (Huerta Amézola, J and others; 2003).

Conceptual: The main aims of the conceptual content are the following:

1. To improve and make previous knowledge of physics more homogeneous, especially knowledge referring to magnitudes and units, pressure and hydrostatics, and Thermodynamics and Calorimetry. In our opinion all students should know these facts, concepts and essential principles of the above mentioned parts of physics (as it is impossible with 6 credits to embrace them all), and know how to use them appropriately in diverse situations.

2. To make students acquire and use the basic terminology of physics, so that they are capable of expressing them with the required precision in the scientific environment. They should also be capable of establishing relationships among the different concepts and managing the conventions of physics correctly.

3. To show the interrelation of physics with other sciences, especially chemistry and technology.

Procedural: The main aims of the procedural content are the following:

1. To know how to elaborate papers with a minimum formal and conceptual level.

2. To be able to search the information in different sources for writing papers.

3. To acquire communicative abilities in order to make observations, interpretations and reach conclusions.

Attitudinal: The main aims of the attitudinal content are the following:

To raise and to instill in the student those values and attitudes that should be inherent to scientific activity.

A. Personal Development

1. Promotion and critical evaluation of actions trending to the conservation and the improvement of the environment.

2. Critical, ethical and constructive position in connection with those school scientific investigations in which he or she participates.

3. Respect for other people's thoughts and assessment of the exchange of ideas in the elaboration of knowledge.

B. Social Development

1. Solidarity and cooperation in the process of knowledge construction.

2. No acceptance of discriminatory stereotypes pretending to be based on scientific results.

C. Development of scientific-technological knowledge

1. Curiosity, openness of mind and skepticism as the bases of scientific knowledge.

2. Critical position toward the ideas imposed by authoritarian approaches and toward any form of dogmatism associated with scientific explanations of the current world.

3. Assessment of the possibilities and limitations of scientific knowledge in its contribution to the understanding and transformation of the natural world.

4. Rigor and precision in the realization of experiences and in the gathering of information and data.

5. Development of communicative and expression abilities.

6. Assessment of the use of a precise vocabulary and of the conventions that facilitate communication.

Adaptation to the european credit transfer system (ECTS)

At the moment, a teaching credit corresponds to 10 classroom hours. In the ESHE a new system of credits is contemplated, in which each credit represents between 25 and of the student's working hours, including every hour dedicated by the student to the subject. Therefore, within these hours, all the different types of activities carried out by the student are included.

In this proposal we will take a value of 25 hours for credit, and will consider that the current teaching load is 6 credits (four hours per week). This gives us:

$$6 \text{ credits} * 25 \text{ hours/credit} = 150 \text{ hours}$$

Thus, the student should dedicate a minimum of 150 hours to this subject. Out of these 150 hours, 60 hours correspond to class hours in the Teacher Training School and the other 90 hours are the student's personal working hours and other complementary activities.

The distribution of these hours is shown in the following chart:

DEVELOPMENT IN ECTS						
	Activity	Classroom hours	Student work factor	Student personal working hours	Student total working hours	ECTS
Theoretical	Lectures	30	1,5	45	75	3
Practical	Practical teaching class (problems)	14	2	28	42	1,68
	Laboratory practices	6	1,5	9	15	0,4
Individual and group works	Individual work	1	4	8	10	0,8
	group	1				
Tutorial	Tutorial hours	3	---	---	3	0,12
Exams	Realization of Exams	5	---	---	5	0,28
Total		60		95	150	6

Laboratory practice

1. *Practices of measure*

- 1.1. Use of different instruments of measurement.
- 1.2. Determination of the density of a solid and of a liquid.

2. *Calorimetry*

- 2.1. Determination of the specific heat of the tin.
- 2.2. Temperatures of melting and boiling of pure substances.

3. *Buoyancy*

3. Qualitative and quantitative investigation of buoyancy.
- 3.1. Confirmation of the Archimedes' Principle.

4. *Gases*

4. Experimental confirmation of Boyle's law.

Individual work

For the writing of short papers, the teacher will provide the students with materials, in which fragments of classic texts are included. In addition, different articles and book chapters related to the treated topic will be provided. The teacher will help the students during the tutorials, in accordance with the work plan that is detailed in the following paragraph.

These will fundamentally focus on the History of Physics related to the topics contained in the program. It is intended that the students will read a series of classic and modern texts about this matter and carry out work that contemplates the following aspects:

Steps for the work

The work will be carried out in two clearly differentiated phases: Firstly, the selection and analysis of the materials and, secondly, the writing itself. During the first step, students will select the materials they plan to use to write the paper. The portfolio with materials facilitated by the teacher and the bibliography offered in the course guide will be the starting part of the process. In the second part of the work, the writing of the paper, the student (or students' group) will synthesize the results of their readings and will present them in an appropriate structure.

Assessment

1. Methodology

1.1. *Course work*. A maximum of two voluntary papers. These will be carried out in groups of 2 to 4 students, one on a topic proposed by the professor at the beginning of the semester, and the other one on a topic related to the subject and previously agreed with the teacher.

1.2. *Personalized tutorials*. These are voluntary and without restriction in content. They will be scheduled and will be announced at the beginning of the semester by the means established by the university.

2. Types of exam

2.1. *Assessment of theoretical classes*. 2 exams of 1 hour 15 minutes duration, each of them consisting of 15 multiple choice questions. The questions are equally weighted and they should choose at least 10. Four problems (to choose 2) also form part of the exam. The result will constitute 50% of the final mark.

2.2. *Assessment of laboratory practices*. An exam of 2 hours duration composed of 2 problems and 2 questions related to the laboratory practices. The result will constitute 25% of the final mark.

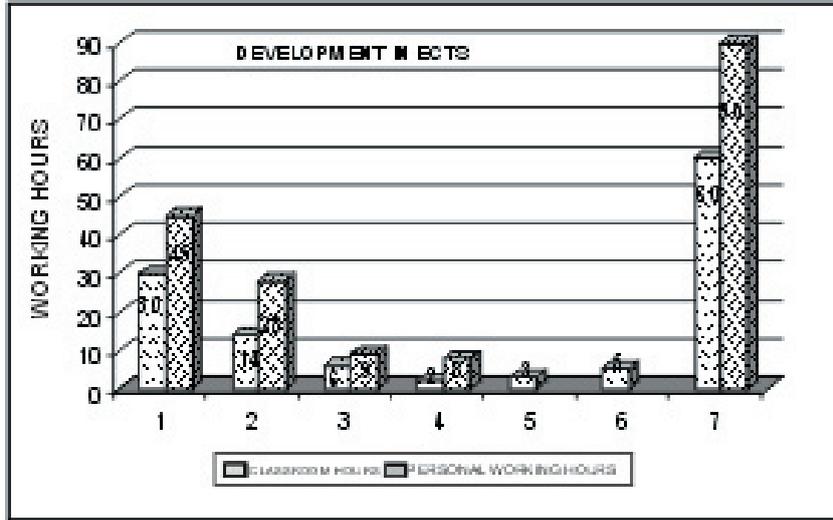
2.3. *Assessment of the course papers*. Their contribution to the final result will be 25% of the final mark, and it will be based on the quality of the students' personal work, on presentations and, in some cases, the public exhibition and defense of them.

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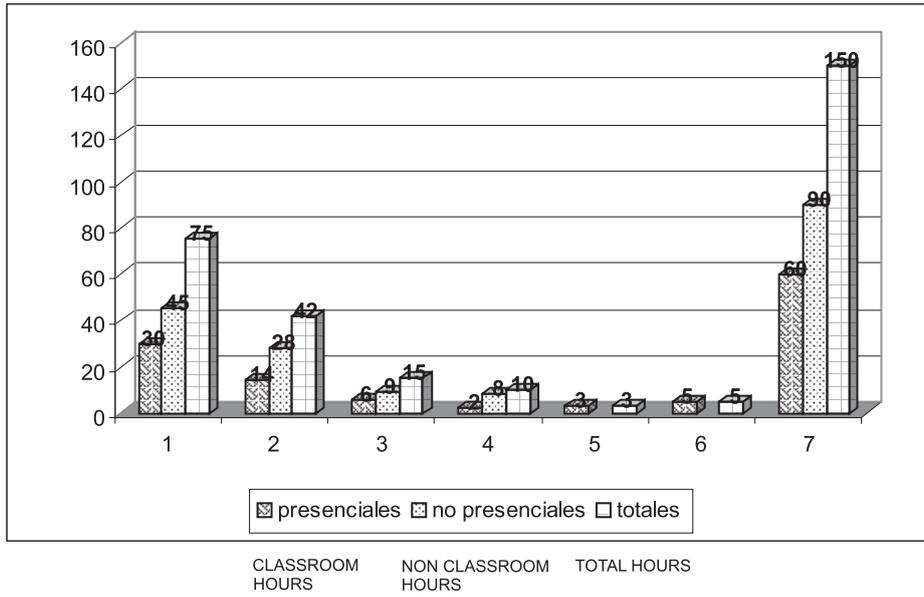
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Annex

Graphic 1



Graphic 2



CONTENTS OF THE SUBJECT “SCIENCES OF NATURE I”		
Classroom hours	Contents	Topic
1 h	Presentation of the subject. Work methodology. Evaluation criteria.	
4 h	Science and Experimental Sciences. The Physical sciences. Physical changes and chemical changes. Magnitudes and units. Systems of Units. Equation of dimensions, dimensional analysis.	1
4 h	Macroscopic and microscopic description of heat. Thermal balance. Measurement and scales of temperature. Heat as a form of energy. Equivalent mechanics of heat. Heating capacity and specific heat. Calorie definition. Calorimetric calculations.	2
4 h	Lineal, superficial and volumetric thermal dilations. Dilation coefficients. Apparent dilation of the liquids. Anomalous dilation of water. Progressive and regressive state changes. Latent heats. Propagation of heat: conduction, convection and radiation	3
4 h	Heat and Work. First Principle of Thermodynamics. Open, closed, adiabatic and isolated systems. Isothermal, isobaric, isovolumetric and adiabatic thermodynamic processes.	4
4 h	Second Principle of Thermodynamics. Reversible and irreversible processes. Entropy and disorder. Thermal machines, refrigerating machines, efficiency.	5
4 h	Ideal gases, macroscopic and microscopic concepts. Laws of Boyle, Charles, Gay-Lussac and Avogadro. General equation of state for ideal gases. Kinetic interpretations of pressure and temperature. Kinetic theory of gases. Third Principle of Thermodynamics. Principle of equipartition of energy.	6
4 h	Concepts of density and specific weight. Measures of pressure. Atmospheric pressure, experiment of Torricelli. Hydrostatic pressure. General theorem of Hydrostatics. Communicating glasses. Force on the bottom of a vessel. Hydrostatic paradox. Buoyancy, Archimedes' principle, applications.	7
1 h	Recapitulation and review of the topics studied during the course. Debates and proposals for improvement.	
30 h		

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A Cross Perspective: Integration in the French and British School Systems

In French, there is a saying that goes 'comparaison n'est pas raison'. As lecturers of English as a foreign language, the authors of this paper are often confronted with higher education students' strong incomprehension of British -and by and large all foreign-cultural traits. It seems opportune then to address the issue of otherness, particularly within today's specific context of growing internationalization: indeed, the dilution of borders and the questioning of national and cultural identities constitute a particular moment in national histories. If many writers (Rawls, 1993; Raz, 1994) have become increasingly aware of the challenges and potential difficulties posed by the existence of diverse cultural groups within national borders, we also acknowledge that cultural diversity does not necessarily mean sharing the values and beliefs associated with host societies and poses therefore a number of problems.

In France and in Great-Britain, identity is acquired and constructed through different and sometimes even antagonistic means. The contrast is striking, going from adherence to inclusion. In France, integration means creating citizens; as Jean-Pierre Chevènement said 'On devient français par adhésion', whereas in Britain, the aim is that all should benefit through fulfilling the requirements determined by cultural specificities. Far from reflecting a common European reality, the two nations exemplify that even within Europe pluralism is varied and approached differently. Roughly, two opposing rationales are at stake here: universalism on the one hand, and differentialism on the other. The huge gap that differentiates both cultural systems of reference can be summed up by this French degree student's reflection when on a research trip in Birmingham:

'... we have all been troubled and shocked finding our identity, our cultural references, our philosophical, political convictions challenged. Some situations are too disturbing.'

Method

In order to put these two rationales into perspective, we are drawing on major landmarks in both nations' cultural and historical development: the 1905 French law on the separation of state and church, and the 1985 Swann report that clearly asserted and

acknowledged the multicultural nature of British society. Obviously, the two references are remote from one another in time and historical contexts, but to us they are still relevant since they indicate fundamental conceptions of otherness in national public spheres, here the field of education.

Our intention is not to adopt a policy-borrowing attitude, but rather to question cultural issues at stake in the current, raging French debate on national identity. It is therefore the object of this paper to expose the contrast between two models and to relate a debate that sometimes obliges us to question the strength of our positions. The very fundamentals of identity -both individual and national- are analyzed.

This paper draws on previous research conducted in Paris and Birmingham, involving degree students in education on the issue of cultural pluralism in the French and British education systems.

The Swann report: Context, rationale and recommendations

Officially referred to as 'Education for all', the Swann Report was presented to the British Parliament in March 1985. It had been commissioned by the Department for Education and Science and was written by a corporate group of authors, under the chairmanship of Lord Swann. The full title of the document is 'Education for All: An Inquiry into the Education of Children from Ethnic Minority Groups'¹.

The report is a comprehensive investigation into the way in which the education service responds to British ethnic diversity; it advocates a multicultural education system for all schools -regardless of institutions, location, age-range or ethnicity of staff and pupils (Griffiths and Hope, 2000).

The report is divided into 16 chapters ranging from conceptual analyses (society, racism, achievement, underachievement, ethnicity and education in historical perspectives) to clarification of multicultural education (presented as a new approach) and finally focuses on a series of recommendations pertaining to language and religion teaching, teacher education and employment of ethnic minority teachers.

For a French reader, the themes addressed within the context of a government report seem, as such, problematic and questionable.

Before going any deeper into the analysis of the report's recommendations, we would like to stress how the very process of such a report can seem unfamiliar to the French. What we are faced with is a full taking into account of specific cultural groups -the report ends with an explicit focus on Vietnamese, Ukrainian, Black Caribbean children, traveller's children etc. - and the acceptance of their marginalization within a supposedly inclusive public national provision, the education system.

A recent government report stated that, for 7.9% of pupils, English was an additional language (DES, January 2000). Even if collecting statistics does not necessarily mean taking action, at least these can be used as indicators that researchers

¹ Education for All. An Inquiry into the Education of Children from Ethnic Minority Groups, London: HMSO, 1985.

could use to suggest transformations. Equivalent statistics are not available in France² since no data based on ethnic origins are tolerated. Even if specific provisions do take into account special educational needs, of non French speakers for example, the children entitled to such provisions are identified according to their administrative (i.e. foreigners) and socio-economic status. Yet local provisions deal with migrant children, the CEFISEM (but these do not cover the whole national territory), whose role consists in sorting out children according to their initial academic level and dispatching them, regardless of their place of residence, into schools that have special linguistic integration classes -isolated from the others- for learners of French as a second language.

The issue of language, central to both identity and education, is then clearly tackled differently: both nations posit a common official school language – French, English and/or Welsh – but the strategies for its acquisition vary, and indicate distinct and unambiguous relations to inclusion. In England inclusion in ordinary classes prevails³ – with classroom assistants etc. and sometimes bilingual teachers – whereas in France non French speakers are barred from classrooms unless they possess some basic French. Depending on the age of arrival, time spent in these integration classes⁴ can hinder educational perspectives, as in the 3rd year of secondary education a second foreign language (mostly European) is studied. As those who come from integration classes very seldom studied a first European language this often leads to directing them to second rank institutions supposedly on the grounds of insufficient previous mainstream schooling. This demonstration confirms the difference between British and French conceptions of linguistic integration. Whereas in England the inclusion of bilingual pupils in modern language classes is seen as inevitably broadening the range of language attainment (DES 1990, p. 84), the converse is true in France, where this is considered as, and is a sign of disadvantage.

Going back to the Swann report, its origins are also instructive: racism was identified as having a causal effect on the educational experiences of ethnic minority children, particularly on black Caribbean boys. The report plainly accuses the British school system of racism, although it designates it as institutional but non intentional. Having said that, a number of recommendations were suggested; even if these found little support from central government, except for limited funding for the in-service training of teachers, it did provide a fulcrum for debate and conferences on multicultural issues. For a lot of researchers, the Education Reform Act (1988) ended the concept of ‘education for all’, based on the assimilationist nature of the newly introduced National Curriculum, school-based financial management and weakening of the Local Education Authorities (Griffiths & Hope, 2000). However, multicultural educational initiatives still have a place within schools as the 1999 MacPherson Report also recommended:

² In its 2000 census report, the INSEE (the French national office for statistics) only mentioned that 7.4% of the legal population was foreign born. Immigration was covered in terms of geographic origins (EU vs. non EU) and socio-economic criteria. In the chapter dealing with educational achievement, the operational categories were: immigrants (EU), Algerians, Moroccans, Africa other countries, total immigrants. http://www.insee.fr/fr/ffc/chifcle_fiche.asp?ref_id=NATSOS07236&tab. Répartition de la population immigrée selon le diplôme et le pays d'origine, 2003.

³ It would be interesting to develop the notion of special educational needs (SEN) in both countries; France is timidly starting the process of bringing handicapped children into ordinary schools, for example.

⁴ At elementary level they are called CLIN and at secondary level, CLAD, CLA etc.

the National Curriculum in schools should be adapted to reflect society by valuing cultural diversity.

The Swann report established the reality of racial prejudice and discrimination and it strongly recommended avoiding race, culture, or gender bias.⁵ One of the ways advocated was enhancing cultural awareness and pride and this is still applicable today, in most school rituals and curricula.

The major recommendations consisted in:

1. A revision and adaptation of the school curriculum with particular attention to the hidden curriculum and paying attention to potentially biased curriculum content and institutional posture.

Let us briefly go back to the not so remote times when French Caribbean children had to learn 'Nos ancêtres les Gaulois'⁶: a clear denial of cultural identity and an unambiguous confirmation of a Eurocentric curriculum. France has a particular – and exacting – constructed representation of its history which hardly tolerates dissent.⁷ Similarly, the Algerian War of Independence and World War II French collaboration with the Nazi regime are still very faintly –if at all- tackled in history programmes.

2. Including a multicultural education module in teacher training – PGCE year.

Although this has been suggested, markedly by a prominent National Education Inspector (Ragenommanjato, in Poyraz), we have no knowledge so far of such a systematic module in teachers' training. However, teachers' training does include a short unit on special educational needs, based on a socio-economic perspective.

3. Promoting the staffing of minority teachers, to act as role models.

Although the issue was recently raised in France, where hiring procedures differ significantly from England, France prefers sending ethnic minority teachers – still largely insignificant in numbers – into 'non ethnic' zones. This is validated by the belief that special action is needed in special geographical zones, by special social groups, but does not apply to local identity. If such were the case, ethnic segregation would be accredited, fostered and strengthened, which cannot apply in the Republic. The issue of cultural proximity⁸ would here again be worthy of study in both contexts.

4. Gratifying and valuing minority cultures in all aspects of school life and curriculum.

One of the major differences between the two nation's national curricula is of course religious education, as will be developed further. If the Christian character of religious education has systematically been emphasized in recent British acts, statutory requirements recommend that religious education "must take into consideration the major religious traditions represented in Great-Britain" (Religious Education, 1995), based on children's own awareness of family and self. Thus, Buddhism, Christianity, Hinduism, Islam, Judaism, and Sikhism are dealt with, falling under the general title of multicultural education, widening children's horizons and making them understand what lies "beyond the province of their own upbringing" (Mitchell, 1993, p. 187). In relation to religious education, British schools encourage the wearing of traditional

⁵ School examination and assessment council, 1989.

⁶ Our ancestors, the Gauls.

⁷ For that matter, refer to Pierre Nora's exhaustive analysis of France's symbolic focal points of memory: Pierre Nora, ed., *Les Lieux de mémoire*, Paris: Gallimard, 1984.

⁸ Cultural vs. Ethnic. Notion of class culture rather than ethnic culture.

clothing, as supporting and promoting pride in one's own culture. Hence, both children and staff would normally display scarves, shalwars, etc. to the great bewilderment and shock of most French observers.

Generally speaking, most of the recommendations would provoke broad disapproval in France. The employment of minority teachers, for example, is assumed to encourage the ethnicization of the profession, which could potentially lead to seclusion and isolation and ultimately to segregation (Mathieu 2004).

Beyond controversy, what seems crucial to us is children's personal autonomy and the capacity to form, revise, and rationally pursue a conception of democracy (Rawls 1993). However, this appeal to autonomy raises the issue of children's role as citizens, leaving them, in their capacity as private individuals, free to subscribe to any lifestyle compatible with education and freedom. More than the reinforcement of beliefs, values and identities which the child brings to school (Swann 1985, p. 10), multicultural education should really be perceived in terms of 'cultural enrichment'.

The French law on secularity and conspicuous religious symbols is an amendment to the French Code of Education banning students from wearing conspicuous religious symbols in French public primary and secondary schools. The law expands principles existing already in French law, especially the constitutional requirement of the separation of state and religious activities. There is no mention of any particular symbol, though it is considered by some to specifically address the wearing of headscarves by Muslim schoolgirls.

The bill has passed France's national legislature and was signed into law by President Jacques Chirac on March 15, 2004. It came into effect at the beginning of the new school year. The full title of the bill could be translated as: "Law, as part of the implementation of the principle of *laïcité*, on wearing symbols or clothing that indicate religious adherence in publicly-operated schools, *colleges* [11–15 years] and *lycées* [16–18 years]." The law is very brief. It says, in addition to technical dispositions: "In public elementary schools, junior high schools and high schools, students are prohibited from wearing signs or attire through which they exhibit conspicuously a religious affiliation. Note that the internal regulations [of the schools] require disciplinary procedures to be preceded by a dialogue with the student."

Two important points must be taken into account:

1. Only public primary and secondary schools are concerned. It does not concern other public spaces, nor does it concern public universities or other establishments of higher education.

2. The French government highly subsidizes private elementary and secondary schools, even those affiliated to religious organizations, that apply the same curriculum as the public schools, with the same academic standards, and that do not discriminate on grounds of religious affiliation nor make religious education compulsory. As a consequence, families who do not wish to abide by the normal disciplinary rules of public schools can use private schools at moderate cost.

History

Since 1905, France has had a law requiring the separation of church and state, prohibiting the state from recognizing or funding any religion. Schools in France which receive all their funding from public sources must not, by law, promote any religion. They should remain equally accessible to children of any, or no, faith. For example, even though a majority of the population nominally professes Catholicism (although far fewer regularly practice Catholicism), state-funded French schools have no communal prayers, religious assemblies, or Christian crosses on the walls. The Constitution of France says that France is a *Laïque* (roughly, secular) Republic. For many years school administrators have, however, tolerated schoolchildren wearing symbols of their various religions, such as a Christian student wearing a cross, or a Jewish boy wearing a yarmulke. However, there was some leeway and uncertainty in these matters. Since the late 1980s, increasing numbers of young Muslim girls have worn headscarves in schools. Many people find crosses and yarmulkes acceptable, but not these headscarves, for a variety of reasons. The issue has divided France, at least in some circles, and debate has raged for 15 years. The issue has wider implications than the mere wearing of headscarves, which contributed to the complexity of the debate. Some Muslim students have refused to attend certain classes, such as biology classes, whose teaching they disagreed with; or they have refused to attend physical education classes, or insisted on attending them in garb judged inappropriate for the activity. On some occasions, Muslim girls failing to wear the veil have been threatened by Muslim males who felt their lack of modesty was inappropriate. The majority of French people welcome the 2004 statute, if for no other reason than the fact that the French government has finally acted, taken the decision out of the hands of individual school principals, and created a law at the national level.

Complex reasons may influence whether an individual either supports or opposes this amendment in favor of *laïcité*. They range from upholding the principle of *laïcité*, ensuring sex equality, preventing girls from being pressured into wearing the headscarf, or a desire to see the Muslim community 'assimilated' into French society on the one hand; to upholding the rights of individuals of any religion to dress as their religion requires or opposing what may be seen as discrimination against Muslims on the other.

Recent events and the Stasi Commission

In July 2003 the French President Jacques Chirac set up an investigative committee (la Commission Stasi) to examine how the principle of *laïcité* should apply in practice. It consisted of 20 people headed by Bernard Stasi. The Stasi Commission published its report on December 1 2003, ruling that ostentatious displays of religion violated the secular rules of the French school system. The report recommended a law forbidding pupils from wearing "conspicuous" signs of belonging to a religion, meaning any visible symbol meant to be seen. The Commission recommended allowing the wearing of

discreet symbols of faith such as small crosses, Stars of David or Fatima's hands. The previous system had left the decision to individual schools and their principals, some of whom chose to exclude Muslim girls who refused to remove their headscarves, though the majority did not.

The investigation of the Commission originated in a long debate over headscarves that has divided France since 1989, when "l'affaire du foulard" ("the headscarf affair") saw two young girls expelled from their school in Creil, near Paris, for wearing headscarves. However, as the Commission noted in its report, the debate covered more than the issue of the veil. The Commission's report emphasized that publicly-funded schools in France should transmit knowledge, teach students critical awareness, assure autonomy and openness to cultural diversity, and encourage personal development. Schooling aims both to train students for a professional career, and also to make them into good citizens of the French Republic. The report states that such a mission presupposes fixed common rules, like gender equality and respect for secularity.

However, since the 1990s, many schools have fallen short of this ideal. Many cultural clashes have occurred, leading to violence, threats to individual freedom, and problems with public order in general. Most of the debate has centered on hijab – the Islamic dress code, which may include a veil for women – but more generally, on the wearing of religious or political symbols (such as Nazi symbols) in schools. The wearing of veils in school started comparatively recently in mainland France (since the late 1980s), and has become the focus of the conflict. The increasing number of visible headscarves has been attributed to a rise in extremist activity in France, in particular in poor immigrant suburbs.

The Commission identified the following positions with regard to the wearing of the Muslim veil:

For those wearing it, the veil can have different meanings. The wearers may have exercised a free personal choice to wear the veil, or else external pressure may have forced them to do so. Most French people find this idea of constraint or pressure particularly intolerable when it relates to young girls (some girls start wearing a veil before the age of 11). For those not wearing it, the meaning of the Islamic veil stigmatized the young girl or the young woman as responsible for attracting male desire.

For the whole of the school community, the fact that some students wear a veil very often becomes a source of conflict and division. Many teachers resent the veil's visibility: they believe it goes against the goal of schools to function as places of neutrality and of critical awareness. Some people also see the veil as a threat to the principles and values that the schools must teach – for example "laïcité", but more importantly equality between the sexes. Many French female teachers, in particular, hold this position. As a consequence, school representatives want a clear framework, a national policy, and a decision taken by the country's political authorities following a public debate. Most school representatives, principals, and teachers want a law forbidding all visible symbols, so that school principals alone need not determine whether a symbol worn by a pupil gives offence or not. The representatives of the main religions and leaders of human rights organizations have expressed several objections to a law banning the wearing of religious symbols. They believe it will lead to the stigmatization of Muslims, exacerbate anti-religious sentiment, promote the image of a France that restricts personal freedom, and encourage Muslim girls to drop out of schools if they feel forced to choose between schooling and their faith.

Recently however, in addition to the issue of the veil, tension (mostly over religious issues) and even violence in schools has increased in France. Many school representatives have faced these issues alone for 20 years now, often in difficult areas (officially recognised as such), already plagued by student violence and rejection of the principles of education. They have highlighted the tensions provoked by the claims of religious and group identities, like the formation of gangs, for instance. They express concerns about the frequent violence toward themselves as well, in particular toward female teachers. Local associations also frequently call for help for young girls and women, daughters of immigrants, living in problem areas. They see these girls as the *silent majority* and as victims of pressures within the family or within the neighbourhood.

Local associations noted, in particular, that a lot of pressure is exerted upon on young girls to force them to wear the veil – pressure which did not occur to the same extent 20 years ago (even though France had a Muslim population of a similar size at that time). The girl's families, in particular their brothers (more often than their fathers), sometimes force them to dress and act in ways they do not choose to of their own free will. This view of the veil receives particular emphasis from feminists who campaign to defend the right of women to go without the veil – if they wish – without losing their status as “decent” women, and not just to be seen as sex-objects for men to abuse freely for their pleasure. The Commission also noted that some pupils refuse to attend school because of the presence of teachers of the opposite sex, or refuse to attend certain classes (such as gymnastics or swimming lessons). The Commission said that the Republic must face this situation, and that schools must remain a place of freedom and emancipation for women. A section of the report which received less media attention recommended that the school system stop acknowledging Christian holidays exclusively, that it celebrate Yom Kippur and Eid each year, and also that it ban conspicuous symbols of political affiliation. The French National Assembly has not taken up these proposals.

In December 2003, President Jacques Chirac decided to act on part of the Stasi report. The President had formed the Commission because he felt that wearing religious symbols in schools had become no longer just a question of freedom of conscience, but one of political order. On February 10 2004 the lower house voted by a large majority in support of the ban, which includes the caveat that the ban will be reviewed after it has operated for one year.

The law will apply in France and its overseas territories (which France administers as a part of its metropolitan territory), but Overseas Countries and Territories with a large Muslim community will receive some exemptions. For example, Mayotte girls may wear small bandanas (*salouva*) and light veils (*kishall*).

As with all rules in the Republic, schools should use sanctions as a last resort.

Interpretation and public reaction

The law is written in broad, vague terms. As a consequence, much will be left to the interpretation of the administrative and judicial authorities:

- the Minister of Education will issue *circulaires*, or instructions for its services; it seems that large crosses, full hijabs or yarmulkes would be banned, while small symbols such as small Stars of David or crosses in pendants would not be;
- headmasters will have to judge whether particular attire is or is not acceptable with respect to the law;
- if necessary, families will go to administrative courts.

The initiators of the law essentially targeted two items of clothing: the headscarf and the veil (French: *foulard* and *voile* respectively). However, the law does not mention any item by name, and the actual scope of its application remains unclear. The headscarf covers the hair, ears, neck, and sometimes the shoulders, but not the face. Most Muslim girls who cover their heads in school wear such a headscarf. More rarely, girls may also wear a complete dress covering their body (*djelbab*). The Afghan burka, which covers the entire body except for a slit or grille to see through, occurs more commonly as the dress of an adult woman than that of a schoolgirl. A recent controversy occurred when a mother who wore a full burka became a representative of parents in a city school. Her participation in school deliberations while entirely covered was highly criticized, but finally tolerated.

The proposed ban has attracted a high level of controversy. On February 14 2004, the Associated Press reported that “Thousands of people, many of them women wearing headscarves, marched in France ... to protest a law banning the Islamic coverings and other religious apparel in public schools.”. However, it must be pointed out that thousands of people nationwide constitute, by French standards, a fairly small protest. Polls suggest that a large majority of the French favour the ban. A January 2004 survey showed 78% of teachers in favour. A February 2004 survey for *Le Parisien* showed 69% of the population for the ban and 29% against. For Muslims in France, the February survey showed 42% for and 53% against. Among surveyed Muslim women, 49% approved the proposed law, and 43% opposed it. While all major political parties were somewhat divided on the issue, all major parties supported the law. Jean-Marie Le Pen from the Front National, a party advocating anti-immigration policies, does not support it.

Arguments against banning headscarves from schools include:

- if a girl decided to wear one freely, the ban might force her to choose between schooling and her faith.
- if parents force a girl to wear a headscarf they may pull her out of the public school and, for instance, send her to a koranic school.
- if a girl wears one because of peer pressure and fear of harassment, she will perhaps feel less pressured or less afraid after the ban.

Some have seen the ban as targeting the Muslim population of France – the nation’s largest religious minority. Many Muslim leaders have expressed their opposition to the ban, as have some Jewish, Christian, and civil liberties groups. The lawmakers admitted that they did not take into account France’s small Sikh population, whose males have a religious obligation to cover their heads, and who may also be banned from wearing their covering. Some Muslims also argue that hijab forms a part of a cultural tradition rather than part of a religious tradition and as such does not conflict with the tradition of *laïcité* in French schools.

French Jews have not expressed significant opposition to the law. Some think that Jewish people hope that such a law will prove a step in the direction of less gang violence toward Jewish boys, such as has occurred in recent years.

Some critics have raised a legal point: they see the law as incompatible with the European convention on fundamental human rights. The Commission dismissed this argument. The Commission considers that the expression of an individual's religion in the French state has to comply with the basic rules regarding the secular nature of the state and has to comply with the requirements of equality between the sexes and the safeguarding of the rights of minors. Similar debates on the education of girls in headscarves have long raged in secular-yet-Muslim Turkey. The European Court of Human Rights upheld the laws of Turkey, which are more restrictive than the French law; it therefore seems highly unlikely it would declare the French law contrary to the Convention.

The law came into effect on September 2, 2004, with the new school year. According to statistics from the French government, out of 12 million students, only 240 young women attempted to come to school with a veil, 170 agreed to take it off, and 70 conciliation procedures were started. 2 female *collège* (junior high school) students, aged 12 and 13 respectively, were the first to be expelled under this law for refusing to take off their headscarves on the 20th October 2004, from a school in Mulhouse, Alsace. As of the 25th of November 2004, 30 students have been expelled under this law, 4 Sikhs because of their turban and 36 Moslems because of their headscarf.

In the light of what has been presented, we can appreciate how culturally different England and France appear. Should the fight against ethnic and cultural discrimination entail a 'racialization' of social relations as seen in England or should it take up a particular 'culture blindness' towards minorities as seen in France?

The debate remains open but we can see how our respective conceptions of tolerance and integration conform to historically constructed representations of minorities.

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International Students in Spain: Training Challenges for Spanish Lecturers

Following the European Higher Education reforms finally drawn up in the Bologna agreement and a HE globalisation trend, Spanish universities are facing structural reforms which intend to effectively update and improve our university system.

In order to better understand the foundations on which a European-led Spanish university is being rebuilt, we will first need to analyse higher education traditions in Spain.

The objectives set out in the Bologna Declaration are based on three main pillars:

1. Student-centred training,
2. Employability,
3. Europe-led convergence framework (mobility initiatives, degree recognition, ECTS).

In this paper, we will concentrate on the implications of a student-centred perspective as we understand that this approach sets the foundations for a multi-culturally aware teaching and learning environment. Analysis will be carried out from a structural review contemplating legal and managerial factors in brief and it will especially focus on the influence of these structural reforms on the everyday teaching and learning experience.

New trends in teaching and learning involve a clear shift from a knowledge-centred to a competence-centred paradigm, where student learning outcomes are prioritised. The student role is now expected to be the key to the learning process. Modern cognitive approaches are based on individualised training in order to improve skills acquisition and to develop lifelong autonomous learning. Several European initiatives in education at all levels highlight the importance of this new student-centred educational drive and HE reforms openly define a student-centred training framework.

For example, European student-centred approaches include the new concept of workload, materialised in the ECTS. ECTS implements two priorities in the European convergence process. First, ECTS concentrates on the student workload rather than on lecturing hours. Hence, the system complies with the idea of focusing on student input rather than teacher output. Second, ECTS is a proper means of promoting widespread student mobility by establishing a supranational credit system that enables credit transfer and recognition (Bologna 1999; Prague 2001).

A student-centred approach also involves a greater emphasis on student mentoring and advice services. This point is frequently neglected and, disappointingly, the European recommendations include very few and too vague guidelines relating to the implementation of student information and orientation services. Experiences in HE environments like the British one, where learning-outcome led frameworks have been in place for quite a few years already, show that a student-centred system needs to be accompanied by an appropriate network of accessible contact points between the institution and the students. Hence, well-established mentoring schemes are in place in the UK, together with a range of other working initiatives which vary from Personal Development Planning or customised career services to special learning and financial needs agencies.¹ This way, students are offered the possibility of being well-informed about all aspects of the training curriculum they are following, while enjoying easy and open communication channels with their trainers and their institution, so promoting significant training processes and a more efficiently personalised service.

Furthermore, a student-centred approach defines the training strategies applied in a classroom environment. The challenges consist in leaving behind old-fashioned delivery methods based on sheer information transmission in order to advance towards more practical and constructive teaching methods. This change in the concept of knowledge acquisition makes much sense, bearing in mind the open access to knowledge we enjoy in the Information Society in which we live. Consequently, information storage is not such a valuable capability now, while active and critical information processing proves to be an essential skill. This way, student assessment should concentrate on practical skills – what the student is able to do – rather than in purely theoretical knowledge.

Finally, a student-centred higher education is aware of issues which were frequently neglected before and allows for personalised attention to the individual stresses, socio-cultural differences and diverse background profiles in a group of students. This is due to several factors, from the democratisation of university access to immigration and exchange programmes. Student multiculturalism is now a reality in Europe, not only as a result of the Socrates-Erasmus programme, but also due to a proliferation of other non-national profiles. Apart from the possible different socio-economic backgrounds in a group of students, student group compositions are now far more complex than before, as they might include individuals matching the following categories:

- Socrates-Erasmus exchange students
- Free-movers within the EEA
- Foreign students studying a whole degree programme abroad
- Students taking part in supranational undergraduate and graduate joint programmes
- Foreign doctoral students (e.g. more than 1000 Moroccan students at the *University of Granada* alone)

¹As pointed out by some scholars and trainers in the UK, mentoring and orientation services are not ideally implemented and raise a degree of dissatisfaction in some sectors of academia, among other valid reasons, for augmenting teacher responsibilities and work hours without always showing convincing results (i.e. Hussey, T et al. 2001). However, we consider that the virtual absence or practical inefficiency of these – often non-existent – communication services, as it is the case in most Spanish HE centres, is extremely worrying and counterproductive, hence the generalised and simplified positive assessment of the British system in this particular context.

- Students proceeding from third countries (overseas students)
- Students belonging to a first generation of immigrants

In the light of these new profiles, training strategies must take cultural differences into consideration. First, specific strategies must be developed in order to respond to personal student needs in general. Second, multiculturalism triggers different intercultural relationships in the classroom that must be understood and, in some cases, are able to enrich the teaching and learning process.

Little has been done so far in order to tackle multicultural classroom environments. To date, there are many studies and reports which focus on structural reform but, disappointingly, not much has been written or planned in order to optimise a multicultural teaching setting. European documents concentrate on topics like mobility financing, exchange students welcoming committees and counselling services, etc. Although these important topics complete and support the learning and teaching experience, we miss greater interest in the implications of a multicultural learning and teaching environment at university level.

The main question here remains whether Spanish universities are ripe for all these reforms. Great efforts are being made by all universities in order to adapt to European standards and new approaches to Higher Education. Legislation and government recommendations towards structural reform in universities have already been issued or are underway. Most HE institutions in Spain have raised debates and awareness initiatives in order to update lecturers' views on teaching and learning challenges within the new European framework. However, some of the main points conforming to the non-evolutionary Spanish HE tradition are still defended by certain sectors of academia.

It seems that HE institutions in Spain were always reluctant to implement substantial qualitative reforms in terms of teaching and learning as well as to question the role of academics and students (Pérez-Díaz et al, 2001: 350; Michavila et al, 1998: 40). Changes were usually rather of a quantitative and organisational nature only. For example, the main reforming trend in the recent history of Spanish universities is that of a clear democratisation process, with a massive increase in student enrolment which is often considered the most impressive and successful enlargement in the developed world². In this way, Spanish universities have adapted to political democratisation very quickly, so responding to new social needs. Other reforms had to do with teaching staff recruitment methods and other organisational legislation at the managerial level. However, few advances have been made as far as training methods are concerned.

In order to better understand the reality of Spanish learning, we should review qualitative trends in higher education in the light of history.

University teaching methodology in Spain has been traditionally influenced by two factors: a positivist approach to knowledge acquisition and an exclusive access to that knowledge by a small number of select scholars in an elite university sector that only started to democratise around 1960. Teaching approaches were (and in many cases still are) based on knowledge transmission and the student role was frequently limited to receiving and storing information chunks.

² Universidad de Almería. *A Guide to Higher Education System in Spain*. (On-line document, page 7) at <http://www.ual.es/Universidad/relint/archivos/Higuer%20education%20system%20in%20Spain.pdf> (17.04.05)

This way, traditional higher education in Spain can be clearly defined as teacher-centred, or rather knowledge-centred or subject-centred.

Curricula and syllabus design has traditionally been led by teaching goals rather than learning outcomes. Curricula are not very flexible, with one-year subject modules and strict evaluation systems marked by very traditional examining strategies, leaving little modular choice and increasing exam pressure for students. Furthermore, curricula cannot be autonomously defined by each university or school as they have to adapt to national degree specifications. For this reason universities have little freedom when it comes to planning their courses.

A traditional hierarchy of lecturers and an outdated lecturing methodology helped in establishing an insurmountable communication gap between lecturers and students. Besides, the positive democratisation process had the counter-productive effect of leading to a mass university. Today groups are severely overcrowded in many cases, so that attention to individual learning needs is almost impossible. Efforts in this direction have often been limited to personal initiatives by some keen lecturers, who are bound to deal with bottomless lists of students and high dropout rates, especially in the early years.

Little module flexibility, lack of communication channels and overcrowded classes are crucial problems for incoming foreign students.

In addition to this, democratisation and access-opening processes led to a heterogeneous student population of diverse socioeconomic backgrounds, which presents very specific individual learning needs. But, as we already explained, due to deeply-rooted traditional teacher attitudes and insufficient resources, there have not been effective policies towards a more effective individualisation of the learning experience so far. This is also an important obstacle when it comes to mobile students' integration.

In terms of orientation services for national students, every university generally offers career advice services, but in most cases they are understaffed and overwhelmed by high demand³ and their services cannot be customised to the different undergraduate programmes in place. As a consequence the information and orientation advice available is rather general and it does not respond to specific undergraduate needs. As far as foreign students are concerned, there are advice services in place for Erasmus students and other exchange programmes, though first analysis shows that the orientation offered is rather of an administrative nature (credits, timetable, recognition schemes) than an answer to specific learning issues.

Mentoring and tutoring systems in Spanish public higher education have just started to settle, having encountered many obstacles on the way, as some academics do not totally agree with the new role of learning facilitator rather than that of a knowledgeable authority. There are very few examples of previous provision involving systematic personal development initiatives or socio-cognitive approaches to the individual learner, excluding some private institution services. Therefore, it might be difficult to convince academics of the importance of the new student-centred system and associated topics like multiculturalism.

In contrast with this, some lecturers and researchers are showing a growing interest in student-related topics like multicultural issues. For example, the TeMCU project

³In the case of the University of Granada, for example, with a total of approximately 60,000 students, there is only one orientation service office which is clearly insufficient to meet student demands.

(Training Teachers for the Multicultural Classroom at Universities), probably the first systematic and wide-range attempt to gather feedback and register attitudes towards multiculturalism in the classroom, analyses and includes perceptions and views on Erasmus multiculturalism in a number of European countries (UK, Ireland, Cyprus, Spain, Slovenia) including all actors (students, lecturers, coordinators), with the purpose of generating a Teacher Training Module to enhance teaching skills in a multicultural environment.

This initiative continued and amplified the work of Tsokaktsidou (2002), in which she first questioned the multicultural environment implications for Erasmus exchange students in the School of Translation and Interpreting at the University of Granada in Spain. Her research project deals with the influence the presence of foreign students has on translation classes in the faculty as perceived from three different points of view: the lecturers' point of view, the permanent students' perspective and the foreign students' perception. She correctly predicted that the topic of the multicultural translation classroom will gradually gain in importance, in the light of several factors already mentioned like the European encouragement of student mobility, globalisation, Europe without barriers, immigration, etc.

In this line, we find another study of a project dealing with teaching and learning in a multicultural university. Morón (2005) is presently doing her doctoral research on the scope and relevance of the ALE programme, a joint programme in which universities from Spain, UK, Germany, Ireland and France cooperate to offer a European Applied Languages Degree which incorporates two years abroad.

Furthermore, there are an increasing number of joint programmes in which Spanish universities are taking part.

All of these reasons lead us to believe in the importance of the European drive, as it is an excellent opportunity to introduce deep changes to some of these stagnant problems in Spanish higher education. Thanks to European reform and the new learning approaches, things are rapidly changing and some forgotten topics are finally welcomed to the negotiating table. For example, in order to engage in a student-centred approach to higher education, Spanish universities have been implementing in-house training on mentoring and tutoring strategies (*Planes de acción tutorial*), which have the potential to improve assistance to mobile students as well if lecturers' attitudinal changes are achieved. Though difficult to accomplish, attitudinal changes on the side of the lecturers are urgently required and resources are being devoted to this purpose, though maybe not as many as we would wish. HE institutions have seen the importance of raising awareness of the negative effects of insufficient communication schemes between trainers and trainees. The university environment is finally being questioned, with the purpose of implementing a more student-friendly and accessible learning structure.

We should also mention that to date there has not been specific teacher training to become a higher education lecturer in Spain. Nevertheless, teacher recruitment processes are being debated now and many agree that specific teaching qualifications should be better valued during selection processes (Kelly, 2005). New legislation is being drafted and we hope to see some positive changes in this sense. More innovative training measures like the TeMCU project should be put into place in order to facilitate improvement in teacher-specific skills and to avoid some historical problems regarding selection processes and teacher qualification.

Learning and teaching innovation and research are also being promoted by HE institutions (i.e. *Planes de innovación docente*, university-promoted projects which intend to innovate and improve unsatisfactory aspects of HE) while new learning and teaching professionals are injecting Spanish universities with renewed motivation and ideas. Teaching staff mobility programmes also help in widening and enriching the trainers' perspective. All in all, there are reasons to believe that sooner or later resistance to change and adaptation to students' reality will be left behind.

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TeMCU: Training Teachers for the Multicultural Classroom at University

Project objectives and intended outcomes

The main objective set by the TeMCU group is to promote better teaching practice among university staff who receive incoming European exchange students. The final product of this research will be a training module, helping to enhance the skills of university teaching staff who receive incoming European exchange students.

Moreover, the following secondary objectives have also been set:

- To contribute to improving the learning experience of exchange students in host institutions
- To contribute to improving the teaching experience of teachers teaching exchange students in mixed groups with home students
- To identify the main problems encountered in the multicultural classroom by teaching staff and exchange students
- To raise awareness within universities regarding multiculturalism
- To improve the level of multicultural competence of all those involved in university education
- To promote continuous staff training for multiculturalism
- To describe current attention for diverse student groups in participating universities
- To describe exchange students' specific needs in the classroom
- To identify teaching staff needs when teaching diverse groups made up partly of exchange students
- To identify best practices when teaching exchange students at university
- To promote multicultural education.

Definition of the object of study

Before embarking on this challenging initiative, TeMCU members highlighted the importance of defining their object of study, as many different approaches can be adopted when dealing with multiculturalism and multicultural or intercultural

education. In this respect, at the first plenary meeting the group reached the following agreement on “multiculturalism” as understood in the context of this project. Unlike previous approaches to multiculturalism, which have emphasized marginalized groups and their integration into the dominant, majority society (in the US racial issues, in Canada minorities, in Europe immigrant groups), this project will look at different kinds of (voluntary) border-crossing, and include a positive appraisal of cultural mobility, giving rise to increased cultural sensitivity. Issues such as language barriers, culture-bound teaching and learning styles, expectations, cultural meanings, academic norms, concepts such as success, competition, academic ethics, plagiarism and so on, will all be addressed in the study.

Partners

The project was initially proposed by the University of Granada as a joint initiative by two research groups. Firstly, the AVANTI Research Group from the Department of Translation and Interpreting, specializing in translator training. Several members of this group have had considerable experience in the setting up and running of complex international programmes and for this reason had particular interest in studying student mobility as an academic phenomenon. Within the group, several postgraduate dissertations related to the subject have been completed or are underway (Tsokaktsidou, 2002 and in progress; Morón, 2003 and in progress; Soriano, in progress). The expertise necessary to launch the proposal was completed with the AREA Research Group, from the Department of Education and School Management, where previous work on teacher training and multicultural education had been carried out. The international team was completed with partners who contribute strong and longstanding experience in the different areas involved in the project: international mobility programmes and their management, teacher training, multicultural and intercultural education, new technologies, educational research. Two of the institutions have been working with Granada since the 1990s on a complex triple-award mobility programme, Applied Languages Europe, and thus share a long experience in the field of mobility programmes and exchange programme management: the University of Limerick (Ireland) and Liverpool John Moores University (United Kingdom). The fourth member is the University of Ljubljana (Slovenia), a former Tempus partner. Finally, and again representing a new EU member, the University of Cyprus, with considerable experience in the field of multicultural education, is our fifth member institution. The group is in itself multicultural and multilingual (although our lingua franca is English), and thus strongly aware of the issues involved in international student mobility. The major areas of expertise required to obtain the desired outcomes are well represented in the team, and can be summarised as follows: international programme management and coordination (UGR, UL, JMU, ULJ); design of materials for teacher training (UL, JMU, UCY); multicultural education (UGR, UL, JMU, UCY, ULJ) and design of computer-based materials (UGR, JMU, ULJ).

Research methodology

The project has two main stages: needs analysis and module design. For the needs analysis a combination of quantitative and qualitative methods has been applied. Focus group meetings have been held with different groups affected by student mobility (teachers, mobile students and International Relations administrators/decision-makers) at each institution. On the basis of these findings, questionnaires for each of the three groups have been drafted and piloted, and data from these is currently being analyzed. As a final element in the needs analysis (which will also provide material for the module itself), semi-structured interviews are being carried out with students and teachers at each institution. Further details of the methodology are given in the paper presented at this conference by Marián Morón, also of the TeMCU team.

The module design is to be based partly on the results of these surveys and interviews, and partly on the wide-ranging prior experience of the project team in international programme management and teaching. In the design, the team will follow a systematic curricular design approach, starting from intended outcomes (on the basis of the needs analysis), then moving on to the design of learning activities and assessment. Evaluation of the module (by external experts, and by participants in pilot editions), and of the entire project has been an integral part of the project design from the outset.

Provisional results to date

As we are reporting on work in progress, we cannot for the moment actually present data from the quantitative study, but the qualitative study has already yielded some interesting pointers to possible conclusions regarding the current situation, which we summarize here.

Students' opinions

Exchange students on the whole have positive experiences in their host institutions, although they criticize lack of preparation and information on the part of both home and host institutions;

Exchange students experience difficulty in class at host institutions due to differing teaching and learning styles, and expectations;

Exchange students recognize a tendency to form groups amongst themselves, and often have difficulty establishing contact with home students;

They often have the impression that teachers "do not know what to do with them";

Language difficulties still constitute a major obstacle for some students;

Students dislike being identified by their nationality, a tendency they describe as frequent in teaching practice;

Assessment is a particularly thorny area for mobile students, who often feel unfairly treated by host institutions;

Issues such as plagiarism or what is considered to be "cheating" are particularly complex.

Teachers' opinions

The presence of exchange students has an impact on teaching, described by some as very positive and enriching, by others in much more negative terms;

Some teachers feel that exchange students should be taught separately and not together with home students;

Some teachers are unaware of the basic working of mobility programmes and fail to understand why the composition of class groups has changed in recent years;

Some teachers feel that, although mobility is on the whole positive for student learning, it makes teaching more complicated;

Many teachers feel they do not receive sufficient information on incoming students and their profiles;

As in the case of students, assessment is a particularly complicated area, as many teachers have the impression that exchange students perform worse than home students and some feel obliged to give higher marks than they would normally;

Lack of language ability is sometimes taken to indicate lack of general academic ability;

There exists a varying degree of lack of trust in other educational systems, affecting perceptions of academic ability and level, and assessment methods;

Teachers have a tendency to generalize about national group characteristics.

Administrators/decision-makers

Administrators are on the whole very convinced of the need for student mobility and prepared to look for innovative solutions to the problems arising;

They are aware of staff reticence towards mixed groups of exchange and home students, and some of them are also in favour of special modules or class groups for exchange students in order to attend to their specific needs better;

Many administrators attempt to avoid problems by directing incoming students to particular subject modules or teachers;

They are strongly aware of the need for mentoring and other support systems for students;

Many of them note a lack of real institutional support and involvement in the day-to-day implications of mobility programmes.

Provisional summary of needs to be addressed by the training module

The group is currently completing the analysis of quantitative data on teaching staff, student and administrators' opinions. From initial qualitative data, substantial prior experience in the field, and the literature available, the following have already been identified as broad areas to be covered by the training module:

- The internationalization of higher education
- The European Higher Education Area and European mobility programmes
- Mobility, expectations and culture shock
- Cultural awareness and intercultural communication
- Higher Education traditions

- Teaching and learning styles
- Teaching methods and approaches
- Language use in the classroom
- Student support
- Assessment
- General management of mobility programmes

As to delivery, the pilot edition of the module has been conceived as a having mixed distance and face-to-face format, with prior reading and preparation by participants of materials made available on the project website, followed by face-to-face seminars and discussion sessions. The methodology will be participant-centred and intended to promote debate and in-depth reflection on the issues involved in teaching multicultural groups arising from mobility programmes. Care will be taken to use participants' prior experience as a starting point and as valuable input to the module itself. Similarly, no one-size-fits-all solutions for all European academic contexts will be proposed, but rather local teaching and academic traditions will be respected, and taken as a starting point from which the issues under debate can be dealt with. Participation will, of course, be voluntary. This is understood to be important for the success of the pilot edition, as the team believes that staff development as an imposition is never well received by teachers, and is thus de-motivating.

Materials are initially to be developed in English, although much of the qualitative data collection has been done in staff and students' own native languages in order to encourage depth of reflection and facilitate expression. This material will be subtitled where necessary for use in other language contexts.

Work remaining

The next few months promise to be intense, as the team completes the analysis of the data collected at all participating institutions, and applies its conclusions to the actual development of module materials, one part of which is already underway. If all goes according to schedule, a pilot edition of the module will take place in at least one English-speaking and one other institution in the autumn. Evaluation, both internal and external, of this experience should allow for final adjustments to be made to content and delivery before the materials are translated into the different languages of the team's institutions. Although we ourselves use English as a lingua franca, the team believes strongly in respecting language diversity, and is convinced that translation is an essential step in the preparation of the module if it is to be effective with teachers participating. Final decisions on whether to develop a fully distance version of the module are yet to be taken, although our current stance is that some form of mixed face-to-face and distance formats is probably the most effective form of delivery.

Closing event

The project will close in March 2006, with a small-scale academic conference where our final results will be made public and the module presented. We hope that the event

will be of interest to other academics working in the field of student mobility, and will launch a call for papers in the very near future for those who wish to present their own experiences.

For further information

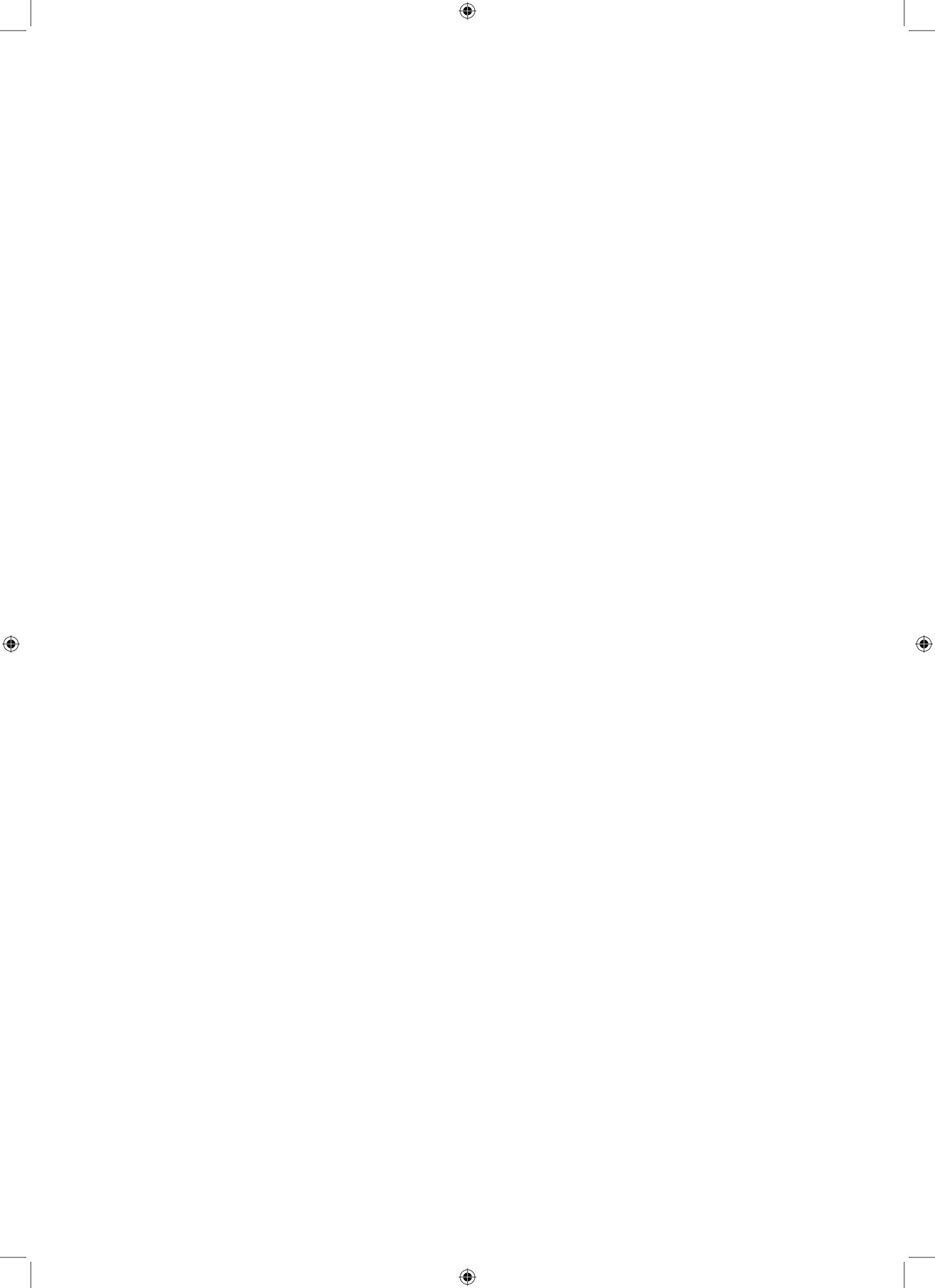
Our website (currently being updated) is to be found at: www.ugr.es/~temcu/Index.htm.

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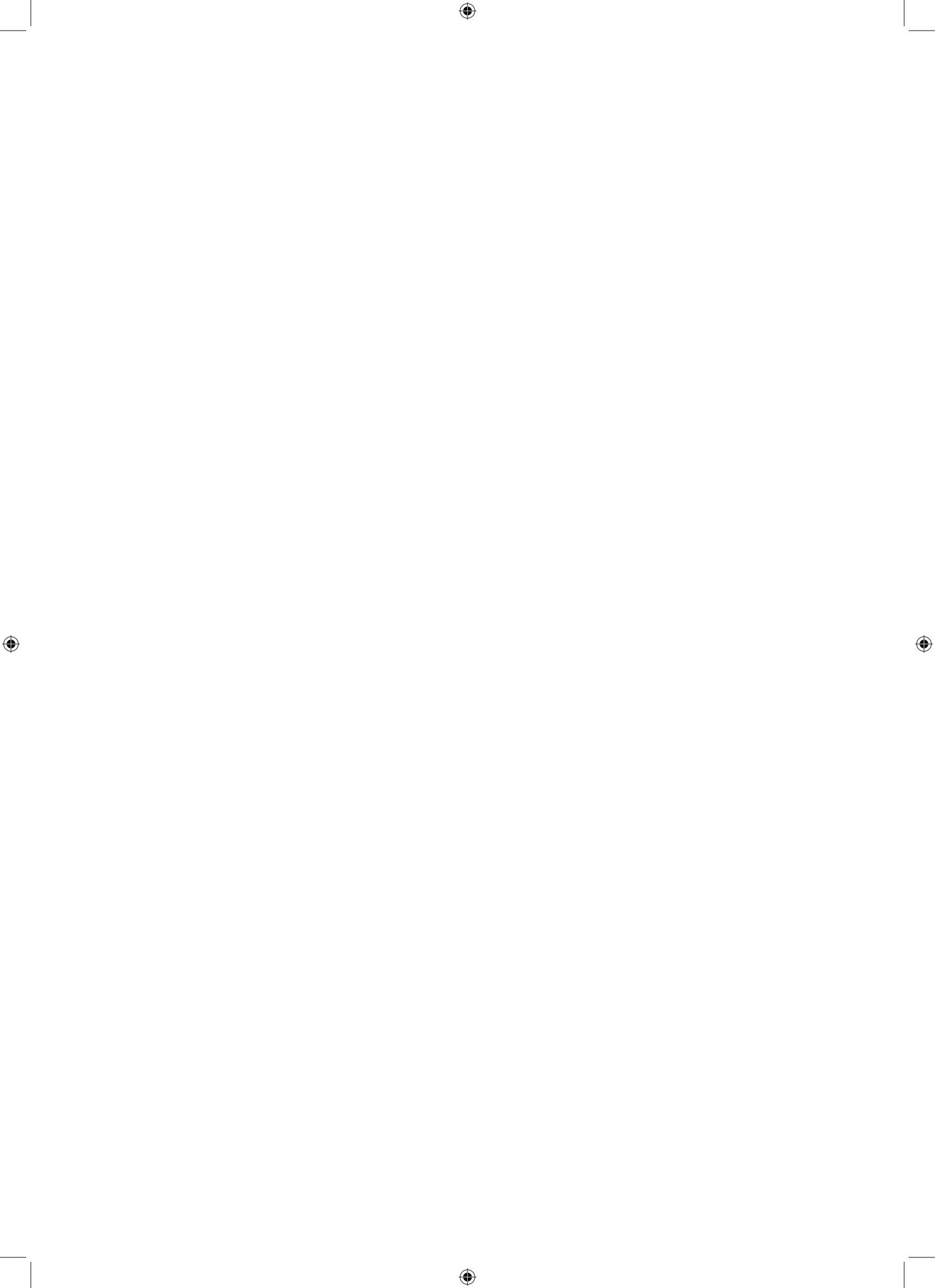
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PART THREE

Specialised Areas of Education



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Children's Drawings: An Alternative Avenue of Communication

Historical perspective

The fields of psychiatry, psychology, education and art therapy have all been interested in the various psychological aspects of drawings. So drawings have been studied from many different viewpoints. Initially psychiatry was interested in the relationship which exists between the artistic product and the personality of the artist. During the 19th century there was considerable interest in Europe in the art of mentally ill people, institutionalized patients and criminals. Many specialists claimed that drawings and paintings can provide an insight into the psychological state of the mentally ill and that they can be used for diagnostic and therapeutic purposes (MacGregor, 1989). The forefather of modern psychology, Freud, was interested in the interconnections between artistic symbols and personality. He claimed that the images or the symbols drawn represent forgotten and repressed memories. These memories are likely to emerge in the drawer's dreams and in his artistic expressions. Freud also noticed that his patients were often unable to describe their dreams in words, but when they were asked to draw them, they could easily do so. Finally Freud suggested that artistic creation is being motivated by universal human conflicts and by neuroses. Jung adopted a different viewpoint on art and creativity. He studied symbolism in drawings and paintings and he noticed that certain forms have a specific meaning, which seem to be similar in all cultures. Jung called these universal images "archetypes" and he claimed that there is an important connection between the image drawn and the psyche of the drawer. Symbolic production was seen by Jung as the psyche's attempt to evolve. In cases of trauma or distress, symbolic production was thought to be a way to heal oneself. So Jung often encouraged his patients to draw what they "saw inside them". (Jung, 1956).

The areas of psychology and education were mainly interested in children's drawings. The drawing activity was considered to be an extension of play activity, so it comes naturally to children. During the 19th century children's drawings were simply observed in order to find out what children prefer to draw and how they draw their subjects at different ages. Cooke (1885) was one of the first researchers who studied children's artistic development and he emphasized the importance of his findings for education. During the 20th century, the central interest in the study of

children's artistic expressions was occupied by the investigation of the stages children go through in their artistic behavior, while drawings were also used to assess children's intellectual functioning. Burt (1921), Goodenough (1926) and Harris (1963) explored the age norms for human figure drawings and they all related drawings to the mental rather than the chronological age of the child. So drawings were used to measure the cognitive maturity of the child. Later on, drawings were used to investigate the inner world of emotions, the psychological status and the interpersonal style of the drawer (Machover, 1946, Koppitz, 1968). Finally, during recent decades the area of art therapy studies art expression as a form of a uniquely personal statement with both conscious and unconscious meanings. Art therapy claims that drawing helps children as well as adults to communicate with other people and to express certain subjects which cannot be expressed by language. Additionally, communication through art is considered to possess a strong and very creative healing power, so that drawing activity is now used for both communicative and therapeutic reasons.

Development of children's drawings

Children begin their drawing activity at the age of approximately 18 months, by making scribbling marks with a pen on paper. This activity gradually increases the child's eye-hand coordination (Thomas & Silk, 1990). The first scribbles drawn by children, though, are not produced by aimless and uncoordinated movements, but demonstrate a strong awareness of pattern. Kellogg (1969) distinguished twenty different types of scribble and seventeen placement patterns in young children's drawings. She claimed that children position their scribbles on the page in certain ways so as to achieve a degree of visual balance with their drawings. Morris (1962) noticed important similarities in the patterns produced in paintings and drawings made by toddlers and the ones made by chimpanzees. In addition, both chimpanzees and toddlers enjoy scribbling enormously and they get very deeply absorbed in it. Finally, adults very often characterize the patterns and the shapes produced by toddlers and by chimpanzees as balanced and aesthetically pleasing. In the beginning scribbles are not intended to represent anything in particular, but they are simply the products of play, rhythmic motions and exercise (Piaget & Inhelder, 1971). However, at the age of approximately two and a half children gradually start interpreting their scribbles as pictures which represent something specific. Initially young children do not announce their intentions before starting to draw, but interpret their drawings after completion. As children grow older, they start declaring in advance their intention to draw something specific, even though the element of opportunism in children's interpretations continues to exist for a long period (Luquet, 1927). Gradually scribbles become more easily recognizable by others and children start favoring specific topics which they produce very often. One of the most favored subjects portrayed by children is the human figure.

According to Kellogg (1969), the human figure develops from a form called "mandala" which is a cross superimposed on a circle. This mandala form can be found across many cultures and it seems to be inherently pleasing to children. Kellogg

suggested that children's preference for that particular shape proves their need for harmony and balance in their drawings. The mandala form gradually evolves to a form that looks like a sun with rays. Later the circle of the sun becomes a head, its rays become legs and arms and the first representation of the human figure appears. This first human representation is called the tadpole figure. The universality of the developmental process of the human figure, as well as its preference as a drawing subject are both well established (Papadakis – Michaelides, 1989). At the age of three and a half years, children often fail to coordinate the different parts drawn in their human figures and they might end up producing figures with the eyes or with the mouth outside the head, or with hands or legs not attached to the head (or body). This phenomenon is described as "synthetic incapability" and it characterizes the stage of "failed realism" that children go through during that period. Gradually children start better coordinating the details they include in their human figures and they gradually increase their realism by adding more details (body, facial features, hands, clothes etc.) and better proportions. At the age of five to eight years, children seem to produce what they know exists, rather than what can be seen. For example, children might draw a baby in a mother's womb, or they might produce houses with "see through walls", portraying the people or the furniture which exist inside the house. This "transparency" or "x-ray drawing" characterizes the stage of "intellectual realism". Finally after the age of eight years, children try to produce realistic drawings. They start portraying depth, they draw from a particular viewpoint, they prefer realistic colors and the proportions of their human figures improve. This stage of development in the drawing is called the stage of "visual realism" (Freeman, 1980). However as children grow older, their free drawings gradually become more conventional in style. Cartoon and comic figures appear and the variability of drawings produced after the age of twelve diminishes. Children at this age often become frustrated and dissatisfied with their drawings and so drawing activity gradually diminishes (Cox, 1993). According to Gardner however, the drawing activity of older children diminishes because they start relying more on language in order to express their emotions and their inner world (Thomas & Silk, 1990).

Studying the way the human figure develops with age is essential if drawings are to be interpreted in any way. Koppitz (1968) examined 2000 human figure drawings produced by children aged between 5 and 12 years. She then scored these drawings according to 30 developmental items which she grouped into four different categories according to their frequency of appearance in children's drawings at each age level. The four categories included the expected, the common, the not-unusual and the exceptional. The list of the developmental items which are found in children's drawings of the human figure can provide researchers and clinicians with a baseline of what is to be expected from children in every age group. Koppitz's list includes the following items:

1. Head
2. Eyes
3. Pupils
4. Eyebrows or eyelashes
5. Nose
6. Nostrils
7. Mouth

8. Two lips
9. Ears
10. Hair
11. Neck
12. Body
13. Arms
14. Arms in two dimensions
15. Arms pointing downwards
16. Arms correctly attached to shoulders
17. Elbows
18. Hands
19. Fingers
20. Correct number of fingers
21. Legs
22. Legs in two dimensions
23. Knees
24. Feet
25. Feet in two dimensions
26. Profile
27. Clothing: one or two items
28. Clothing: two or three items
29. Clothing: four or more items
30. Good proportions

Children's drawings used as measures of cognitive maturity

Early research on children's drawings emphasized their usefulness as measurements of cognitive ability. Burt (1921) explained that drawing tests are useful tools for measuring children's intellectual abilities, because they are less dependent on learned skills while at the same time they do not depend on language. First Goodenough, and then Harris, explored the age norms for human figure drawings and they related children's drawings to their mental rather than their chronological age. Goodenough (1926) developed the Draw A Man (DAM) test claiming that, since certain aspects of drawing performance correlate to the child's mental age, his drawings could be used to estimate his intelligence level. Goodenough chose the subject of a man as a drawing subject, because it is a universally favored subject for children. She formed a list of 51 items of the human figure children could include in their drawings. The DAM test takes into consideration the number of details used in the human figure drawing, but it also considers the correct proportions, the integration of the various parts of the figure and the fluency of the lines used. Goodenough also suggested that the DAM test might reveal certain personality traits in addition to the intelligence of the drawer.

Harris (1963) created a new test called the "Goodenough-Harris (G-H) drawing test" by revising and extending the list of the 51 items of the DAM test and by enriching the instructions given to the children. The new list formed by

Harris included 71 items and the subjects were asked to draw a man, a woman and a self-portrait. According to Harris, the intellectual maturity of the child is composed by the ability to perceive and discriminate similarities and differences, the ability to abstract these similarities and differences and the ability to generalize and classify objects correctly. So by examining the concept of the human the child has, one can draw valuable conclusions about his intellectual maturity.

Finally, Koppitz (1968) also considered the Human Figure Drawing (HFD) test as a valuable technique for the evaluation of children's intellects. She formed a list of 30 developmental items and claimed that their presence in the HFDs is primarily related to children's age and mental maturity and not to their artistic ability or to the training instructions provided by the school. However Koppitz emphasized that the drawing test should not be used with children above the age of twelve because after that age children tend to criticize their drawings heavily and they are no longer willing to draw. All drawing tests are considered to be extremely useful since they are very easy to administer to a large number of children at the same time and they can easily be administered to pre-school children, to subjects with hearing or speaking disabilities and to subjects speaking foreign languages.

Children's drawings used as projective tests

The idea that drawings could be used to determine the characteristics and the emotional aspects of the personality appeared around 1940. Since then many researchers and clinicians have considered drawings as visual representations of the internal psychological states of the drawer. The term "projective drawing" was used in order to emphasize the idea that drawings represent the inner psychological realities and subjective experiences of the person who creates them. Drawing was seen as an alternative self-expression which brings out information that words alone cannot reveal. Various projective techniques appeared in order to assess the personality traits, the inner problems, the secrets, the disturbances, the fears and the anxieties of the drawer. Most projective drawing tasks reflect psychoanalytic thought and they emphasize the connection between single graphic characteristics of the drawing and the personality or the affect of the drawer. This material is largely focused on problematic aspects of personality and on pathology.

One of the most well known projective tests is the House–Tree–Person (HTP) test developed by Buck (1948, 1966). These three different subjects were selected because of their familiarity to all children. Buck suggested that these subjects were able to stimulate conscious and unconscious associations and project the drawer's inner material. According to Buck, the house image brings out information concerning the drawer's home and those living in it. The tree drawing represents the child's psychological development and his feelings about his environment while the image of the person is a representation of the drawer's self. Evaluations of the HTP drawings are based on the presence or absence of certain features, on the details drawn and on the proportions, the perspective and the colors used. The HTP test is also accompanied by a questionnaire as part of the evaluation procedure.

Another well established and widely known projective drawing test is the Draw-A-Person (DAP) test developed by Machover (1949). The DAP test continues to be one of the most popular projective drawing tests, and is now used very widely by clinicians (Drachnik, 1995; Oster & Montgomery 1996; Cantlay, 1996). Machover claimed that the human figure represents the self of the drawer and it relates intimately to his impulses, anxieties, conflicts and compensation characteristics. She attached specific symbolic meanings to the different parts of the human figure and to other details of the drawing such as buttons and pipes etc. Machover also emphasized the structural qualities of the drawings such as the size, the quality of line, the shading, and the general composition. However, even though Machover herself never intended to develop a simple list of singular elements linked to specific diagnoses, unfortunately her material is often used today in this simplistic way (Malchiodi, 1994).

Later, Koppitz (1968) shared Machover's idea about the self-representation in a human figure drawing and she used drawings to assess the intelligence as well as to evaluate the personality of the drawer. She created a list of emotional indicators which, according to her, reveal children's emotional conflicts and psychological problems.

The multidimensional approach to understanding children's drawings

The one to one approach used by projective tests, which associates one graphic feature from the drawing with a specific meaning, has been severely criticized as being naive and of limited use. At the same time the validity and the reliability of the projective tests have been questioned. Finally, if the projective tests are used unwisely by insufficiently trained or inexperienced people, they might lead not only to incorrect but also to dangerous conclusions. In recent years the reductive approach of merely checking for characteristics indicative of pathology has expanded into a much broader view and a multidimensional approach to understanding children's drawings has developed. This new approach takes into consideration the richness, uniqueness and spontaneity of the drawing act, while at the same time it does not simplify the complex conclusions which can be drawn from drawings themselves. The interpretation of drawings from this new viewpoint takes into consideration many different factors like the multidimensionality of artistic expression, the diversity of creators, the context in which drawings are being produced and the possibility of multi-meaning in the drawings (Malchiodi, 1994). Additionally the multidimensional approach to understanding children's drawings does not only use drawings in order to assess intelligence or extract a diagnosis. Drawings are now seen as alternative ways to communicate different issues, thoughts, feelings, perceptions and experiences. Drawings are also seen as self-expressions which can explore, invent and problem solve (Oster & Gould, 1987; Oster & Montgomery, 1995). And finally drawings are seen as means of working through situations, memories and emotions which trouble the artist. All these different aspects make the drawing act an important part of the therapeutic intervention. Therapy through art has now become very popular,

especially with clinicians and therapists who work with physically and sexually abused children (Hagood, 2000). As Kramer (1993) explained, drawing (and all creative work) activates psychological processes which have healing powers. At the same time, art helps people clarify and express their suppressed feelings (catharsis) and helps them face their emotional problems. Additionally, by employing creativity people find novel and unusual solutions to their problems. Rubin (1984a, 1984b) explained that children also use the art of drawing for various reasons. Some of them are trying to master the drawing task, others are using drawings as a means of self-expression and self-definition, while others address stress, emotional problems and trauma through the act of drawing. Because children's motivations vary widely, it should not be assumed that every time an image appears in a drawing it should always mean something specific. At the same time it should not be assumed that the significance of an image drawn is invariant over time for a particular person.

Even though it is very tempting for a therapist to attribute a steady significance to specific elements in drawings, one needs to be very careful since this simplistic approach can be highly problematic and dangerous for children. For this reason, when the multidimensional approach interprets drawings it does not take into consideration the drawing product only, but it emphasizes the importance of the drawing procedure as well (Killick, 1997; Oster & Crone, 2004). So drawing is seen both as a process (creating the art product) and as a product. The therapist now has to experience children drawing at first hand, in order to fully evaluate what their drawing might mean. As Malchiodi (1998) explained, trying to evaluate a drawing product without following the whole process is like watching people swim and then expect to know what the experience is like.

When assessing the drawing procedure, the therapist first notices whether the child refuses to draw. Usually children consider drawing as being a very pleasant activity and they need little or no encouragement to start drawing. Possible light resistance can be overcome by proposing to the child different drawing materials or by showing the child drawings from other children. However, extreme resistance to drawing might be due to deep worries, insecurity, mistrust, lack of confidence or even depression. The therapist should also notice whether the child waits for instructions or whether he is impulsive; whether the child seems calm and focused or is restless and distracted; whether the child is active or withdrawn; whether his body position changes during the drawing activity (nonverbal body signs); whether the child is confident about his drawings or is overly concerned about "mistakes" and whether the child requires assistance, reassurance or constant clarifications. In a group setting the therapist should also observe if the child shares materials and ideas with other children, or if the child is ashamed and hides his drawing from others. The therapist should also notice if the child wants to keep the drawing for himself, or if he wants to hand it to the therapist and if the child feels proud about his drawing or has the tendency to destroy it. The drawing process not only provides valid information to the therapist but therapeutic change, transformation and catharsis take place during it. For this reason the presence of the therapist during the drawing activity is of vital importance (Malchiodi, 1997). As Allan (1988) wrote, when children draw in the presence of their therapist, the healing process of art is activated and painful conflicts are being brought to the surface and worked through. This happens because the therapist creates with his presence a safe space and so the child does not feel threatened by powerful and painful emotions

expressed through art. If the therapist provides the child with a secure and nurturing environment, unconditional acceptance and support, the traumatized child has an ideal opportunity to reveal his pain and externalize his emotions in a non-threatening way (Malchiodi, 1997, 1998, 2003).

Drawings, for the multidimensional approach, are not only pictures but also have narrative qualities and children usually love talking about them. The new approach to studying drawings pays attention to what children say about the images they draw. Children are encouraged to talk about their drawings and the personal meaning attributed to them is being explored. So artistic expression is now seen as a form of visually symbolic speech or as a form of nonverbal communication. The therapist who knows how to listen has a good chance of understanding the meaning a drawing has from the child's point of view. The therapist can only step inside the drawing if he lets himself to be led by the drawer. During the drawing activity the child should not be interrupted by questions, but if he wants to talk the therapist should listen carefully. When the child finishes his drawing, the therapist asks questions about it. Sometimes inexperienced therapists might ask problematic questions, but in most cases questions encourage children to talk about many more things, beyond the obvious visual content of the drawing. Discussing the drawing has benefits for both the child and the therapist. It helps the child clarify and externalize his thoughts and feelings through both the artistic expression and the storytelling, which is highly therapeutic for the child. At the same time, talking about the drawing helps the therapist understand the beliefs, the perceptions and the emotions of the child and it helps him to assess the case and plan the possible intervention. In a good therapeutic relationship the vast majority of children are willing to talk about their drawings. Of course one should not expect the child to reveal at once the whole content of his heart. This is a slow and sometimes painful procedure, which demands a lot more time and effort. However drawings provide children with a safe starting point and give them the opportunity to reveal as much as they can handle at a time, without feeling overwhelmed or threatened. In some relatively rare cases, children resist talking about their drawings. However this resistance to talking can be valuable information for a therapist. If the therapist trusts his alliance with the child and if the child is capable of talking (he has no speech or language problems or he is not too young to talk), then the therapist can be almost certain that the child who refuses to talk about his drawing is either extremely shy or withdrawn or has been violently traumatized or abused (Malchiodi, 1997).

The therapist should be careful with the type of questions he addresses to the child. Questions like "why did you draw this picture?" are unproductive and might frighten a child. The troubled child might feel stupid and unsure if he cannot reply and, as a result, he might distance himself from the therapist. A safer method for the therapist is to start describing the various aspects of the drawing and wait for the child to respond. In most cases children start adding more information to the comments the therapist makes. The description the therapist makes should not be too specific, so as to lead the child to present his own viewpoint. For example the therapist can say "I see a house and two people in the yard" but he should not say "I see a house and two young children playing happily in the yard". When the child stops talking, the therapist can move to a deeper level, which will include thoughts and feelings. For example the therapist can ask questions like "What does that person think (or feel)?". The therapist should always adopt the position of the person "who does not

know" so as to lead the child to provide his own explanations and to make his own comments. If children express powerful feelings, the therapist should reflect them back to the child. Reflecting back emotions pleases the child, reinforces the acceptance of the therapist and, as a result, strengthens the therapeutic alliance. For example if a child says "I hate my mother when she drinks", then the therapist can say, "I guess that seeing your mother being drunk can be very hurtful, it's ok not to like your mom when she drinks". In cases of young children the therapist might try to persuade them to adopt the voices of different figures from the drawing. Then the therapist can ask the child questions indirectly (through the figures) and create a playful and safe conversation with him. This indirect approach of storytelling is of tremendous help with seriously traumatized or disturbed children, who are otherwise very restricted or frightened to speak and to express their personal pain. This method also allows the child to express secrets that contain deep and hurtful feelings from a distance which feels safe. The indirect method also reduces feelings of shyness, anxiety, self blame, guilt, and fear (Malchiodi, 1998).

Emotional content of children's drawings

Therapists who use drawings understand that they are a powerful medium for children who are emotionally traumatized, disturbed or grieving. Artistic expression provides these children with a potent way to explore and to express negative and confusing feelings. As emphasized before, it is not safe to assume that there is a one to one relation between features in drawings and different kinds of disturbances. However there is a strong possibility that certain structural elements and certain symbols which appear in drawings are indicative of emotional distress. Evaluating children's artwork through single elements can be highly problematic and counter-productive. However, an expert who knows how to collect and combine information from different sources (drawing, interview, the immediate environment of the child, the nonverbal communication of the child etc.) possesses a rich and powerful path to the child's inner world. The symbolic content of children's drawing products can be decoded if one considers both the structural elements and the particular features which appear in (or are omitted from) the drawings.

Important structural elements

1. Developmental level of the drawing: It should be ascertained whether the drawing is developmentally appropriate for the age of the child.

2. Overall quality of the drawing: This refers to the first and overall impression the drawing creates in the viewer. The therapist should notice whether the drawing looks complete or unfinished; whether the figures drawn are likeable; whether they look happy or sad; whether they look friendly or aggressive; whether they look strong or

weak; whether they look relaxed, calm and carefree or tense and uptight and whether they look active or passive. The posture adopted by the figures can also be revealing and transmit messages about the affective state of the child. For example a strong figure drawn with hands on hips and with legs spread apart transmits aggressive feelings, grandiosity and expansiveness. On the contrary a tiny figure, with arms stuck on the body and with knees and ankles touching each other portrays a shy and constricted person with a poor self-concept.

3. Quality of line: Different line characteristics need to be considered. For example how heavy or faded the lines are, if there is asymmetry in the lines or if the lines are well integrated (Koppitz, 1968). In general boys tend to draw with heavier lines than girls. However, excessively heavy lines characterize high energy or aggressive individuals, while excessively light line pressure indicates low energy, inhibition, fear and shyness

4. Erasures: Some erasure is normal in drawings. However, if erasing is excessive while at the same time it does not improve the drawing, then it is related to anxiety and uncertainty. If a specific part of the human figure is excessively erased, then the child's anxiety is related to that particular body part

5. Shading: Shading is very significantly related to anxiety. If both the body and the head of the figures are shaded, then the anxiety of the child is overwhelming and generalized. If only one particular body part is shaded, then the anxiety is related to that specific body part.

6. Baseline: Placing a baseline under the figures might indicate a firm footing and a sense of security. However if the baseline is excessively emphasized, that might mean that the drawer has a desperate need for support. Children in need of support and security might also draw figures at the bottom of the page with their feet touching the edge of the paper.

7. Slanting figures: Slanted figures suggest imbalance and lack of security.

8. Placement of figures: Figures which are placed on the top of the page suggest individuals who find it difficult to achieve their goals and use fantasy to satisfy themselves. Figures placed at the very bottom of the page might indicate insecurity or extreme reality orientation. Figures placed at the extreme right of the page suggest orientation towards the future, while figures placed at the extreme left of the page indicate open accounts with the past.

9. Figure integration: Refers to the connection of the head to the neck, the connection of arms and legs to the body and the connection of the hands to arms.

10. Color: It is obvious that there are strong societal and cultural influences on the use of color in drawings, but there are also personal meanings in it. Usually there is concern about children who systematically limit the use of color to one choice, or overemphasize a specific color in their drawings. There are many interpretations as to what color means in drawings with reference to emotion. Generally red is considered to be an extremely emotional color, attributed to issues of vital significance and to burning problems. Red is also associated with aggression, anger, hate, danger, passion, affection and expressiveness. Yellow is associated with energy, light and positive feelings, while blue is associated with peacefulness and depression. The excessive use of black is connected with negative connotations and symbolizes the unknown. When black is used for shading, there is a strong possibility that there are negative and dark thoughts, threat or fear. (Furth, 1988; Oster & Crone, 2004).

11. Size: Almost all projective drawing literature considers the size of the human figure in drawings as being very significant. Size has been related to the drawer's self-esteem and to his personal adequacy (Machover, 1949, Koppitz, 1968, 1884, Papadakis – Michaelides, 1992). Generally, children who draw very small sized human figures want not to be seen or noticed. Very small figures also reflect insecurity and they are usually drawn by timid, shy, anxious and withdrawn children. Sometimes these personality traits might be masked by the behavior of these children. Extremely large figures are usually drawn by aggressive children with poor inner control. Large figures might also suggest feelings of grandiosity. Often overactive and uninhibited children overrun the boundaries of the page and leave out parts of the body.

12. Unusual ways of drawing people: Banal and extremely conventional productions, stereotypes and stick figures which are not expressive are often drawn by people who refuse to reveal themselves. Also children in extreme emotional pain or severely depressed often resort to stereotypes to avoid expressing or communicating the real issues that trouble their lives. Finally, clowns are often drawn by children with poor self-esteem and self-depreciating thoughts, while monsters or witches are drawn by children with feelings of depersonalization and poor self-concept.

13. Emphasis and exaggeration: Overemphasis can be expressed either by enlargement and heavy lines or by elaborating excessively a specific body part. Underemphasis is expressed in the opposite way (smaller body parts, faint lines and very few details). Both over- and under- emphasis might express the child's anxiety or concern about the specific body part.

14. Representation of the sun: The representation of the sun in children's drawings is indicative of parental warmth, love and support. If, however, the representation of the sun is either overemphasized, is drawn with dark colors or if the sun is blocked by clouds, then there might be severe problems in parental relations.

15. Violent and overtly sexual features or scenes of hurting and sadism: Disturbing violent or sexual imagery often comes from children who have been abused and they either reenact the abuse in order to come into terms with it, or they are using art to express out feelings or wishes against their abusers. Haeseler (1987) wrote that it is very important to help the child understand why he draws violent images, because the child either wants to shock or punish others, or he asks for help. The timing of such a drawing's production, its exact theme and the intended viewer are important elements for the interpretation of the drawer's intentions (Malchiodi, 1997). Graham (1994) noted that adolescents sometimes draw overtly violent or sexual scenes in order to draw attention to themselves and to be distinguished by others. However this intense need to be noticed (even in a negative way) also needs to be investigated further.

Specific features of the human figure drawings

1. Head: A very large or very small head might indicate the child's concerns for his perceived intellectual inadequacy.

2. Mouth: Overemphasis of the mouth might show excessive dependence. Children with communication or language problems also emphasize very often the

mouth area. The omission of the mouth suggests difficulties in relating to others (they cannot communicate) (Klepsch & Logie, 1982).

3. Eyes: Vacant eyes (no pupils), as well as crossed eyes, are both strong indications of severe emotional problems.

4. Arms: Large or long arms may be drawn by children who want to be able to control, or by children who value power and strength excessively. Sometimes children with physical handicaps overemphasize arms by drawing muscles in order to express their desire to be strong and powerful. Small arms are drawn by children who feel weak and ineffective or by children who feel that they lack control. Muscular and elaborate arms might also hide concerns about the drawer's masculinity. The omission of arms suggests feelings of inadequacy, ineffectiveness and perceived lack of power and control.

5. Feet: They are either overemphasized or omitted by children who lack security and feel helpless (Klepsch & Logie, 1982).

6. Hands: Large hands drawn in parental figures might be an indication of abuse. The omission of hands suggests insecurity and difficulty in dealing with the environment.

7. Legs: When underemphasized, cut or omitted the child feels lack of support or feels immobile.

8. Nose: The nose is a symbol of striving for power and, if omitted, the child might feel powerless.

9. Teeth: The representation of teeth is indicative of aggression.

10. Ears: Children who are suspicious and perceive that others talk about them might draw over-emphasized ears (Klepsch & Logie, 1982).

11. Buttons or belly button: They both indicate dependency (early dependency when the belly button is represented), especially if drawn by children more than seven years old.

12. Sex organs: The representation of sex organs is an almost certain indication of physical, sexual and psychological aggression experienced by the child. Genitals appear in the drawings of severely disturbed children with acute body anxiety (Koppitz, 1968). However, one should always cross-check all data taken from the drawings with data from other sources. As Klepsch and Logie (1982) note, they once faced the case of a child who was representing genitals in his figures because his parents used to move around the house naked, in order to make the child feel free with the human body.

13. Drawings are undeniably very important to clinicians and therapists for both evaluation and therapeutic intervention. However one needs to be extremely sensitive, cautious and very highly trained in order to interpret them correctly. The interpreter needs to constantly cross-check his findings with material from other sources, such as behavioral and nonverbal observations, other psychological assessments, self-reports and reports from the immediate environment of the patient.

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Art Therapy Studies in Madrid

Postgraduate university studies in Art Therapy began in Spain in 2000 at the Complutense University of Madrid. They will soon also be implemented at the University of Granada. These studies have existed in almost all European countries, the USA and Canada for several decades and, more recently, in Argentina, Chile, Brazil, Israel, Australia, and other countries.

The Master of Arts degree offered in Madrid at the Faculty of Education, within the Department of Didactics of the Plastic Expression, has a duration of two years. Its main goals are:

- To conceive of art as a vehicle for social, physical, psychic, and emotional betterment;
- To reach a global and integral vision of the possibilities of art as an instrument for growth and improvement, and as a resource for integration and development in specific areas;
- To know the various disabilities, as well as the social and psychological disorders for which art therapy may be indicated;
- To facilitate an adequate methodology for the elaboration of work and research projects, for their later application with people of specific characteristics.

The domains of application of art therapy are wide, both in centres dedicated to the various disabilities, of either formal or non-formal education, and in centres and hospitals that attend to people with various needs.

The Master of Arts degree offered in Madrid has agreements with various associations, social institutions and educational centres, where practical training (an essential element in the education of an art therapist) takes place.

For two academic years, the students of the Master's courses have practice IN different kinds in public and private centres of social, clinical and educational character. In addition, in those two years, the students must carry out creative work and produce two major research papers, one of which must include a case study and a final clinical presentation.

The Master of Arts degree is built on the following assumptions:

1. The Master's degree is addressed indistinctly to Fine Arts graduates, or graduates in other creative degrees, Psychology, Psycho-pedagogy, and the like. The Master's degree qualifies any student from these degrees indistinctly, as do all European Master's with a similar program, and similar academic background in all Europe and the USA, through their respective Universities. Many of the latter are members (as is

also the case of the Complutense University) of ECArTE, the *European Consortium for Arts Therapies Education*.

2. Of course, the Master's degrees in Art Therapy, of an interdisciplinary character, must transmit to its students the need of a continuous education that will not end with the degree, as training does not end with a university degree. This means that psychologists have to overcome their deficit in visual reading, comprehension of the creative processes, aesthetic understanding, knowledge of artistic movements, avant-gardes and creative techniques and procedures, and that students with a background in Fine Arts must overcome a deficit in studies in developmental psychology, psychobiology, intervention techniques, etc. This is the reason why this Master's degree condenses both aspects.

3. Supervision is essential and should be constant, not only during training, but also throughout the whole of the art therapist's professional life. And it is also essential as an ethical commitment for all the people who are dedicated to a profession that is tied to human development, because this profession involves the whole of the person. It is so stated in the principles of the British Association of Art Therapists for all art therapists, and the Master's in Madrid adheres fully to it.

4. The professionals who obtain the Master's degree do not intend to replace the labour of psychotherapists, but to collaborate with them. Art therapy is a novel discipline, with specific characteristics that do not replace other areas but are neither under their "command" or "guardianship". The art therapist collaborates and enriches other disciplines, as other disciplines collaborate, in turn, with the art therapist, on an equal academic and professional footing.

5. The Master's degree advises art therapy students to undergo personal therapy as a mode of the self-knowledge necessary to face the work with groups at risk.

For Sara Paín and Gladys Jarreau (1995), the knowledge and skills the art therapist needs to master "correspond basically to three domains: that of the techniques of plastic activities, that of the psychology of representation and expression, and that of art, its meaning and history, for all of which a careful training is required".

It is important that those who want to become art therapists have experience of teaching. Following Edith Kramer's advice, we can highlight the fact that being an art therapist integrates various disciplines, because this kind of professional must simultaneously be an artist, a therapist and an educator. González Magnasco (1996) writes: "Whoever is dedicated to art therapy must have, at least, three levels of intervention: the aesthetic, the pedagogic, and the therapeutic. To be effective within this frame, one has to be trained in the ability to recognize the moment in which these three elements should be combined, or when one should prevail over another. Although these three tiers or stages could not function separately, there is no doubt that, at certain moments, one prevails over another".

Since 2004, the Complutense Summer School has organized a 100-hour-long art therapy course, in the month of July, with the aim of introducing and teaching this discipline, both in a theoretical and in a practical way. Professionals from various parts of Spain and abroad have attended these summer courses.

Studies and Research on Art Therapy in Madrid

Ph.D. courses in art therapy started at the Faculty of Fine Arts in the academic year 1995–96; they took off on a bi-annual basis, and have been annual for the past four years.

The first doctoral dissertation read on this topic at the Complutense University of Madrid was authored by Elvira González Rodríguez, on the subject of “Art Therapy with a Gestalt Orientation”. Elvira González works in art therapy within the framework of humanistic Gestalt psychotherapy, with a holistic and integrative view of the human being in her physical, emotional, mental and spiritual capacities, and whose potential it is possible to develop and nurture, to become healthy persons and thus collaborate in the creation of a more harmonious society. In her doctoral thesis, she also reflects on an extensive one-year field-work with people in different situations, where she presents all the activities performed, the interchanges and reflections among the clients and the art therapist, and the evaluation that the art therapist herself does in all the sessions, as well as the conclusions at which she arrived after the year of work as a whole.

In 2001 Carmen Alcalde Spirito’s doctoral dissertation was read, on the topic “Artistic Expression and Therapy: Plastic Expression Workshops for Psychiatric Patients in a Day Hospital”, in which the goals were to make known in Spain the characteristics, groups of incidence and work processes in art therapy, as well as their development and scope, over more than half a century of existence and to prove, by way of work experience with psychiatric patients, that the practice of art, used within an ensemble of therapeutic activities, contributes to the process of healing.

That same year, another doctoral thesis was read, the theme of which was related to art therapy: the dissertation by the teacher Susana Valé Madeo under the name of “The Teaching of Art in Adult Education. Non-Formal Educational System”, in which she studies in depth art education in adulthood, creativity in the third and fourth ages and analyses the concomitant biological and cultural elements, and deals, lastly, with empirical research on the employment of symbols and analogical thought in adult subjects. In the recent VIIth Bi-Annual European Arts Therapies Conference of ECArTE, that took place in September 2003 in Madrid, in the final recapitulation it was noted that one of the forgotten topics in art therapy was the contributions that this discipline brings to the elderly.

At the end of 2002, the doctoral thesis by teacher Maria Vassialiadou Yiannake, from Cyprus, on “Artistic Expression as an Alternative for Communication in Schizophrenic Patients. Art Therapy and Schizophrenia” was presented. In her dissertation, she set forth the possibility of using art with mentally ill patients in a three-year long fieldwork project, in which she asked: Can art heal? Does the practice of art have beneficial effects on the patients? Can art help in the analysis of disorders? Is artistic creation an alternative for other kinds of expression in people with severe communication disorders? Can art be a medium for the improvement of self-esteem, and therefore an important element of socialization? In her research, she intends to prove that these patients have the same capacity for artistic expression as any other “normal” person, and that artistic expression plays an important role in the therapeutic treatment of illness, contributing to the positive development of the clinical record. In her work she also recounts experiences of visits she has made with psychiatric patients to art museums, and studies the work of outsider artists or *art brut*.

At the beginning of 2004, the teacher Lilia Polo Dowmat read her dissertation on “Plastic Techniques of Modern Art and the Possibility of their Application in Art Therapy”, dealing with the process of the creation of images, as a revealer of unconscious contents. When a dialogue with our interior is established, upon the modification of the image -when the image is acted upon- a change takes place, a transformation, not only of the form, but also of what the form internally represents for the subject. In this thesis, artistic techniques are examined that can offer the following characteristics for the practice of art therapy: procedures simple to execute (so that they may be successfully managed by all kinds of people, even those with no plastic training); procedures that will favour the formation of an image that is efficient and communicative of its significance (for its later reading and analysis); procedures that will permit an aesthetic alphabetisation (especially on contemporary art, since it is a product of our time, with a great power of communication for emotions and ideas); procedures that will allow the pleasure and satisfaction of creative work (favouring trust, self-esteem and a sense of personal realisation) and, lastly, techniques that will adapt, by virtue of their economy of means, to the usually meagre budgets of institutions (and even of individuals) destined for this type of activity.

Two dissertations will be presented imminently. The art therapist Ana Belén Núñez’s is on “Art Therapy and Autism”, in which she will discuss her work with people affected with autism, the characteristics of which are their repetitive behaviours, their stereotypes, obsessions, resistance to environmental changes and rituals, as well as their absence of (or deficiency in) their abilities of relation and social interaction, of their verbal and non-verbal communication abilities, and of their creative and imaginative capacities. On the other hand, Marián Alonso Garrido will soon present her thesis on the topic of “Woman and Art Therapy”, in which she will present a casuistic study of women within art therapy, and analyze the various disorders that can occur in the different ages, as well as the work that has been useful for various women artists.

The thesis of the art therapist María Del Río is also in process, on “Mental Illness and Art Therapy”, which builds on more than four years work on case studies at mental health hospitals, in which she tried to design instruments for qualitative and quantitative measurements. Also, the art therapist Raquel Pérez Fariñas is developing her doctoral dissertation on the work of the pioneer Edith Kramer.

In 2004 a specific Art Therapy inter-university doctoral program began, under the title “Applications of Art in Social Integration: Art, Therapy and Education for Diversity”, coordinated by the Complutense University, the Autónoma University of Madrid, and the University of Valladolid. This doctoral program intends to establish in Spain a rigorous and systematic body of research that will serve, beyond the training for degrees, as a source of continuous feedback for professionals who start their careers in this discipline.

Research Performed at the Complutense University of Madrid on Art Therapy

Several research works have been written on art therapy for the obtaining of the certificate-diploma in advanced studies (DEA). In 2001, Antonio Fernández del Río presented the work "Art Therapy and Anorexia" on this very severe problem among adolescents of both genders, and the various forms in which art therapists in Europe and the USA have tackled this problem. Art therapy makes specific contributions for the treatment of anorexia, because art can help bring the patient to a state where she or he can relate directly to another person.

In 2002 two research works were presented in the field of education and adolescents. In the work by teacher Raquel Pérez Fariñas entitled "Art Therapy, Art Psychotherapy, Dynamic Art Psychotherapy: Art Therapy in the Field of Education", a detailed assessment was performed on the various orientations of art therapies, as well as a history of the beginnings and the forerunners of the subject. The investigation ends with the study of works performed by adolescents, within the setting of an art therapy workshop. The second research work is authored by teacher Nuria Gonzalo Vegas: "Adolescents and Art Education". Its topic is the problem of the low self-esteem of many adolescents, and how they can be helped with various artistic and therapeutic techniques. In her work, she studies the current situation in secondary compulsory school education (ESO), the problems between teachers and students, the various opposing views on education, and also the period of adolescence. Detailed fieldwork on the artistic production of her students is also exposed, together with the assessments made by the adolescents themselves.

In 2003 the Chinese painter Yu Xin presented her work "Mental Illness and Art, a Treatment through Plastic Expression: Art Therapy", which delves into the complexity of mental illness in the works of several artists, and studies the impact of artists' traumatic experiences in concentration camps or of depression on their work. Art therapy serves as a positive bridge to help sick artists to overcome the duality in the relation between normality and the unusual state of pathology. Yu Xin proposes Chinese calligraphy as a therapeutic means to help this kind of patient in the control of his or her energies.

In addition, in 2003 the Brazilian teacher Marcia Blanco Araujo presented her research work "Nise da Silveira and the Museum of the Unconscious. Her contribution for Art Therapy in Brazil", where she discusses the great labour of psychiatrist Nise da Silveira in the treatment and recovery of psychiatric patients by means of artistic work. A woman of advanced ideas, both in her profession and in politics, da Silveira offered a more humanistic and innovative vision of mental illness as the expression of the subjective richness of people considered mentally deficient or bearers of psychic disturbances. The "Museum of Images from the Unconscious", located in Rio de Janeiro, has been created to host the work of her patients.

Within the Master's degree in Art Therapy of the Complutense University of Madrid, very interesting investigations have been carried out in various areas: the educational, the social, and the clinical.

In the area of education in public academic centres, several investigations have been carried out on the subject. In one of them, the starting point was the conviction

that art is inherently therapeutic, and it was carried out in a secondary school. Set apart from the school classes, the non-compulsory "Art Therapy Workshop: Space and Time for Artistic Creation as a Vehicle for Emotional Development" hosted adolescents who had been previously informed of what the workshop was about. Among the main goals of this workshop was to collaborate in the adolescents' emotional development with plastic work as a starting point, and knowing beforehand the need to act on their various emotional dimensions, their low self-esteem in contrast with the high familiar and social self-esteem, as well as their tendency toward introversion.

Another study was also performed in a public secondary school in Madrid, where an art therapy workshop was held with secondary school students who showed any kinds of conflict or limitation in their school development, or problems of communication or social integration. In collaboration with the head of the institution, a group was formed of 4 adolescents aged between 13 and 15, with the goal of exploring the possibilities of artistic creation for the promotion and fostering of communication, and offering a space for creation and free expression, for spontaneity to flourish as an alternative for the contribution to the strengthening of the students' identity, for the use of metaphor as an alternative to represent their fears and worries, and to awaken their interest in self-reflection.

Work with adolescents in a regime of the Social Guarantee of Special Education was carried out in a Public Educational Centre for Integration. The adolescents suffered light to moderate mental deficiencies, some had physical impairments, some were on medication and some had emotional and social problems. The main therapeutic emphasis was on working to foster the development of mechanisms of social interaction, as well as in strengthening their self-esteem, helping them to get acquainted with their self-image and the image they would like to have, with how they thought they were perceived by others, and with their own feelings. They agreed to a contract of participation in the workshops, by which they committed themselves to respect their peers' right of confidentiality, to attend with the intention to participate, to do their best and to maintain a commitment to themselves in order to improve and overcome their own barriers.

Moreover, work was performed in a specific centre with mentally retarded children and adolescents. Art is particularly useful for people with intellectual difficulties, who find it hard to transmit their ideas and emotions by other means, and who even have trouble in understanding themselves. This research was carried out with children with limited possibilities and behavioural, social, family, personality and apathy problems. The activities suggested to them had to be broken down and sequenced into minimal units, to guarantee their comprehension, and always bearing in mind that their execution is different from that of "normal" children, so that it behoves us to respect each child's rhythm, and to provide the necessary reinforcements.

In the social area, fieldwork was carried out for two years in a shelter for battered women. These shelter houses are temporary solutions; the mothers and their children stay there for approximately six months. Among the goals set in the work with this group was the strengthening of the self-esteem of these women who, due to the long period in which they have received maltreatment, arrive with a high degree of personal disintegration. For this, the women were provided with a space of their own, in which they were given the opportunity to reflect on themselves and to come to understand the causes and motives that generated their situation. At present, these workshops

with battered women and children are carried out through the Commission for Maltreatment of the Madrid Community.

In the same shelter house, work was also carried out with the children, with the contention that abused children do not lose their anguish just because they are no longer in the home where they saw and received maltreatment. This is why it is important to do therapy with them, because otherwise they are at risk of repeating as adults the behaviours they saw in their childhood. Another thing that must be considered is that in these spaces, families are gathered that do not only originate from regions of Spain, but also from various countries, and this may be a source of tensions. The main goal of this research was to teach children to learn to know each other better through the images they created, and thus help them change the things they did not like in their lives. To sum up: to know and accept themselves, to understand themselves, to accept their environment and enjoy it and to become aware of their limits and know their possibilities.

In a shelter house for children, art therapy workshops are carried out with children in extreme situations, such as being unwanted, abused or abandoned, with parents who are hospitalized, or in jail, or have drug addictions, or are unemployed immigrants...etc.; in any case, unable to take care of their children. Art helps these little ones to improve communication with themselves and others, to feel valued as persons, and to gain security, develop their self-esteem, and empower their creative imagination.

At the Valdemoro penitentiary, and through an agreement between the Master's degree and Penitentiary Institutions of the Ministry of Internal Affairs, specific work has been carried out with a module of inmates who suffer from problems of personal disintegration, often associated with addictions or degenerative illnesses. The focus of the art therapy with these inmates has been on self-esteem, personal development and social bonding; with a module of preventive custody inmates, work has been done mainly on aspects of communication and expression.

Likewise, work has been started in elderly wards, focusing on the goals of the recovery of social bonds, the battle against communicative isolation, work on self-esteem, and the recovery and stimulation of memory.

In clinical settings, research has been performed in psychiatric hospitals, where therapeutic goals have covered three types of area: the emotional, the intellectual, and the ludic. The main goals have been the recuperation of the knowledge of self and others (in the sense of knowing in a new way, of discovering hitherto unknown dimensions of empathy, identification, and recognition); the satisfaction of creation (for which technical difficulties must be reduced to a minimum, and yet permit aesthetic results); a re-definition of reality; the expression of emotions, the search for new solutions, and the encounter with play (so that defence mechanisms may relax).

In 2003 an agreement was signed (and has been extended for 2004 and 2005) between the Coca-Cola Spain Foundation and the Department Section of Didactics of Plastic Expression of the Faculty of Education (Complutense University of Madrid), to perform an investigation on "Art Therapy Workshops in Various Social Areas". Under this agreement, work is being performed in three hospitals in Madrid: the La Paz Hospital, the Clinical Hospital, and the Ramón y Cajal Hospital. The art therapy workshops are being carried out in various hospital sections, such as Paediatrics, Oncology and Transplants. Work is being done with children and adolescents, as well

as with patients unable to move (in which case art therapy is done from bed to bed). In workshop sessions, children between the ages 4 and 18 participate; for this reason, the orientation of art therapy differs notably in the specific cases. Artwork is done with different materials and techniques (tempera, wax crayons, plasticine, etc., as well as typical hospital materials, such as X-rays, bandages, etc., so that the stay in the hospital loses drama). Bed-to-bed activity takes place with those children in greater trouble, whether it is due to the seriousness of their physical condition or, in other cases, because, even though they are physically capable of joining the others in the workshop room, they refuse to go, psychically shocked as they are by the illness and/or the treatment received. This modality allows the therapist to tackle more intimate and private subjects. Eight art therapists are working on this research, as well as Master's degree students in Art Therapy training, who collaborate in their practice.

Simultaneously, within the agreement with the Coca-Cola Foundation, another piece of research is being carried out with Alzheimer patients in cooperation with Messengers of Peace-Golden Age; two certified art therapists are participating, aided by two students in training from the Master's degree. It is being proved that art therapy is effective from several perspectives: as an instrument for the conservation of capacities (insofar that it activates memory, relational abilities, psychomotor capacities, and oculo-manual coordination); as an aid in the warding off of depression and the improvement of mood (because, as a non-verbal activity, it helps patients to express their emotions tangibly); and as a tool for the re-establishment or conservation of an effective channel of communication (thus contributing to maintain social bonds, memory and affects).

From these investigations, a book has been issued, *Art Therapy and Education*, published by the Community of Madrid.

In addition, a bi-lateral cooperation agreement has been signed for doctorate studies, between the University of São Paulo and the Complutense University, sponsored by the Higher University Council, for the years 2004 and 2005.

Conferences and Seminars in Madrid

The VIIth Bi-Annual European Arts Therapies Conference was held in Madrid, on 18–21 September, 2003. It was organized by the European Consortium for Arts Therapies Education (ECArTE), with the Complutense University and the Autónoma University of Madrid as local advisors. The Conference attracted more than 300 participants from 32 countries worldwide, from Japan and New Zealand to Brazil, Israel, Europe, the USA and Canada. One of the goals that the local advisors had set was to open the doors to the activities and research on art therapy in Latin America. There was a considerable representation of this continent from Argentina, Brazil, Chile and Mexico.

The opening took place at the Museum of America, on the 18th. The following personalities were present:

The Chancellor of the Complutense University, Mr. Carlos Berzosa,
The Vice-Chancellor of Culture, Ms. Isabel Tajahuerce,

The General Director of Educational Promotion of the Culture Council of the Community of Madrid, Ms. María Antonia Casanova,

The Coordinator of Activities of the Museum of America, Ms. Elena Delgado, as well as

The President of ECArTE, Ms. Christine Lapoujade, from the René Descartes University, Paris, and

The Director of the Conference, Ms. Line Kossolapow, from the University of Munster.

The opening speeches were given by two teachers of the Complutense University of Madrid: Dr. Marián López-Fernández Cao, who spoke of "Art Therapy in Spain", and Dr. Noemí Martínez Díez, who lectured on "Art Therapy in Latin America". Ms. Ana Mae Barbosa, from the University of São Paulo, spoke of "Various Concepts of Art Therapy in Brazil", and Mr. Robert Landhy, from New York University, of an "Experience with Children in Drama Therapy after September 11". Finally, Ms. Diane Waller, from London University, spoke of "Quality in Art Therapy in the European Professional Sphere".

More than 160 presentations, posters or workshops on dance-, art-, drama-, music-, and photo-therapy, were presented at the conference, by professionals from all over the world.

Among other themes, there was debate on the orientations of disciplines and research, methods and modes of work and record; on the relation between therapist, client, and art work; on verbal and non verbal implications; on aspects from the points of view of art, aesthetics, and artists, as well as the practice and results of Art Therapy in the various groups considered, from youths to patients with various psychopathologies, pathologies related to eating disorders, and other subjects.

From Spain, there were presenters from the University of Barcelona, the University of Vigo, the Autónoma University of Madrid, the Complutense University, and various Catalan, Basque, and Madrilenian institutions.

Moreover, the International Complutense Seminar "Art Therapy as a Recognized University Profession: International Networks and Plans of Action in Training and its Professional Opportunities" was held at the Museum of America on the days prior to the VIIth Bi-Annual European Arts Therapies Conference, profiting from the occasion of the gathering of distinguished professionals in Art Therapy from various parts of the world, for the conference of the following days.

It was held by invitation, as a closed working Seminar. The directors of the Spanish Master's degrees in Art Therapy were present, as well as those from several countries, like Argentina, Brazil, Germany and France, as were the directors of various international programs on art therapy.

In this Seminar, we had the opportunity to comment on the points of encounter and disagreement on the curricula of the various Master's degrees in Art Therapy in Spain, Europe and Latin America, and the differing expectations of each of them. European Convergence and the desire to integrate the Master's degrees within it were a much-valued element and object of debate and study among all the attendees. In the portfolio prepared to that end were documents about European Convergence and the professional colleges.

The various models of functioning and financing were discussed, from the gratuitous (in Buenos Aires), to the private (in some places in Spain).

Among the Spanish-speaking participants, the need was shared of study and research texts in Spanish, in the new profession of Art Therapy.

The professional future and the professional standards of Art Therapy were another element of debate, considering the budding state of the profession in some of the countries present in the seminar. There was discussion of the accreditation of the professional colleges and the accreditation of the Universities as legitimators and guarantors of the profession.

It was noted that there is a growing interest in the different countries in this field of study and professional qualification.

Professor Christine Lapoujade, President of the European Consortium for Arts Therapies Education, spoke of the advantages of the association of European Universities, and Dr. Line Kossolapow, speaking about European Convergence, reported on the European Master's degree in Art Therapy, that would consist in a third year of the students' respective Master's degrees in the different European countries. She informed those present of the possible models and modules that would constitute it.

Lastly, the director of the National Centre of Educational Information and Communication of the Ministry of Education, Culture and Sport, and also director of Latin American Educational Television, spoke about the possibilities of educational television as a support for conjoint European and Latin American modules, and future doctorate studies.

The need was confirmed to hold periodic meetings among the directors of the Master's degrees, for the shared design of curricula, the possibilities of having common modules, etc., as well as continuing relationships with the Latin American countries (like Uruguay, Chile, Mexico, etc.), that are now starting new studies related to Art therapy.

Conclusion

Art therapy is a discipline in expansion. As such, it is introduced in many parallel areas, and with very different emphases.

We believe university institutions have the indispensable and immediate task of ensuring an adequate training and a rigorous professional implantation and development.

Finally, we would like to end with a sentence by Rilke, that points at part of the task of our discipline:

"Art is a deeply inner confession, that uses a memory, an experience or an event, as a pretext to liberate itself, and which, independently of its author, can exist on its own" (Rainer Maria Rilke).

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Teaching Literature to Children Aged 6 to 10: Talking About Emotions in a Knowledge-Based Economy

Higher emotional awareness has been linked to self-assurance, empowerment and a positive self-concept. It has also been linked to important interpersonal skills and social understanding. Yet most educational systems nowadays focus on the life of the mind instead of emotional intelligence. If it is possible for a person with several PhD degrees to be completely at a loss in her emotional life, then something must be wrong with the system. But it all begins much earlier.

In many educational systems for the years from elementary to lower secondary education the curriculum offers very few possibilities for thinking and talking about emotions. At the same time it is in these years, and particularly in elementary education, that the system needs to be most focused on emotional inclusion and development, since this is the first time children experience mandatory education. In that period one of the very few subjects that could naturally encourage a focus on subjectivity, emotions and self-knowledge, is literature. Therefore it is particularly important to tap the emotional potential of teaching literature. Yet, while that potential of literature is being used to animate learning and activate various skills, emotional literacy rarely emerges as a goal in its own right in the process of teaching literature, or teaching as a whole. This trend has been reconfirmed in the European Union strategy on the “knowledge-based economy,” which employs a concept of knowledge in which self-knowledge is rather marginalized.

In this paper I will argue that it is important to see children as whole human beings, complete with reason and emotions. For that reason, when teaching literature to children, teachers should encourage children’s self-reflection and their ability to acknowledge, understand, and describe their emotions. To analyze the subtleties of the psychological effect of works of literature on children, teachers could draw on child psychology and emotional intelligence research, as well as on psychological and psychoanalytical interpretations of various works of children’s literature.

Much like collective social cognition, educational systems are inert systems. They change slowly and gradually, even when there is purposeful effort directed at their reform. It takes a while before the potential of new psychological concepts, such as emotional intelligence, is realized and integrated into the educational system. First there are the psychological studies, then gradually concepts get introduced into educational psychology, then they might become part of educational research, then certain approaches might be recommended for practical work in schools, and only after that some of these

approaches might actually be implemented, after the necessary awareness campaigns and trainings for teachers. In this paper I will look not only at the concept of emotional intelligence, but also at how far it has traveled along this chain, if at all, in the Bulgarian educational system. The Bulgarian system is a system in transition both because of the need to overcome the fossilized concepts of 45 years of communist education and because of the need to get aligned with EU educational objectives. Is this transition going to take into account the new developments in psychology?

Emotional intelligence

The term emotional intelligence was first used in 1985 by a graduate student in the US. Later, Peter Salovey and John Mayer did substantial research on emotional intelligence. Yet the concept did not become popular until 1995, when American psychologist Daniel Goleman published his book *Emotional Intelligence*, which was soon translated and published in other languages. One of the proposed definitions of emotional intelligence is: “the ability to process emotional information, particularly as it involves the perception, assimilation, understanding, and management of emotion” (Hein). Researchers state that emotional intelligence consists of these four branches of mental ability: “1. emotional identification, perception and expression; 2. emotional facilitation of thought; 3. emotional understanding; 4. emotional management” (Hein).

Research has demonstrated that emotional intelligence, or EQ as it has been called in parallel to IQ, is of key importance to the success, happiness and integrity of a person. Some scholars claim that a large part of the EQ capacity is inborn (Hein). Yet it has also been proved that it takes particular circumstances for that capacity to develop, which means that emotional intelligence can be taught and developed, and the most important years for its development are the years of childhood (Hein, Shapiro). Laurence Shapiro has explored different methods for the development of EQ in the childhood years and has summarized the most efficient approaches in his book *How to Raise a Child with a High EQ* (1997), which has been received with great interest throughout the world, being the first book to dwell on the subject in detail.

Yet is EQ given the necessary prominence in today’s educational priorities and strategies?

The knowledge-based economy

Educational priorities in European countries are determined more and more at the level of the European Union, rather than on the national level. At the Lisbon European Council of March 2000, the Heads of State and Government set the European Union a major strategic goal for 2010: “To become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with

more and better jobs and greater social cohesion.” The 2000 Council stressed that achieving this goal would require not only a “radical transformation of the European economy”, but also a “challenging programme for the modernisation of social welfare and education systems.” As European Commission Communication 685 (2003) states: “Never before had the European Council acknowledged to this extent the role played by education and training systems in the economic and social strategy and the future of the Union.”

Knowledge and education are central to this concept of the future of Europe. But does this idea of knowledge focus on the individual enough? Does it include personality development, emotional intelligence, psychological literacy? I reviewed a large number of EU documents, communications, programs, measures and benchmarks, only to have my hypothesis confirmed: the concept of knowledge that these strategies use refers to a combination of information and skills related mostly to reason and the life of the mind. This is best exemplified in the European Commission’s Report on the Quality of School Education of May 2000, which set the assessment criteria and the directions for the future development of educational systems in Europe. The report outlines 16 quality indicators for the assessment of education systems, divided into several groups. None of the criteria takes into account in any way the need for developing the emotional intelligence of students.¹ Like most EU education-related documents, this one too places an explicit accent on the training of the mind, and emotional competencies are overlooked.

How is this overall strategy perceived in Bulgaria? Most educationalists welcome European policies wholeheartedly, since they give education a new, prominent status of prominence. But some critical voices can also be heard. Dimitar Pavlov calls for an extended focus on the humanitarian side of teaching. Plamen Lazarov contrasts EU policies with the UNESCO Delors report and praises the latter for focusing on personality, self-knowledge and psychological development or, generally, on “learning to live” (205). Vilia Velikova criticizes the term “knowledge” for entailing a focus on empirical objective knowledge and for neglecting subjective knowledge and the emotional aspects of the human being, thus dissociating knowledge from its carriers and making it an abstract good that can be amassed. Liuben Dimitrov brings up the increase in students’ psychological problems — and the consequent increase in juvenile crime — and draws on Erich Fromm and Pierre Daco to stress that the focus of education should be on creating whole persons, complete both mentally and emotionally.

Can these philosophical criticisms of the term “knowledge” be traced in the education system, though? While individual teachers may apply an EQ-sensitive philosophy in their everyday work in the classroom, what could indicate a broader acceptance of these values are the texts used in the training of teachers. The following part of this paper contains a brief overview of these texts.

¹ The group of criteria that is most relevant for this discussion, the “attainment” group, contains seven indicators: mathematics, reading, science, foreign languages, learning to learn, ICT, and civics. Only the last indicator looks like it might have something to do with EQ, but closer inspection shows that it has to do with the promotion of the values of multiculturalism and democracy. In the “success and transition” group, there is one more indicator that could include EQ: dropout rates. Yet, once again, closer inspection proves that high dropout rates are perceived as dependent on factors largely external to the students, such as economic difficulties, etc., and with only one exception, the examples for national programs targeting this issue do not include a focus on psychology.

Educational psychology textbooks and publications and the emotional development of elementary school students

Children go through various stages in their emotional development, and there are no single commonly accepted criteria for determining these stages. Shapiro states that different emotional skills have different general timelines of development, which may vary from child to child. Children in elementary education are going through important transitions, such as the transition from excessive self-confidence to the realistic perception of one's own abilities, for example. Moreover, starting school presents a number of emotional difficulties. For most children this is the first mandatory form of education they experience. They have to get used to a new situation, where they are surrounded by many other initially unknown people, where they are to behave in an appropriate way and meet certain expectations. They need to learn how to balance their desire to achieve and excel over the others with their desire to be part of the community. In this difficult process there is a lot teachers can do to help pupils find the right balance, deal with difficult emotions and retain their self-confidence.

However, educational psychology has for a very long time focused only on the psychology of learning and the various issues teachers need to be aware of when managing a group of students. Until very recently, most writing on educational psychology has dwelt on children's emotions only inasmuch as they may hamper or facilitate the learning process, and the overall emotional state and development of the child was brought up mainly in relation to children with emotional derangements and problems. One of the most popular US textbooks in the field, *Educational Psychology* by Robert E. Slavin, recently translated into Bulgarian, is a good illustration of this trend. The most recent educational psychology textbooks by Bulgarian authors were published in 1995–7 and also have not taken into account the concept of emotional intelligence.² This also holds true for most child psychology related publications in specialized journals such as *Начално образование* (Elementary Education).

This does not mean that psychology as a whole has not dealt with children's emotions. Yet the findings have not been given the necessary prominence in the teaching of educational psychology to elementary school teachers-to-be.

The good news is that this situation is gradually changing both in the world and in Bulgaria. Over the last decade some publications that are available world-wide have focused on pedagogical methods for encouraging positive emotional development of students in elementary schools. In Bulgaria this trend is not yet prominent, but one of the positive signs is the publication of Rumen Stamatov's *Emotional Development of the Child*, a textbook for Education majors. Unfortunately, the book is very dry and contains no examples. But there are more good signs, among them the publication in Bulgaria of translated books on child psychology, including the already mentioned books by Goleman and Shapiro. Yet these books are not part of university curricula.

Given the inertia of the system, I believe it is necessary to bypass the chain from psychology, through educational philosophy, to formalized teacher education, and instead turn directly to elementary school teachers, suggesting methods they could use to encourage the development of their pupils' EQ. It is to the teachers that the

² Based on the holdings of the Bulgarian National Library.

final two parts of my paper are addressed. I will focus on the teaching of literature, since literature is the subject in elementary school that is best suited for developing emotional intelligence.

Literature in the elementary school: current approaches

A review of the recently published textbooks of Bulgarian Language and Literature for the elementary grades shows that the amount of literary texts included in these textbooks is decreasing. However, some additional learning materials have been published containing collections of literary texts appropriate for this age, with suggested questions and activities.³ This is a good trend, because it makes the texts available, without making them mandatory. It gives greater freedom to teachers and greater choice to pupils, and makes it possible to focus on texts that are best suited to pupils' individual and group needs. Unfortunately, most of the questions and activities on the literary texts are either factual or logical, and—with the exception of occasional activities asking students to relate the text to their personal experiences — they barely provide opportunities for customizing the experience of the text to the particular emotional needs of students. The result: “insincere essays and parroted interpretations” in secondary school (Rusinova 207).

What is more, worldwide there are more and more calls for using literature for teaching all kinds of other disciplines: from grammar and reading, through history and social sciences, to mathematics, chemistry, and geography.⁴ Such calls can be seen in publications in the Bulgarian journal *Начално образование* as well. This is a sign of the ever-increasing reverence for reason, rational thinking, and the life of the mind. The emotional capacity of literature is put to use in these approaches only to attract the interest of students, and once the interest is grabbed, emotions are put aside and rationalism takes over. Literature classes are being hijacked.

Therefore it is necessary to withstand this pressure to make literature serve the sciences, and focus instead on its humanistic capacities, and in particular its EQ-enhancing capacities.

EQ-enhancing approaches to teaching literature

Here are some suggestions for literature teaching activities for the elementary classroom that could develop pupils' emotional intelligence:

– *perceiving emotions*

- emotionally charged reading of works of literature by the teacher

³ Based on the holdings of the Bulgarian National Library.

⁴ A combined search for “elementary school students” and “literature” in ProQuest (online academic publication database, www.proquest.com) results in tens of such publications, with those focusing on teaching maths through literature being the largest in number.

- *processing emotions*
 - comparing different versions of well-known fairy tales
 - role play using the techniques of psychodrama
 - telling a story or fairy tale with a new end
 - writing a similar story on the basis of one's own experience
- *understanding emotions*
 - creating lists of characters' emotions
 - talking about the characters and their emotions
- *expressing emotions*
 - emotionally charged reading of works of literature by the students
 - drawing pictures and composing tunes to express the emotions of the characters
- *managing emotions*
 - role-play using the techniques of psychodrama (important both for processing and managing emotions)

In this list there is a gradation from the passive perception of emotions to the active contemplation, expression, and management of emotions. The activities can be ordered along this continuum, or given in a different order, depending on class dynamics and other factors. They could be repeated with various texts, starting from emotionally simple situations and going on to situations that are more emotionally complicated or deal with more difficult emotions. Here are some examples of works of children's literature that are of comparatively simple emotional makeup: *The Chicken and the Duckling* (excessive self-confidence); Andersen's *The Princess and the Pea* (curiosity, sincere belief in objective truth and the fact that it can be verified; the need to verify the truth of something; also, an occasion to talk about being over-sensitive, and the pros and cons of wanting to be a princess or wanting to marry a princess). One of the best-known works describing situations that are more emotionally complicated is Lewis Carroll's *Alice in Wonderland*, where only a few of the characters are explicitly good or bad, and the emotional interactions are rather complicated. Among the well-known works that deal with difficult or painful emotions are Andersen's *The Steadfast Tin Soldier* (unrequited love and desire, particularly relevant as children are gradually starting to learn that they cannot have everything that they want) and *The Little Match Girl* (the feeling of isolation, no help or care from anyone).

To identify the emotional content of various stories, teachers could draw on:

– *child psychology research*: Laurence Shapiro's *How to Raise a Child with a High EQ* is one of the most relevant works on the development of children's EQ;

– *emotional intelligence research*: Daniel Goleman, Steve Hein, Peter Solvey, John Mayer;

– *psychological and psychoanalytical analyses of children's literature texts*: For example, the work of Jack Zipes, which is rich both in psychoanalytical interpretations and in factual information relevant to the interpretation of the texts. For example, Zipes has unearthed older versions of the Little Red Riding Hood, where the girl is much less passive and manages to take care of herself. This is very good material for the version comparison activity.

Of course the process of planning classes and finding the right information for teaching literature in a way that could enhance the development of emotional intelligence is not easy, and it could be made much easier by teacher guidebooks on EQ-enhancing literature teaching, with suggested texts, interpretations and activities.

But until such guidebooks appear, and I sincerely hope they will, teachers could use their personal research, combined with their intuition and teaching experience. I believe that the suggested activities can easily fit into the classroom and can go hand in hand with regular activities on teaching literature.

Conclusion

Within the context of Western society's very strong reliance on reason and rationality-related skills and competencies, reconfirmed in the EU's education strategies, it is very important to raise awareness on the issue of emotional intelligence. Policy makers and education professionals need to realize that even though rationality might provide economic benefits faster, emotional intelligence might bring better results for society in the long run, since making good choices and decisions depends on self-knowledge. Moreover, and by definition, the efforts of teachers are efforts for bringing up the next generation of people, of whole human beings, and not simply cogs that fit smoothly into the social machine. We are personally responsible to every student for helping them realize their place, options and wholeness as individuals.

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UE ALLEGRO Project

A University Communication Portal for Senior Students Based on a Content Management System

1. Introduction

In the year 2001 the University of Castilla-La Mancha founded a special programme for senior citizens. It is called “Universidad de Mayores José Saramago” and it includes a large variety of subjects like languages, history and politics, health and medical care, psychology, law and economics as well as computer lessons. At the moment there are about 320 senior students attending the courses. In 2006, when the programme will be completely installed, it will be able to take as many as 800 students.

In 2004 we decided to develop a web portal for the Universidad de los Mayores. The main idea when designing the web portal was to create a communication and information platform for the senior students and their teachers. They should also use and profit from modern communication media like any regular young student. And moreover – due to the fact that the University of Castilla-La Mancha has four campuses and two extensions spread throughout the region – there was an even greater need to install a communication system in order to connect the different locations.

2. Research

Before actually designing a web-portal a great number of facts have to be considered, investigated into or just taken as fixed data. Five areas can be differentiated:

- (1) framework of the web-portal planned
- (2) communication-systems offered on the market
- (3) technical equipment and financial means available at university
- (4) possible design guidelines already existing at the university
- (5) and most important, the target group for whom the web-portal is to be created.

2.1. Framework

As for the framework for the web-portal, the three main aspects are fast access, up-to-date information and communication. Furthermore, the web-portal is planned as

a non-commercial project, which means there are no e-commerce applications necessary. The only public area will be a presentation of the “Universidad de los Mayores José Saramago”. The number of participants will not surpass 800. They will be divided into two groups, students and teachers, which will get different rights of access.

2.2. Communication Systems

Content-Management-Systems make these things possible, since they separate form from content and provide user access. So information can be easily differentiated according to user group and time. However, there are a considerable number of companies offering content-management-systems. So which to choose? Looking at the present university computer-system and at the financial possibilities of UCLM may help to decide.

2.3. Technical equipment and financial means

There is one central server installed at UCLM, which can be used for the web portal.

The web portal operates as an internet-only solution. The data operation will be managed centrally. As media format the commonly known and standard file formats will be used.

A normal internet browser has been selected for output-application as well as email distribution

Starting costs and operating costs were calculated to be about 10, 000 €. This was within the budget available in 2005.

In order to systematize and facilitate decision-making regarding which content management system to choose, a list of questions was developed according to Zschau, Taub and Zahradka (2002). It became clear that a content management system with the possibility of adding further modules would serve best but a final decision could not be made before the needs and wishes of the target group had been looked at.

2.4 Design guidelines

The university for senior citizens at the university of Castilla La-Mancha already has a corporate design. Its logo and colour had to be used with the web-portal.

3. The target group

The target group – and this is most important – are people from fifty years onward.

When using a computer this target group shows some important characteristics and this was why we spent a lot of time investigating the needs and wishes of this age-group.

Above the age of 50, as various studies have revealed, cognitive, physiological and psychological problems regarding the use of computers can be observed. This is an important difference between “normal” (younger) and older computer users which has by all means to be taken into consideration when developing a web-portal for senior students.

Cognitive problems often occur with older people when learning new things. Using computers needs a new way of thinking and problem solving. According to Morell and Echt (1997) there are four cognitive processes which deteriorate with age: memory capacity, text understanding, spatial sense and power of comprehension.

One of the main physiological problems is the loss of seeing power. Also input devices can be seen as a barrier as senior people may lack part of their kinetic capabilities, e.g. when handling the (computer) mouse.

Psychologically we can often observe a lack of self-confidence in older people. Unlike the young computer generation using the efficient “trial and error” method, people over fifty do not dare to try things out on their computer. Bad quality of application leads to frustration and this may lead to them dismissing the computer altogether.

So to avoid the frustration of senior students using a computer is one of the main issues. There are three aspects which should be taken into consideration: training, design and hardware. The focus of this project will be on the design of the web-portal. So a clear web structure, sufficient letter size, contrast and colour are points to pay attention to in general. But there are still many more specific items to be observed, which could only be derived from special user research.

4. User Research

In order to get more information about the target group we developed a threefold research strategy.

4.1. Method

To begin with a general questionnaire was handed out to all senior students (at the moment there are 323 students participating in the programme). This questionnaire was meant to give an overview of the experience, preferences and education of the students. Next were conducted a series of in-depth interviews in order to get a closer look into the lifestyle of the senior students. The results of the in-depth interviews were then used to create “personas” according to a model invented by Allen Cooper. This model includes the creation of specific questions and requests with respect to the web-portal.

Based on the results of the three types of research the structure, the layout and the functions of the web portal were designed. The design was then tested in a so called Usability-Testing, which allows for the discovery of any problems at the initial stage.

4.2. General questionnaire

The students had to answer 15 questions. They were divided into three parts: experience in computer usage, preferences regarding different web portals and information about the students' personal situation. To give an example, here are some questions from the questionnaire:

What disturbs you most when surfing the internet?

Would you search online in the projects and papers of your classmates?

What level of formal education do you have? (primary/secondary school/university).

Results

The answers showed that the senior students had little experience of using the new technologies, but they also revealed that their motivation to use computers is very high. About 89% of the respondents are willing to learn how to surf the internet. Half the students have a computer with internet connection at home. When surfing the internet they do not like being disturbed by advertisements. The students who surf the internet often have problems with navigating and rather frequently get lost on a webpage. They feel the need to learn how to use a computer, because they do not want to lose contact with new things. The majority of the senior students are interested in the projects and papers of their fellow students and would also like to communicate with them. Most students have a lower or medium type of formal education, only a few went to university.

4.3. In-depth interview

The main reason for launching an in-depth interview was clearly to get a more subtle impression of the situation, in particular the needs and wishes of senior students. The interview was divided into three parts. The first part dealt with the person, the next part was about studying followed by questions about spare time activities. The last part consisted of questions referring to design preferences. Altogether 12 students of the programme "Universidad de Mayores" were interviewed.

Results

The majority of the senior students mentioned that they now have more time at their disposal than before. Their children don't live at home anymore. They do not have to care about old or needy relatives, except in one case. They live near the university.

Asked about the reason for attending the university course they said that they wanted to get more general knowledge as well as receive updated information regarding current events. When they were young many of them were not able to go to university, because of the social and economic situation during those years. So they consider the present programme for senior students as a special chance. Most participants see their studying as a mixture of work and fun. They want to spend a nice time with their fellow students. Another important reason for going to university mentioned by all of them is their wish to socialise with other people. In other words, they want to maintain social contact. The majority of the students said that they did not invest much time in reviewing the contents of lessons outside class. Only very few considered their classes at the Universidad de Mayores as a start to enter into further (regular) university courses.

The students were delighted by the idea of finding class documentations online. They also liked the idea of learning in groups, which could also be provided online.

Asked about design they did not have clear design preferences, but their answers to the questions showed that they appreciate a clear structure and a good overview on a web-page.

4.4. The “Personas” – Model

This method allows for the creation of a few fictive “personas” from the information gathered. It means the persons are invented, but they are real in the sense that they represent a group of typical features as they appeared in the answers to the interviews. Like real people the “personas” get a photo and a name. They are defined by their goals and these goals determine what they expect from a web-portal. If, for example, a “persona” wants to communicate with fellow students outside class he/she will ask for the possibility of doing so via the web portal. So from defining the goals and responding to the requests of a few representative “personas” the different content areas of the web portal as well as an appropriate design can be developed. The “personas” model makes it easier to do this.

Four “personas” were created for this project. They cover the variety of students taking part in the programme “José Saramago”. Their requests were taken into consideration in the actual planning for the web portal.

5. Conception

As mentioned at the beginning, the web portal will consist of a public and a non-public sector.

The public sector will give some information about the Universidad de Mayores to whomever is searching for it on the internet. The non-public sector is solely to be used by students and teachers of the Universidad de Mayores. This project deals with the non-public sector only.

The first step in the conception of the non-public sector is the determination of the structure and the different areas of the web portal.

5.1. Areas

According to the research results and the “personas” requests respectively, the following areas of content were developed:

(1) Newsletter

This area serves to inform the students in a quick way about, e.g., changes of timetable. The students are divided into groups (1st year, 2nd year etc.), which means they can be contacted separately.

(2) Courses

This is one of the most important areas of the web portal. It is the online database of the different classes. So course materials are available to students round the clock.

(3) Projects and papers

To make the web portal more attractive there will be an area where professors can put the projects and papers of students online. As time goes on an archive of many different papers about various subjects can be created and knowledge shared.

(4) Cultural Activities

Both from questionnaire and interview it became very clear that students have a strong wish to participate in cultural activities. In this area professors can announce any cultural activity like excursions, special lectures etc. and they can use this space to organise them. Moreover a calendar of cultural activities in town can be added.

(5) Forum

This area is especially designed to enable communication between students at one campus as well as between the different campuses of the Universidad de Mayores. The page is divided into various topics/fields of interest so that students can easily talk to other students with the same interests.

(6) Contacts

As could be seen from the in-depth interviews, the main reason for attending university courses is to make friends. The contact area should help the senior students to find information like telephone numbers, email addresses etc. in order to actually get into contact with fellow students.

(7) Professors

In this area students can find information about their professors and their work. This makes the page livelier, because students get an idea of the professors and their subjects.

6. Access

When logging on the system offers the students information pertaining to their campus. If they would like to get information about one of the other campuses they can swap the menu.

The professors also have login rights to visit the web portal. They can change or update materials in certain parts of the site, for example in the course area. Every course has its own space, where the professors can enter their material and assignments etc.

7. Selection of system

Finally, knowing the structure of the web portal it became possible to choose the most suitable content management system. It had to meet different technical challenges as they are required by the various areas like fora, newsletters, calendars and so on. After intensive research the content-management-system Typo3 was chosen. It is an Open Source software which operates with ApacheServer, PHP and MySQL. Those things are very common among programmers. Typo3 can be easily expanded, which means that it is possible to attach other modules. It is steadily updated and developed further. As for the budget there are no licence costs, which will leave more money for staff training and thus secure the proper installation and operation of the new web portal.

8. Design

8.1. Principles

Talking about design there are three main principles:

- Organisation-principle: “Give the user a simple, clear and consistent structure”.
- Economic-principle: “Maximise the effectiveness of a minimal set of devices”.
- Communication-principle: “Shape your presentation to the intake capacity of the user”.

Apart from these main principles there are the general design guidelines which were also to be observed such as, for example, the incorporation of the logo of the Universidad de Mayores. Finally there were the rules concerning the special needs of older people in terms of contrast and colour, size of letters etc., which also had to be taken into consideration.

8.2. The Screens

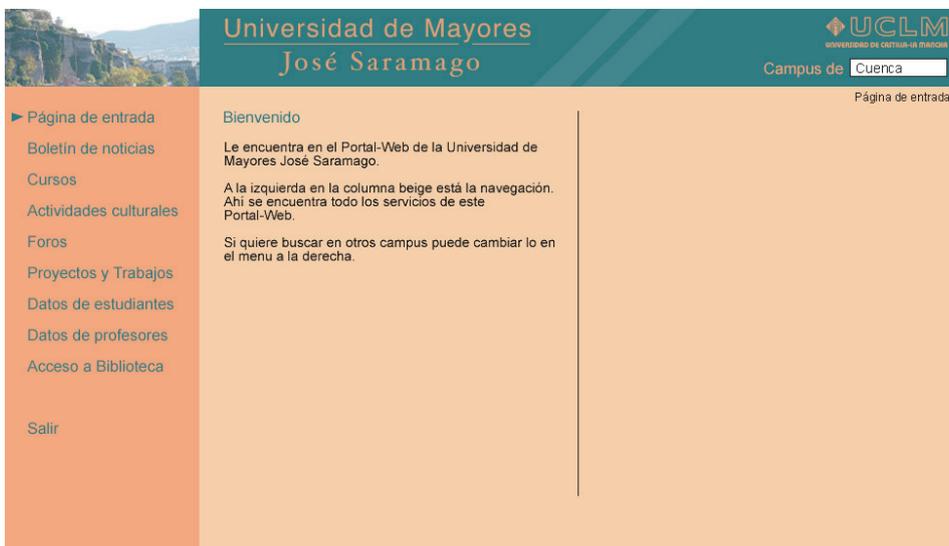
Starting with the first screen the login to the page must be found easily. So that is why there are only three options to choose from: “Presentation, Entrance and Help”. All visual objects are placed in such a way that the user is led to the login. This can be seen on the screen below.

The next screen is the login screen. To avoid any distraction there is nothing but the login on this screen. This ensures that the students do not get lost during their first steps, which are so important for the success of the following stages.





The next step leads to the main screen. It has a very simple but useful layout. The main navigation is on the left hand side. On the right hand side of the header you can find the navigation for swapping between the different campuses. The middle part of the screen with the lighter colour offers the contents. Typo3 uses templates, which ensure that every sub-page appears in the same or in a similar design. The web portal of the Universidad de Mayores needs one template, which means that the position of texts and pictures can be changed whereas the types and sizes of the letters remain the same.



Conclusion

The project-work can be used as a guide to the installation of a web-portal for senior students participating in the programme “José Saramago”. Due to the detailed user-research the project can be seen as a product especially designed for the students of the Universidad de Mayores but it may also be adapted to courses for senior students from other universities. The web-portal would serve as a communication-tool in the first place but as time goes on and more and more papers of students and professors are added it may also develop into an archive. So it is a web-portal designed to help both students and professors.

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Encouraging Reading Habits: A Reading Guide Model on the Net

1. A reading guide

The centre of Studies for the Promotion of Reading and Children's Literature (CEPLI) is a university research centre. It is a pioneer in this domain, aiming fundamentally at promoting research and studies related to children's literature, as well as any activity related to the promotion of reading and the creation of stable reading habits in our society.

In order to achieve its goal, fruitful activity through its different strands of work is being developed, among which we'd like to underline the following: organizing national and international seminars and congresses for researchers and specialists; editing studies and monographs; collaborating and maintaining a presence within important research projects, both at a national and an international level; organizing a Master's in Children's Literature and Promotion of Reading, an on-line Master's unique in the Spanish language; developing projects through different research strands (LIJ, *Hábitos Lectores*¹, etc.); creating new tools in order to promote reading and developing reading guides.

For further information, you can check out CEPLI's webpage.

This work is in the framework of the above mentioned strand, and the main subject of this paper: the development of a new interactive reading guide.

In 2003, the CEPLI had the opportunity to introduce the first of these interactive initiatives, developed in its centre² in Braga (Portugal) from a printed reading guide³ named *Los tres perritos. Guía de lectura interactiva a partir de un poema de Figuera Aymerich*⁴.

Following this project, the centre has developed a new guide to a book of poetry by Antonia Ródenas (1993), designing a series of proposals and activities which are

¹ Magazines on children's literature and reading habits.

² See Perona López and Martínez Soria (2003).

³ You can check any reading guide Publisher by the CEPLI and download them for free on the Centre's webpage: <http://www.uclm.es/cepli/publicaciones>

⁴ <http://www.uclm.es/cepli/guia/3perritos/3perritos.swf>

not directly aimed at children but at mediators between books and children. They are provided with a series of suggestions and strategies which may help them achieve an essential goal: encouraging people to read.

The mediator's role is very important when promoting reading, as well as when encouraging reading. When working with children, this role is played by adults with a specific profile (parents, teachers or librarians, although, logically, we should include publishing houses and booksellers). The mediator is a link between children and books and his/her aim is to encourage dialogue between them. Reading guides are just an instrument which must be used and adapted to the context and its potential readers, to make reading more exciting to them and help them enjoy it (Cerrillo *et al.*, 2002).

The promotion of reading consists of making reading into a pleasant experience. Reading for pleasure is a priority objective for people who start reading. It is not necessary to underline the lines that should be followed for correct planning in terms of prompting reading, a concept which not only includes the different strategies and ways to achieve this goal, but also all those educational policies which should be promoted at a national and EU level in order to create and consolidate stable and lasting reading habits (Cerrillo *et al.*, 2002)⁵.

2. The new technologies

Nowadays, information is considered one of the most important assets, or probably the most important one, for any company aiming at leading its domain of development and influence. The statement "Knowledge is Power" has always been well known. The knowledge society has given way to the information society. Know more and earlier: master more things, and be able to manage this information optimally, according to our interests. For this reason, we have promoted the development of new technologies, particularly computer science, their implementation and the new forms of communication created by them. It is probably the most important development since the printing press was invented.

New information technologies show us, in real time, what is going on in any part of the world. The information society, eager for news through new technological tools, faces a new problem: its own inability to adopt and assimilate so much information, which is very different, even though it may refer to the same piece of news. Here the lack of reading ability of the new technologies' users is not completely alien to this problem: the inability to discern information, to choose the appropriate messages and suitable information channels. People read to know, to compile data and information useful for their jobs, not for pleasure. Definitely people read as if it was another mechanical activity part of their lives, leaving the pleasure of reading and its benefits behind.

The Net provides an enormous amount of resources, open to everybody, free in most cases and available to any person having a computer and broadband. There are many public and private initiatives that promote the creation of new websites in order to encourage people to read. There are also other didactical tools aimed at children and young people rather than adults (García Ribera 1999; Morote y Pons 2001).

⁵ This book deals with this subject in depth.

We must underline *Mediometro's* webpage, since it is specially related to the activities proposed in our interactive reading guide. Its name has to do with its public's height, since it is aimed at children between 4 and 6 years of age⁶: it was conceived as an educational tool and is divided into five areas, being those dedicated to formation (formal and non-formal) the most important to our example. It has a direct and easy language, and prompts the participation of the child in the activities.

Our didactic proposal in the present reading guide has similar purposes and, in order to achieve them, it uses identical proposals in its computer tools. The activities developed by other webpages both in English and Spanish remain more alien to us; we share the same objectives, but they do not use the same interactive means.⁷ On the other hand, some webpages use the same means (even far more developed), but in these cases they do not share this didactic nature and focus on the playful part of reading.⁸ Finally, other webpages offer a wide range of interesting contents, under subscription, not very different from the page included in the University's domain, or the links offered by other centres such as the Fundación *Germán Sánchez Ruipérez*⁹, or the CEPLI itself.

3. The interactive reading of *Rimas de luna*, by Antonia Ródenas

The activities proposed have been designed for readers between 4 and 6 years of age, although we acknowledge that we can easily overcome age barriers if we bear in mind the different levels of reading ability we can find in the framework of their development (classroom, home, libraries), as well the different "attraction" or interest that the proposals provided may arouse among the public, which is very diverse too.

When the presenter accesses this interactive reading guide from his/her computer (for example, at work, working directly from the document on the net, or from a previously downloaded document on his/her computer's hard disk), the first thing he/she will find is a start page with the title of the book, its author and the first pictures / animations. By clicking on any part of it, you can gain access to a second page, where the different sections of the guide are shown, with other pictures as well.

These sections appear all through the guide as an active menu with its different "buttons": AUTHOR; POEMS; RELATED READINGS. (*Author*: brief bibliography and comments on María Antonia Ródenas' career. *Poems*: access to a page where the first lines of each one of the twelve poems which comprise the original book are shown. These lines will work as active buttons, from which we will access the whole text of all of them and the activities proposed to the mediators and participants who encourage other people to read. *Related Readings*: a bibliographical list with other recommended books related to the subjects of this reading).

Through all the activities, we have tried to remain faithful to the tasks proposed on the printed guide by Cerrillo *et al.* (2005), although we have not always succeeded, since many activities were deliberately conceived for work in a classroom or in places

⁶ <http://www.mediometro.com>

⁷ <http://www.primeraescuela.com> ± <http://www.first-school.ws> Also: <http://www.dltk-kids.com>

⁸ <http://www.navidadlatina.com>; www.chicos.net ; www.cyberkids.com; www.chasque.apc.org

⁹ <http://www.fundaciongsr.es>

with many children, using more manual tools to promote reading. Two more buttons will be active in the whole application: BACK and EXIT. The first one gets you the previous page. EXIT obliges the user to quit.

You can gain access to the activities through the POEMS option. All the titles of the books work as an access button to the poem. The guide is divided into the same number of parts as the number of poems in the book, with a series of activities we propose for each one of them. In this work, due to limitations of space, we offer the activities included in the guide, but only six of the twelve poems in the book, which can show a sample of the general content.

La luna ha salido,
el sol ya se va;
una luciérnaga
sale a pasear.

POEM *LA LUNA HA SALIDO*

When the person participating in this activity accesses this poem, two educational proposals are offered to him/her.

The first one shows, next to the poem, three pictures of the main characters and, in another area, the three identifiers (moon, sun and firefly). The activity proposed is very simple: matching words and pictures, asking the participant to drag one to the other with the computer mouse. If he/she does not get it right, the program informs him / her that he/she must try again. At the end, the program displays an animation congratulating the participant.

The second proposal offers participation in the animation, with four buttons and four activities: “1st riddle”, “2nd riddle”, “3rd riddle”, “Other riddles”.

When you press on the “1st riddle”, the next one is displayed: *Alto por alto, / redonda como un plato*. Next to it, there are three pictures working as possible correct answers: a coin, a giraffe and the moon. When the player clicks on the right answer (the picture representing the Moon), a congratulations display is loaded.

If you click on the “2nd riddle”, you get a new riddle: *Doy calorcito, / soy muy redondo, / salgo temprano / y por la noche me escondo*. Three new pictures are displayed as possible correct answers: a store, a light bulb and the sun. When the player clicks on the correct answer (the picture representing the Sun), the congratulations display is loaded.

If you click on the “3rd riddle”, a text is displayed: *Para luz natural / la que desprende de noche / este pequeño animal*. Three pictures are displayed as possible correct answers: an owl, a lighthouse and a firefly. When you click on the right answer (the picture representing the firefly), the congratulations displayed is loaded again.

Finally, the button “Other riddles” displays other full-text riddles, below which the button ANSWER is displayed. When you press it, you get the picture with the right answer.

Both proposals aim at working on the participants’ comprehension by the mediator, as well as other of the riddles’ main features.

La luna se esconde,
se quiere escapar.
La nube la oculta
con un delantal.
La luna...
La nube...
Un delantal.

POEM *LA LUNA SE ESCONDE*

The poem on the screen offers two educational proposals. The first one offers a pictogram: we have removed the nouns from the poetical text (“moon”, “cloud”, “apron”), leaving the corresponding gaps.

These nouns have been replaced by their relevant pictures (meaning=signifier), which are placed at the side to help the person participating in the activity to choose them with his/her computer mouse and, by dragging them, to place them in their relevant location within

the poem. If the person participating in the activity does not get it right, the message, "Wrong answer. Please, try again!", is displayed.

The second proposal makes the poem disappear from the screen, leaving just a pictogram with all the verbs removed ("hide", "wants to", "escape", "conceal"), leaving only the substantives, the articles and other particles. These verbs, in a textual format, are represented apart from the pictogram. The person concerned should then drag the verbs with the mouse to put them in the right place, but in this case there will be no tips saying whether the place is right or not; this will promote the creation of new sentences, new meanings, other senses, etc. Once the poetical pictogram is correctly solved, the poem will be displayed in a full-text format, with light effects announcing the end of the activity.

Both activities should help the mediator to make the starting point of reading and writing easier and help to exercise the reader's memory.

POEM LA LUNA SE ESCONDE

The poem on the screen offers two educational proposals. The first one offers a pictogram: we have removed the nouns from the poetical text ("moon", "cloud", "apron"), leaving the corresponding gaps.

La luna se esconde,
se quiere escapar.
La nube la oculta
con un delantal.
La luna...
La nube...
Un delantal.

POEM CANTA LA LUNA

This poem offers only one activity, aimed both at promoting the creative and motive abilities of the people participating in it, as well as at working with numbers.

A hidden picture is offered, which must be completed with the mouse. The person participating in this activity must simply follow the numbered spots' correlative sequence.

Canta la luna,
la luna canta,
y el niño chico
no se levanta.
Canta en la noche
con su bufanda,
pues siente frío
en la garganta.

The mouse's pointer turns into a pencil. The player should successively click on each number, following their ordinal sequence (from number 1 to number 49). The program does not let the user get it wrong: the line will only be displayed if the number order is followed correctly. Once the picture is finished, following the spot line, the picture will be displayed gradually and coloured, which represents the end of the proposal.

POEM YO BUSQUÉ EN LA NOCHE

The proposal is very simple: to encourage the person to participate in the animation's creation. We propose that the player draw a picture:

"Draw your ideal moon.

We help you with all these things"

The player will be presented a blank picture of the moon and a series of objects on one side, divided into categories: EYES, NOSES,

EYEBROWS, MOUTHS, HAIRS, HATS, ACCESSORIES. The pictures offered in each option will be different.

The player will choose among different alternatives, which will be put in their relevant places, so he/she will configure step by step his/her own picture of the moon.

Yo busqué en la noche,
y a la luna encontré;
su cara era triste,
y ya sé por qué.
Buscaba un lucero
que un día se fue
detrás de una estrella
y lo atrapó un pez.

The player will be able to change one object for another as many times as he/she wishes, which entails a constant interactivity between the mediator and the player.

This activity is aimed basically at working on people's participation in the activity's creation through animation, as well as at learning different values, both positive and negative (joy, sadness, anger, etc.), emotions the people participating in the activity can talk about when drawing the different pictures.

La luna llora
frente a su espejo
de aguas tranquilas
y azul intenso.
La luna llora
frente a su casa:
está muy triste,
está cansada.

POEM *LA LUNA LLORA*

The chosen poem is displayed on the computer screen. After reading it, a game is proposed to the participants, through the PLAY button. After clicking on it, the poem is displayed again, but in this case there are some gaps in it: the words "MOON", "MIRROR", "HOUSE", "WATERS", "BLUE", "SAD", "TIRED".

On the screen, next to the poem, there are a total of fourteen (14) chests, having inside them the pictures and the words missing from the poem. In this way, the player will find the picture of the moon, the mirror, the waters and the house. In other chests, the words are "blue", "sad" and "tired".

The proposal is the famous couple game: the player should find the pictures and the terms, by clicking consecutively with his/her computer mouse. When he/she finds the same pictures and the same words, they will disappear with their relevant chests. When all the words and pictures are matched, the whole poem will be displayed again, representing the end of the activity.

By playing this game, the player is initiated to reading and writing. In turn, also the ability to memorise has also been practised.

Que baje la luna,
hasta mi ventana.
Que su luz se meta
dentro de mi cama.
Que luego se acerque
y roce mi cama.
Que muy despacito
pueda yo abrazarla.

POEM *QUE BAJE LA LUNA*

This poem offers an activity for both the mediator and the reader. If they look carefully, they will realise that the poem is the sequence of a specific action.

Four different pictures will be displayed on the screen, each one of them corresponding to one of the poem's scenes. These pictures will not be numbered.

The player should then drag with the computer mouse each one of the scenes, placing them correctly according to what is being said in the poem.

A white band will be available on the desktop, numbered from 1 to 4, to complete this activity. If the player gets it wrong, the message, "Wrong answer. Please, try again!" will be displayed. When all the objects are placed correctly, a congratulations message will be displayed, representing the end of the activity.

This activity is aimed at developing the readers' plastic expression.

4. The application's technical features

This Internet project has been designed graphically with Freehand MX's (Macromedia) vector pictures, loaded through the Flash MX (Macromedia) program.

The final version has been optimised both for PC and Macintosh systems. To download it on your computer, the Flash 6 plug-ins must be installed. These plug-ins are available for free on the CEPLI's webpage, through a link to download for free.

Finally, we want to underline that the whole application is less than 500 Kb in size, and its use is free and to anyone on the webpage: <http://www.uclm.es/cepli/publicaciones>.

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Language Development in Adolescents and Adults with Down Syndrome. Allegro Project¹

1. Introduction

Studies of language development in children with Down Syndrome have persisted throughout the last 25 years and still continue to ask 1) whether there is a particular pattern of language strengths and weaknesses characteristic of language acquired by children with Down Syndrome and 2) whether the developmental course of language acquisition is best characterized as delay, or atypical acquisition. From among these studies, we would like to highlight Rosenberg's (1982) review of previous research on language development in children with mental retardation. Later work by Hartley (1986), Miller (1988), Pruess, Vadasy and Fewell (1987) and Fowler (1990) consider differential rates of development for the lexical and syntactic domains. Our study, however, was restricted to focusing only on the lexical domain.

The studies carried out so far in this field have focused on the learning of the students' mother tongue. When these students are learning and developing their mother tongue, the following aspects are considered to be important:

- Their use of simple, short sentences.
- Their difficulties with grammatical development.
- Their reduced, automatic vocabulary.
- They remember words by analogy and not by logical reasoning.
- Even when able to maintain a conversation they prefer to remain silent.
- Their comprehension level is higher than their production level.

As Steinberg points out:

It is clear that the child must learn to understand speech before he or she is able to produce it (meaningfully). It is necessarily the case that speech understanding precedes speech production. (...) Sach and Truswell found that children who could say

¹ This study has been carried out with the financial support of the European Union: *Allegro: Access to Language Learning by Extending to Groups Outside* (Socrates, 100033-CP-1-UK-LINGUA-L1).

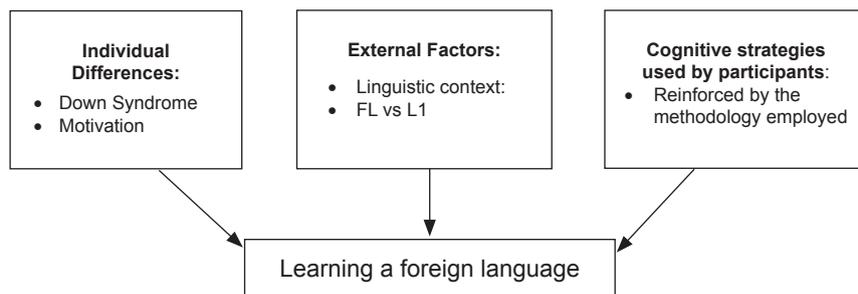
only single words could understand speech structures composed of more than a single word... We can conclude that language learning may occur without production but not without understanding (Steinberg, 1996: 17–19).

Our initial hypothesis is that FL Down Syndrome Students follow the same path in the process of learning English as a foreign language as in the process of learning their mother tongue, Spanish in this case. The hypothesis also states that learning process would progress in a positive way, but the difficulty would be greater when the input increased.

This paper focuses on language production and lexical development. Research studies carried out with children and young adults with Down syndrome (Mein, 1961) maintain that there is a decrease in the learning of nouns and an increase in the learning of verbs. They also show that the acquisition of new vocabulary is faster if there is a friendly and relaxed ambience and if the students have access to new vocabulary through games (Chapman, Kay-Raining Bird and Schwartz, 1990). Students must have time to play with what they have been learning and activities must have an overlap to enable those who want to spend more time on an activity to do so (Vázquez et al. 1999: 50).

In order to carry out the study, the factors suggested by Ellis (1994) as fundamental in the process of language learning have been taken into account. These factors can be summarized as follows: 1) individual differences, 2) external factors and 3) internal learning strategies. They are explained in the following chart and in section 2.

Chart 1. Determining factors in language learning. Ellis (1994)



2. Methodology

The subjects belong to a monolingual Spanish-speaking middle class community in Castilla-La Mancha (Spain). Foreign language learning occurred without any opportunity to interact with native speakers or any other way to learn the language

² There are three basic types of motivation: a) integral motivation, a positive attitude towards the language brought about by an empathy with it and its culture, the influence of social and family attitudes and the influence of the teacher and his/her attitude towards the language; b) intrinsic motivation, a positive attitude towards the language due to respect for the teacher, interest or enjoyment of activities, participation; c) productive motivation, a positive or negative attitude towards the language due to experience of success or failure (Vázquez et al. 1999: 28).

(such as TV, films, radio etc.) outside the classroom environment. The cognitive and emotional elements are important factors: all the students had their families' support and were highly motivated,² and this positive attitude towards the language was an aspect to be built upon. With regard to intrinsic motivation, teachers had to change certain teaching habits to meet the students' needs. Teachers prepared high quality activities which motivated students and made the lessons enjoyable, increasing their desire to participate in them. In terms of productive motivation, teachers had to encourage students continuously, congratulating them when they had done well and trying to minimize their failures. Factor one was therefore taken into account.

External factors are also relevant in this study. Research in the learning of Down Syndrome students has been carried out with children learning their L1 or their L2. But our participants were learning English as a foreign language, in a context in which the input they received is not so high. This implied a greater difficulty in the learning process for these students.

Internal learning strategies must be reinforced by the methodology chosen. In this study this proved to be quite successful, since the participants, in spite of their individual differences and the difficulty of learning a foreign language, demonstrated the same development in learning as with L1.

The teachers had to give structure to small pieces of language in an amusing way, so that students could assimilate them. Teachers also had to take careful notes of the order in which new pieces of language and speech were introduced and organize a rich and varied range of activities to fix the new language, recycle it in an imaginative way so that it would not be forgotten, and re-use it constantly. The vocabulary input was gradually increased over the 6-month period. By April the students had practised the following items: greetings, colours I and the name of some animals. In May, new items were introduced (colours II, numbers 1–20, bingo, parts of the body, songs) and the previous ones were reviewed and recycled. In June, in addition to reviewing the previous items, vocabulary related to food and some verbs were added.

Our students' first contact with the language took place in January 2003. In this study we take into account a 6 month period, until June 2003; however evaluation was only carried out from April onwards in order to respect the so-called period of silence. There are two main reasons for this three month period. Firstly, following Butterworth & Hatch (1978), it seemed a long enough period of time for subjects to become familiar with the learning of English negative devices, and secondly, following Gibbons (1985) and Saville-Troike (1988), L2 learners – both children and adults – may go through a period of silence to prepare for the time when they begin speaking the L2. This period is thought to take place during the initial three months. It also relates to Steinberg's remarks on understanding and producing a language as quoted in the introduction (Steinberg, 1996: 17–19).

The main social, demographic and cultural characteristics of the subjects are summarized in table 1. In order to protect the subjects' anonymity they are referred to as subject 1, subject 2, etc. The participants in this longitudinal study were five native Spanish speakers: three adolescents aged twelve, fourteen and fifteen, and two adults aged eighteen. The teacher was also a Spanish native speaker.

Table 1. Subjects' social, demographic and cultural characteristics

SUBJECTS	Sex	Age	L1	Level of English	Current Studies	Intelligence Test	Method
Subject 1	F	14	Sp.	Beginner	2º Secondary	C	Interactive
Subject 2	M	12	Sp.	Beginner	5º Primary	A	Interactive
Subject 3	M	15	Sp.	Beginner	2º Secondary	C	Interactive
Subject 4	F	18	Sp.	Beginner	Adult School	C	Interactive
Subject 5	M	18	Sp.	Beginner	-----	B	Interactive

3. Results and discussion

In order to carry out this study, students were evaluated each month on the different topics introduced in the lesson. Some of the items were not evaluated on their own, either because the activities did not lend themselves to a clear evaluation or because the contents of the activities were evaluated in relation to other tasks. Such was the case with numbers, for example, which were evaluated in the *bingo* activity, the word search, whose content was also evaluated in the bingo, or the songs associated to parts of the body. Tables 2 to 4 show the marks (out of 10) awarded to the participants in each summative evaluation.

Table 2. Marks of Participants in April

	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5
Greetings	5	9	6	9	5
Colours (I)	4	9	7	9	6
Colours (II)	4	9	7	9	6
Point to something blue, yellow...	3	8	5	7	4
Colour a banana, the sun...	3	9	5	7	5
Animals	4	8	1	9	6
What colour is this?	3	7	5	7	5

Table 3. Marks of Participants in May

	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5
Greetings	6	9	7	9	7
Colours (I)	5	8	8	8	7
Colours (II)	5	8	8	8	7
Point to something blue, yellow...	3	9	5	8	4
Colour a banana, the sun...	4	9	5	8	5
Animals	4	8	1	9	6
What colour is this?	3	7	5	7	5
Numbers 1-20	3	9	9	9	6
Bingo	4	9	9	9	7
Song	5	7	5	7	4
Draw a line to match the body parts	6	8	1		
Word search	7	6	3	8	6
Head, shoulders...	8	5	2	8	5
Bingo	2	7	2	3	3
Simon says...	3	4	3	4	3
Hockey cokey (song)	8	5	1	9	5

Table 4. Marks of Participants in June

Greetings	6	9	7	9	6
Colours (I)	6	8	8	8	8
Colours (II)	6	8	8	9	8
Point to something blue, yellow...	4	9	5	9	5
Animals	5	9	3	9	6
What colour is this?	4	9	5	8	6
Numbers 1-20					
Bingo	4	9	9	9	7
Song	5	7	5	7	4
Draw a line to match the body parts					
Word search					
Head, shoulders, knees and toes	8	6	3	8	5
Bingo	2	7	2	3	3
Simon says ,touch your nose'					
Doing the hokey cokey (song)	8	8	1	9	7
Members of the family	3	7	5	7	5
Food (I)	1	7	7	8	6
Food (II)	3	9	7	8	6
I like, I don't like	1	4	2	6	3

From the marks summarized in tables two to four, graphs one to six have been elaborated. Graph one represents the marks the students got in their first evaluation. Two of them, subjects 2 & 4, achieved high marks in almost all the evaluation items – in both cases marks between 7 and 9. Subjects 3 & 5 show a relatively good perception, although subject 3 shows a notable drop in the category of ‘animals’. This is significant, and confirms the importance of the social and affective factors and individual differences in language learning mentioned by Ellis (1994). The student was reluctant to participate in the activity because one of the animals was showing udders and the child considered this to be obscene. This child has been brought up in the bosom of a very conservative and religious family, which is reflected in the child’s learning. Subject 1 demonstrates a similar learning profile.

Graph 2 shows the results obtained in the second evaluation of the same items as Graph 1 (see appendix). Subjects 2 & 4 maintain the highest marks, followed by subjects 3 & 4. A clear improvement can be seen in all subjects, especially in the case of subject 4. It is interesting to note that subject 3 retains the same low level in the ‘animals’ item. Even though the materials used were different, the subject still considered it was inappropriate and did not want to participate. Overall, a reasonable improvement can be seen in all five subjects

Graph 3 shows the results of the second stage of evaluation which took place in May. This included recycled items from April (greetings, colours I, colours II etc.) and new items from the month of May (numbers, bingo etc). The total of all the marks is therefore represented here. Overall, subjects 2 and 4 continue to display improvement, followed by subjects 5 & 3, but what is most notable is that subject 1 has improved to such a degree that there is now parity in all the levels. This was brought about by the subjects’ very good performance results in the exercises used in this second evaluation stage.

Graph 4 shows the results obtained in June from the reviewing of items of learning which took place in April. The subjects show a progressive development in their learning (no scores were made for the ‘colour a banana’ item). In relative terms, subjects 2 and 4 continue to show the best marks, followed by subject 3, although the ‘animals’ item shows a negative development with a return of 0. Subject 5, however, continues to show a consistent overall improvement.

Graph 5 allows us to carry out a comparison of their progress between the months of May and June. The subjects returned very similar results for both months, although subject 3 shows no progress as some questions were left unanswered.

Finally, Graph 6 offers an overall view of the results achieved by the five subjects and covers all the questions carried out in the month of June. Two of the subjects, 2 & 4, show a higher level of understanding of the questions. Subject nº 5 reaches almost the same standard and shows therefore a remarkable improvement in these months. Subjects 3 and 1 have also attained a very respectable degree of learning even though it is lower than the other three subjects.

Conclusions

We can ultimately compare the average marks of all the subjects for each of the three months’ items and obtain an overall view, as displayed in Table 5 and in Graph 7.

Table 5. Average marks in April, May and June

	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5
April average	3.7	8.4	5.1	8.1	5.3
May average	5	6.8	4.1	6.5	4.5
June average	2.7	6.9	5.1	7.3	5.1

Graph 7 shows the average marks obtained by the five subjects for all the questions in each of the three evaluations. We can see how subjects 2 and 4 stay in the top position, followed by subjects 3 and 5, who have practically the same average marks in June, while subject 1 barely attains a mark of 2.5. On the other hand, we can see that when all the evaluations are taken into account the rate of learning is less satisfactory than when the subjects were only dealing with the simpler concepts of the first two months' evaluations. In other words, the subjects demonstrated good learning ability in the initial contents of the course, but appear to have increased difficulty as new items were introduced.

Being aware of the three factors mentioned by Ellis (1994) has proved to be very useful in this experience. The comparison of the average marks of our subjects in the three months evaluated shows some tentative results. In line with the studies mentioned in the introduction, regarding whether there is a particular pattern of language strengths and weaknesses, we feel it is possible to say that in fact there is. Even though the studies mentioned in the introduction refer to mother tongue language learning, this also seems to be true when the students are learning a foreign language. They seem to be stronger in the acquisition of nouns, but this is also related to the students' particular interests in things. This contradicts Meins' findings, which showed a decrease in the learning of nouns and an increase in the learning of verbs.

With regards to the studies carried out by Hartley (1986), Miller (1988), Pruess, Vadasy and Fewell (1987) and Fowler (1990), we agree that there are differential rates of development for the lexical and syntactic domains, since the graphs show how they respond better to single items of vocabulary than to sentences, even though they are short and simple, such as the ones introduced in June. This is interesting since it confirms our initial hypothesis, that they follow the same path both in the processes of learning English as a foreign language and in the process of learning their mother tongue. As was stated in the introduction, they have difficulties in grammatical development, they use a reduced and automatic vocabulary and remember words by analogy and not by logical reasoning. It is also interesting to note that all the subjects follow the same rate of progression although they keep the initial differences.

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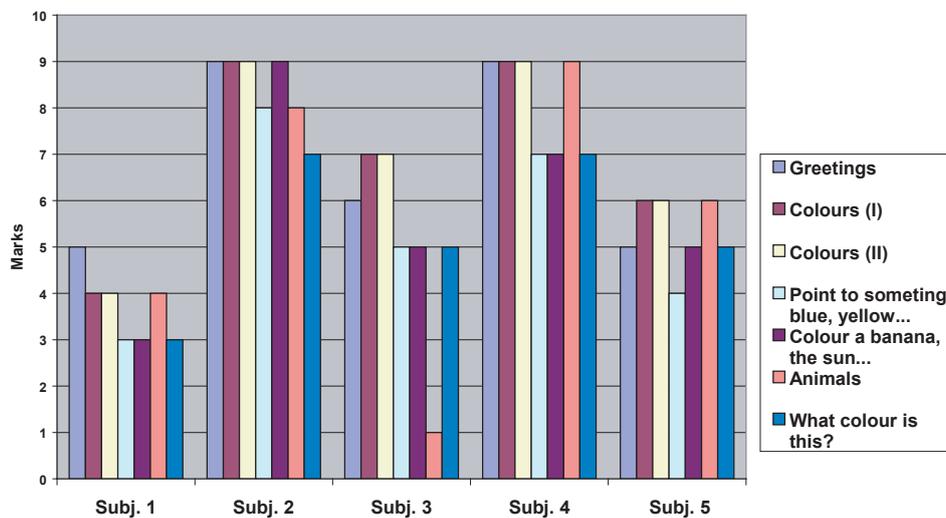
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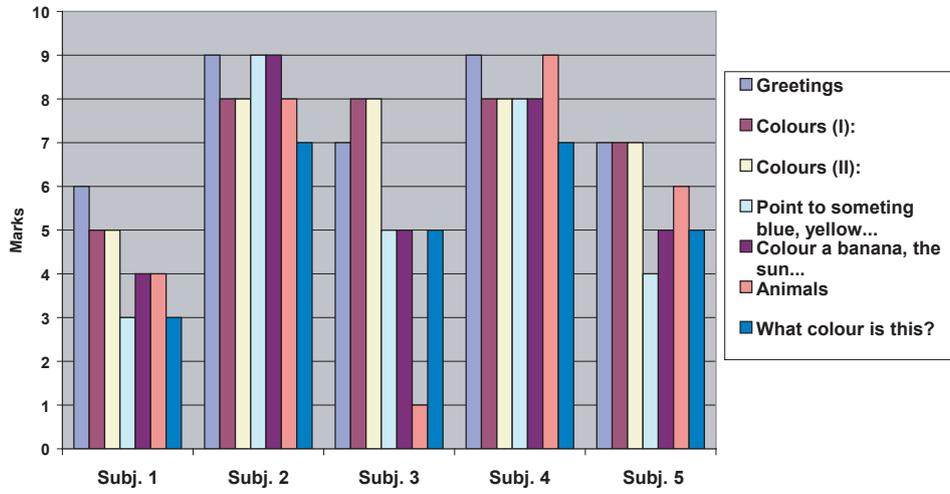
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APPENDIX

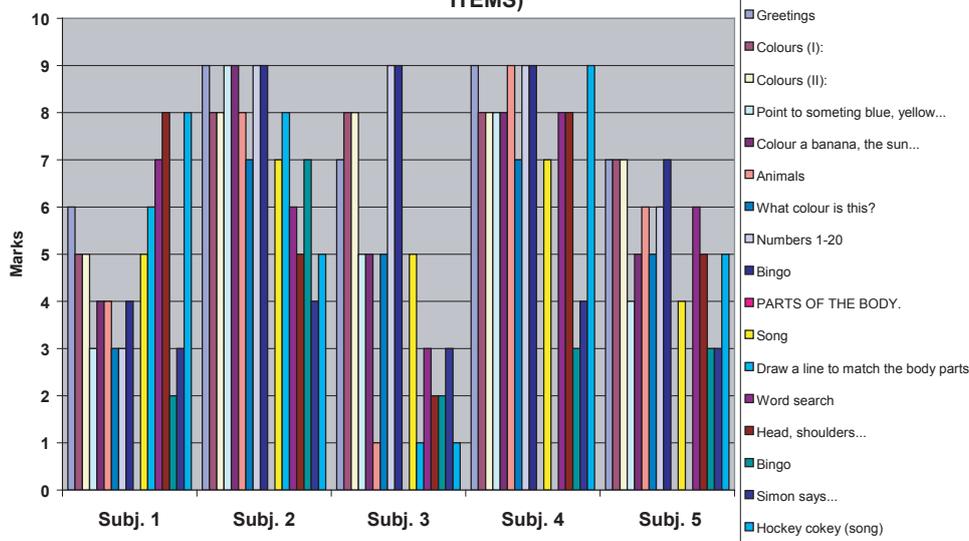
GRAPH 1. MARKS OF PARTICIPANTS IN APRIL

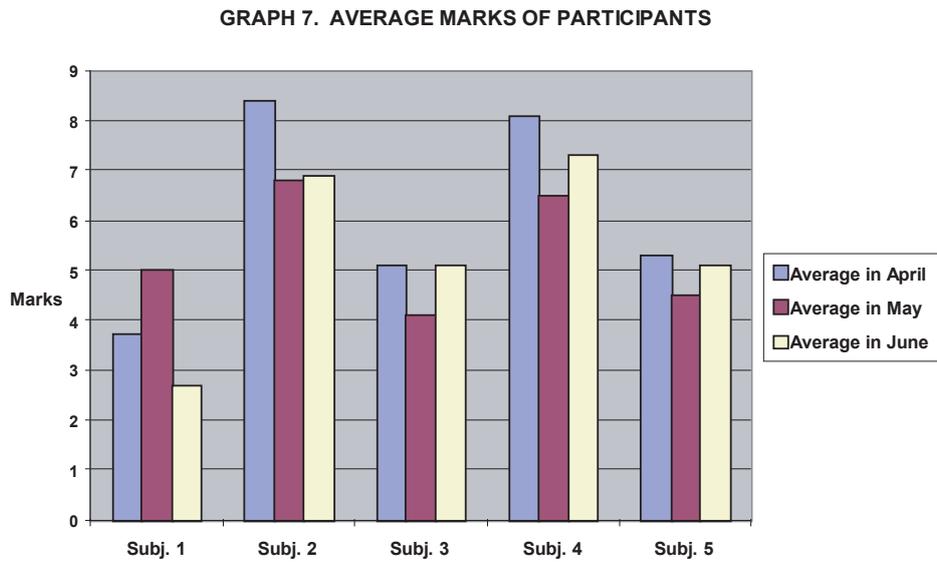
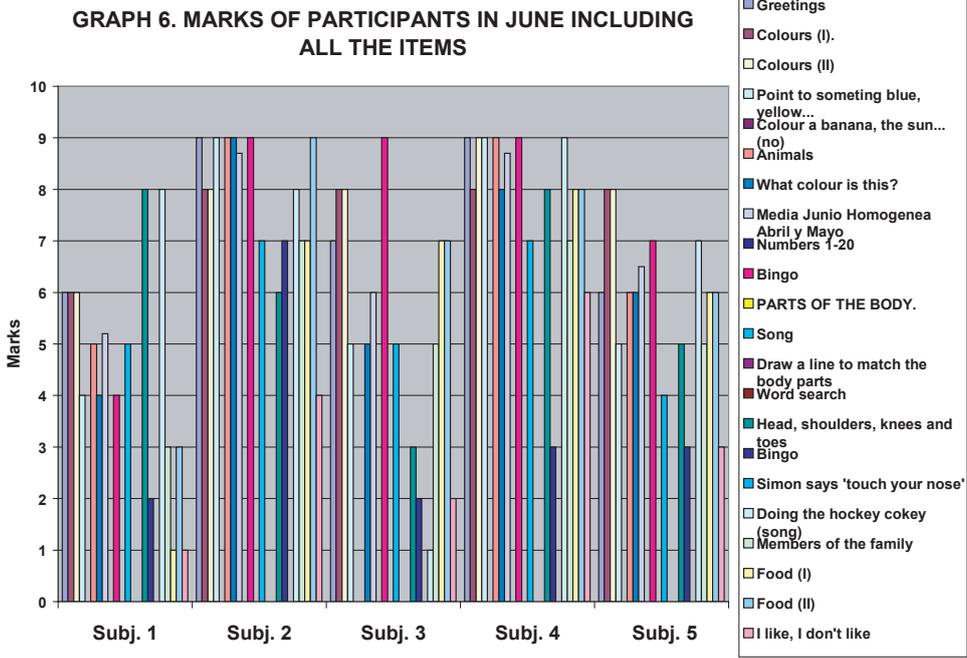


GRAPH 2. MARKS OF PARTICIPANTS IN MAY (CORRESPONDING TO ITEMS OF APRIL)



GRAPH 3. MARKS OF PARTICIPANTS IN MAY (INCLUDING ALL THE ITEMS)





Teodora C. Esteban Lobato
Julián Serrano Heras

The Interactive Blackboard: A Pedagogic Tool for Integration

The interactive blackboard has been used in our university in several foreign language learning projects and, in all them, we have been able to verify that it is an especially useful and effective tool that facilitates access to information technology and communication with people with diverse learning limitations like mobility and integration in class groups.

There are three contexts in which we have experienced this tool:

- The introduction of the reading of foreign languages in primary education, that is to say in the age group of 8 to 12 years (I Project Comenius 2.1 Primary Letter Box, financed by the EU).

- The sensitizing to and beginning of learning foreign languages with groups of autistic and Down Syndrome children.

- The sensitizing to and learning of foreign languages with adults.

The last two experiences are part of the project Lingua 1 ALLEGRO (Access to Language Learning by Extending to Groups Outside), financed by the EU (100033-CP-1-2002-1-UK-LINGUA-L1).

Primary Letter Box is a project that concluded in September of 2004, in which we worked with 6 partners of 4 European countries (Austria, Great Britain, Poland – the Pedagogic University of Krakow – and two Spanish institutions, the Centre of Formation and Resources in Coruña and the UCLM at the University of Cuenca).

This project has had a formation module as a result of the introduction of reading in foreign languages in primary teaching; their objectives can be summarized in the following three ways:

- To contribute some hints to help learners to trace their own personal itineraries, supported by the diversity of their students.

- To collaborate in the construction of the first steps towards autonomy in reading.

- To define conducive itineraries to success in the learning of reading and to translate them into numerous activities illustrative of a significant and easy formation module for use with learners.

Our work has essentially leaned on the following fundamental lines:

- Investigation, integration and teaching practice. The team was integrated by investigators and professors who have had, or they still have, experience in that stage, but we have also collaborated with centres that have experienced our ideas and materials.

- Attention to diversity through the theory of Multiple Intelligence. Starting from the theory of Gardner, we have tried to respond to the different potentialities of the students. We have programmed and classified our activities to improve the attention to diversity of each one of the students in a class.

- The interest for the TICE:
 - Digital video. To evaluate the experimentation of our ideas and activities, we have used this resource. But it has also been a fundamental tool to integrate pronunciation models or motivation resources in our activities.
 - Multimedia innovations. We are convinced that the technologies allow us to integrate all types of resources and that they can facilitate and enrich the professor's task, but they can also interest the students by attracting them and motivating their learning.
 - Finally, the interactive board has been the support in which all the above-mentioned ways of work have found their best expression. All the elaborated resources have the classroom as their objective and this tool allows us to use all our resources in a collective way in a normal class.

In the ALLEGRO project, each institution has worked or works with different external groups. In the University of Castilla-La Mancha (UCLM), we have worked on sensitization towards three languages (English, French and German) and with three types of people (children with Down Syndrome, adults and immigrants). We have only intervened in the first two groups and in the French language.

Our first ALLEGRO group arose out of an agreement with ADOCU (Association Down Cuenca) and it was composed of children with Down Syndrome and two autistic children. These children and their families fight in a habitual way against:

- Integration difficulties in an educational system that tries to integrate them, but doesn't generally have the appropriate means.
- Motivation difficulties, mainly in the children with Down Syndrome. These prevent them from managing with ease some tools, such as the mouse of a computer.
- Socialization difficulties. The autistic would be charmed if they were left isolated in front of a computer, but that doesn't help them at all in the discovery of other areas.

In the first year of work, we provide different materials and forms of support; we diversify the activities as much as possible and we check that all the members of the group are interested in the use of computers. As our objective was to work in groups, we use a computer and a projector. The projection of multimedia programs and the alternative manipulation of the computer solved many integration problems in the group of autistic children, but we found participation problems with the Down Syndrome children, mainly because of their mobility limitations.

Our group of adults was composed of people that had to abandon their studies when they were young. They were also fascinated with the possibilities that the multimedia programs offered. But nobody had had contact with computers and they considered themselves unable to use the program in an autonomous way. We should also point out the sight problems and the mobility problems of these people that hinder them in work with a small screen and with keyboards or conventional mice. Also, one of the biggest motivations for the adults is to share and communicate with other people and not with a machine.

To overcome all these difficulties, the help of the interactive board has been fundamental. It has allowed us to manipulate all type of objects and icons, it has facilitated access to computer technologies for all the users, and they have helped us to prepare and to propose simulations of communication situations. The interactive blackboard has become, in short, a dynamic scenario of shared learning.

Different types of interactive blackboards exist

The first important difference between types is the capacity for autonomy when generating the image. There are blackboards that you/they don't need a projector for because they work as a television with a tactile screen. They have many advantages, but one fundamental inconvenience; their price.

The most affordable depend on a projector and they assure communication with the computer in different ways: by means of an optic pencil that transmits the pulsation coordinates, by means of a sensitive membrane whose intersections correspond to those coordinates. In all of them, it is fundamental to guide the program, that is to say, to fix a certain number of parameters for a base that will connect the pulsation in the blackboard with the point adapted in the used program.

Both of them allow us to manipulate the computer and to generate our own, exportable materials.

We chose the Smart Board, because it is the only one that allows us to draw or to write directly with the finger or with the whole hand. This was fundamental for our projects, because it reduces to the minimum the intermediate elements; on the contrary, it allows us to manipulate virtual objects directly (drawings, symbols, texts etc.)

In our experience with the interactive blackboard, we have used three types of materials:

- Documents generated with other computer programs, as Word, Power-Point, Hot Potatoes (salade niçoise, mèls etc.)
- Commercial educational materials, multimedia or not (multimedia language system, lexiquefle etc.)
- Materials generated with and for the interactive blackboard.

Use of documents

The interactive blackboard is an active surface, sensitive to the pressure that communicates the coordinates of this pressure with the computer. It works exactly as the mouse of a laptop computer. Therefore, all the icons incorporated into a certain program can be activated directly from the blackboard.

The fundamental difference that this tool makes is that it allows us to manipulate the most sophisticated programs with the same ease with which we write on a conventional blackboard and, what is more important, with the same personal contact with the group and with the space of the class, to which we, as well students as professors, are accustomed. These computer presentations, of the Power-Point type for example, have transformed the form of preparing the classes or any conference type or presentation. Many partners already habitually use them. But sometimes, such presentations limit us or they direct us excessively, because to interrupt them can suppose an important interference in our speech. Now, on the other hand, we can score, to correct or to enrich our presentation and, at the same time, save the introduced changes if they interest us, before continuing the same point and without interruptions to our presentation.

In the same way, exercises found online or generated by ourselves become group activities, where the collaboration, the communication and the integration of abilities and actions play the fundamental role that corresponds to them in the teaching-learning process in the classroom.

As an example, we will use the program Hot Potatoes, a Canadian program available to teachers by free registration. It is a generator of exercises of several types, very useful for all relevant matters. Their exercises are created in a page web format; the program allows for them to be downloaded onto one or several computers, to serve them in a local net or through the Internet, and it allows us to share exercises with colleagues throughout the whole world.

Two of the five types of exercises lend themselves especially to realization in the group:

- The relationship exercise (Jmatch) allows us to choose or to drag an element to relate it with the one that corresponds to it. This activity has a richer and more motivational character when it is performed in a group, in a cooperative way. Also, the fact of carrying it out physically, before the group, transforms it into a more effective, motivational and amusing game.

- To order sequences of all type (words, sentences, texts or numbers) in groups it can also be enriching, by means of the discussion or the use of watchwords or orders. These situations can be especially interesting for matters related to languages, but also with very diverse competitions, such as logical reasoning or argumentation.

Every day, at least in the discipline in which I work, we incorporate more and more multimedia materials, educational games or commercial programs whose contents are very rich, very amusing and very valid educationally.

We often incorporate them as complementary materials of reinforcement, because most of them are designed for auto-learning or for personal and individualized uses – educational or not – with a computer.

At other times, we try to include them as class materials and, with the novelty of the computer classrooms or laboratories multimedia, we put our students to work individually in front of a computer.

Without a doubt, this type of work can respond to certain perfectly justifiable objectives and they will be programmed for the acquisition of some competence. But in many cases, for example in languages, we think that it is necessary to promote, above all, communication among the students. And that communication is better and easier with actual partners than with the machine.

Those educational programs (playful, formative or for consultation) that often foment isolation and individualization become, in this way, socialized and socialising tools that facilitate the integration into the dynamics of the group of all the students.

We will use as examples some programs that we have used with a difficult group. This group included 3 children with Down Syndrome, with different grades of capacity and of learning level, and to two autistic twins with an intellectual coefficient of 130 and 135 respectively:

- *Je découvre l'ordinateur* by Génération 5, an introductory program to the computer for children starting from 3 years; this program becomes the support of an activity that works on mobility and at the same time language.

– *Le coloriage* by Génération 5, that takes advantage of the immense potentialities of the ICT in certain learning, by means of the union of the password, the action and the effect of the action. We are convinced that to integrate different senses, dexterities and abilities proves the effectiveness of the learning. But we know some supposedly modern practices of teaching-learning of languages that abuse manual activities. We are convinced that, while he/she carries out the activities of painting, cutting out, hipping etc., the boy or the girl is not learning the language, because he is thinking in the mother tongue, and therefore he is not learning the foreign language. However, the learning of the language is effective when he/she wants or must paint red (after a password in the foreign language) and, in an immediate way, gets red. If, also, that action is reinforced by the appropriate word and with the corresponding stimulus, the reinforcement multiplies.

– A program already old, very simple, static and even maybe boring used individually, like *I Speak French* of Multimedia Language Systems, is an amusing, motivational and effective tool to learn vocabulary and to practice repeatedly all type of structures, watchwords and linguistic reinforcements.

– In the same way, a freely available in Internet resource such as *Lexiquefle* can be incorporated into the class as a learning support.

Finally, we will count some activities carried out with the tool characteristic of the blackboard, that is to say, the notepad. This program offers us a surface equivalent to that of a conventional blackboard. On that surface we can create slides, arrange them in sequences and to use them as those in a Power Point presentation are, but in a freer way, more agile and easier to modify.

Among the possibilities that it offers us, some of which will see after as practice activities, we can highlight the easiness of creating materials.

Let us see an example of an activity example created with this tool

In an easy and quick way, we can create an entire series of screens with the exact contents that interest us to go from simple vocabulary learning to a simulation of a communicative situation, for example, an activity in which we “**buy provisions**”:

For the vocabulary presentation, it is very easy to create a flash card screen for learning vocabulary. You only need to look for and to copy and paste the images that interest you. We can also draw them, it is easy and amusing.

In the first moment, we will present our objects orally, later we write the names next to each object. In the following phase, we can disarrange image and word, so that the students relate them.

While we learn vocabulary, we can use it again in a proposition. We try to create an affective link between the words and the students: with expressions such as “I like...”, “I don’t like...”, they learn the words in an affective way, which interests us very much.

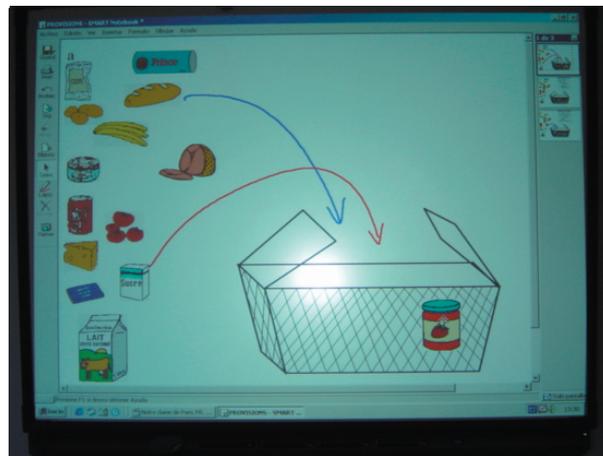
Secondly, we create a small dialogue using the vocabulary practised.

Finally, with the interactive blackboard as stage, we make a dramatization game, in which we use all the structures of this particular communicative situation (I want..., questions, answers, polite expressions, saying good-bye...).

Conclusion

The incorporation of the interactive blackboard as a fundamental work tool has improved in a very important way the effectiveness of our experience, from very different points of view. According to our experience:

- It facilitates the creation and the cohesion of the group, promoting participation.
- It allows the integration of students with very special difficulties from the point of view of motor and intellectual functions.
- It contributes to fixing the attention of distracted students.
- It makes easier the access to ICT to publics traditionally distanced from them.
- It increases the user's self-esteem, because it provides him with accessible ways of handling difficult challenges.
- It transforms the individual learning path, the computer, which is good in their personal version for auto-learning, and a collaborative tool very useful in a communicative pedagogy.



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Career Guidance for Students of Compulsory Education in Cuenca

Theoretical frame

To begin with, I will emphasize three expressions which belong to the classical view of career guidance. These terms are related to each other, but their meanings are different. First, there is the term *career guidance*, which includes vocational orientation, second we have *career education* and third we speak of *vocational education*. Nowadays in Spain, the expression nearest to career guidance is “Orientación para el Desarrollo Profesional” (Repetto, 2003).

The career guidance is based on the Evolutionary Theory of Career Development by Super, the Theory of Experience Learning by Pelleiter, and on the Curricular Theory of Formal Education as well as on the humanistic context.

The following theoretical innovations in career development stand out as significant:

Approach to Career Development by Super, Savickas and Super (revised) 1996, *Cognitive Social Theory and the Role of Self-Efficacy* by Lent, Brown and Hackett, 1994, *Model of the Transition of Adult Career* by Schlossberg, Walters and Goodman, 1995, *Theory of Person-Environment interaction* by Holland, 1997, *Revised Theory of Social Learning* by Krumboltz, 1999 and *Ecologic Model of Race and Gender* by Cook, Heppner and O’Brien, 2001.

The program I have worked on is called “TFP”, (Tu Futuro Profesional) “Your Professional Future” by Repetto. It belongs to the Orientación para el Desarrollo Profesional (career guidance) and it is based both on the psycho-pedagogic and sociological theories of career development and transition from school to adult life, as well as on the constructivist approach. It is a comprehensive model, included in the school curriculum and, personally speaking, in Spain it is the most complete, aimed at the development of the abilities and skills of students.

The program displays three levels: from 12 to 14, from 14 to 16, and from 16 to 18 years old and it contains four modules.

The first module, *self-knowledge*, training for strategies for getting knowledge about oneself and other persons.

The second module, *decision-taking*, training for strategies to conduct one’s life project.

The third module, *exploration for the career*, training for strategies to identify one's personal skills and relate them to job features.

The fourth module, *planning and management of career*. Training for strategies to design one's occupation and to set up a career program.

In each module we can distinguish between: main purpose, ambience, concepts, units and specific targets.

Each module is divided into several units in which the following points are specified: targets, basic concepts, group size, timing, resources, physical space and phases of application.

During three academic years of data collecting (1999–2000; 2000–2001; 2001–2002), the first and second modules of the “TFP” program (self-knowledge and decision-taking) were applied to students between 12–14 years old attending secondary schools in Cuenca (Spain).

In order to define the concept of self-knowledge different theoretical approaches had to be examined. They were:

Cognitive psychology “There is a continuous processual interaction between subject and environment”.

Differential psychology and psychology of personality (Fierro, 1996). “The five phases of internal cognitive behaviour are self-attention, self-perception, biographic memory, self-concept and self-decision.”

Cognitive approach of information process, “The self-concept is a central cognitive structure of the information process or a unique cognitive scheme”.

Cognitive phenomenological approach by Rogers (1986), children build up the self-concept through appraisals from others.

Humanistic psychology takes the growth principle from Eipsein's self-concept.

We could define decision-taking as “a continuous and sequential process that requires permanent revision making according to the information acquired by the subject throughout his/her career development. This leads to two different situations: on the one hand, the decision can be reaffirmed, or, on the other hand, the decision can be changed” (Álvarez González, 1998, p. 8). This concept is based on Gelatt (1962) and Krumboltz (1977). The theoretical bases of career guidance as well as the description of the “TFP” program and the concepts of self-knowledge and decision-taking are analysed in my book (2004).

Problem

In the present curriculum there are a lack of comprehensive program's aimed at improving students' skills and competences relating to their professional development. This is where the “TFP” comes in. It intends to improve the vocational discernment of students in compulsory education in Cuenca.

Academic year

		frequency	percentage	valid percentage	accumulated percentage
Valid items	1	216	58.7	59.2	59.2
	2	149	40.5	40.8	100.0
	Total	365	99.2	100.0	
Lost items		3	0.8		
Total		368	100.0		

Study centre. Students from IES Lorenzo Hervás y Panduro: 17.3%. Students from IES Pedro Mercedes: 56.7%. Students from IES Alfonso VIII: 26%.

Study centre

		frequency	percentage	valid percentage	accumulated percentage
Valid items	1	63	17.1	17.3	17.3
	2	207	56.3	56.7	74.0
	3	95	25.8	26.0	100.0
	Total	365	99.2	100.0	
Lost items		3	0.8		
Total		368	100.0		

Group. Experimental group: 63.3% and control group: 36.7%.

Group

		frequency	percentage	valid percentage	accumulated percentage
Valid items	1	134	36.4	36.7	36.7
	2	231	62.8	63.3	100.0
	Total	365	99.2	100.0	
Lost items		3	0.8		
Total		368	100.0		

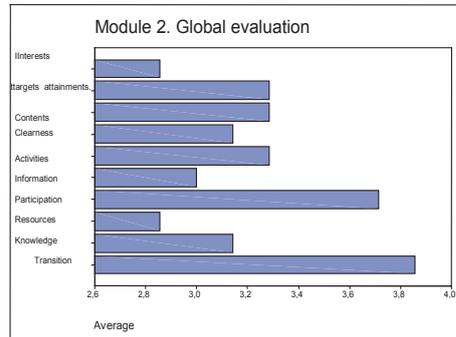
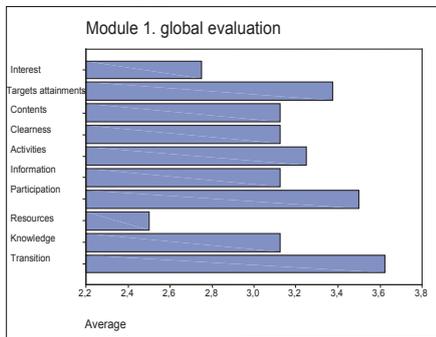
Sex. Male: 52.1% and female: 47.9%.

Sex

		frequency	percentage	valid percentage	accumulated percentage
Valid items	1	190	51.6	52.1	52.1
	2	175	47.6	47.6	100.0
	Total	365	99.2	100.0	
Lost items		3	0.8		
Total		368	100.0		

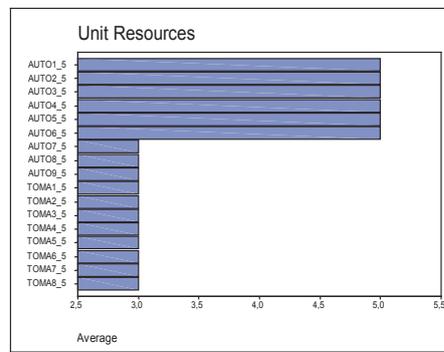
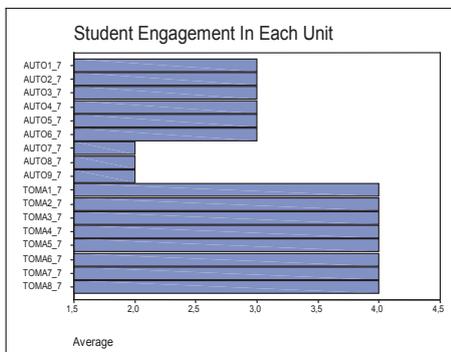
Evaluation of modules I and II by the teachers

The average is 2.5 and the results are positive in both global evaluation modules.



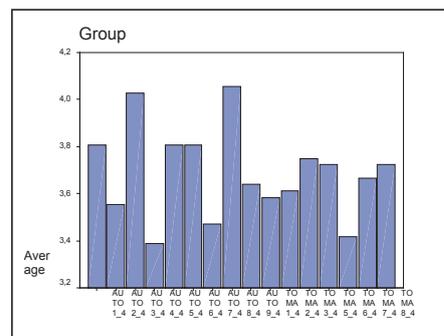
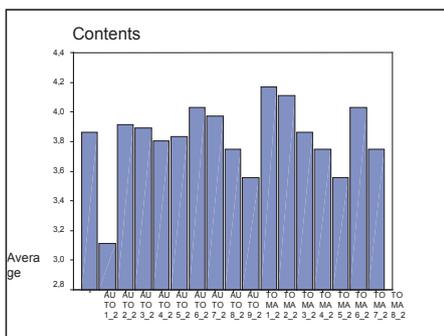
Evaluation of the units by the teachers.

In the evaluation of the units by the teachers, the average is 2.5 and the results are better in the second module, for example:



Evaluation of the units by the students.

The evaluations by the students are very positive in both modules, for example in contents and group.



Data collecting tools. There are tools which the program offers for students as well as for teachers at the end of each module. These tools have been validated by the author of the program (Repetto, 2003).

Results Pre-test/Post-test

Contrast-Module I	SPSS Program	Unit and percentage %
PRE-TEST CG AND EG	T Proof, averages equality	1. Motor skills 0,000 2. One's own and features of others 0,000 4. Dependence and independence 0,001 5. Public interview 0,000 7. Personal abilities 0,001 9. Self-evaluation guide 0,001
	Levene Proof, variances equality	4. Dependence and independence 0,01
POST-TEST CG AND EG	T Proof, averages equality	5. Public interview 0,01 7. Personal abilities 0,105 8. Social abilities 0,141
	Levene Proof, variances equality	1. Motor skills 0,001
PRE-TEST-POST-TEST CG	T Proof, related samples	4. Dependence and independence 0,025 9. Self-evaluation guide 0,013
PRE-TEST-POST-TEST EG	T Proof, related samples	1. Motor skills 0,000 2. One's own and features of others 0,000 4. Dependence and independence 0,000 5. Public interview 0,010
GAINS	Levene Proof, variances equality	3. individual and group activities 0,01 4. Dependence and independence 0,000 5. Public Interview 0,008 7. Personal abilities 0,019
	Levene Proof, averages equality	2. one's own and features of others 0,018 4. Dependence and independence 0,000 9. Self-evaluation guide 0,053

Contrast-Module II	SPSS Program	Unit and percentage %
PRE-TEST CG AND EG	T Proof, averages equality	5. Things to learn 0,01
	Levene Proof, variances equality	7. Steps to learn skills 0,05 8. Decision Phases 0,05
POST-TEST CG AND EG	T Proof, averages equality	2. Options search 0,24 3. Reasons for preference 0,01 7. Steps to learn skills 0,24 8. Decisions Phases 0,06
	Levene Proof, variances equality	7. Steps to learn skills 0,10 8. Decisions Phases 0,01
PRE-TEST-POST-TEST CG	T Proof, related samples	5. Things to learn 0,025
PRE-TTEST-POST-TEST EG	T Proof, related samples	1. Reasons to choose 0,000 2. Options search 0,000 3. Reasons for preference 0,000 4. Leisure skills 0,000 5. Things to learn 0,001 6. Fun Experiences 0,001 7. Steps to learn skills 0,000 8. Decision Phases 0,000
GAINS	Levene Proof, variances equality	1. Reason to choose 0,005 2. Options search 0,003 3. Reasons for preference 0,000 4. Leisure skills 0,011 5. Things to learn 0,019 7. Steps to learn skills 0,000
	Levene Proof, averages equality	1. Reasons to choose 0,000 2. Options search 0,002 3. Reasons for preference 0,000 4. Leisure skills 0,005 5. Things to learn 0,009 7. Steps to learn skills 0,003 8. Decision Phases 0,015

These are the results of the pre-test and the post-test, achieved by using the SPSS program and the Student “t”. In comparison with the control group, the experimental group proved to have better self-knowledge and decision-taking skills. The advantage was especially significant in the decision-taking units.

Contrast of first hypothesis

In the self-knowledge module, the control group shows meaningful differences between pre-test and post-test in the units 4 and 9.

In the self-knowledge module, the experimental group shows meaningful differences between pre-test and post-test in the units 1, 2, 4 and 5. Hence, the *first hypothesis is accepted*.

Contrast of second hypothesis

In the decision-taking module, the control group shows meaningful differences between pre-test and post-test in unit 5.

In the decision-taking module, the experimental group shows meaningful differences between pre-test and post-test in the units 1, 2, 3, 4, 5, 6, 7 and 8. Hence, *the second hypothesis is accepted*.

Contrast of third hypothesis

There are meaningful differences between the gains of the experimental group and the gains of the control group in the self-knowledge module in the units 2, 3, 4 and 9. Therefore, *the third hypothesis is accepted*.

Contrast of fourth hypothesis

There are meaningful differences between the gains of the experimental group and the gains of control group in the decision-taking module in the units 1, 2, 3, 4, 5, 7 and 8. Therefore, *the fourth hypothesis is accepted*.

Conclusions

Students as well as teachers considered the program to be very positive. Teachers appraised the viability of each module of the program. Students gave even higher marks than teachers. Group work was especially pleasing for both. In contrast, both disliked the poor resources of the program. The results of the pre-test and post-test application for the self-knowledge and decision-taking modules confirm that “TFP” can be a useful tool aimed at the growth of the student’s discernment with regard to their vocational development in compulsory secondary school students.

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How to Teach on Sustainable Development or Is the Integration of Social and Natural Sciences Possible

1. Introduction

The goal of this paper is to point out the most crucial, in the author's opinion, elements of a lecture course on sustainable development. The description and the comments relate to a specific series of lectures conducted by the author at the Department of Economics of the Warsaw University. The lectures "Sustainable Development Strategy" have been offered for several years as an elective course to upper-classmen majoring in economics. More recently, the course has been offered to non-economics majors, mostly Environmental Studies, Biology and Geography majors. Historically, these lectures are a continuation of an earlier class entitled "Ecological aspects of economic mechanisms". The final conclusions are universal, i.e. they are aimed at determining the essential components of well-constructed lectures in sustainable development.

The main goal of the lectures discussed here is getting the students acquainted with the theoretical foundations and practice of sustainable development. Sustainable development has garnered worldwide attention amongst environmentalists, economists, as well as politicians. The main reason was that for the first time a legitimate compromise solution to the conflict between environmental protection and economic development with growing welfare has been proposed to the international community. Humankind will survive and thrive only if the 21st century becomes the century of sustainable development. This will happen provided that a sustainable development strategy is operationalized and supported by ecologically aware democratic societies.

Finding a satisfactory compromise in Poland is not an easy task. Unlike developed Western European countries, Poland is still struggling with the problems created during communist rule. The "environmental voluntarism" of the past decades has, remarkably, surpassed any environmental threats that a market economy may pose. In the planned economy, the natural environment had been damaged with the purpose of attaining political and economic goals. Public opinion was quietened down and ignored, while political opponents were kept away through undemocratic methods.

The results are significant lags in restoring the environment and environmental protection. Therefore substantial funds, including some from the EU, will have

to be poured into the new member countries for restoring the environment damaged before 1989. We can also observe a corresponding lag in the growth of environmental awareness of these societies, which only now, under fully democratic rule, express their opinions and request environmental improvements. A similar phenomenon exists in education, which is trying to catch up after the years of censorship and repression, which secured political goals and did not offer to the younger generations any pro-environmental education.

As demonstrated in sociological polls, sustainable development is not widely understood. This criticism applies not only to “common people”, but also to politicians and scientists. It is not characteristic only of the new member countries, but popularizing the idea and getting it into mainstream thinking will be the most difficult and will take the longest time in these countries. The most common mistake is putting the equals sign between sustainable development and environmental conservation that would hamper economic growth and welfare improvements. As a result, the term “sustainable development” evokes reservations and rejection instead of cooperation and integration.

Social Science and Environmental Science departments at most Polish institutions of higher learning are striving to expose students to the major problems of environmental protection, policy and environmental economics. Increasingly included in this are the topics of sustainable development presented in accordance with modern concepts, trends and research directions. However, in the author’s opinion, sustainable development is too often associated solely with environmental protection.

The paper therefore emphasizes the need to extend the field of analysis and demonstrates that all academic considerations should be based on three equally important pillars: environmental, economic and social. In the extended commentary, the author presents his opinion on the qualification of sustainable development phenomenon and, in particular, on the highly regarded and widely recommended “sustainability indicators approach”.

2. General survey

The first part of the lecture series should present environmental aspects of human economic activity. Theoretical problems that form the foundation of ecology and economics should be discussed. Even if the lectures are read to humanities or engineering students, and such an inter-disciplinary mix is quite admissible, even desirable. First of all, the necessary elements of the science of ecology have to be introduced and reinforced, which will allow the use of terminology in the systematic description and interpretation of the natural environment.

Economic problems and natural resource management should be presented in the context of the depletion of non-renewable resources and sustainable consumption of renewable resources. The classification of natural resources must take into account their versatility and *in situ* value. Particular attention has to be paid to so-called global environmental protection problems related to improper biosphere resource management.

In the second part of the lecture series one should discuss the fundamentals and the methods of the economic valuation of resources and the benefits derived from the natural environment. The valuation should be interpreted in the context of the expansion and rationalization of the cost-benefit analysis. The modified cost-benefit analysis should allow making justifiable and correct socio-economic decisions that affect the natural environment with various orders of magnitude.

The ideological and institutional roots of the sustainable development concept should be presented, followed by the evolution and development of that concept, as well as its role in national and international environmental protection policy. It is worthwhile establishing the main directions for the future of local, national and international sustainable development. Particular attention should be paid to sustainable development indicators, which describe changes in society, economy and environment on different levels and in different profiles.

3. Crucial topics

Experience so far shows that very few non-Biology majoring students know basic terms and definitions related to the functioning of life on Earth. The reason is the widespread increase in major-field specialization, which happens at the expense of the interdisciplinary character of studies. Very few students have a chance to learn at departments related to environmental protection. The rest of the students who take the course, mostly Economics majors, typically have a hard time recalling the fundamental problems they learned in high-school biology classes. More importantly, and sadly, it seems that no sources of information, including educational programs in the mass media, have a significant impact on the environmental knowledge and awareness of young people entering the institutions of higher learning.

The lectures should therefore start with a recollection of the fundamentals of ecology and an interpretation of the natural environment as an ecosystem. The next step is a discussion of selected properties of ecosystems. Following this should be a discussion of ecological factors, succession stages, the problem of homeostasis, food chains, the circulation of matter, the role of energy in the ecosystem, the organism's and the population's optimum, and most of all the ecological barriers to development.

Let the introduction end with a characterization of the mechanisms of the largest known ecosystem, i.e. the biosphere. In particular one should present the key elements of the biosphere and the links between them, food chains, the circulation of organic matter, biogeochemical cycles, energy inputs and flows, subsequent energy transformations, entropy and evolutionary adaptation processes as well as the role of the random factor.

The next group of topics should assume an economic approach to the natural environment. The starting point is a presentation of economic activity confronted with the functioning of ecosystems. Real life examples of anthropogenic pressure should be presented synthetically with knowledge about the environment. Several questions should be given particular attention: the conflict between economic goals and ecological conditions, the forms of natural environmental degradation, breaking the balance in

ecosystems, demographic pressure, the limits to extensive economic development. At this point it is worthwhile mentioning the “tragedy of commons” and to explain that the lack of clear property rights definition leads directly to the uncontrollable exploitation of many resources in the biosphere.

The first problem, which must be included in the lectures on sustainable development, is the correct classification of natural resources. It is crucial to introduce the division into depletable and non-depletable as well as renewable and non-renewable resources. Particular emphasis should be placed on showing that the services provided spontaneously by the environment and many of its resources are renewable, if we assume the survival of human civilization. The economic benefits related to them are unlimited, provided that their natural ability to replenish is not distorted.

Together with the knowledge acquired at the beginning of the course it should become clear that it is the form and intensity of the pressure applied by man to the environment that determines the presence of the most severe ecological threats. In his own interest, man should make sure that the economy does not consume non-renewable resources too quickly, and most of all, that it does not destroy renewable resources, which are potentially the known guarantors of sustainable life on Earth.

In order to precisely determine the correct methods of natural resource management, one should discuss the following biological, economic and social problems:

- the sustainable use of resources principle,
- the maximum sustainable revenue principle,
- the Hostelling principle for non-renewable resources,
- the rights of future generations,
- the dynamics of exploited resources.

The problem and methods of natural environment valuation should be discussed more thoroughly in parallel courses. In our university’s educational framework in the Economics Department, we have lectures on: “Ecological Economics” and “Economic Aspects of Environmental Protection”. Anyhow, in the lectures on sustainable development it is advisable to emphasize some basic problems: the economic value of the environment, the total economic value, direct and indirect valuation methods, the extended (real) cost-benefit analysis. It should be argued that economic valuation, with all its shortcomings, is a way of assigning a value to those components of the environment which are often overexploited because of the easy and free access to them.

The part devoted to the theoretical foundations of sustainable development should introduce the key concept of distinguishing between environmental, social and man-made capital. After that, one can discuss the problem of substitutability of different kinds of capital, taking into account the replenishment of renewable resources and the necessary substitutability of non-renewable resources. I suggest using the English typology, which distinguishes the weak and sensitive sustainable use principle as well as the strong and restrictive sustainable use principle.

The evolution of the sustainable development concept in the international arena can be illustrated with a survey of historical events which led to the creation of Agenda 21: the Stockholm conference (1972), “World Conservation Strategy” (1980), “World Commission on Environment and Development”(1983), “Our Common Future” – Brundtland Report (1987), “Agenda 21” – Rio de Janeiro (1992), and recently

Sofia and Johannesburg. It should be emphasized that the conclusion, which states that the sustainability of development is determined by 3 pillars – environmental, economic, and social – is widely accepted.

The description of the institutionalization of the sustainable development concept should include the actions and the role of the following international organizations: UN Commission on Sustainable Development (UNCSD), UN Development Programme (UNDP), UN Environment Programme (UNEP), World Bank and Global Environmental Facility (GEF). They represent a wide spectrum of tasks that combine to work towards sustainable development on the international arena.

One should point out the main directions of change for the present economic model warranted by the theoretical conclusions of sustainable development. The following undertakings should normally be included in socio-economic policy programs: changing the consumption structure, raising economic efficiency, financing substitution (of non-renewable with renewable resources), decreasing the intensity of the pressure on the environment. This is not a complete list but it clearly points to the fact that the implementation of these processes requires the involvement of individuals as well as whole societies.

In addition, the ideological premises of future sustainable development should be explained using the most viable scientific concepts, which have been, and still are, constituting the foundations of sustainable development, and additionally are motivating current research. These include, among others, the following theoretical concepts:

- “adaptive environmental management” (Costanza, Holling),
- “veil of (time) ignorance” (Rawles),
- “intergenerational equity” (Page),
- „transferable development rights” (Panayotou).

The next crucial task, necessarily included in the syllabus, should be to formulate, calculate and apply sustainable development indicators. The author proposes a classification of indicators which particularly emphasizes the cross-sectional ones. Undoubtedly, one should discuss the analytical and operational concept of the triple process of pressure-state-reaction. Having established this background, one can discuss the measures of environmental policy implementation according to OECD standards, the measurement systems proposed by UNCSD and the World Bank, as well as the specific indicator approach used by EUROSTAT and EEA, based in Copenhagen.

A separate spot should be reserved for local programs and measures of sustainable development. Using appropriate handouts, it is easy to conduct an in-class experiment, in which the students, divided into several groups according to their place and conditions of residence, will determine their own set of sustainable development indicators. The results are usually very stimulating, as they show how the quality of life and environment can be interpreted differently from the perspectives of a dormitory, an apartment building, or a small village.

The final part of the lectures should be focused on the aggregate sustainable development indicators, which are in the scope of interest of scientists in various fields. First, national income and national accounting modifications should be presented, most of all the far-reaching concept of the System of Integrated Environmental and Economics Accounts. After the theoretical discussion, one should move to the indicator estimates known from the literature: a macroeconomic measure of welfare

– “*Index of Sustainable Economic Welfare*”, “*Genuine Savings*”, and then the physical-unit measures – “*Total Material Requirement*”, “*Environmental Space*”, “*Ecological Footprint*”. All of the above indicators have been calculated for the Polish economy as a whole and these estimates are a good starting point for an open discussion of the feasibility of sustainable development in Poland.

It is important to point out the fact that including social considerations in the discussion of sustainable development significantly complicates the possibility of quantifying and assessing the examined phenomena. This is easiest to do in the case of the economic pillar. It is enough to include non-market activities in the analysis and apply the valuation of the appropriate flows from the environment into the economy and the opposite flows. This is not easy, but it is scientifically objective. Certain limits have to be set to prevent the importunate domination of economic goals and market allocation fetishism. The environmental domain, in turn, is easily represented with physical units. Economic valuation of environmental goods and services is possible to some extent, but the results tend to be highly arbitrary.

In the social domain we are faced with some elements of normative thinking, which makes the problems qualitatively different from economic and environmental problems. There is the problem of the social set of values and norms, their universality and acceptance, as well as the problem of the admissible limits to personal freedom. It is easy to “struggle” for freedom, equality and fraternity, but it is much more difficult to translate these goals into tangible criteria and to co-ordinate them with all members of the society. In addition, how do we determine precise limits to sustainable development in relation to such common problems as unemployment, the minimum wage, income inequality, education level, health care, personal security etc.?

It follows from this that a didactic and a practical call for caution and avoiding an overly dogmatic definition of the social determinants of sustainable development are necessary. What is, with all due respect, selected and proposed from the treasury of European democracy may not survive the test applied at two levels. First, the cultural test may lead to the suspending or rejecting many indicators, such as those related to the role of women in the family or equality of all with respect to the law. Second, the religious test may put in question many rules offered by political correctness, which is nothing else but an attempt to extrapolate European and American trends of lay social development onto other societies and world regions.

4. Conclusions

Based on my own lecture series “Sustainable Development Strategy”, I identify and emphasize the following crucial points:

- ⇒ classifying environmental resources – necessarily distinguishing renewable and non-renewable resources, as well as the economic rules of their proper use;
- ⇒ distinguishing environmental, social and man-made capital in order to create the terminology used for further economic analysis;
- ⇒ interpreting sustainable development as a process that is harmonizing three components of development: environmental, economic and social;

- ⇒ pointing out the basic directions for a socio-economic policy compliant with sustainable development (most of all: changing the consumption structure, raising economic efficiency, financing the substitution, decreasing the intensity of the pressure on environment);
- ⇒ formulating, calculating, and widely applying sustainable development indicators (cross-sectional, synthetic, and local);
- ⇒ showing the difference between economic and environmental problems and indicators and social problems and indicators;
- ⇒ stimulating student participation in order to unveil the problems and aspirations of their local communities;
- ⇒ selecting the literature that allows self-education and the use of multimedia and modern communication techniques, including the Internet.

Naturally, every class follows its own rules and the end result is determined by many tendencies, which depend on the teacher's knowledge and preparation, the type of educational institution or department and prior course offerings. Nevertheless, I think that the problems enumerated and highlighted above are important enough to be included in any lecture series, which seriously and professionally presents the premises, principles and implementation conditions of sustainable development.

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Water and Its Properties – An Environmental Approach to Science Education for Teacher-Training Students

Contents and approaches of evaluation related to water in primary education

In annexe I (Basic Elements of the curriculum of Primary Education) corresponding to the areas of Sciences, Geography and History of the REAL DECRETO 830/2003, of June 27, which contains the common teaching of Primary Education, a series of contents and evaluation approaches that we can summarize in *chart 1* are set down.

Chart 1

	First Cycle	Second Cycle	Third Cycle
Contents	6. Water. Composition, characteristics and importance for living beings The Water cycle: superficial and subterranean water	5. Matter and its properties. Types of materials. Physical changes. Chemical changes: Burning. Utility of some advances, products and materials for society	6. The layers of earth. Atmosphere, hydrosphere, crust, mantle and core. Minerals and rocks. Components of the soil. Natural catastrophes: volcanoes, earthquakes and floods
	9. The conservation of the environment. The risks of the pollution of water, soil and air	8. The climate and its effects on the landscape	11. Concept of energy. Sources of energy and raw materials. Renewable and non-renewable energies. Sustainable development
Evaluation criteria	4. To know the more important aspects of the air, water and soil and some measures for the protection of the environment	4. To distinguish the physical and chemical aspects that affect matter, especially those produced by heating	8. To know the different Spanish landscapes as a result of the combination of diverse physical agents, likewise the interaction between natural environment and human groups
	6. Meteorological phenomena and comprehension of the characteristics of the four seasons	8. To recognise the different elements that form the landscape (relief, soil, climate, vegetation, population, Communications network) to establish resemblances and differences among several territories	10. To know the main sources of energy and their environmental impact and classify several types of raw materials explaining their possible uses and transformations. To apply the concept of sustainable development

Taking this into account, we have sought to develop a multidisciplinary Didactic Unit for Teacher Training students based on the water cycle and properties. This unit would be valid for any one of the 6 specialties that can be studied in the Teacher Training School of Cuenca (University of Castilla-La Mancha): Infant Education; Primary Education; Foreign Languages; Musical Education; Special Education and Audition and Language.

1. Water: a wonderful substance

If we observe water from a scientist's point of view, we can appreciate that its properties are so singular and extraordinary that they surprise us if all of them are analyzed in the same context.

2. "Magic" properties of water

2.1. Chemical properties

2.1.1. Linking by hydrogen bond

Molecules of water tend to attract each other, making "*hydrogen bonds*". These relatively strong bonds practically determine all the physical, and most of the chemical, properties.

This kind of bonding explains why water is not a gas under atmospheric conditions, as are all the other small molecules (ammonia, methanol, hydrogen sulphur). Other compounds that present this kind of bonding are hydrogen fluoride, HF, and the molecule of DNA.

Chart 2

Spatial structure of the molecule of water	
Shape	3 atoms forming an angle of 104.5° (as Mickey Mouse's head and ears). If the protuberances of the two pairs of paired-electrons are included the shape is quasi-tetrahedral
Diameter of the atom of oxygen	0.060 nm
Diameter of the atom of hydrogen	0.025 nm
O–H Bond distance	0.096 nm ($\Delta h_{\text{enlace}} = -463 \text{ kJ/mol}$) A efectos comparativos: para el O–O en O_2 : 0.120 nm ($\Delta h_{\text{enlace}} = -498 \text{ kJ/mol}$) para el H–H en H_2 : 0.074 nm ($\Delta h_{\text{enlace}} = -436 \text{ kJ/mol}$)
O–H covalente bond	The two shared electrons are closer to O atom than H atom. So the atoms are electrically charged with a net charge: each H as $\text{H}^{+0.41}$ and each O as $\text{O}^{-0.82}$, i.e. the molecule is polar

2.2. Water as a universal solvent

An extraordinary property of the water is its capacity to dissolve other substances. Life would probably not exist without the solvent capacity of water, due to the fact that water transports the nutrients that are vital for animals and plants. The rain water that falls crossing the atmosphere dissolves gases that are present in it, and when it reaches the earth these gases and the subsequent compounds affect the quality of soils, lakes and rivers.

The cause of this capacity resides in the polarity of the molecules of water; each molecule presents positive ends – the atoms of H –, and negative – the oxygen atom –, to those that can link to other molecules.

2.3. Low grade of ionization

Only one of each 10^7 molecules of water is ionized.



This explains that the concentrations of hydronic ions (H_3O^+) and of the hydroxyl ions (OH^-) are very low. Taking into account the low levels of H_3O^+ and of OH^- , when an acid or a base is added to water, even in a small quantity, these levels vary abruptly.

3. Physical properties

3.1. Thermal properties

3.1.1. Melting and boiling

At the sea level pure water freezes at 0 C and boils at 100 C (because it is strongly affected by atmospheric pressure). The boiling temperature decreases as we ascend (because the atmospheric pressure descends). That is why it takes much more time to cook food in high altitudes than at sea level. On the other hand, if the water contains dissolved substances, its freezing point descends. For this reason salt is spread on sidewalks and roads after a snowstorm, because it lowers the melting temperature of ice. The interval of temperatures during which water remains liquid is the biggest of all known liquids and explains, on one hand, its presence under very different atmospheric and climatic conditions, and also its capacity to harbour life in a wide margin of temperatures. On the other hand it is very important to underline that, although its boiling point is 100 °C at normal atmospheric pressure, the evaporation process takes place at any temperature and the speed of evaporation quicker the higher the temperature is. This fact explains the hydrological cycle of water and it has a great variety of applications in the daily life of living beings (animals, plants and human beings).

3.1.2. Heating capacity and climatic effects

Water absorbs or gives, for each grade of increment or descent of temperature, a bigger quantity of heat than many other substances. For that reason it is used to cool and to transfer heat in many thermal and chemical processes. The capacity of the water to store heating energy has very important environmental consequences. One of these it is the climate. This way geographical areas near to big lakes, seas or oceans experience

smaller fluctuations of temperature, not only between winter and summer but rather also between day and night than those areas located inside the continents. Water can absorb a great quantity of heat in summer, while its temperature only increases lightly. In winter the substances give off heat so the temperature of water decreases.

The differences of temperature between lakes and rivers and the surrounding air can produce a great variety of effects. For example, localised fog appears more frequently if the vapor of water caused by a lake on the air that surrounds it saturates the atmosphere with humidity, which produces small drops of water suspended in the air.

Such big such masses of water as the oceans and seas have a great influence on the climate. They are big reservoirs and, at the same time, interchangers of heat and the source from which the fog, the rain and the snow that fall on the adjacent earth masses proceed.

When water is colder than the surrounding air, the precipitations diminish, the winds decrease and banks of fog are formed.

3.1.6. Inside of the structure of ice

A vital and unusual property of water is that it expands when it freezes, contrary to many other substances. That is the reason why ice floes float. In fact, water usually contracts when it cools down, until reaching 4 °C, when it begins to expand again. This means that water’s freezing temperature is less dense, so it tends to expand. This fact is very important. Most of the liquids exposed to the cold air would cool down, and the cold liquid would sink, forcing more liquid to ascend and to be cooled by the air. Later on, all the liquid would lose heat to the air and it would freeze from the bottom up until totally frozen. But, with water the cold layers, being less dense, remain on the surface, allowing to the hottest ones to stay below and to avoid loss of heat to the air. This means that the surface can be frozen, but fishes can continue to live in the water below.

4. The properties of water and their consequences

The cognitive objectives of this Didactic Unit can be summarized in the following:

1. To know the following properties of water and to explain their consequences:

PROPERTY	CONSEQUENCES
Melting and boiling points	Liquid state at average temperature on the main part of Earth
Increase of density between 0°C and 4°C	Possibility of life at the bottom of the sea and lakes Increase of volume when freezing action on the rocks
Abnormally high specific heat	Water as regulator of climate and thermal absorber in the organisms
High superficial Tension	It guarantees the energy transfer from wind to water by the waves. Waves are necessary to cause a quick diffusion of oxygen in lakes and seas. It facilitates the development of aquatic animals that move on the surface in some phase of their biological cycle

2. To know the molecular structure and properties of water

Water is composed of hydrogen and oxygen	– practically inexhaustible source of hydrogen isotopes (combustible, heavy water, nuclear fusion) – stability of water in liquid state
Polarity	– abnormally high melting and boiling points
Hydrogen bonds	– high solvent power

3. To recognize the great solvent power of water and to explain the following consequences:

- Vital chemical reactions. Importance of water for life.
- Chemical reactions in water solutions. Importance of water to industry.

4. To observe the capillarity and superficial tension of water and to explain daily phenomena and biological consequences (ascension of sap in plants, displacement of aquatic insects, etc.)

5. To know the possibilities of mechanical and energy uses of water (hydraulic press, vapor machine, etc.)

6. To enunciate the conditions of buoyancy of a body in the water and their incidence in transport (marine, fluvial) STS approach.

5. The hydrological cycle

This is the motor that causes the great circulations of matter and energy on the surface of the Earth. It participates in almost all biological and geologic processes. We can distinguish in it the following processes:

5.1. Phases of the cycle

5.1.1. Evaporation

Water is heated by the sun, as a consequence of which its superficial molecules acquire enough energy to escape from the forces of attraction that maintain their unity with some others in the liquid phase, giving rise to the phenomenon of evaporation; the liquid passes to the gassy state and the molecules acquire total freedom of movement, ascending as invisible vapor toward the atmosphere.

5.1.2. Transpiration

Is the evaporation of water from plants.

5.1.3. Condensation

Condensation is the process by which water vapour in the air is changed into liquid water. This process is crucial to the water cycle because it is responsible for the formation of clouds.

5.1.4. Precipitation

Any form of water, such as rain, snow, sleet, or hail that falls to the earth's surface.

5.1.5. Percolation

Vertical and lateral movements of water through spaces between soil and rock layers

5.1.6. Underground water

Underground water lodges in cracks and in porous spaces. Depending on the geology of the terrain, it can form streams.

5.1.7. Drinking water

Is water that is directly consumed for drinking and should be of the highest possible quality. It is required to meet the minimum health standards of the state or locality.

It is usually placed in the phreatic level of the most superficial wells.

5.4. Objectives

The objectives that we intend the students to meet are the following ones:

- To be able to build a model of the hydrological cycle.
- To recognize the water like element that it is part of a cycle in the natural means.
- To be able to explain how the water cycle works and its importance.
- To be able to compare and establish similarities and differences between the water cycle and other cycles, such nature as those of nitrogen and carbon.

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The Difficulties of Learning Concepts in the Social Sciences

1. Introduction

Nowadays, most social sciences university study programs, or even the High School ones, include, at least, a course in statistics. It shows the increasing importance conceded to statistics as a basics to the understanding of the modern world.

Nevertheless, statistics teaching methodology has not received proper consideration; most study programs have remained unchanged for the last twenty years. The contents are quite general, and neglect recent trends. On the other hand, the different taxonomies (biostatistics, econometrics, social investigations techniques, psychometrics, etc.) prevent students from catching the general principles and foundations of the discipline.

As a result of the convergence process aimed at establishing the European area of higher education, a process of reflection is underway concerning short term aims (the passing of subjects), long terms aims (the knowledge and skills necessary to work as a professional) and contents (the weighting of mathematics, data analysis etc.). It is, nevertheless, also necessary to reflect on the attitude and incentive problems of students with respect to statistics subjects, because of its importance as a powerful analytical tool. This is the main aim of this paper.

Following Phillips (1980), the student's attitude to statistics could be an obstacle or an advantage in their learning process. Roberts and Saxe (1982), Beins (1985), Wise (1985) and Katz and Tomezik (1988) show the links between attitudes towards statistics and academic results, as well as the use of these tools in professional life. Auzmendi (1992), Sánchez-López (1996) and Gil (1999) corroborate the correlation between the student's attitude and performance in statistics.

To measure the students' attitude towards and incentive for studying statistics, in this paper we report on a test we have developed which is closely related to others in the specialized literature, such as the classical *Attitudes Toward Statistics (ATS)*, developed by Wise (1985) and Auzmendi (1992). The proposed test analyses the

more relevant results of the study of social science university students in Castilla-La Mancha. The test examines the structure of latent attitudes, the differences in previous attitudes to mathematics or the “initial difficulties” caused by the prejudice against statistics which is very widespread among students.

At the second stage, those variables were studied which affect the student’s attitude; the results have been quite uneven. A less discussed characteristic is the connection with previous statistical-mathematical training, as has been shown by Roberts and Saxe (1982), Collins et al (1989) and Eltinge (1992). There is no definitive evidence regarding gender. The different works offer very different conclusions. Roberts and Saxe (1982) and Raiszadeh and Ahmadi (1987) examine underlying differences in the gender question; Gil (1999), on the contrary, does not. Other works which focus on statistics teaching methods are Collins et al (1989) and Elmore and Lewis (1991) – which concentrate on statistics teaching software – and Raiszadeh and Ahmadi (1987). An excellent bibliography covering all these questions can be found in Carmona (2004).

On the other hand, students’ learning processes have been analysed in the specialized literature, from Bigg’s original works (1987a and 1987b), Biggs, Kember and Leung (2001). However, the links between students’ attitudes toward statistics and teaching methods haven’t been sufficiently investigated. The origins of students’ negative attitude are not linked with the characteristics analyzed in the specialized literature but with the inappropriate teaching methods of highly formalized disciplines. Didactic conclusions will depend on that relationship. So this paper will emphasise the relation between students’ attitudes towards statistics and the teaching process.

The contents of this paper are as following. The second section focuses on purposes and methodology. The third one shows the main results of the empirical work. Finally, the paper ends with the conclusions and ideas for future investigation.

2. Purposes and methodology

The main aim of this paper is to analyze the origin of the problems concerning the learning difficulties of subjects with a high level of statistics, who are looking for a more efficient teaching statistics methodology. In order to do this, the paper will measure students’ attitude to statistics and will analyze the learning process trying to find the eventual relation between both questions.

At the *first stage* a measurement scale of attitudes to statistics will be validated. There has been increasing interest in the affective aspect of emotions in learning statistics in the last twenty years, but no consensus over the theoretical basics of this has been achieved. Neither is there consensus about how constructs which could measure this problem might be developed (Carmona 2004). Even the term “attitude” itself has different connotations depending on the chosen survey (Estrada 2000), by virtue of it being a theoretical construct which can’t be observed directly. Following Auzmendi (1992, 17) we will consider attitudes in this framework as “aspects not directly observable but inferred and compounds as by beliefs as by sentiments and behaviour tendencies to the objects it will focus on.” More generally, this results in the

acceptance of the multidimensionality of the attitude to statistics, but some differences could still be found over the relevant components, as shown by Estrada (2002) or Carmona (2004). In this paper we will try to define two relevant dimensions: first, the emotional one which includes aspects like interest, satisfaction, nervousness, fear, etc; second, that which depicts the student's opinion of statistics and its utility in their professional future.

The structure employed is similar to the Wise's (Wise 1995). It is a well known and widely diffused structure which has been used in empirical works and as the point of origin of other scales (Elmore and Lewis, 1991, Schau, Dauphinee and Del Vecchio, 1995, etc.). The *Attitudes Toward Statistics* (ATS) scale, which was developed to measure students' attitudes to statistics, is a 29-item questionnaire. The items are organised into two sub-scales: the first one is emotional and related to the learning of the subject; the second one is cognitive and related to statistics use. Nevertheless, the initial validation was based on a small sample, so the interpretation was not conclusive.¹ Later works corroborate this structure (Waters 1988, Woehlke 1991). Gil's study (1999) chooses a pentadimensional factorial structure; one of the factors is related to an emotional component and the other four to different aspects of the cognitive one.

On the other hand, the *Attitudes Toward Statistics Scale* (EAE), proposed by Auzmendi (1992), is a 25-item one and was originally validated with students at the University of Deusto. The underlying factorial structure is a five-factor one; one of the factors related to the cognitive component (the usefulness of statistics as perceived by the students) and four of the factors related to the emotional component (anxiety-fear of the subject, self-confidence, pleasure and incentive). Sanchez López (1996) proposes a tetradimensional structure, the cognitive component is the same as Gil's and the emotional components are threefold: the first one is related to security (including anxiety, fear and self-confidence), the second one related to the importance of the discipline and the third one related to the motivation toward the study. In all of these cases, there is a single factor related to cognition and three or four related to emotions.

It seems that the two previous scales are not unidimensional, but are pluridimensional in their operation. So in this study we have developed a questionnaire using Gil's and Sanchez Lopez's ones in order to catch the emotional and cognitive components and the eventual multidimensionality of both of them. The questionnaire ATS and EAE were tested with 96 business administration and psychopedagogy students. These preliminary tests allowed us to refine the questionnaire by eliminating those items under a 0.35 correlation over the whole scale. At the second stage, the items eliminated were those of a lesser contribution to the alpha of Cronbach. At the final stage, the items eliminated were those located at a greater distance in relation to the whole scale using the PROXCAL algorithm. The final questionnaire was a 27-item one (see appendix one). This questionnaire is the scale used in this paper to measure the attitude to statistics. The planned objectives are: to validate the scale of measurement and to get the underlying factorial structure; to compare with the previous results gotten by other scales; and to describe the sample studied.

¹ The author himself recommends to interpret carefully the factorial structure validity which have been gotten (Wise 1985).

The *second stage* focuses on the measurement of the student's study process. In that case, we have chosen the bifactorial scale, *The Study Process Questionnaire (SPQ)*, proposed by Biggs, Kember y Lenng (2001)² and developed in Biggs (1987a, 1987b). The Revised two-factor Study Process Questionnaire (R-SPQ-2F) consists of twenty items, reflecting the motives and strategic learning behaviour of college students pursuing a certain course. Subjects were asked to indicate how true each item was of themselves by rating a 5-point Likert-type scale (see appendix 2). In the original papers, three study approaches (surface, deep and achieving), each with its component motive and strategy subscales, were proposed in Biggs' theoretical framework. In 2001, Biggs, Kember and Leung attempted to reconsider the original 42-item SPQ questionnaire and tried testing and refining the process with a sample of university students in Hong Kong. Eventually a revised two-factor (surface and deep) study process questionnaire (R-SPQ-2F) was developed with modified items from the original SPQ, with 10 items per approach subscale. The results of their study indicated that the final version of the questionnaire had reasonable Cronbach alpha values for scale reliability. Besides, confirmatory factor analysis showed the desirable goodness of fit of an intended two-factor model. Well defined motive and strategy subscales also emerged from the deep and surface approach scales. Therefore, it was concluded that the revision process had been successful in producing a simple questionnaire which investigators and teachers can handily use to evaluate their own teaching and study approaches and those of their students as well.

At this stage, we are trying to validate the questionnaire with the students of Castilla-La Mancha. If the questionnaire is validated, the results from the tests will allow us to analyze the learning process of the students, looking for the generic guidelines and to develop a typology of the learning process.

At the third stage, the survey will focus on analyzing the links between the attitude toward statistics and the learning process in each student. Specifically, we will try to see if the attitude to statistics is different among each group of students, depending on the differing study methods.

The empirical study has been done with a student sample at University of Castilla-La Mancha. The selected students have been chosen from those who study statistics for the first time in their studies programs. The design has, ex-post-facto, the following distribution:

Table 1. Distribution by graduates

	N	%
Business Administration	137	36.63%
Economics	47	12.57%
Public Administration	21	5.61%
Psychopedagogy	16	4.28%
Industrial Relations	13	3.48%
Social Education	77	20.59%
Logopedics	63	16.84%
Total	374	100.00%

² The translation and revision of the scale has been made by professor F. Hernández Pina, Departamento de Métodos de Investigación y Diagnóstico en Educación, Universidad de Murcia.

The study took place in the second week of the course, so the results could not be corrupted by the development of the subjects and the course, the professor or the exams. This methodology enables us to evaluate the previous attitude to statistics and the general learning methods of the students.

3. Results

For the final selection of items, an initial sample of 92 students, who responded to the ATS of Wise (1985) and the EAE of Auzmendi (1992), was selected. The objective consisted in capturing the affective and cognitive components and their possible multidimensionality, for which items were grouped within each scale. The reliability obtained for the set of both scales and the subgroups formed by items corresponding to each dimension are shown in table 1. In order to simplify the questionnaire, we eliminate items whose correlation with the total of its respective component was inferior, in absolute value, to 0.35, and those whose elimination improved the value of the Cronbach' alpha, thus obtaining a questionnaire with 27 items, with a global reliability of 0.9083, divided into two sets; one composed of 14 items related to affective component and another one composed of 13 related to the valuable one, whose reliability is also shown in table 2.

Table 2. Cronbach's alpha statistic

Components	Cronbach's alpha	Number of items
ATS and EAE scales	0.672	54
Total affective items	0.668	31
Total cognitive items	0.524	23
All selected items	0.9083	27
Selected affective items	0.8714	14
Selected cognitive items	0.8465	13

The questionnaire's content validity comes from the evaluations of the original scales of Wise (1985) and Auzmendi (1992); for that reason we only study its internal structure. First of all, we analysed the similarity of items by means of multidimensional scaling, based on PROXSCAL's algorithm; it revealed the existence of two differentiated groups of items, those related to the affective component and those related to the valuable one, as it is shown in figure 1.

A second step consisted in a factorial analysis of the set of 27 items, considered as two groups corresponding to each previously identified component. This analysis showed the existence of four factors capable of explaining the 53.255% of the variance. The composition of these factors, given in table 3, shows that first of them is related to the affability and satisfaction of the students with statistics, reflecting a positive

attitude. The second factor is related to the nervousness or fear triggered by the use of this discipline. Both are formed by items of the affective component and reflect the degree of duality of this one.

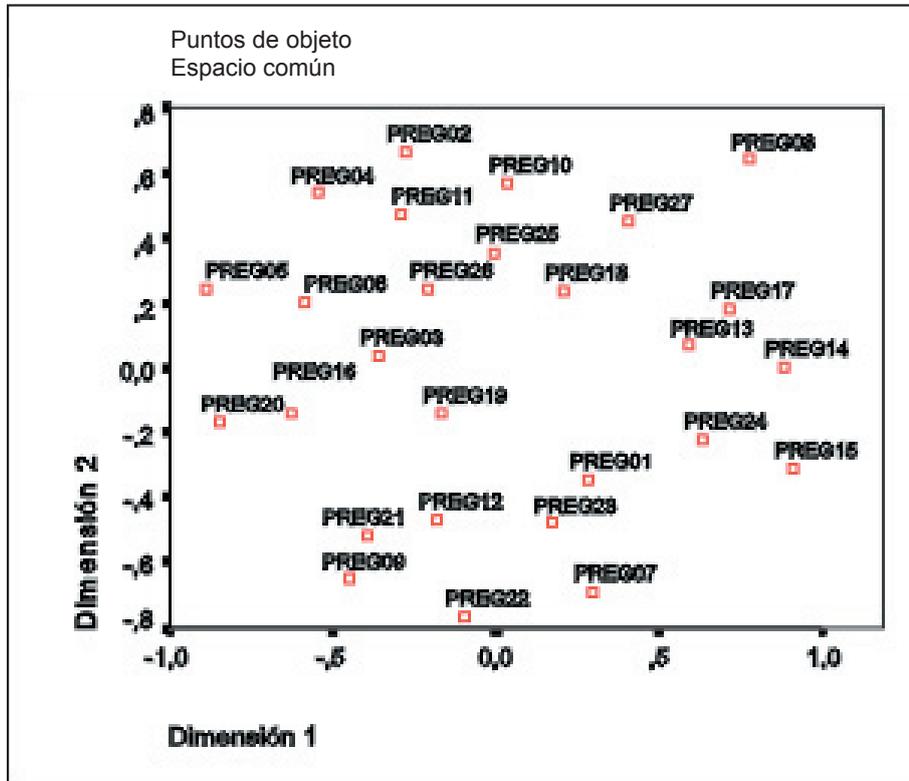


Figure 1. Dimensional Structure of Questionnaire

The other two factors are formed by items corresponding to the evaluative component. The third factor reflects the value that the students attribute to statistics for their studies. The fourth factor is related to the perception of the utility of the discipline for their professional future. There is also a duality in the evaluative component, since the students attach so much weight to present value (in studies) that statistics has for them.

Finally, individual factorial analyses for each one of the studied components were made. In both, a bifactorial structure was obtained that corresponded exactly to the factorially obtained one, since items were grouped forming such factors.

A questionnaire, reliable and valid is obtained, that captures the affective and evaluative dimensions of the students' responses, structuring each one of them around two poles or basic dimensions.

Table 3. Rotate component matrix

Item	Component 1	Component 2	Component 3	Component 4
Item nº 15	0.764			
Item nº 17	0.759			
Item nº 14	0.737			
Item nº 13	0.735			
Item nº 24	0.671			
Item nº 18	0.537			
Item nº 9		0.735		
Item nº 7		0.722		
Item nº 22		0.706		
Item nº 21		0.702		
Item nº 23		0.643		
Item nº 12		0.633		
Item nº 1		0.557		
Item nº 10			0.690	
Item nº 25			0.655	
Item nº 16			0.593	
Item nº 3			0.533	
Item nº 5				0.746
Item nº 20				0.679
Item nº 11				0.555
Item nº 26				0.552
Item nº 6				0.550
Item nº 4				0.520
Item nº 2				0.519
Item nº 19				0.501
Item nº 27				0.497
Item nº 8	---	---	---	---

A descriptive analysis shows the low level of interest statistics, that considers the subject to be more useful for professional future than present studies. In addition, the students' anxiety level is slightly over the central value of the scale. It also emphasizes the existing differences in the level of anxiety by sex, where the women have a mean of 2.93 whereas the men have an average score of 4.00. The rest of the dimensions don't present significant differences, as is shown in table 5.

Table 4. Mean and Standard Deviation of component

Component	Mean	Standard Desviation
Interest	2.56	0.92
Anxiety	3.26	1.00
Present utility	3.40	0.98
Professional utility	3.47	0.93
Total of scale	3.17	0.96

Table 5. ANOVA for dimension by sex

		Sum of squares	d. of f.	Square Mean	F	Sig.
Interest	Inter-grupos	1.675	1	1.675	1.678	.196
	Intra-grupos	367.325	368	.998		
	Total	369.000	369			
Anxiety	Inter-grupos	8.332	1	8.332	8.501	.004
	Intra-grupos	360.668	368	.980		
	Total	369.000	369			
Present utility	Inter-grupos	1.067	1	1.067	1.067	.302
	Intra-grupos	367.933	368	1.000		
	Total	369.000	369			
Professional utility	Inter-grupos	1.453	1	1.453	1.454	.229
	Intra-grupos	367.547	368	.999		
	Total	369.000	369			

On the other hand, significant differences in all the dimensions exist for the different studies, as is shown in tables 6 and 7.

Table 6. Mean of component by studies

	Interest	Anxiety	Pres. util.	Prefes. Util.
Business Administration	2.92	4.00	3.54	3.70
Economics	2.47	3.93	4.19	4.38
Public Administration	3.47	3.00	2.85	2.97
Psychopedagogy	2.66	2.76	4.05	4.58
Industrial Relations	3.39	4.63	4.55	3.51
Social Education	2.27	1.63	2.87	3.35
Logopedics	0.74	2.87	1.73	1.79
Total	2.56	3.26	3.40	3.47

In the affective subscale, there is observable a low anxiety level in Social Education, Psychopedagogy and Logopedics, whereas the average anxiety level is high in Industrial Relations, Business Administration and Economy; on the other hand, it emphasizes the degree of interest in Public Administration and Industrial Relations, whereas it presents a very low value in Logopedics.

Table 7. ANOVA for components by studies

		Sum of squares	d. of f.	Square Mean	F	Sig.
Interest	Inter-grupos	17.474	6	2.912	3.007	.007
	Intra-grupos	319.655	330	.969		
	Total	337.129	336			
Anxiety	Inter-grupos	38.885	6	6.481	7.290	.000
	Intra-grupos	293.390	330	.889		
	Total	332.276	336			
Present utility	Inter-grupos	71.128	6	11.855	14.644	.000
	Intra-grupos	267.139	330	.810		
	Total	338.268	336			
Professional utility	Inter-grupos	26.694	6	4.449	4.733	.000
	Intra-grupos	310.226	330	.940		
	Total	336.921	336			

With respect to the cognitive subscale, in the negative part it emphasizes the low interest that is attributed to statistics in Logopedics and Public Administration. On the other hand are the studies in Economics and Psychopedagogy, in which students perceive the discipline more favourably, useful as much for present studies as for professional future.

With respect to the study processes questionnaire, a bifactorial structure is obtained, represented in the figure 2 and whose composition is shown in table 8, agreeing with the results obtained in the bibliography on the subject.

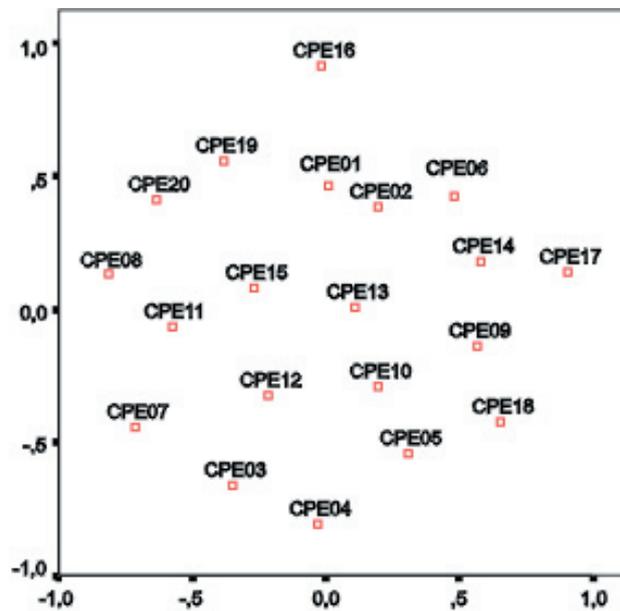


Figure 2. Factorial structure of SPQ

This structure is related to two attitudes of study: on the one hand, the first factor gathers items related to a deep approach to the subject, displaying greater interest and effort; the second factor is made up of items related to a more superficial approach, with a focus on passing the subject with a minimum of effort.

Table 8: Rotate component matrix for SPQ

Item	Component 1	Component 2
Item nº 14	0.700	
Item nº 06	0.643	
Item nº 13	0.635	
Item nº 09	0.613	
Item nº 18	0.596	
Item nº 10	0.589	
Item nº 05	0.564	
Item nº 17	0.534	
Item nº 02	0.519	
Item nº 01	0.464	
Item nº 15		0.624
Item nº 08		0.623
Item nº 20		0.620
Item nº 11		0.602
Item nº 19		0.598
Item nº 04		0.530
Item nº 12		0.491
Item nº 03		0.476
Item nº 16		0.380
Item nº 07	---	---

This structure provides a confirmation of the metric properties of the R-SPQ_2F questionnaire of Biggs, Kember and Leung (2001).

Table 9. Cronbach's alpha statistic for SPQ

Components	Cronbach' Alpha	Number of items
Deep Approach factor	0.7990	10
Surface Approach factor	0.7090	10
Total items	0.7826	20

This duality of factors is shown in figure 2 through the coordinates of items in the X-axis, corresponding the negative semiaxis to the superficial approach towards study and the positive to the deep approach.

The second dimension of figure 2 reflects the existence of the duality motivation-strategy, since half of the items of the questionnaire are related to the motivation of the

student (why a certain approach is adopted) and the other half with the strategy adopted for the study process. As it is expressed in table 10, each one of the aforementioned factors is formed by items related to motivation and strategy simultaneously.

Table 10. Tetrafactorial structure of SPQ

Item	Deep approach / motive factor	Deep approach / strategy factor	Surface approach / motive factor	Surface approach / strategy factor
Item nº 10	0.709			
Item nº 05	0.683			
Item nº 02	0.590			
Item nº 13	0.559			
Item nº 09	0.554			
Item nº 01	0.550			
Item nº 18		0.685		
Item nº 17		0.634		
Item nº 06		0.624		
Item nº 14		0.610		
Item nº 11			0.750	
Item nº 08			0.678	
Item nº 20			0.664	
Item nº 15			0.570	
Item nº 07				0.663
Item nº 04				0.555
Item nº 19				0.510
Item nº 12				0.456
Item nº 16				0.367

The results obtained with the SPQ allow us to analyze the influence that the form of study has in the attitude towards statistics, as much of joint form as in the diverse outstanding latent dimensions. For it, from the scores in each one of the two dimensions of the SPQ, the students in two groups have catalogued themselves, of low and high score respectively.³

Table 11. Latent factor mean by level of deep approach to study

	Low level	High Level	Total
Interest	-0.1351	0.0706	0.0278
Anxiety (*)	0.1884	-0.1334	0.0304
Present utility	0.0382	0.0188	0.0287
Professional utility	-0.0421	0.0056	-0.0187

(*) 0.000 p-value in Anova.

³ To clarify the relation, only the third end of the distribution in each group has been classified, leaving the central third unclassified.

Table 11 shows that the students who adopt a deep approach to study tend to consider the discipline most interesting and they assign more utility to it for their professional future. The most important difference between the groups appears in the anxiety level, much smaller in the case of adopting a deep approach to the study. As it is appraised, the form of study affects in greater measurement the affective component, improving significantly its previous attitude to statistics.

Table 12. Latent factor mean by level of surface approach to study

	Low level	High Level	Total
Interest	0.0899	-0.0019	0.0467
Anxiety	-0.0294	0.0413	0.0075
Present utility (*)	0.2038	-0.2046	0.0033
Professional utility	0.0054	-0.0453	-0.0204

(*) 0.000 p-value in Anova.

On the other hand, when the student adopts a more superficial exposition, the previous attitude to statistics is more problematic, since it presents a smaller level of interest in the discipline and a slight increase in anxiety. Also the two factors related to the cognitive component present minor values when a superficial approach is adopted, emphasizing the little utility that is attributed to the subject for personal studies.

As it is appraised, the form of study that the students experience affects their attitude towards statistics. As the students engage more in deeper study, according to the terminology of Biggs, Kember and Leung (2001), the affective component improves, increasing the degree of interest in the discipline and reducing the anxiety level suffered. On the other hand, the effect on the cognitive component is more diffuse, since the improvement in the appreciation of the utility of statistics is not a sufficiently significant thing like being able to extrapolate it to an ampler group.

4. Conclusions

The two primary aims of this work were, on the one hand, the construction of a valid and reliable questionnaire on the attitude of students to statistics and, on the other hand, the analysis of how this attitude is influenced by the students' study methods.

From Wise's ATS (1985) and Auzmendi's EAE (1992) questionnaires, we have developed a new one, shown to be valid and reliable, with which to measure the attitudes of University of Castilla-La Mancha students of social studies. The questionnaire has two subscales, an affective one and a evaluative or cognitive one, both with a bidimensional structure; with respect to the affective one, we find a factor related to the degree of interest that the subject awakens and another one related to the level of anxiety and nervousness that students undergo when they are faced

with the study or resolution of statistical problems; on the other hand, the evaluative component also comprises two elements, one related to the utility that they appreciate for their own studies and another related to the degree of perceived applicability in future professional life.

This questionnaire shows, from our point of view, a better adaptation to the analysed group and allows to break down both subscales jointly. Specifically, the observed disparities when results are contrasted according to the type of skilled studies lead us to think that the previous attitude to statistics is not invariant to this characteristic. A valid justification of the causes of these differences is beyond the scope of this work, but it could be related to students' previous experience of mathematics, that leads them to choose a specific university degree profile. This issue is not detected by previous scales since they consider more homogeneous samples; so the applicability of ATS or EAE scales can be seen affected when scopes different from the original ones are considered, even within social groups.⁴ Thus, the use of a more heterogeneous sample for this questionnaire allows a more general applicability preserving the initially obtained validity and reliability. On the other hand, ATS and EAE scales display a unidimensional subscale as well as a multidimensional one (alternating affective and evaluative ones), so that none allows the decomposition of both of them in isolation, as shown by our application.

On the other hand, the use of the Biggs, Kember and Leung (2001) R-spq-2f questionnaire, besides being used to classify the sample used and reveal its characteristics before the study process, has allowed us to evaluate previous influences in the development attitudes towards statistics, which not analysed in the bibliography by us. Thus, we have shown that a greater depth of study increases the degree of interest towards the subject and significantly reduces the nervousness-anxiety level. Also affected is the evaluative scale, where a more superficial approach to study is related to a lower valuation of the utility of statistics, as much during the studies as for future labor.

This variable thus becomes a key to understanding attitudes towards statistics and, most importantly, their modification. In particular, and in view of the results obtained, an educational strategy aimed at reducing the degree of superficiality in the approach to study and its substitution by with a deeper strategy would help significantly to modify the attitude of the students and to improve the academic results in subjects with statistical content, since it would increase interest and reduce the degree of anxiety in the subject. Associated with this improvement, it would also increase the perceived utility of statistics; this could indirectly increase students' interest through understanding and use.

Finally, this work constitutes the beginning of a wider study consisting of presenting questionnaires to the students once they pass their subjects. One of the aims is to value the changes not only to the extent but also in the concept. Following the GAL and Ginsburg (1994), the previous attitude to statistics depends on what the students understand by statistics. For that reason, it is interesting to contrast the ways in which the learning of statistics modifies the students' prior concepts.

⁴ It seems evident that the use of these scales for studies with contained fort technical-mathematician is more debatable still, since the attitude towards the mathematics of its students can be very different from which chooses social studies.

Future research will focus on the influence of previous learning methodologies on the attitude of students. In particular, following Suanpang, Petocz and Kalceff (2003), we will try to analyze how the new technologies of information and communications could improve the teaching of statistics, in contrast to traditional methodologies.

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Appendix 1: Students' Attitudes Toward Statistics Questionnaire

1. – I'm not very good at statistics.
2. – I think statistics will be a useful tool in my profession.
3. – It would be better to leave statistical analysis to “experts” and not include them as a task for the professionals who know nothing about the subject.
4. – Knowing statistics would improve my job opportunities.
5. – A good researcher should have studied statistics.
6. – Statistics training will provide me a better understanding of the research in my study field.
7. – I'm calm and relaxed when facing a statistics problem.
8. – I think that there are subjects more important than statistics to professional development.
9. – Working on statistics makes me feel very nervous.
10. – Statistics could be a useful tool for researchers but not to standard professionals
11. – Statistics training improves professional experience.
12. – When I face a statistics problem I can't think clearly.
13. – I'm very enthusiastic about the possibility of using statistics in my work.
14. – If I had a chance I would enrol in statistics courses, although there were not necessary.
15. – I use statistics for fun
16. – Studying statistics is a waste of time.
17. – I would like to continue my training on statistics following advanced courses.
18. – Most people would benefit from following a statistics course.
19. – Statistical contents are not very interesting in most cases.
20. – Scientific research requires statistics as an inseparable tool.
21. – Thinking of following a statistics course makes me upset.
22. – I'm afraid of statistics as one of the most terrible subjects.
23. – I'm self-confident when facing a statistical problem.
24. – Statistics are pleasant and challenging for me.
25. – Statistics are so mathematically to be useful in my future development.
26. – Statistics training is important for my development in my study field.
27. – I think it would be important to call for statistics in training for a profession.

Appendix 2: The Revised two-factor Study Process Questionnaire: R-SPQ-2F

- I find that at times studying gives me a feeling of deep personal satisfaction.
- I find that I have to do enough work on a topic so that I can form my own conclusions before I am satisfied.
- My aim is to pass the course while doing as little work as possible.
- I only study seriously what's given out in class or in the course outlines.
- I feel that virtually any topic can be highly interesting once I get into it.
- I find most new topics interesting and often spend extra time trying to obtain more information about them.
- I do not find my course very interesting so I keep my work to the minimum.
- I learn some things by rote, going over and over them until I know them by heart even if I do not understand them.
- I find that studying academic topics can at times be as exciting as a good novel or movie.
- I test myself on important topics until I understand them completely.
- I find I can get by in most assessments by memorising key sections rather than trying to understand them.
- I generally restrict my study to what is specifically set as I think it is unnecessary to do anything extra.
- I work hard at my studies because I find the material interesting.
- I spend a lot of my free time finding out more about interesting topics which have been discussed in different classes.
- I find it is unhelpful to study topics in depth. It confuses and wastes time, when all you need is a passing acquaintance with topics.
- I believe that lecturers shouldn't expect students to spend significant amounts of time studying material everyone knows won't be examined.
- I come to most classes with questions in mind that I want answering.
- I make a point of looking at most of the suggested readings that go with the lectures.
- I see no point in learning material which is not likely to be in the examination.
- I find the best way to pass examinations is to try to remember answers to likely questions.

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