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SITE VISIT PROGRAMME

ANNUAL REPORT

ACADEMIC YEAR 1992/93

Tempus **PHARE**

*Trans-European cooperation scheme for higher education
between Central and Eastern Europe
and the European Community*

(presented by the Commission)

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Annex: List of the Joint European Projects Visited

SUMMARY

1. The purpose of the site visit programme is to carry out a quality audit of the TEMPUS PROGRAMME and, in particular of the Joint European Projects, from both an academic and a financial point of view. Thirty nine projects in their 2nd or 3rd year have been examined; a 10% sample of all projects, representative of the subjects and countries concerned. The Commission, which chairs the audit missions, has obtained the cooperation of academic experts from the Member States and eligible countries and is assisted by representatives of the EC TEMPUS Office and the national TEMPUS Offices.
2. Of the 39 projects visited, 5 were judged to be between 'excellent' and 'good', 18 as 'good', 6 to be between 'good' and 'average', 7 as 'average', 1 to be between 'average' and 'poor' and 2 as 'poor'. The overall score is positive since almost 60% of the projects were considered to be at a good or very good level, whilst only a small minority (5%) were frankly disappointing.
3. The principal activities undertaken in the projects were course development (21%), staff mobility (20%) and student mobility (18%). Closer analysis shows that it is an approach combining these three actions, particularly the first two, which ensures the success of a project.
4. The results from site visit assessments are found to be strongly convergent with respect to the assessment internal to the TEMPUS administration, through an examination of the "final reports" on the projects. The two approaches are complementary. The Final Reports, which the Coordinators are asked for tend towards a more qualitative approach.
5. A financial audit of the projects was conducted in parallel with the academic assessment. It may also be observed that the academic and financial evaluations of a given project show a degree of coherence. Assessments are close for 79% of the projects. Sixty five per cent of the programmes obtained an 'excellent' or 'good' mark for their financial management. For the minority, where doubts existed or where there were serious omissions, corrective measures, in particular requests for refunds, were taken (3% of the total amount granted to the projects visited).
6. The development of teaching programmes, often a complex exercise, is one of the important aims of TEMPUS. A significant number of successes have already been recorded. Full curricula with new diplomas have already been set up in several countries in subjects such as the environment, sciences and engineering, management and foreign languages. Nevertheless, some difficulties remain, either for reasons external to the project (of a political or legal character, or linked to the economic situation) or for internal reasons (the lack of clear objectives).

The importance of the production of teaching material, a direct effect of staff mobility from the eligible countries to the Community, must be stressed. Optimum results are obtained when new manuals, written in a given country's language, are adapted to the local situation.
7. Staff and student mobility have the joint feature of being highly developed within the context of projects and are highly appreciated by the beneficiaries. In both cases serious attention is given to selection, which favours competence in the chosen field and linguistic aptitudes.

8. TEMPUS has contributed significantly to the supply of equipment to eligible countries. This equipment ranges from large specialised instruments through to personal computers, books and cassettes and contributes to raising the standards at beneficiary universities to an international level. The experts believe that the necessary technical development must be accompanied by the in-depth renewal of teaching methods and structures.
9. The assessment that can be made of University/Industry cooperation is still limited. Industry is absent from the initial training programmes. However, courses and practical work in companies enjoy definite success and some eligible country universities are developing training courses aimed at company personnel.
10. An involvement of all the partners (and an active role for the eligible countries, in particular) and a high degree of personal investment (on the part of the coordinator) are the conditions necessary for the proper management and effective organisation of projects. Democracy in decision-making and transparency are also needed.
11. TEMPUS started in 1990/91 by giving priority to direct contacts between institutions and by favouring actions on this basis. The immediate or foreseeable impact of projects is currently stronger at department and faculty level than at the level of the university or the higher education system in the eligible countries.
12. The expectations aroused by the site visits and by the results already obtained lead to the conclusion that the site visit programme must continue. For the 1993/94 academic year, of the 50 planned visits, a certain amount will be aimed at higher education institutions. What will then be examined is the way in which synergy occurs between several TEMPUS projects at the same university.

I. THE SITE VISIT PROGRAMME

1. INTRODUCTION

This document is the first Report to be published by the Commission of the European Community regarding the implementation of the site visit programme which began in the academic year 1992/93. The Commission plans to publish a similar report every year.

During the meeting of the TEMPUS Committee on 29 June 1992 in Heraklion, the Commission presented its proposal to strengthen the scope for action with respect to a consistent and meticulous follow-up procedure for the Joint European Projects (JEPs) by the introduction of the site visit programme for individual projects. In this regard, the Commission took into consideration the external evaluation of the TEMPUS Scheme carried out by Coopers & Lybrand and the recommendations it contained.

1.1. Aims and objectives

The aim of the site visit programme is to carry out a high-quality audit of the TEMPUS Scheme in general and of the JEPs in particular. The principal aim of the site visits is to carry out a detailed evaluation of the development of JEPs with reference to their declared objectives and to assess the efficiency of the financial control to which they are subject.

The following specific objectives have been identified for the site visit programme, which should:

- ♦ Evaluate the impact and the achievements of JEPs in terms of benefits to the eligible countries, partner institutions and, to a lesser extent, Member States and their participating institutions, keeping in mind the aim of the TEMPUS Scheme concerning the restructuring of higher education systems in the eligible countries.
- ♦ Evaluate the organisational and financial aspects of JEPs in terms of their capacity to fulfil the declared objectives.
- ♦ Highlight the strengths, as well as the weaknesses and limitations, of JEPs and analyse the requirements for modifications with regard to operation, administration, content and other academic aspects of the projects.
- ♦ Draft advice and recommendations for possible changes and ways to improve the implementation of the TEMPUS Scheme in general and JEPs in particular.

1.2. Project selection

The Commission had intended to visit some 10% of JEPs in their second or third year of activity. Projects beginning in the academic year 1992/93 were not visited.

The sample was composed of randomly selected projects taking into account the proportion of national¹ and regional projects, their distribution in each eligible country by subject area, by the degree of participation of Member States as partners or contractors, and including, as far as possible, projects with a contractor from one of the eligible countries.

1.3. Organisation of the visits

Each project selected was visited twice. A first on-site evaluation was initially organised at a partner organisation in one of the eligible countries, if possible when all partners were present. The second visit, to the contracting institution, took place several weeks after the first visit and consisted of a financial audit. In order to make the evaluation reports easier to use, all the visits, as far as possible, followed the same pattern.

2. ON-SITE EVALUATION VISITS

2.1. Team of Visitors

To ensure a consistent and meticulous follow-up of JEPs, the Commission secured the help of some 60 academic experts from the eligible countries and the Community. The experts from the eligible countries were suggested by their respective National TEMPUS Offices. The experts from the Community came from various universities in the EC Member States. The group of experts also included the academic members of the TEMPUS Committee.

Two academic experts (one from an eligible country and one from the Community) specialised in the subject matter and area of activity closest to the project, though in no way linked to the project, were invited for each evaluation visit. The group of experts was assisted by representatives of the EC TEMPUS Office and the National TEMPUS Office concerned. The evaluation mission was headed by a representative of the Commission of the European Communities, Task Force Human Resources, Education, Training and Youth.

2.2. Procedure for site visit evaluations

The timetables for site visit evaluations were established according to the activities prepared by the project partners in the eligible countries. The date of the visits was fixed in agreement with the JEP coordinator.

Two weeks before the evaluation mission, the visitors received preparatory documents, i.e. the 'Project File', 'Guidelines for carrying out the site visit evaluation', reporting procedures and practical information concerning the visit.

The various members of the visitors team were asked to arrive in the eligible country concerned the day before the visit was due to begin in order to participate in a preparatory meeting. The project coordinator was also invited to attend parts of this meeting. The visitors had to ensure that the aim of the evaluation was clear to all participants. Moreover, they had to agree with the coordinator on the timetable and the agenda of the site visit and on how the evaluation was to be approached. The site visit had to take place in a friendly and undisturbed atmosphere, its objective being clearly evident and requiring a sound cooperation between the different parties concerned.

¹ In compiling the sample, those projects involving Czech and/or Slovak partner institutions were treated as national Czechoslovak projects.

During the evaluation visit, the visitors participated in several working sessions in which they discussed the projects' strong points, weaknesses and limitations with the present partners. The visitors met and interviewed staff and students who had participated in the mobility scheme, and finally the team visited the laboratories on other premises to inspect the operation and conformity of equipment purchased with the financial resources made available by TEMPUS.

At the end of each visit, the full team of visitors meet to discuss the results of the evaluation. The first conclusions and comments are then communicated to the partners verbally and informally.

2.3. Different aspects of the evaluation

The task of the visitors team consisted in evaluating the overall achievements and progress made by JEPs according to their declared objectives and to the tangible results of possible activities, notably the development of new curricula, student and teaching staff mobility, short intensive courses, modernisation of facilities, development of university-industry cooperation, continuing education and retraining, regional activities and other cooperative activities with regard to education.

Depending upon programme implementation, the visitors had to evaluate the way in which the project had been organised, using human and other resources efficiently and respecting the set timetable. The impact of the projects was assessed at department, faculty and university level. In addition, the experts were invited to give their opinion, if and when possible, on the programme's long-term effects on the development of higher education and its wider impact on the economic and social restructuring of the countries of Central and Eastern Europe.

2.4. Reporting procedure

Based on the reports presented by individual experts from both the Community and the eligible countries, summary reports were drafted on the events and results of each evaluation visit.

Finally, the Commission informed the JEP coordinators of the evaluation results and of the comments and recommendations made by the team of visitors.

3. FINANCIAL AUDIT

The aim of the audit is to monitor the proper use of the financial resources allocated to JEPs in general and to formulate advice and recommendations on possible changes and on how project management and organisation could be improved.

The financial audits of JEPs took place in the contracting organisations and were carried out by the financial experts of the Commission assisted by financial specialists from the EC TEMPUS Office.

3.1. Audit procedure

The timetable for the financial audits was established in agreement with the Contractor on the day of the visit, taking into account the availability of the financial services in the contracting institutions. Contractors were asked to make their budgets and financial reconciliations for TEMPUS grants allocated in 1990/91 and 1991/92 available to the auditors, in addition to extracts from balance sheets and appropriate expense vouchers.

The financial audit is divided into two parts. In the first part, the auditors ask general questions concerning the management of the TEMPUS grant and the internal procedures used in order to evaluate to what extent the internal control is reliable and, in fact, followed. The second part consists of the actual verification of expenses and of the conformity of the declarations made in the Statement of Expenditure in the Annual Report. This actual verification is more or less extended according to whether or not the first part of the extensive audit has shown weaknesses in terms of internal control. Thus, it is obvious that a JEP managed by a university with highly developed, centralised, internal control corresponding to European standards may be subject to less extensive examinations than a private foundation or a firm of consultants.

As a rule, the auditors were received by the Contractor and accompanied, in most cases, by the person responsible for the accounting of the project and occasionally by other people involved in the project. The atmosphere was, with very few exceptions, always friendly.

The audit ends with a short working session during which the auditors verbally inform the Contractor of their conclusions.

3.2. Reporting procedure

After each financial audit, an evaluation report was drafted and a questionnaire about management procedures filled in. If there were problems, the Contractors were informed of the weaknesses identified during the financial audit and of possible recommendations relating to the future financial management of the project.

4. VISITS ACCOMPLISHED

Between October 1992 and August 1993, both evaluations and financial audits were carried out for 39 Joint European Projects.

The following tables show the distribution of visits according to countries where the missions took place:

Site visit evaluations							
BG	CZ	H	PL	RO	SLO	SK	Total
4 (1)	7 (3)	11 (3)	8	6	1	2 (1)	39

NB.: () regional projects

Financial audits												
B	D	DK	E	F	GR	I	NL	P	UK	CZ	H	Total
2	5	2	1	9	2	1	6	1	8	1	1	39

The site visit evaluations in Poland and Romania covered almost all geographic regions, while in Bulgaria, Hungary and the Czech Republic they took place mainly in the capital cities. One university in Romania and three universities in Hungary were visited several times. The projects in question were based in different faculties or departments.

During the first few years of the TEMPUS Scheme the contracting organisations were based in the Community. However, in the academic year 1992/93, Hungarian and Czechoslovak institutions were allowed to become contractors. The sample of projects visited comprised two JEPs with contractors from the eligible countries.

4.1. Direct actions resulting from the site visits

The results of the site visits were included in the Joint European Project follow-up and renewal procedures. Where needed, immediate measures were taken by the EC TEMPUS Office concerned, as the contractor for the Commission, based on the conclusions of both the evaluation visit and the financial audit.

II. OVERALL ASSESSMENT

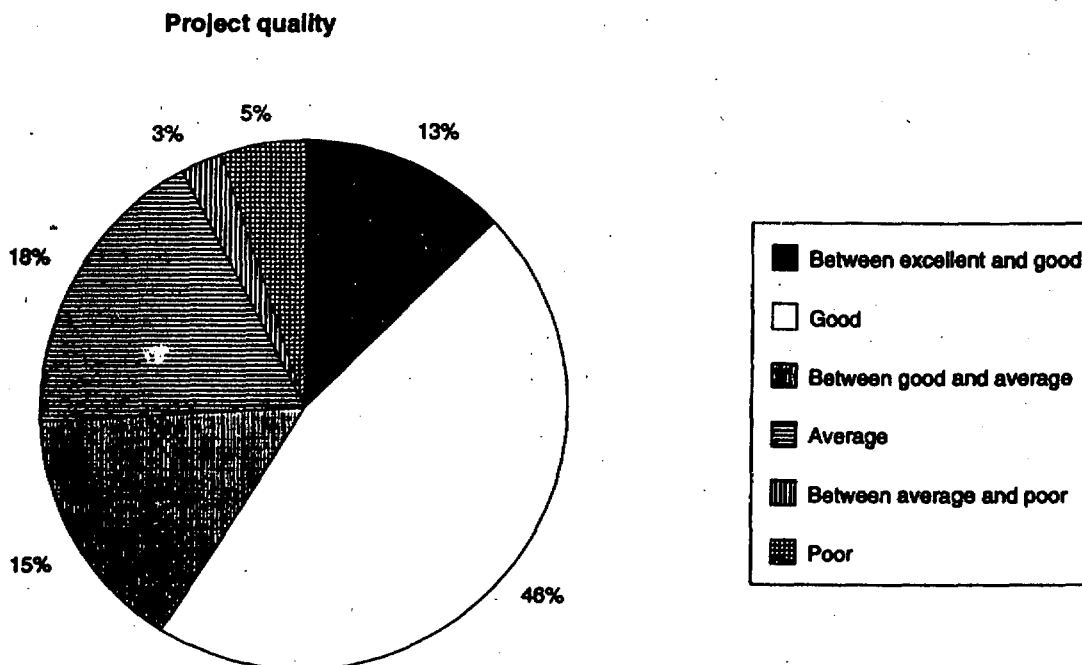
1. RESULTS OF THE SITE VISIT EVALUATIONS

1.1. Quality of the projects

The academic experts were asked to indicate the quality of the project visited using the following terms:

- Excellent** the Joint European Project entirely fulfils the stated objectives with an effective and efficient use of human and other resources within the scheduled time. The project has impact and European added value. The JEP could be referred to as a 'flagship project'.
- Good** the Joint European Project fulfils the stated objectives with some constraints as regards the use of human and other resources and time scheduling. The project may have impact and a European added value.
- Average** the Joint European Project achieves the stated objectives with some weak points and/or limitations as regards the use of human and other resources and the time scheduling. The impact and European added value are limited.
- Poor** the Joint European Project has difficulty in achieving the stated objectives, there are weak points and/or limitations as regards the use of human and other resources and the time scheduling. The impact and European added value are doubtful.
- Other** to be defined.

The following pie-chart depicts the distribution of projects according to the overall assessment carried out by the site visit experts.



Of the 39 projects visited, 5 were judged to be between 'excellent' and 'good', 18 as 'good', 6 to be between 'good' and 'average', 7 as 'average', 1 to be between 'average' and 'poor' and 2 as 'poor'.

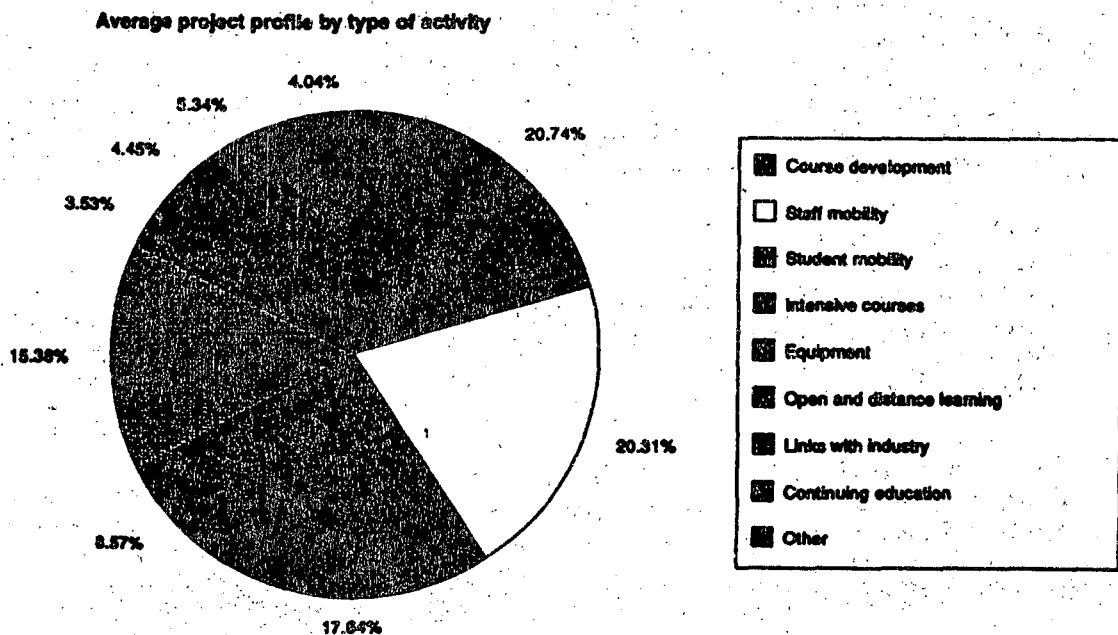
On the whole the results are positive. Over 60% of the projects are considered to be of 'excellent' or 'good' quality, while only a very small minority (5%) are frankly disappointing. The question arises as to whether a correlation between the quality of the project and its characteristics can be established.

1.2. Approach by subject area

The size of the sample calls for a cautious approach. Conclusions cannot be drawn from the subject areas which are only represented once or twice in the sample. Of the better represented subject areas, modern language JEPs obtained the best evaluation, followed by projects in engineering, management, medicine, natural sciences and agriculture. The differences are not significant, but it seems that JEPs in the agricultural and agro-food sectors experience some difficulties which are related to the sector as a whole and maybe even to the difficult position of agricultural education within the higher education systems of the eligible countries.

1.3. Approach by type of activity

During the evaluation, project managers had to evaluate the relative importance of a series of activities within their JEP: curriculum development, staff mobility, student mobility, intensive courses, equipment, open and distance learning facilities, links with industry, continuing education and other activities related to cooperation in education.



On the whole, the projects indicated that energy has been invested more or less equally in curriculum development (21%), staff mobility (20%) and student mobility (18%); moreover, the provision of equipment plays a role that should not be underestimated (15%). In contrast, other activities are less important: intensive courses (8%), links with industry (5%), continuing education (5%), open and distance learning (3%).

It was therefore interesting to see whether the projects that gave preference to particular fields of activity had been evaluated differently from the rest. It was also possible to determine whether the projects considered best or worst in one section had a special profile of activities.

The differences were not overly important and the following findings should be interpreted with the utmost caution. It would appear that the projects where equipment plays an important role have generally enjoyed a positive evaluation. Of the five projects with the maximum mark, four declared that they devoted more than 20% of their activities to the modernisation of equipment (while the average for the sample was 15%). It is obvious that the provision of modern teaching material (particularly computer hardware and software and equipment for teaching laboratories) generally has a strong impact on a department and particularly visible effects.

In 17 of the 23 projects considered 'good' or 'excellent', the degree of staff mobility, curriculum development and/or student mobility was above average for the projects as a whole. Seven of these projects devote more than 50% of the total of their activities to curriculum development, strongly backed by staff mobility, which in three cases is complemented by an above-average student mobility figure.

Student mobility, whenever it is above the average of the sample (which is the case with 18 projects), always goes hand-in-hand with staff mobility which, again, is situated above average in the projects which have obtained high assessment marks (six projects). At the same time, these projects devote a significant part of their activities to the development of new curricula, with the exception of one project which was concerned purely with mobility.

This leads to the conclusion that staff mobility is the main activity of JEPs and that the quality of this mobility strongly influences the implementation of goals aimed at restructuring higher education.

In addition, seven out of the ten poorest projects (judged as 'average' or 'poor') devote more time to staff mobility than the average of the sample. However, the benefits of individual teaching staff mobility are obvious; the teachers can reinvest the knowledge and expertise obtained during a placement period abroad in their teaching practice. Nevertheless, if this mobility is not coordinated, structured or linked to a specific project such as the development of new courses, it may tend to be geared towards excessively personal goals (e.g. research subjects), thus perhaps reducing its impact.

The projects related to open and distance learning have also, albeit to a lesser extent, obtained high assessments. All projects devoting more than 10% of their activities to this type of learning are classified as 'good' or 'excellent'. The same (with the exception of one project) applies to continuing education. In these latter two spheres, it is the innovative dimension that takes precedence, all the more so as continuing and distance learning are put to use within traditional subject areas such as engineering, medicine or others which are poorly represented in the eligible countries (e.g. management and environment).

To sum up, the projects which claim to devote a significant part of their time to links with industry very rarely, barring exceptions, rank among the best. It is possible that in these cases, this average performance may be explained by the overall difficulties in establishing university-industry links in the current economic climate of the eligible countries.

1.4. Approach by year

The sample was composed of 13 projects reaching their final (3rd) year and 26 projects in their second year of operation.

The two groups have different profiles in terms of academic quality. The proportion of projects in their second year classified as 'good' or 'excellent' is marginally higher than that determined for the third year (62% compared with 54%). By contrast, the proportion of projects considered 'average' and between 'average' and 'good' is much higher in the third year than in the second year (46% compared with 27%). Finally, those projects showing weaknesses (11%) are still in their second year. However, despite being carried out in the same way and with the same assessment scale, the evaluations measured slightly different facts: the progress was made during the second year and final achievements during the third year.

There is no unequivocal explanation for these slight differences, there are only parameters that can be taken into account without clearly determining the role they have played:

- ◆ The selection in the first year of TEMPUS was tougher than in the second year (the rate of acceptance in 1990 was 11.3%, with 22.7% in 1991).
- ◆ At the same time, in 1991 the procedure was improved and the requirement that the projects should respond to the principal needs of the country was made more stringent.
- ◆ The projects starting in 1990 had a somewhat difficult year as a consequence of the late date of the signing of agreements, but the quality of the achievements did not suffer.
- ◆ One incongruity is worth noting; five out of six JEPs visited in the countries with a higher rate of acceptance (50% of the submitted projects) were classified as 'good' and 'excellent'.

1.5. Evaluation by site visit and internal evaluation by the TEMPUS administration

The project Coordinators have a contractual obligation to submit an annual report on their activities (known as the 'Final Report') to the EC TEMPUS Office. These reports are subject to a quality evaluation and a financial control in Brussels and, in cases where a site visit has taken place, it is interesting to compare the conclusions of the TEMPUS Office assessment with the opinion of the experts.

The results show a strong convergence: 29 projects out of 39 have similar or related assessments. The projects considered best within the sample also received high marks in the Final Reports. The reverse was also observed.

Significant differences were only found in the case of ten projects. In six cases, the site visit view was more favourable than the EC TEMPUS Office view. In the most striking example, experts judged two JEPs, evaluated as 'poor' and 'average' during the assessment of the Final Report, to be of good quality. In contrast, projects judged more severely by the site visits, which was the case with the three poorest projects of the sample, were, as a result of their Final Report, considered 'average' or between 'average' and 'good'.

These statements call for several comments:

- ◆ Through their Annual Reports, the projects managers will have to try and make the most of the innovative experiments that they conducted in their project; indeed, site visits cannot be made to more than 10% of the active projects in any one year.
- ◆ From the point of view of the EC TEMPUS Office, the two approaches are complementary and, from this year onward, the site visit reports have been taken into account when examining requests for project renewals. In 1993/94, the questions which the operators will be asked within the context of their Final Reports will tend toward a more qualitative approach, allowing the true impact in the field to be better assessed.

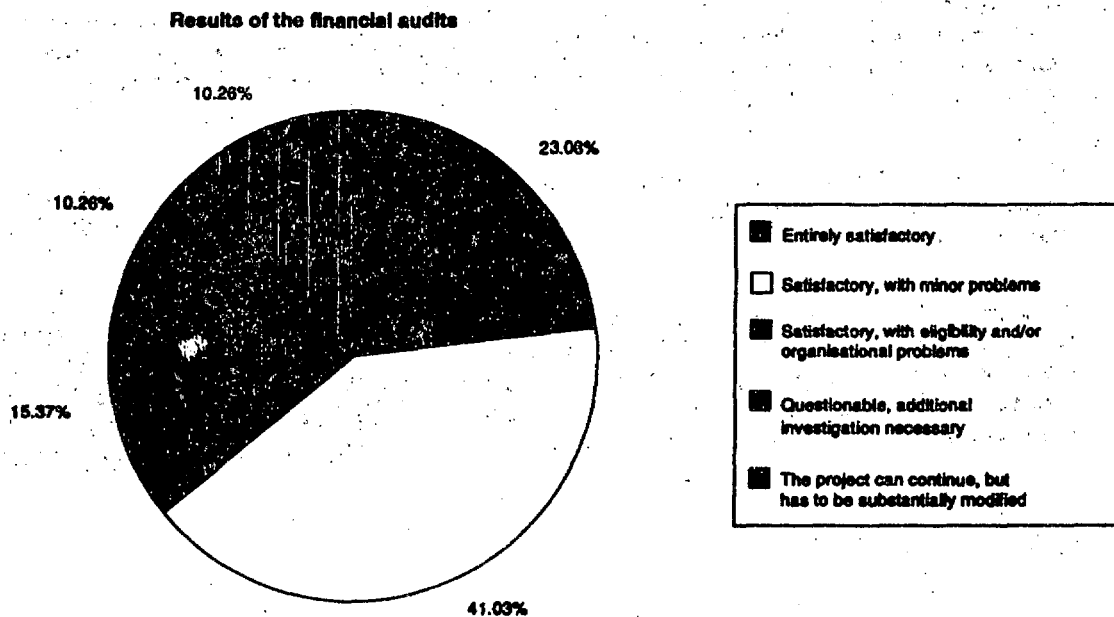
2. RESULTS OF THE FINANCIAL AUDITS

2.1. Quality of the projects

The financial experts have summarised the results of the financial audits of projects using the following categories:

- ◆ Entirely satisfactory
- ◆ Satisfactory, with minor problems
- ◆ Satisfactory, with eligibility and/or organisational problems
- ◆ Questionable, additional investigation necessary
- ◆ The project can continue, but has to be substantially modified
- ◆ The project has to be stopped.

The following pie-chart shows the distribution of the projects according to the results of the financial audits.



Nine projects out of 39 obtained the highest assessment: the financial management was transparent and entirely satisfactory.

For 16 JEPs (41%), the result of the audit was satisfactory. However the financial experts still found minor problems, e.g. problems related to the exchange rate or to eligibility.

A further fifteen percent of the audits (six projects) can still be considered satisfactory. Although projects falling under this category revealed slight problems relating either to eligibility of expenditure, expenditure outside the contractual period or to cash being accounted for but not yet paid out. The reporting system of the actual state of expenditure in the partner institutions may present slight problems. However, this is often the case with projects operating under decentralised management.

If all the documents required in advance (statement of accounts, invoices, documents substantiating expenditure, etc.) were unavailable or unsatisfactory, financial reconciliation turned out to be extremely difficult and painstaking. Those projects with very weak financial management were labelled 'questionable' by the experts and the contractors were asked to provide additional information within a fixed period. This was the case with four projects (10% of the sample).

In short, according to the audit, four projects need substantial modifications relating to financial management, without which these JEPs cannot continue. In these cases, the statement of annual expenditure did not correspond to the actual expenses, the expenditure statements were missing or could not be approved by the auditors. Moreover, a large number of expenses were ineligible.

The overall assessment was positive: 64% of the projects visited have excellent or good financial management. Fifteen percent of the projects were satisfactory, but 20% had to be subject to an additional follow-up.

2.2. Problems encountered

In carrying out the financial audit, experts rely on the Statement of Expenditure which forms an integral part of the contract. Within the framework of the follow-up and TEMPUS project renewal procedure, the Final Report of activities and the corresponding Statement of Expenditure are subject to a quality control and an examination of expenditure. The results are taken into account when it is decided whether or not the projects will be allowed to continue. During the audit, expenditure listed in the Final Report and the internal accounting of the organisation have to be reconciled and the invoices substantiating this expenditure must be found.

The usual problems encountered by the financial experts during their missions are generally related to the fact that the Contractors have either not understood or have insufficiently understood all the obligations, or that they use unreliable internal control procedures. In the few cases where the Statement of Expenditure was, for example, based both on estimates and actual costs, reconciliation with invoices became virtually impossible. Pro forma invoices and receipts issued by the central departments of the partner institutions instead of proper invoices were definite signs of poor management. Inaccuracies in account entries led to differences between the financial situation of the project as indicated in the Statement of Expenditure and the TEMPUS balance of account, e.g. internal transfers between two departments of the same institution that the Contractor forgot to carry out. The most frequent problem mentioned by the auditors was the use of the wrong exchange rate during the reconversion of expenditure from foreign currencies into ECU for the annual balance-sheet.

Some budgetary items relating to substantial sums such as equipment or staff costs were subject to a detailed examination. Costs relating to the acquisition and installation of equipment conformed, in most cases, with the declaration in the financial reports and the requirement for EC origin of equipment bought with TEMPUS funds was, on the whole, followed. The experts' recommendations were essentially concerned with improvements in internal control procedures relating to invitations to tender and guarantee or maintenance contracts. In addition, the auditors stated that invoices following contractual period very often related to equipment and concerned amounts corresponding to the remaining balance due at the end of the academic year. It seems to be current practice to spend the remaining sums on equipment benefiting the partners in the eligible countries, a practice accepted by the TEMPUS administration.

The examination of potentially ineligible expenditure such as mobility grants exceeding the limit fixed in the contract was also given priority. Overspending was mainly due to organisational problems (availability of inexpensive accommodation) and to the fact that the cost of tickets for travel sometimes exceeded the reduced tariffs. The auditors also found cases where the length of missions and meetings mentioned in the Annual Report did not correspond with the actual length of stay. On the whole, the majority of problematic or non-acceptable costs were linked to excessive travel and/or subsistence costs.

The audit reports also indicate that the financial experts found it difficult to verify the actual time people spent working on the project. Contractors often had difficulties in determining the number of working hours (weeks or months) spent on the project. Despite having proofs of payment, the auditors found it impossible to verify if the scale of local charges had been adhered to, particularly in the eligible countries. In order to overcome this problem, a revised and detailed budget mentioning the annual staff costs will in future be required from the beginning of the contract.

Finally, the total amount of expenditure which has been subject to refund requests is less than 3% of the total amount allocated to the projects visited.

2.3. Consistency between academic and financial assessments

The analysis of the results of the financial audits is dealt with separately. However, it was interesting to see whether the same projects, analysed in different places and from different angles, were judged in the same way.

The appraisals are, on the whole, fairly similar. The projects judged to be good on an academic level were classified as 'good' or 'good with minor problems' in terms of financial management. By the same token, the JEP that came last in terms of its educational quality level was also the one with the poorest financial management.

There were, however, a number of cases (7 out of 39) that showed significant differences between the two approaches. Two of them had impeccable financial management, while the quality of the projects was simply average and a third, classified as 'good with minor problems' in terms of the financial audit, were classed as 'poor to average' on an academic scale. An explanation for this would be that the financial management is carried out by a higher education institution which is accustomed to managing European programmes and has competent staff.

The remaining four cases present more complex problems, having a positive academic assessment and a negative financial audit. These projects are subject to a strict follow-up and the Contractors were asked to significantly modify the financial management of their projects.

3. ACTIONS ARISING FROM THE VISITS

Site visits are also clearly part of the follow-up and programme evaluation mechanism established by the Commission.

The site visits results are taken into account, in particular, for projects in their second year which are included in the sample and wish to apply for the renewal of the grant. If the on-site evaluation of JEPs, carried out by the experts, indicates significant weaknesses and if their conclusions are confirmed by an unsatisfactory appraisal of the 'Final Reports' or other elements from the regular dialogue between the TEMPUS administration and the project Coordinators, some projects may find that their aid is stopped. This occurred twice within the 1992/93 sample.

Other measures can be taken which do not entail the cutting off of financial support. As a result of the academic visits, the experts can advise project coordinators how to redirect the activities of a particular programme. After the financial audits, and in view of the contractual obligations entered into by the people responsible for the projects, reimbursements were requested for unjustified expenditure.

In addition and in parallel with the programme of site visits, the Commission, assisted by the EC TEMPUS office, has been led to organise special missions exclusively concerned with the financial management of certain projects where serious problems had appeared.

III. TEMPUS INTERVENTION METHODS

In the preceding section the approach according to type of activity has been outlined in quantitative terms. It appeared expedient to analyse the results in a more detailed way, i.e. within the framework of JEPs and according to the main areas of activity. Five topics were chosen: four of them (new curricula, student mobility, staff mobility, equipment) absorb the energy of a large part of the projects. Cooperation between universities and industry is still rather moderate, but as it had always been a goal laid down in the programme, it was necessary to make a first assessment of the situation.

1. CURRICULUM DEVELOPMENT

One of the main objectives of TEMPUS is curriculum development, consisting of either the creation of new curricula or the review and partial or total overhaul of existing curricula. This may result in the creation of new diplomas and a possible restructuring of the institution concerned.

Not all of the projects subject to evaluation missions this year gave priority to curriculum development. More than 20% of the projects declared that they devoted more than 40% of their activities to new curricula; 40% devoted 20% to 40% of their activities to them. This type of activity, however, is completely absent in four out of the 39 projects and very reduced in a further 13.

1.1. Significant successes

The most significant achievements are those which result in the creation of new curricula validated by a new diploma. Among the most remarkable successes of the TEMPUS Joint European Projects are the following:

◆ *In the environmental field*

- ◆ the introduction of a 'Master of Environmental Management' at the Technical University of Gdansk (PL) with the help of Danish and German partners; organised in the fifth year of the base cycle; divided into two semesters of 15 weeks each for students from various backgrounds;
- ◆ the creation of a four-year course at the University of Agriculture in Gödöllő (H) called 'Bachelor of Sciences-Environmental and Landscape Management' with the help of German, Italian and Austrian partners. This project, which involves 35 students, is very innovative in terms of teaching methods. It offers a variety of optional and multi-disciplinary courses. This regional project has also contributed to the introduction of a new specialisation in the environmental field at the University of Agriculture in Nitra (SK).

◆ *In the fields of sciences and engineering*

- ◆ the creation of a new cycle of doctoral studies in biophysics, previously non-existent, at Kosice (SK), in cooperation of a regional character with Prague (CZ), within the framework of a project with French, Czech, Italian, Dutch and Swedish partners;

- ◆ the establishment up of new mechanical engineering teaching facilities in the recently established University of Suceava (RO), where the first students with a diploma equivalent to the French DUT ("*Diplôme Universitaire Technique*") will be graduating this year. Within this project, six subjects have already been revised and two have been completely overhauled, one of these being computer-assisted graphic design. The partners of this project were French and British;
- ◆ the creation of new multi-disciplinary courses on environmental protection as part of the M.Sc. course at the L. Eötvös University (H) recognised by the Hungarian Ministry. This project was completed with the help of Dutch and German partners and combines geology and geophysics.
- ◆ *In the field of management*
 - ◆ the setting up of the 'Brno Business School' at the Czech Technical University in Brno (CZ); a new department of the faculty of management which offers MBA-type studies and intensive courses for managers. The partners of this project are British, Spanish, Greek, Italian and Polish;
 - ◆ the creation of a 'Master of Sciences-Entrepreneurship' in Ljubljana (SLO), involving 23 students and spread over two years (British, Spanish and Dutch partners);
 - ◆ the setting up of the 'Business School of Transylvania' (RO) in cooperation with British and Greek institutions; the BST has been empowered by the Romanian Ministry of Education to teach a two-year MBA and also offers intensive courses for company executives.
- *In the field of foreign languages*
 - ◆ the creation of a recognised 'Bachelor in Applied Foreign Languages', a four-year diploma developed as part of a new department of Applied Modern Languages of the University of Cluj (RO). French, Belgian and Dutch institutions cooperated in this project.

Other projects are expected to lead to similar results next year. The diversity of the subjects concerned and the teaching levels may be noted, even though a certain priority to the 4th and 5th years seems to exist. It is worth noting, incidentally, that the management-related projects are strongly oriented towards continuing education and are therefore the subject of concerted action by the local economic community. This concern for links to industry is again found, in another form, in the Gdansk project which focuses upon practical placements and in the modern languages project at Cluj in the search for vocational placements for students in enterprises.

1.2. Partial achievements

Even if their approach is not as global as in the above-mentioned cases, the other projects have to a large extent achieved significant restructuring in the field of education. In some cases, this may include the revision of the syllabus in individual subject areas and, in others, a complete overhaul. Intensive courses have been created, whilst optional courses have frequently been set up. This is a positive approach which may turn out to be innovative and which may result in a multi-disciplinary approach and address a varied public. However, it is important to ensure that these syllabuses are validated and that they do not represent an alibi for not carrying out profound restructuring. These courses are often validated by 'certificates' issued by the home university or by a partner institution, but the degrees often do not possess the same value with regard to the eligible country or to subsequent studies in the Community.

The analysis of projects highlights the importance of producing teaching material such as handbooks, lecture papers, case studies, etc. These achievements are often the result of the staff mobility flows from the eligible countries to the Community, where the opportunity was taken to bring documents together. It appears that these documents have been subject to real adaptation at local level. The new handbooks are written in the language of the country concerned. The largest number of examples can be found in Hungary, but another example is a regional project in which a handbook has become available in English, Polish and Czech, and in which a British publisher has expressed interest.

The expert evaluation points to the 'good use' that must be made of foreign languages. It has been accepted and is even desirable that some courses, particularly those taught by visiting teachers, should be held in one of the Community languages. Nevertheless, it is preferable that, in the case of a completely new subject, the syllabus as a whole is not taught entirely in a foreign language, as this would prevent students from the university concerned, who have not studied the relevant language but who are otherwise motivated, from attending a course.

1.3. Difficulties encountered

There are several factors which might lead to the failure of the project or prevent the development of new curricula. External factors, especially those concerning economic and social reforms and the progress of higher education reform, are of particular importance.

Thus, a project which would have led to a two-year diploma in engineering is not successful because the Minister of Education will not recognise it.

A training scheme relating to transport, which was developed to meet the needs of the sector, is trying in vain to establish a dialogue with the transport industries and services, which are incapable of formulating clear requirements.

The agricultural sector is proving to be particularly sensitive to constraints such as the delay in agricultural policy in general and/or the reform of higher agricultural education which are handicapping several projects in countries such as Hungary and Bulgaria.

There are other factors closely linked to the failure or partial failure of some projects:

- over-ambitious objectives; the goal of wanting to achieve a mutual recognition of diplomas in a sector as particular as medicine was probably out of reach for one project and, as a result, not even the new curriculum development stage was reached;
- excessively vague objectives: some projects introduce innovative changes, but in a scattered and marginal way and without an overall perspective, so the changes do not influence the educational structure;
- differences between partners in terms of cooperative levels, of investments on the two sides or an inactive coordinator are factors that hinder the development of teaching and training projects.

2. TEACHING AND UNIVERSITY STAFF MOBILITY

The activities relating to the mobility of university or administrative staff include teaching missions, practical placements and periods of retraining abroad. Staff mobility is one of the major actions developed under the TEMPUS Scheme. Of the projects visited, more than 15% devote over 30% of their activities to this field, the majority of JEPs (56%) invest 18% to 25%. Only 5% of JEPs have no action at all in this area.

The placements seem to vary in terms of duration in the direction of East to West mobility (from one week to nearly one year), while the West to East placements rarely exceed two weeks. The average length of teaching missions in the eligible countries is some ten days, while the placement of teaching staff in the Community for the same type of mobility is on average about two weeks. Retraining and updating periods are, to a large extent, priorities for staff from the East. An average period of placement extends over six weeks. Nevertheless, this type of mobility varies in terms of duration. During the interviews held as part of the site visits, the academic experts frequently recommended that the retraining and updating courses should be extended to at least four weeks.

Data concerning East-West mobility emphasise, not surprisingly, that the selection was generally based on criteria relating to competence in the specific scientific field and to language skills. Twenty percent of the people in the projects visited who benefited from mobility were women. Several projects gave priority to young teachers. The teams of experts stated that, without doubting the individual value of the selected people, the choices made within individual projects were not always consistent. The comments stressing linguistic weaknesses of the grant-holders were counterbalanced by those emphasising the absence of problems.

Particularly significant mobility flows included in our sample are found in the French-speaking engineering network of the Technical University of Budapest (H), in an agricultural project coordinated by Gödöllő (H) and in the Montpellier Chemistry and Applied Chemistry regional project.

2.1. Lessons learned

The vast majority of staff benefiting from a period of mobility underlined their interest in acquiring new teaching methods. The advantage of allowing university teachers to travel to different countries was that the scheme did not depend on one model alone. This is stressed at Cluj (Applied Modern Languages), where staff travelled to Belgium, the Netherlands and France, and in the Budapest project for staff training, in which the beneficiaries travelled to the United Kingdom and Germany.

The objective of these mobility flows is to reinvest the material gathered in the creation of new courses. New teaching material was gathered and developed by staff of the University of Suceava (RO) during their placement in France and the United Kingdom. The Polish staff involved in the aeronautical project known as STAR were able to produce multimedia materials. The Hungarian staff of the University of Agriculture in Gödöllő (H) reported that they were taught new research and teaching methods by their German, Austrian and Italian colleagues. A series of course notes were prepared by Bulgarian and Hungarian teachers within the framework of a regional project in applied discrete mathematics.

The examination of the teaching practice currently in use in Western Europe should not, however, lead to the mere copying of courses from colleagues abroad. An accounting handbook, inspired by the practice in the United Kingdom, but adapted to the local situation, was created in a distance management training course in Bulgaria. Similarly, case studies of local enterprises were developed as part of the 'Business School of Transylvania' project in Romania to be used by students.

2.2. Special features of teaching staff mobility

Nonetheless, the results of staff mobility are incongruous. This type of action does not seem very efficient when the selection is not organised coherently or when its follow-up, in terms of new curriculum development, is left to individual initiative. Staff mobility should not be a goal in itself, it should always be accompanied by a teaching/training project. In the limited cases where student and staff mobility are organised at the same time, the results seem positive because the teachers can monitor the progress of their students and the two groups can, on their return, discuss their experience. This was particularly the case in the 'Modern European Languages' project coordinated by Heidelberg (D), the 'Biochemistry' programme in Prague (CZ) and the 'Applied Modern Languages' project in Cluj (RO).

This mobility exercise particularly emphasises the difficulty in finding balanced exchanges among the various partners. The above-mentioned problem (the general difficulty of finding staff for even the shorter missions) exists between Western and Eastern Europe, in terms of the distribution of staff originating from the eligible countries among the various Community countries (as a result of the unequal command of languages) and staff coming from the Community to the various cities of the East (some destinations seem more accessible than others in terms of transport, or more comfortable in terms of standard of living).

Administrative staff mobility within TEMPUS is marginal; nevertheless, site visits revealed interesting initiatives. Two skilled technicians from the University of Wangeringen (D) were sent to Prague in order to help their colleagues familiarise themselves with the operation and maintenance of new equipment acquired for teaching laboratories. The librarians from the Technical University of Gdansk (PL) and the University of Cluj (RO) were retrained in Denmark and France in the operation of new computerised catalogue systems introduced as part of the projects. Administrative staff and the Rector of the Technical University of Gdansk visited the administrative departments of the University of Roskilde.

Few administrative obstacles were pointed out concerning the operation of these exchanges. Mention was made of the inconvenience that exchange beneficiaries may experience on lengthy East-West exchanges, due to the suppression of basic pay at their home university after a certain time of absence (a problem which has been encountered in Poland and Romania). Moreover, there were occasional delays when trying to obtain a visa, particularly in Romania.

3. STUDENT MOBILITY

Student mobility formed part of the activities of most of the projects evaluated. Nevertheless, 12 projects of the sample did not feature student mobility at all. Six projects devoted more than 40% of their activities to it and can therefore be considered specialists in student mobility with significant numbers of students involved. Among these were a language project coordinated by Heidelberg and a Chemistry project run by Montpellier. It should be pointed out that both of these are regional projects. The majority of the projects visited, which have a mobility component, dedicated between 20 to 30% of their activities to this area.

The general conclusion to be drawn is that project partners are satisfied with student mobility. The evaluation points out that it often appears to be one of the most successful points of the JEPs. It would be superfluous to give a statistical survey of the numbers relating to the sample, as the TEMPUS Annual Reports already provide exhaustive information. This section will instead try to explain the general trends.

3.1. Number of students per project

A significant number of projects have to deal with relatively restricted mobility flows, i.e. three to eight people a year. Mobility only becomes a serious activity when more than 10 people are involved. From this point of view, appropriate plans of action had to be applied by projects such as the 'French-speaking network' of the Technical University in Budapest (H), where some 150 students were involved over three years - or in the case of the cooperation between Antwerp (B) and Szczecin (PL) in the field of transport, where 24 Polish students were sent on a practical placement to Belgium.

Projects dedicated to mobility, such as the Modern European Languages project coordinated by the University of Heidelberg involving 143 students a year, have an even larger dimension.

3.2. Direction of mobility flows

Not surprisingly the main tendency is that mobility flows (and thus the main preoccupation of universities) predominantly go from eligible country universities to the Community.

Often enough, responsible university staff in the eligible countries regret the limited character of the West-East mobility flow. It seems that those Western students interested in TEMPUS are more motivated by the practical placements in East European enterprises than by university placements, except when they have a specific thesis project in mind. The host enterprises are, in this case, either local companies or subsidiaries of companies in EC countries. The West-East mobility is also objectively limited by linguistic difficulties.

3.3. Level of studies

The majority of students benefiting from the mobility scheme are in their fourth or fifth year, which seems to correspond with and satisfy the requirements of the academic environment. In the engineering sector, which makes up a significant part of the sample, this corresponds with the period when the students have to carry out personal research followed by a dissertation such as the '*Diplomarbeit*'. In these cases, the mobility scheme may facilitate this task. During the second and third year, travel is less frequent and the results are more differentiated. Doctoral studies are represented even less frequently as a result of TEMPUS selection and also because the national examination systems tend very little towards thesis preparation carried out in several countries. The progressive transfer of these studies from the Academies to the universities should raise the level of the exchanges.

3.4. Student selection criteria

The evaluation affirms the seriousness of the criteria used by the managers. The level reached in the subject area in question and the language skills are both seen as having almost equal value and are practically unanimously considered to be the decisive elements. Very often, open competitions - publicised within the institution - have been organised. The selection procedure often involved the Western partner, who is either present at the ad hoc interview or makes the final choice from a preliminary selection made by the sending university.

3.5. Material conditions of placements and linguistic preparation

In most cases, site visits have shown that the material conditions of student placements abroad are good and that the grants are generally considered to be sufficient. Students normally receive part of their grant in advance to cover travel costs and are given the rest of the grant by the host university in the form of a monthly payment.

But two problems deserve attention. Firstly, there is the issue of registration fees for universities where tuition is high (e.g. in the United Kingdom). Here, a preliminary agreement has to be reached to avoid jeopardising mobility. Secondly, there is the accommodation problem in countries or cities such as Germany or Paris, where the cost of living is high. In these two places, accommodation problems have arisen repeatedly. In other cases, where the organisers of the mobility schemes did not manage to find inexpensive accommodation (such as university housing) in time, grant-holders have had to be accommodated in hotels and consequently at a higher cost, even for those staying over a long period of time.

Even though language skills are tested as part of the selection procedure, some mobility students have difficulties in adapting. Linguistic preparation before leaving and support during the placement were sometimes lacking. Moreover, the specificity of some courses meant that the students had to master two foreign languages. This was the case with the Hungarian students who went to the Italian department of a German university, or the Romanian students learning English and travelling to the Netherlands. Furthermore, universities stress that knowledge of the host country language, which will facilitate social and cultural integration, should be just as important as knowledge of the course's working language.

3.6. Recognition of study periods

There are differences in terms of recognition. The study period abroad may not be recognised at all, it may be partially recognised (the students are exempt from attending courses but they have to take exams on their return), it may be completely recognised (students are exempt from exams on their return if the studies at the host university have been satisfactory).

Overall, universities in the eligible countries are informed about and interested in the schemes existing within the European Community, particularly by the European Community course credit Transfer System (ECTS). However, it should be emphasised that the measures designed to promote the recognition of study periods depend primarily on the local or possibly national academic authorities in the eligible countries.

3.7. What are the results?

The view that students benefit from their placement abroad is shared by the teaching staff. Nonetheless, the experience and knowledge acquired tend to vary.

Some people stress the added value of the mobility period as a possibility for obtaining a vocational placement in an enterprise. This was the case with the Polish students from the transport training scheme in Szczecin (PL). In another case (this time the project concerned dealt with Social Security in Europe) the Hungarian students of the Lorand Eötvös in Budapest (H) working on the project subsequently became assistants at their university.

Other students emphasised purely academic advantages in terms of personal projects and completed theses.

The students of one teacher training project were able to compare approaches to teaching used in two EC countries and to apply them to their own system. Medical students from Debrecen (H) found different approaches in terms of staff/student and physician/patient relationships.

These observations are in line with those expressed in other Community training programmes. Mobility is of the utmost importance for cultural exchanges, knowledge of languages, the discovery of another culture and the mutual understanding of European peoples.

4. EQUIPMENT MODERNISATION

4.1. Types of equipment

TEMPUS supplies the eligible country universities with a large amount of equipment, comprising an average of some 15% of project activity. In the case of seven of the sample projects, this share exceeds 30% and in the majority of projects (64%) it is situated between 10% and 20%. Seven of 39 JEPs declared that no activities were devoted to the acquisition of equipment (18%).

The equipment examined can be classified into various categories:

- large specialised equipment
- educational software
- management-related and office automation software for project administration
- other teaching materials (books, periodicals, tapes).

An example of large specialised equipment might be the work stations for projects such as 'Microelectronic Design' of the Technical University in Budapest and the 'Discrete Mathematics' projects at three universities in Sofia or the computer-assisted design at the Technical University in Warsaw (project in aeronautics) and in the University of Prague (aerodynamics). An air-pollution analyser was acquired for the environmental project carried out in Gdansk and equipment for waste-water treatment was installed at the Institute for Fisheries and Ichthyobiology in Zabienec (PL). An argon laser was bought for the University of Safarik in Kosice (SK) as part of the project dealing with 'Physical chemistry and Biophysics' involving, in particular, the universities of Prague and Paris VI, and an 'excimer laser' and a multichannel detector were bought for the University of Prague. A pollution analysis laboratory was installed in Ostrava (CZ) for a project involving Sheffield, and four university centres in the Czech and Slovak Republics were supplied with endoscopic equipment. To give an example outside the exact sciences, the department of Applied Modern Languages in Cluj (RO) was given 15 language booths by Nantes.

Computer equipment supplied for personal use with the aim of improving teaching is obviously even more widespread. Partner universities in the eligible countries have also obtained computers, printers and fax machines to facilitate project management.

Apart from handbooks and periodicals, other types of teaching materials have included a videotape collection with the films of the most famous Italian writers, which was sent to a JEP at Pécs in Hungary as part of the 'Italian Language and Culture' project, and video courses on gastroenterology to the medical universities in Prague, Brno and Bratislava (a Franco-Belgian project). Audiovisual facilities are also being used in Ljubliana as part of a management project.

4.2. Conditions of use

There are some cases in which the equipment is used for research more than anything else, but it seems that the overall rate of use - particularly of computers - is excellent. Training rooms have extensive opening hours and often include 'self-service' facilities. Attendance and motivation among students and staff are excellent. In the report on the sample, only one case of disappearance or damage to equipment was recorded, which is very important for the establishment of trust between the partners. On the whole, the use of the equipment was properly monitored. It was often young teaching staff who introduced the students to the equipment after having themselves benefited from the mobility scheme. One successful initiative was taken within the framework of a chemistry project, where the partners used their grants to enable the technical staff of a Dutch university to travel to an eligible country to help install new equipment. Apart

from the practical benefits, the association of university personnel, other than students and teaching staff, in a TEMPUS project tends to strengthen the links between institutions.

On-site observations have indicated that the hardware was more often than not bought locally at the initiative of the partners of the eligible country. In most cases, Western contractors were responsible for payment. A large number of companies specialising in hardware have representatives in the capitals of the eligible countries and prices are very competitive.

The future of projects where equipment plays a major role depends largely on the care taken in terms of operation and maintenance. Here attitudes vary. On the whole, the provision of equipment is a significant element in the process of helping universities in the beneficiary countries to reach an international level. TEMPUS is seen as the main source of financing, at international level, which assists these countries in catching up. This is all the more desirable since science in the eligible countries is generally of a good theoretical level.

Nevertheless, the conclusions of the evaluation reports drew attention to the need to update equipment together with teaching methods. Technique should not be considered an end in itself and the acquisition of equipment, sophisticated as it may be, should not cover up concern on how it fits in the context of a more global organisation, in the optimisation of human resources and in the profound restructuring of curricular content.

5. COOPERATION BETWEEN UNIVERSITIES AND INDUSTRY

5.1. Industry contributions

The number of economic actors or, more generally, representatives of economic life involved in the sample chosen for the site visit programme was small. Only nine projects out of 39 indicated actions linked with industry. This reflects the limited presence of industry in the TEMPUS Scheme during its first two years of activity.

Despite having the legal form of companies, some economic actors are in fact training institutions or advisory bodies that will not necessarily contribute significantly to the programmes in the field of university-enterprise cooperation.

The expert assessment has initially found no exact correspondence between the formal participation by an 'industrial' partner in a JEP and the actual level achieved by cooperation with industry.

Some industrial partners in the eligible countries have made a particularly limited contribution to the Scheme. It is true that in some cases they are mainly concerned with the restructuring of their own activities. The few industrial enterprises in the Community directly involved in the projects have had a more active role. These partners have included the Antwerp port authorities who are involved in a 'transport' project in Poland, the aeronautical consortium participating in the STAR project in Poland and the British Steel Consultants' cooperation activity in the Czech Republic.

In contrast, other organisations have shown interest in the projects even though they were not present from the beginning. In Western Europe, this was the case with enterprises wishing to offer practical placements to students from the eligible countries. In the East, some enterprises showed interest in continuing training programmes and intensive courses for their executives and management staff. Others even showed a more general interest in the project: two Czech steel works were interested in a project in Ostrava (CZ) and the Hungarian Atomic Energy Board and the Gas and Oil Cooperation in a geology project.

Finally, other influential economic actors have shown concrete interest in specific programmes. The Ministry for Economic Affairs in Slovenia demonstrated interest in a management project in Ljubljana; the Business and Innovation Centre established with the help of PHARE in the Czech Republic or the regional authorities in Gdansk (PL) for the Environmental Centre.

5.2. Various forms of cooperation

The topics for university-industry cooperation are potentially varied. In practice, they are at very unequal stages of development.

The participation of industry in defining the contents of initial training courses is virtually nil. This idea is correct in principle: an enterprise should be able to formulate its requirements with regard to the educational system, making it possible to adapt initial training and provide the necessary skilled personnel. In practice, individual enterprises, often struggling to survive, are not in a position to anticipate trends and define their requirements.

The results are also very poor with regard to research contracts. Industry is often not financially in a position to pass on orders to universities, even in sectors where important technological developments leading to specific applications have been achieved with the help of TEMPUS and others.

In contrast, training activities developed in the universities of Central and Eastern European countries which are directed towards company personnel, often (but not exclusively) in the form of intensive placements in companies, are a guaranteed success. Examples of this can be found at Torun (PL), where 80% of the students in an 'SME in Management' come from enterprises in Sofia, Cluj, Ljubljana, among others. In almost all cases, the subject area concerned is management with its diverse specialisations. Apart from responding to the requirements of local economies, the success of this approach makes it possible to consider financial contributions vital to the running of universities.

Programmes for practical placements of students within companies have, on the whole, been successful. In terms of East-West flows, requirements could not be entirely satisfied, but there have nevertheless been interesting achievements. The port of Antwerp hosted more than 20 students and, at Roskilde, practical placements took place in enterprises dealing with environmental problems. With regards to West-East flows, the success rate was more significant, but the numbers were limited. Dutch students from the Hogeschool Den Haag visited Poland and a number of French-speaking engineering students visited Hungary.

6. PROJECT ORGANISATION AND MANAGEMENT

6.1. The factors of success

The organisational and management methods used by the networks within the sample received a positive overall assessment.

The factors leading to a satisfactory assessment of project management are as follows:

- involvement of all partners and a certain amount of individual investment;
- a significant degree of initiative left to the representatives of the eligible countries;
- a realistic and structured programme which keeps to the agreed timetable;
- clear division of tasks and responsibilities;
- sound financial management.

In addition, strong personalities capable of enlivening the network and inspiring their colleagues with the necessary enthusiasm are equally necessary.

On the whole, the projects involving partners who already knew each other (through projects of scientific cooperation or involvement in other European programmes) were at an advantage and were able to work together more spontaneously. Specific cases are a tribology project in Suceava (RO); an Italian language project in Pécs (H) and regional cooperation linking Budapest, Warsaw and Darmstadt in the microelectronics field.

This last project, together with the biochemistry project involving Prague and Paris VI, the Applied Modern Languages project in Cluj and the cooperation between Sofia and Maastricht on information technology, is a good example of the personal effort invested in the project by the coordinator.

Institutions from the eligible countries were also actively involved in other projects, in addition to the majority of those mentioned above such as the leading role the University of Gödöllő (H) plays in an agricultural programme, where it acted both as Contractor and Coordinator, receiving support from a local TEMPUS Office.

Democratic and collegiate decision-making is also a key to success and is achieved by ensuring an open atmosphere in which information flows freely. This requires regular meetings of the partners; two sessions a year being a realistic objective (this naturally depends on the specific conditions). In one project the partners met six times a year without the overall efficiency being superior to that observed elsewhere.

6.2. Network practice

There does not seem to be a significant difference in quality or efficiency between 'small' and 'large' networks, even if practice and constraints are different.

In the 'large' networks (such as the regional Heidelberg project for languages and the French-speaking network), a limited management structure (steering committees) had to be set up which, as a rule, consists only of the more active partners. This does not, however, mean that the others play an insignificant part, but merely that their role is more limited (e.g. hosting of trainees or students for example). The 'small' networks, in theory more flexible, always run the risk of a bilateral drift if one of the Western partners is passive and withdrawn.

A total of six projects coordinated by the eligible country institutions were visited this year. There is no qualitative difference between this group and all the other projects where network management is concerned. In two projects of the sample, the role of the Contractor had been transferred to the institution of the eligible country in the third year of the project and the financial audits which took place in Prague (CZ) and Gödöllő (H) turned out to be entirely satisfactory.

Similarly, the separation between the functions of contractor and coordinator can be excellently managed when carried out correctly. Here, coordination between the organisation of activities and financial management always requires a superior personal effort by both the coordinator and the contractor.

Good project management requires the ability to plan strategically. Projects which have received the overall evaluation of 'poor' and 'average' are often those where decisions are taken on a case by case basis and without an overall vision. This often results in a great deal of energy being unnecessarily wasted. Very few projects practice regular self-assessment, the Budapest-Warsaw-Darmstadt consortium, already mentioned, being a happy exception.

The networks do, however, change during the course of a project. Experience shows that if one partner is not up to a task, or is in conflict with the direction chosen by the majority of the other partners, it is preferable to take prompt and appropriate action. Contrariwise, the experts responsible for the evaluation have also had wide-ranging reactions to suggestions for enlargement of networks by some operators. Although enlargement is desirable for balancing a project that is excessively bilateral, it entails certain risks, e.g. non-achievement of the initial programme, scatter effects and difficulties in integrating new elements (e.g. during the third year, for example).

Network operations cannot be addressed without brief mention of their approach to languages. Activity is made difficult by the lack of one common working language (this has been observed in one case). In the vast majority of cases, the working language is English, particularly when the networks are wide-ranging and include participants from a number of different countries. When the projects are centred about the culture and identity of one EC Member State, it is the language of that particular country that takes priority, as in the case of the 'French-speaking network' and the Italian language project in Hungary. German is used as the working language in the Timisoara project (RO), while French is used in a medical project in the Czech and Slovak Republics.

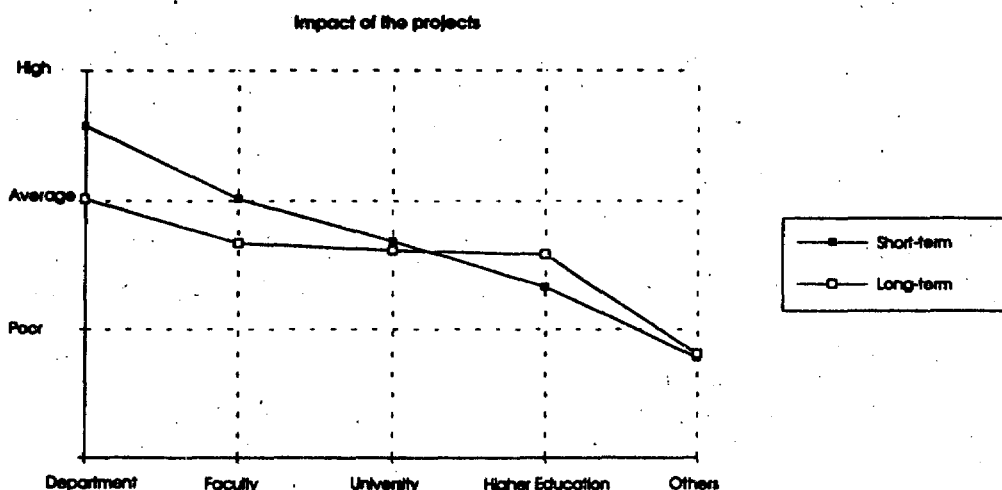
Almost all project coordinators, in particular those of projects which run smoothly, emphasised that they themselves had to invest a large amount of time to enliven the JEP and that they had to mobilise funds from their own institutions in the form of contributions to structural costs beyond the compensations foreseen by the programme management. Aware of the need to make CEEC institutions benefit as much as possible from available funding, the coordinators mentioned that they have to accept the present situation. They also discovered (in the case of those individuals with no previous experience of international programme management) that the mastery of a programme of this kind requires not only academic and teaching competence, but genuine managerial skills.

IV. IMPACT

TEMPUS was established to respond to the needs of the eligible countries in the fields of training and higher education. It forms part of a general EC aid programme created to promote the economic restructuring of the countries of Central and Eastern Europe (PHARE). During the various stages of project selection, particular attention was given to those projects which not only included realistic short-term goals but also seemed to have long-term effects on the development of higher education in the eligible countries.

The academic experts participating in the evaluation missions were asked to assess JEPs in terms of time; while the project was in operation; in terms of short and long-term effects; in terms of their 'spatial' impact, i.e. their impact on the department, the faculty, the university in question and higher education in general. The impact assessment was based on a scale of 'high', 'average' and 'low' impact.

It is interesting to see the results of the statistical treatment based on the assessment documents filled in by the academic experts of the site visit team.



1. THE 'SPATIAL' DIMENSION REVEALS SUBSTANTIAL DIFFERENCES

At department level

An absolute majority opinion considers that the JEPs visited have, on the whole, had a high impact on the departments concerned. The academic experts gave this positive assessment to 71% of the projects in operation. In 60% of the projects, there is a short-term impact and in 34% even a long-term impact.

At faculty level

TEMPUS has had an appreciable impact at faculty level. The experts assessed all projects as having an 'average' level of impact for the duration of the project as well as in the long-term.

It is interesting to note that some 67% of the projects which had a significant impact at department level (23% of the sample) also had a high impact at faculty level during the course of the project. In terms of long-term impact, the experts gave 33% of the projects a high assessment.

At university level

Effects are harder to assess as soon as one moves to university level. Most experts indicated that JEPs have a 'weak' to 'average' impact both during project operation and in the long-term. None of the projects achieved the highest mark, during their period of operation at least.

At higher education level

Individual JEPs have little immediate effect on the restructuring of higher education. One project in Romania has nevertheless been assessed as having a high immediate impact. The overall assessment, however, is situated between 'weak' and 'average'. The experts are a little more optimistic with regard to the long-term, since the impact was slightly greater for higher education as a whole.

Other

The impact outside higher education cannot be measured very easily. Effects on links with the economy, on relations between regions and on research etc. fall under this heading. Many experts assessed the projects examined rather favourably, at least according to long-term criteria. This, however, only concerns a minority of the sample. In most cases, the experts found it impossible to measure the external impact of the projects and therefore have not assessed them at all.

2. THE TIME DIMENSION IS LESS SIGNIFICANT

According to the experts, the impact that projects have at department and faculty level will diminish over time. By contrast, the results for university and higher education are more varied and, in some cases, projects can be predicted to have more visible consequences in a few years time at national level. These conclusions are very logical as, during a visit, it is relatively easy to measure the immediate effect of a project on its environment. It is, however, much more difficult to assess its impact at university or national level. Taking account of the time required for responses to be generated within the educational system, it is not wrong to assume that a local initiative will only attain its full value in three to five years, when it is harmonised with other initiatives or with the wishes of national authorities.

3. FACTORS DETERMINING IMPACT

The impact at department level is judged to be high when the basic activities of a project have been carried out correctly: sound management of mobility flows, provision of equipment that meets educational requirements, introduction of new teaching tools, development of new courses.

For a project to have a high impact at the university faculty level, it has to meet more than just individual teacher or student requirements. It must disseminate new educational approaches or develop the recognition of study periods. Above all, the project must have an effect in terms of restructuring. In this context, the creation of new departments is significant. Several examples can be given: the Department for Dairy Technology at the University of Agriculture in Poznan (PL); the Department for Maritime Ports in Szczecin (PL), the Business School of the Technical University in Brno (CZ); the creation of an 'Education Centre' for distance learning at the Medical University in Debrecen (H), etc. Cooperation between faculties is also a sign of strong impact at institutional level. An example of this includes the Centre for Environmental Studies at the University of Gdansk (PL). Examples of cooperation between departments can be seen at the L. Eötvös University in Budapest (H) or the University of Agriculture in Gödöllő (H).

High impact at institutional level was also accredited to projects identified by the university representatives as promoting their institution as a 'centre of excellence' in a field that gives or contributes to giving their institution a new image.

The prospect of integration in a permanent European network also leads to a high impact.

The small number of projects which have a high impact on higher education are those that develop new curricula which can be considered original or serve as a model for the country. This is the case with the Department for Applied Modern Languages of the University of Cluj (RO) and the 'Business School of Transylvania', again at Cluj. A project has obviously more chances of achieving a high impact at national level if it involves a subject area which is not traditionally represented in the eligible countries.

Human factors may also influence, albeit to a lesser extent, the impact of projects. University officials who are actively involved in the restructuring of higher education in the eligible countries and who were met during the visits, expressed a genuine interest in the projects leading to structural changes. A number of the university rectors visited assured the visitors team that they were supporting the respective JEPs on a personal and institutional level.

4. UNIVERSITIES AS PROMOTERS OF CHANGE

The above-mentioned comments on the stronger impact of projects at local level have to be considered in relation to the objectives of TEMPUS in its initial stage and to the conditions existing when the scheme was launched. The projects visited started up in 1990/91 or 1991/92, at a time when the emphasis was on direct contacts between institutions (which very often meant contacts between university people belonging to different institutions) based on a bottom-up approach. The approach of linking these site initiatives to national priorities correlated with policies of restructuring higher education is thus more recent, and it will take some time before the effect of the projects set up within this new framework can be evaluated.

Looking through these analyses, two diverging categories emerge: the 'department-faculty' set and the 'university-higher education' set.

A project approved by its department, therefore, stands a good chance of being taken into consideration within the faculty. There are certainly several reasons for this phenomenon: geographical proximity, reasonable size of the faculties, proximity of academic interests.

In contrast, projects do not necessarily influence the host university, and they are, to a certain extent, just as easy (or difficult) to be recognised on a national level as on an institutional level. For certain staff it is possible that their academic specialisation is more important than their attachment to their 'home' institution. The coordinator of a project in management, for example, stands more chance of winning the interest of a colleague within the same subject area in another town or of a Ministry expert, than the Rector of his own university, if the latter is a scientist. It is also probable that, with the context tending toward the independence of the universities as well as the decentralisation of authority within institutions, the rectors are no longer in a position to measure exactly what their margin of manoeuvre may be. These remarks highlight the fact that a university as such and its executive are not clearly perceived as one of the levers of change. As one expert from an eligible country stated, "the universities of the eligible countries must have stronger institutional development strategies and concentrate on projects providing strong support (this nevertheless assumes that universities become active participants in the decision-making process)".

Multi-disciplinarity and management skills, are therefore core characteristics. The decision to direct a proportion of the site visits towards the institutions themselves in 1993/94 should make it possible to analyse the progress made in this field more thoroughly.

5. Maintaining the networks

The possibility for projects and networks built around them to continue their activities beyond the third year of funding by TEMPUS is a good sign of their in-depth effectiveness and their long-term impact on universities.

As a rule, projects classified as 'poor' or 'average' are not in a position to deal with such concerns. However, there are also good projects which, because they operate in a specialised field that is unlikely at first sight to attract external funding, have expressed concern as to how they will continue in the post-TEMPUS period.

Among the good projects wishing to continue, several are well within the framework of TEMPUS. These are mainly projects in their second year of operation which are planning to increase their number of partners, often with another Community country, particularly when the partners become aware that their project, set up on a national basis, would benefit from the contribution of experience from other Community countries. This is the case with the introduction of new curricula and positively reflects an analysis of university needs in the eligible country. In this way a project in Romania, originally set up in cooperation with France, will now cooperate with Germany and an originally British project will now be extended to include a French-speaking institution. In most cases the new partner, who can contribute the required specialisation, comes through an ERASMUS network in which one of the partners of the TEMPUS project has already been involved.

A number of projects in their third year expressed the wish to submit a new proposal. One mobility project wants to take its specialisation further, and in another network, an eligible country institution wants to become a coordinator.

The main concern for coordinators of projects that are now expiring is how to consolidate and maintain the experience gained in the partnership with TEMPUS. Even though none of the projects visited can operate on a self-financing basis, there is a general desire to continue the cooperation between partners. The partners do, however, stress the danger of jeopardising project achievements due to a lack of financial resources. The maintenance and repair of equipment or the running of new courses established with the participation of international partners requires financial resources which are not at the disposal of the eligible country universities.

The most frequent questions put to the team of visitors were how the academic community could benefit from the newly developed curricula (representatives from a number of Romanian universities in particular expressed their interest in the Applied Modern Languages programme during a visit to the university at Cluj) or how to encourage the use of new teaching material, allowing other faculties to benefit from it as well.

Referring to the future of their partnership, some JEPs are turning towards other European programmes such as PHARE (mentioned in Slovenia), ACE and research programmes. Other projects want to create broad trans-national networks without becoming part of a specific programme. The establishment of a 'European Chemistry Network' has already been announced. TEMPUS has allowed partners to become involved and a 'European University of Aeronautics' should emerge next year as a result of a network created under COMETT. TEMPUS support made it possible for Poland to join.

In at least two cases, bilateral aid schemes have been mentioned as a possible source of finance; the United Kingdom (British Council, Know-How Fund) and France (*Affaires Etrangères*). Local financing does, however, exist within the TEMPUS Scheme and is usually provided by governments or national foundations. Some projects have been based on cooperation between universities or twinning between regions (Gdansk-Roskilde, Constanza-Brest).

In contrast, as a result of economic difficulties, few projects are willing to take the risk of trying to obtain, even on a short-term basis, grants from local industry. However, in at least two cases (Bulgaria and Slovenia) it has been mentioned that a significant contribution to the financial stability of the programmes might come from the students themselves where, it is true, adults following a continuing training programme in the field of management are involved.

As far as the maintenance of networks is concerned, JEP partners having a direct link to ERASMUS or COMETT projects, have also expressed their desire to be integrated into a permanent European network. The contribution of these networks to higher education in Europe will ensure valuable cooperation and the fostering of integrated education programmes. This is the case with several JEPs, particularly in medicine (coordinated by Rotterdam), in the field of social security (Leuven), modern languages (Heidelberg) and aeronautics (Talence).

Following a number of expert missions it has been pointed out that several representatives of organisations in the eligible countries have raised the issue of joining EC educational programmes such as ERASMUS and ECTS in the short or medium term. This desire has been particularly voiced in Hungary, and, to a lesser extent, in Poland and the Czech Republic.

The assessment of the impact that JEPs have already had on their environment and the realisation that most networks established by the projects want to remain operative beyond the third year of financing justify the initiative for launching a new action, Joint European Networks, for the academic year 1993/94. The provision of grants, even limited to one or two years, to allow networks to continue meeting, to enable other institutions to benefit from their experience, to ensure the servicing of the equipment installed in the eligible countries, would today meet the expectations of operators involved in the programme and hopefully ensure that the accomplishments achieved through cooperation are not lost.

V. CONCLUSIONS

The site visit programme conducted during 1992/93 provided valuable information on the state of the development of actions carried out within the framework of TEMPUS. It mobilised a considerable number of academic experts, covered all the eligible countries (which already had projects running in their second year) and significantly present subjects in the programme.

From this point of view, the sample can be considered representative; it does not provide a description of all the situations encountered, but highlights the main characteristics of projects in progress, mentioning both their successes and their limitations.

In an assessment where the opinion of experts from the academic world played a leading role, the fact that 60% of the projects were considered 'excellent' or 'good' must be considered a result worthy of praise. In this respect it should be remembered that TEMPUS was set up in a great hurry, in an environment of rapid changes in eligible country political, economic and social levels. The European Community and its higher education institutions had no previous experience of a cooperation programme, on such a scale, with another geographic block.

It is normal, in such a context, that a few projects should demonstrate omissions, either in the achievement of objectives or in the management field; their number remains very limited and follow-up or corrective measures have been taken.

The site visit campaign could not have been carried out without the active and efficient participation of the National TEMPUS Offices in the eligible countries. These offices have contributed not only to the smooth running of the site visits, but also to the evaluation of the projects that concern them directly.

In appointing their academic experts, the National TEMPUS Offices have contributed to the establishment of a core of evaluators. These offices are thus taking part in the widespread movement which, within the framework of the restructuring of higher education systems in the eligible countries, aims at producing reliable and independent university evaluation procedures.

Finally, the expectations aroused by the site visits and by the results already obtained lead to the conclusion that such a programme must continue. In view of the need to create a sample that will be as representative as possible, it is likely that some 50 site visits will take place during the 1993/94 academic year.

Most of these visits will involve projects. However, there will be one change. The re-orientation of the TEMPUS Scheme, as regards a more widespread consideration of the priorities determined by national authorities and an awareness of the strategic element that universities and their administration represent, has led the Commission to propose that a significant number of visits be directed towards higher education institutions as such. This will be the case for institutions benefiting from several TEMPUS projects, where the assessment will try to analyse the synergy between the different forms of international cooperation.

For these reasons, the TEMPUS evaluation system, which also entails a regular dialogue between the EC TEMPUS Office and the people responsible for the projects, as well as an external evaluation to be carried out in 1994, is being reinforced each year so that the Community, national authorities (from the eligible countries and the Member States), academic community and all the institutions affected by the TEMPUS objectives can assess as clearly as possible the results obtained with regard to the resources invested.

ANNEX: List of Joint European Projects Visited

JEP-06977-93			
Title:	Development of new curricula in microelectronics design methodologies		
Partners:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> B1 Interuniversitair Micro-Electronics Centrum DK Danmarks Tekniske Højskole F Institut National Polytechnique de Grenoble </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> H Technical University of Budapest PL Institute of Electron Technology USA University of Cincinnati </td> </tr> </table>	<ul style="list-style-type: none"> B1 Interuniversitair Micro-Electronics Centrum DK Danmarks Tekniske Højskole F Institut National Polytechnique de Grenoble 	<ul style="list-style-type: none"> H Technical University of Budapest PL Institute of Electron Technology USA University of Cincinnati
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Coordinating and contracting organization:			
D	Technische Hochschule Darmstadt Institut für Mikroelektronische Systeme		
JEP-06978-93			
Title:	Curriculum development in supply management		
Partners:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> H Budapest University of Economics P Instituto Superior de Economia e Gestão </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> UK University of Strathclyde </td> </tr> </table>	<ul style="list-style-type: none"> H Budapest University of Economics P Instituto Superior de Economia e Gestão 	<ul style="list-style-type: none"> UK University of Strathclyde
<ul style="list-style-type: none"> H Budapest University of Economics P Instituto Superior de Economia e Gestão 	<ul style="list-style-type: none"> UK University of Strathclyde 		
Coordinating and contracting organization:			
D	Reperichs Julius-Maximilians Universität Würzburg Bachstrassenfachliches Institut		
JEP-0107-93			
Title:	Establishment of a French-speaking technology unit at the Technical University of Budapest		
Partners:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> B Université Libre de Bruxelles B Université de Monro-Hellmut B Université de Fribourg à Lausanne F AUIEP Brétagne F Procon Telecom F Institut National Polytechnique de Toulouse F Institut National des Sciences Appliquées de Lyon F Union des Ing. et Tech. Utilisant la Langue Française F Université d'Angers F Université de Caen F Ecole d'Architecture de Marseille Luminy </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> F Université de Belfort Champagne - Ardenne F Université de Rennes I F Université de Technologie de Compiègne F Université des Sciences et Techn. du Langrois F Orestipolier II) F Ecole Nationale Supérieure de Chimie de Montpellier F Ecole Nationale des Ponts et Chaussées F Ecole Spéciale des Travaux Publics du Bâtiment et des Industries (U.I.T.B.) H Technical University of Budapest </td> </tr> </table>	<ul style="list-style-type: none"> B Université Libre de Bruxelles B Université de Monro-Hellmut B Université de Fribourg à Lausanne F AUIEP Brétagne F Procon Telecom F Institut National Polytechnique de Toulouse F Institut National des Sciences Appliquées de Lyon F Union des Ing. et Tech. Utilisant la Langue Française F Université d'Angers F Université de Caen F Ecole d'Architecture de Marseille Luminy 	<ul style="list-style-type: none"> F Université de Belfort Champagne - Ardenne F Université de Rennes I F Université de Technologie de Compiègne F Université des Sciences et Techn. du Langrois F Orestipolier II) F Ecole Nationale Supérieure de Chimie de Montpellier F Ecole Nationale des Ponts et Chaussées F Ecole Spéciale des Travaux Publics du Bâtiment et des Industries (U.I.T.B.) H Technical University of Budapest
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Coordinating and contracting organization:			
F	Institut National des Sciences Appliquées de Rennes		
JEP-0161-93			
Title:	Improvement in teaching of modern European languages		
Partners:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> B Katholische Universität Louvain CZ Charles University, Prague D Bayerische Julius-Maximilians Universität Würzburg D Friedrich-Schiller-Universität Jena D Universität-Oswaldobischschule Paderborn DK Aarhus Universitet E Universidad de Granada E Universidad de Salamanca F Université de Caen GR Aristotelio Panepistimio Thessalonikis H Budapest University of Economics H Jesus Pansoniun University, Pecs H Lajos Kossuth University, Debrecen H Lorand Eötvös University, Budapest H Technical University of Budapest I UTEP Toronto, Firenze </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> I Università degli studi di Bologna I Università degli studi di Pavia I Università degli studi di Siena IRL Dublin University Trinity College IRL University College Dublin NL Rijksuniversiteit Groningen NL Rijksuniversiteit Leiden P Universidad de Columbia PL Bielskøk Technical University PL Jagiellońska University, Kraków PL University of Łódź PL University of Wrocław PL Warsaw University SP University of Joazeiro SG Comenius University, Bratislava UK University of Bristol </td> </tr> </table>	<ul style="list-style-type: none"> B Katholische Universität Louvain CZ Charles University, Prague D Bayerische Julius-Maximilians Universität Würzburg D Friedrich-Schiller-Universität Jena D Universität-Oswaldobischschule Paderborn DK Aarhus Universitet E Universidad de Granada E Universidad de Salamanca F Université de Caen GR Aristotelio Panepistimio Thessalonikis H Budapest University of Economics H Jesus Pansoniun University, Pecs H Lajos Kossuth University, Debrecen H Lorand Eötvös University, Budapest H Technical University of Budapest I UTEP Toronto, Firenze 	<ul style="list-style-type: none"> I Università degli studi di Bologna I Università degli studi di Pavia I Università degli studi di Siena IRL Dublin University Trinity College IRL University College Dublin NL Rijksuniversiteit Groningen NL Rijksuniversiteit Leiden P Universidad de Columbia PL Bielskøk Technical University PL Jagiellońska University, Kraków PL University of Łódź PL University of Wrocław PL Warsaw University SP University of Joazeiro SG Comenius University, Bratislava UK University of Bristol
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Coordinating and contracting organization:			
D	Reperichs-Karls-Universität Heidelberg Abendkurse des Auslandsstud.		

JEP-0339-92

Title: TEMPOS - Postscript port management training

Partners:

- B Universitaire Faculteit Sint-Jozefus Antwerpen
- I Universita degli studi di Bari
- PL Maritime Office in Szczecin

- PL Municipal Government of Szczecin
- PL Port Authority Szczecin-Swinoujście
- PL University of Szczecin

Coordinating and contracting organisation:

- B Antwerp Port Engineering and Consulting VZW

JEP-0387-92

Title: Development of higher education capacities in the field of social security law

Partners:

- CZ Charles University, Prague
- D Universitat Osnabrück
- DK Roskilde Universitetscenter
- E Universidad Pontificia Comillas
- GR Ethniko kai Kapodistriako Paeoepistmio Athinon
- H Lorand Eötvös University, Budapest
- I Libera Università Internazionale di Studi Sociali Roma

- IREL Dublin University, Trinity College
- NL Katholieke Universiteit Brecht
- P Universitade Internazionale
- PL Jagiellonian University, Krakow
- S University of Lund
- UK University of Edinburgh

Coordinating organisation:

- B Katholieke Universiteit Leuven
- B Reichsfaculteit - Institut Sociali Recht

Contracting organisation:

- B Katholieke Universiteit Leuven
- B Rector

JEP-0487-92

Title: Establishment of a centre for environmental studies, Odense

Partners:

- D Freie Universität Berlin

- PL Odense Technical University

Coordinating and contracting organisation:

- DK Roskilde Universitetscenter
- DK Dept. Environmental, Technology and Social Studies

JEP-0644-92

Title: COBTEK - Coherent rational medical training and exchange in a pan-European context

Partners:

- B Universitat Gent
- D Justus-Liebig-Universität Gießen
- D Ruprecht-Karls-Universität Heidelberg
- DK Aarhus Universitet
- DK Odense Universitet
- E Universidad Complutense de Madrid
- E Universidad de Cádiz
- E Universidad de Extremadura
- E Universidad de Granada
- E Universidad de Oviedo
- E Universidad de Salamanca
- E Universidad de Valladolid

- F Université Claude Bernard (Lyon I)
- GR Aristotelio Paeoepistmio Thessalonikis
- H Albert Szent-Györgyi University of Medicine
- H Debrecen University of Medicine
- H Pecs University of Medicine
- H Semmelweis University of Medicine
- I Università degli studi di Bologna
- NL Katholieke Universiteit Nijmegen
- NL Rijksuniversiteit Limburg
- NL Rijksuniversiteit Utrecht
- NL Vrije Universiteit Amsterdam
- S University of Lund

Coordinating and contracting organisation:

- NL Rijksuus Universiteit Rotterdam
- NL Faculteit voor Geneeskunde

JEP-0717-92

Title: Small and medium enterprises in the context of management education

Partners:

- CZ Technical University Brno
- E Universidad de Sevilla
- GR Effective Management International Ltd

- I Università degli studi di Firenze
- PL Nicholas Copernicus University

Coordinating and contracting organisation:

- UK Nottingham Polytechnic
- UK Business School

JEP-0779-92**Title:** Extension of Star aerospace network to Poland**Partners:**

B	Katholieke Industriële Hogeschool West-Vlaanderen	PL	Star - PL
F	Star - EUPL	PL	Technical Bureau for new aircraft industry 'PLZ' programmes
PL	Airplanes Factory 'PIZ'	PL	Warsaw Technical University
PL	Polish Airlines (LOT)	UK	Kingston Polytechnic
PL	Rzeszów Technical University		

Coordinating and contracting organisation:

F	Institut Universitaire de Technologie 'A', Formations Aérospaciales Domaine Universitaire
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JEP-1073-92**Title:** Development of the expertise of East European higher education institutions and enterprises in milk processing, manufacture and marketing**Partners:**

IRL	University College, Cork	PL	H. Kollataj Agricultural Academy
PL	Agricultural Academy, Poznan		

Coordinating organisation:

UK	Scottish Agricultural College Food Technology Department
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Contracting organisation:

UK	The Scottish Agricultural College Dean's Unit
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JEP-1179-92**Title:** Development of a European aircraft design consortium in higher education**Partners:**

CZ	Aeronautical Research and Test Institute, Prague	D	Universität Stuttgart
CZ	Aerotechnik, Uherské Hradiště-Kunovice	E	Universidad Politécnica de Madrid
CZ	Czech Technical University in Prague	F	École Nationale Supérieure de l'Aéronautique et de l'Espace - LET Aircraft Manufacturer
CZ	Moravian Aircraft Company, Otrokovice	I	Politecnico di Torino
CZ	Motorlet, Prague	NL	Technische Universiteit Delft
CZ	Technical University Brno	UK	Euroaerospace
D	Technische Universität Carolo-Wilhelmina zu Braunschweig	UK	Zinn Electronics Ltd

Coordinating organisation:

UK	University of Glasgow Department of Aerospace Engineering
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Contracting organisation:

UK	University of Glasgow Office for EC programmes
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JEP-1259-92**Title:** Development of the practice of endoscopy**Partners:**

B	Université Catholique de Louvain	F	ICARE-Nord
CZ	Charles University, Prague	F	Ministère de l'Éducation Nationale de la Jeunesse et des Sports
CZ	Czech Medical Association, Prague	F	Ministère de la Solidarité, de la Santé et de la Protection Sociale
CZ	Czech Society for Gastro Enterology, Prague	F	Ministère des Affaires Étrangères
CZ	Palacky University, Olomouc	F	Olympus
CZ	Technical University Brno	F	Région Lorraine
CZ	University of Veterinary Science, Brno	F	Université du Droit et de la Santé Lille II
F	Association Endoscopica, Nancy	SQ	Comenius University, Bratislava
F	Canal France International		

Coordinating and contracting organisation:

F	Université de Nancy II Vidéoscop
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JEP-1467-92

Title: Training of Hungarian primary teachers in foreign languages and teaching methods

Partners:
H Budapest Teacher Training College UK St. Martin's College

Coordinating and contracting organisation:

D Universität Augsburg
Lehrst. für Schulpädagogik, Pädagogische Fakultät I

JEP-1465-92

Title: Development of education of agriculture and environmental protection

Partners:
B Faculté des Sciences Agronomiques de Gembloux UK University of Edinburgh
H Odette University of Agricultural Sciences

Coordinating and contracting organisation:

P Institut National Agronomique Paris-Grignon

JEP-1501-92

Title: Upgrading and development of education, training and continuing education of mechanical engineers with special attention to environmental protection and economical energy utilisation

Partners:
A Technische Universität Wien H University of Miskolc
D Technische Universität Carolo-Wilhelmina zu I European Institute of Technology
Braunschweig I Università degli studi di Roma "La Sapienza"
D Technische Universität Clausthal P Instituto Superior Técnico
D Universität Friedr. Wilh. Karlsruh (TTH) SP Helsinki University of Technology
P Electricité de France International UK University of Glasgow
H Hungarian Electricity Board (MVM) UK University of Newcastle-Upon-Tyne
H National Association of Hungarian Entrepreneurs (VOSES)

Coordinating organisation:

H Technical University of Budapest
Department of Heat Engines

Contracting organisation:

P Instituto Superior Técnico
Department of Mechanical Engineering

JEP-1506-92

Title: Advanced training in geology

Partners:
D Universität Friedr. Wilh. Karlsruh (TTH) NL Vrije Universiteit Amsterdam

Coordinating organisation:

H Leerdam Eindhoven University
Faculty of Natural Sciences

Contracting organisation:

NL Vrije Universiteit Amsterdam
Institute of Earth Sciences

JEP-1504-92

Title: Establishment of an open learning system in Bulgaria (BONYS)

Partners:
B Interactive Learning Services Ltd UK Polytechnic of West London
BG Higher Institute of Economics

Coordinating and contracting organisation:

GB TEL Leidsch
School of Business and Economics

JEP-1570-92

Title: Human rights education and training in Eastern Europe

Partners:

D Ludwig-Maximilians-Universität München
PL International Cultural Centre, Kraków
PL Jagiellonian University, Kraków
UK University of Essex, Colchester

Coordinating and contracting organisation:

UK Association of Rights and Humanity

JEP-1668-92

Title: Update on Poland: trainer training in business economics

Partners:

PL Nicholas Copernicus University
UK Teesside Polytechnic

Coordinating and contracting organisation:

NL Haagse Hogeschool (Centraal Instituut)
Economics and Management Department

JEP-1728-92

Title: University network for coordination and development of artificial intelligence and advanced information technologies education

Partners:

B Vrije Universiteit Brussel
BG Bulgarian Academy of Sciences, Sofia
BG Higher Institute of Mechanical and Electrical Engineering, Sofia
BG Higher Pedagogical Institute 'Neophit Rilski', Blagoevgrad
BG New Bulgarian University, Sofia
BG Sofia University 'St. Kliment Ohridski'
D Universität Hamburg
GR Hellenic Operational Research Society, Thessaloniki

Coordinating and contracting organisation:

NL Rijksuniversiteit Limburg
Computer Science Department

JEP-1746-92

Title: Cooperation and exchange in economic studies with the University of Lodz

Partners:

F Université de Nancy II
F Université des Sciences Sociales Grenoble II
NL Rijksuniversiteit Limburg
PL University of Lodz
UK University of Kent at Canterbury

Coordinating organisation:

NL European Institute of Public Administration
Community Policies and Internal Market

Contracting organisation:

NL Foundation for European Studies in Central and Eastern Europe

JEP-2016-92

Title: Improvement of aquaculture research and training in Poland

Partners:

B Universiteit Gent
I Istituto per lo Sfruttamento Biologico delle Lagune, Lesina
PL Agricultural Academy, Warsaw
PL Inland Fisheries Institute, Rutki
PL National Union of Producer's Societies, Warsaw
UK Sparsholt College, Hampshire

Coordinating and contracting organisation:

DK Hørsens Tekniske Skole (The Aquaculture Centre)

JEP-2092-92**Title:** Updating of education in applications of discrete mathematics**Partners:**

BG	Bulgarian Academy of Sciences	H	Loránd Eötvös University
BG	Sofia University 'St. Kliment Ohridski'	I	Università degli studi di Roma 'La Sapienza'
BG	University 'Cyril and Methodius'	UK	Queen Mary and Westfield College (University of London)
D	Techn. Universität Carolo-Wilhelmina Braunschweig		

Coordinating and contracting organisation:

UK University of East Anglia
School of Mathematics

JEP-2138-92**Title:** Development of higher education in chemistry and applied chemistry**Partners:**

BG	'Prof.Dr.A. Zlatarov' Higher Institute of Chemical Engineering, Bourgas	H	Technical University of Budapest
BG	Higher Institute of Chemical Technology, Sofia	I	Università degli studi di Pavia
CZ	Czech Academy of Sciences, Praha	I	Università degli studi di Torino
CZ	University of Chemical Technology, Praha	P	Instituto Superior Técnico, Lisboa
D	Justus-Liebig-Universität Gießen	PL	Technical university of Wrocław
E	CETS - Instituto Químico de Sarriá	PL	University of Łódź
F	Centre CNRS-Inserm de Pharmacologie et d'Endocrinologie	PL	University of Wrocław
F	Institut Montpellierain d'Études Françaises	RO	University of Craiova
F	Institut National Polytechnique de Toulouse	SQ	Slovak Technical University, Bratislava
		UK	Thames Polytechnic, London
		UK	University College of Swansea

Coordinating and contracting organisation:

F École Nationale Supérieure de Chimie de Montpellier
Faculté de Chimie

JEP-2155-92**Title:** Teaching of Italian in Hungary**Partners:**

D	Deutscher Volkshochschul-Verband E.V.	H	Janus Pannonius University
F	Université de Paris-Sorbonne (Paris IV)	I	Università degli studi di Firenze
H	Fondazione Ponte		

Coordinating and contracting organisation:

I Centro per lo Studio delle Lingue e della Comunicazione Applicata

JEP-2233-92**Title:** Agricultural education in Central Europe**Partners:**

A	Universität für Bodenkultur Wien	D	Universität Hohenheim
CZ	University of Agriculture, Nitra	I	Università degli studi di Milano

Coordinating and contracting organisation:

H Godólló University of Agricultural Sciences
Faculty of Agricultural Sciences

JEP-2262-92**Title:** New curricula and courses in engineering theory education**Partners:**

AUS	University of Sydney	P	Universidade Técnica de Lisboa
BG	Higher Institute of Mechanical and Electrical Engineering	PL	Kraków Technical University
CZ	Masaryk University	PL	Warsaw Technical University
CZ	Masaryk University	SF	Helsinki University of Technology
D	Hamburger Ausbildungspartnerschaft	UK	Queen Mary and Westfield College (University of London)
D	Technische Universität Magdeburg	SQ	Slovak Technical University
D	Technisch Universität München	UK	University of Liverpool
H	Technical University of Budapest		
I	Inter-Univers. Research Centre on Develop. Countries		

Coordinating and contracting organisation:

CZ Czech Technical University in Prague
International Centre for Scientific Computing

JEP-8894-92

Title: Oosterva project: engineering staff re-training project

Partners:

NL Industriële Hogeschool van het Rijk B.M.E.
 B Industriële Hogeschool van het Rijk C.T.I.
 CZ Technical University of Mining and Metallurgy
 of Oosterva

E Universidad de Oviedo
 UK British Steel Consultants Ltd
 UK Teesside Polytechnic

Coordinating and contracting organisation:

UK Loughlanda College
 Applied Science and Computing Department

JEP-8887-92

Title: Improvement of the standard of education in biophysics and chemical physics

Partners:

CZ Charles University, Prague
 I Università degli studi di Bologna
 NL Landbouwwetenschappelijk Wageningen

S University of Stockholm
 SQ Sefarik University, Kosovo

Coordinating and contracting organisation:

F Université Pierre et Marie Curie (Paris VI)
 Laboratoire de Physique et Chimie Biomoléculaires

JEP-8890-92

Title: Masters degree programme in enterprise studies and development of policy framework for entrepreneurship and SME development

Partners:

E Barcelona Activa
 E Universidad Politécnica de Catalunya
 NL Institute of Social Studies

SLO Gaa College
 SLO University of Ljubljana

Coordinating and contracting organisation:

UK University of Stirling
 Scottish Enterprise Foundation

JEP-8896-92

Title: Developing the teaching of Informatics in agriculture

Partners:

BG Higher Institute of Agriculture, Plovdiv
 BG Higher Institute of Economics, Sofia
 GR Georgio Panofratiso Athlona

NL Association of Colleges for Professional
 Higher Agricultural Education
 NL European Institute of Public Administration

Coordinating and contracting organisation:

GR Greek Productivity Centre (EILIPPA)
 Institute of Information Science

JEP-8876-92

Title: The Ecocon regional partnership project: training of teachers in management

Partners:

UK Northern Development Company
 UK Teesside Polytechnic
 SQ Veska Vojvacka Lesocka Slavia, Koziac

SQ Technical University, Koziac
 SQ Industrial Society of Shorvalla, Bratislava

Coordinating and contracting organisation:

E Universidad Politécnica de Valencia
 Industrial Engineering

JEP-8710-92

Title: PAFITES - Establishment of advanced study of entology

Partners:

F Institut National des Sciences Appliquées de Lyon

UK Imperial College Science, Medicine & Technology

Coordinating organisation:

RO Universitatii 'Stefan cel Mare', Suceava
 Facultate de Ingineria si Mecanica

Contracting organisation:

F Institut des Sciences Appliquées de Lyon
 Laboratoire de Mécanique des Contacts

JEP-3714-93

Title: Development of curricula for European Studies in Romania

Partners:

B	Collège d'Europe, Bruges	IRI	University of Limerick
F	Council of Europe, Strasbourg	NL	Universiteit van Amsterdam
F	Université de Nancy II	RO	Bucharest University

Coordinating and contracting organisation:

NL European Institute of Public Administration
Task Force Central & Eastern Europe

JEP-3729-93

Title: Cooperation and training in health studies between Brest (France), Cadix (Spain), Constanta (Romania)

Partners:

E	Universidad de Cádiz	RO	University 'Ovidius', Constanta
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Coordinating and contracting organisation:

F Université de Bretagne Occidentale, Brest
Faculté de Médecine

JEP-3750-93

Title: Establishment of a Department of Applied Foreign Languages at the Arts Faculty of Cluj-Napoca (interpreting, translation, public relations, business and trade)

Partners:

B	Université de Mons-Hainaut	NL	Rijksuniversiteit Limburg
F	Université de Nantes		

Coordinating organisation:

RO University 'Babeş-Bolyai', Cluj-Napoca
Faculté des Lettres

Contracting organisation:

F Université de Nantes
Département des Langues Etrangères Appliquées

JEP-3760-93

Title: Development of technology transfer seminars and establishment of a centre for science transfer in Timisoara, Romania

Partners:

D	Datenauswertungsbüro für Ecology-Engineering Dr. Braha	RO	Academy of Economic Studies, Bucharest
D	Limnologisches Institut Dr Nowak	RO	Environmental Surveillance and Protection Agency, Timisoara
F	Université des Sciences et Techniques de Lille Flandres Artois	RO	Institute of Construction, Bucharest
		RO	Timisoara University

Coordinating and contracting organisation:

D Universität Bremen
Zentrum für Weiterbildung

JEP-3764-93

Title: Establishment of the Babeş-Bolyai University Business School for Transylvania

Partners:

GR	Ikonomiko Panepistimio Athinon	RO	University 'Babeş-Bolyai', Cluj-Napoca
P	Universidade Técnica de Lisboa		

Coordinating and contracting organisation:

UK Nottingham Polytechnic
Business School

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