

The Participation of the UNESP in Distance Teaching Programs: the Program PEC University Education— Continuous Education for Teachers

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Abstract:

This work aims to describe the participation of UNESP—Sao Paulo State University—in programs involving distance teaching. The main research interest related to this theme is the use of Educational Technologies in both face-to-face and distance teaching. The work here presented emphasizes the development of the program PEC—University Education, which aimed to provide the teachers, in activity in the public teaching network of the Government of the State of Sao Paulo, without a Licentiate degree, the opportunity to obtain that Degree. PEC was born from an association between the Bureau for Education and Universities of the State of Sao Paulo. The program was implanted taking into account the goal established by the Law of Guidelines and Bases for the National Education—LDB, according to which all the teachers acting in the infantile education and in the teaching from first to fourth series should be called to fulfill the Licentiate Degree until the year of 2006. The development of the program involved a combination of both face-to-face and distance activities. In this way, videoconferences and teleconferences have been scheduled, whose contents should be linked to the activities of monitored work that would be developed on-line or off-line. The program has yet covered other activities as Supervised Works, Educational Experiences and Cultural Workshops. With respect to the infrastructure for the program development, in the participant Universities generator poles have been implanted, used, for instance, for the Videoconference activities. In specific educational units, learning environments have been implanted, used by the student-teachers for the development of the activities of the program. Starting from this program, other similar programs were implanted, as the Pedagogy for Citizenship program, linked to UNESP that also aims the teachers' graduation. Beyond its participation in the mentioned programs, UNESP develops distance teaching activities inside the program VirtUnesp and in specific research projects. The VirtUnesp program was designed to reach, initially the students of extension courses, and, in a latter stage, under-graduate students. Now

various contents have been prepared to support the face-to-face classes and for university extension courses.

Keywords and Phrases:

Teachers Formation, New Technologies in the Education, Distance Teaching Activities.

1. Introduction

The purpose of this work is to describe the participation of the UNESP—Sao Paulo State University, in programs involving distance education activities. Our main research interest is in the application of Educational Technologies to support both face-to-face and distance teaching activities (Akamatsu & Sena, 2000). Emphasis will be given, in this work, to the management and support aspects concerning the development of a special program, namely the PEC—university formation. A brief characterization of the program is given in this section. Its development will be detailed in the next sections.

The program PEC (Scavazza & Sprenger, 2002) resulted from a partnership among the Bureau for Education of the State of Sao Paulo—SEE, the Sao Paulo State University—UNESP, the University of Sao Paulo—USP, and the Pontifical Catholic University of Sao Paulo—PUC/SP. The general coordination of the program was carried out by the Vanzolini Foundation, of the Polytechnic School of the USP.

In that partnership SEE assumed: purchasing and installing all the data processing and communication resources; the technological circuit management, what meant: SEE became responsible for the connection between several generator poles and the reception of the classes; management of the databases and further information; production, printing and transmission through the WEB of all pedagogic material elaborated by the universities. The universities assumed the responsibility for the development of a final proposal of the Program, the detailing of the contents and of the methodology, the definition of the teams and the elaboration of the pedagogic material (texts and materials transmitted in the WEB), the teaching, the evaluation and the certification. The articulation of all the partners and the maintenance of a necessary cohesion of this program stayed under the responsibility of a Management Committee, compounded by three representatives of the universities and plus three representatives of SEE. The Committee has been ruled by the Program executive coordinator, chosen by SEE.

The program has been indicated to the teachers on duty (public employees) with high-level graduation only or without a Licentiate degree, which is awarded upon the completion of an undergraduate course of Licentiate (WES, 2003). By applying advanced technology of communication and information (Scavazza, Sprenger & Cunha, 2001), it has been proposed to assist what is determined by the

Law of Guidelines and Bases (LDB) for the National Education. In agreement with the article 62 of LDB, “the teacher graduation to act in the basic education will be made in higher education, in the level of Licentiate, in a full undergraduate degree, in universities and institutes of higher education.” Before the program beginning there were in the State of Sao Paulo around 39100 of effective teachers PEB I (teaching from first to fourth series of basic education). 12400 teachers out of them had not reached the higher-education level. The program aimed to reach a target-public of 7000 teachers, most of them with more than ten years of experience in the profession. From these elements, one can tell that the program aimed to assure the conditions for the construction of a more democratic public school, of quality and inclusive. It still translated a clear intention to value the first to fourth series teachers of the basic teaching, allowing them to have a formation of quality in higher education.

Implanted since June 2001, the program was developed in 18 months. Its development included a combination of both face-to-face and distance activities, with emphasis on the use of interactive media. In this way, the activities of the program included monitored works, accomplished off-line (tutoring teachers) and on-line (virtual assistant teachers, through the internet), besides supporting activities. Yet referring to the distant activities, the program included videoconferences (on average, twice a week) and teleconferences (on average, twice a month). Other programmed activities were: educational experiences, cultural workshops, meetings with the advisers and face-to-face meetings at the University.

The infrastructure implanted for the program development included the organization of the learning environments in the reception points. These ones, implanted in teaching units known as CEFAMS —Specific Centers for the Formation and Improvement of the Professorship, are composed by a videoconference room, a learning laboratory and a study room. In each of the generator poles at the Universities participating in the program a Videoconference Production Studio was implanted. The teleconferences have been produced and transmitted by one of the broadcasting TV station of the state of Sao Paulo, named, the Culture Television Network.

Referring to the involved educators, several categories of professionals worked in the program. The Academic Coordinator was the responsible for the management of all program actions at the University, from the academic point of view. This educator was also one of the Management Committee members of the program. In each of the generation points there was one Coordinator of the pole. Referring to the contents, there was the participation of teachers (production of the printed didactic material), virtual assistant teachers, tutoring teachers (face-to-face activities) and academic advisers (accompaniment of the student-teachers team works). The development of the academic contents occurred in the form of modules, in which one worked by thematic axes and not by individual subject matters. According to the conception of the program, both the videoconferences and teleconferences should be articulated with the activities related to the development of the modules (monitored works),

to be worked on-line or off-line.

The infrastructure implanted for the program PEC is now being used in UNESP for the development of a new program, namely the Pedagogy for Citizenship. Other similar programs, in development in the State of Sao Paulo are PEC Always Building USP and PEC—University Education of the Municipalities. All these programs aim the educational teams of the state and municipal education network of the State of Sao Paulo. Beyond the participation in the mentioned programs, UNESP made official, in August of 2001, the release of a distance teaching program (EAD) designated of VirtUnesp. This program intended to reach, initially, students of extension courses, and, in a posterior stage, under-graduate students. Currently several contents have been prepared to both support the face-to-face classes and for the university extension courses. In terms of activities of Research Groups, the groupware cooperative environment Virtual Team and the collaborative environments for EAD, Web Course and Virtual Course, developed in the campus of Bauru of UNESP, can be mentioned.

2. PEC—Program Implementation—University Formation

2.1. Implanted Infrastructure

Essentially, regional generation units—in the generator poles at the participant Universities, and learning environments—in the reception points, have been implanted. Named “learning environment” the group of classrooms and informatics laboratories where the student-teachers attend their classes in one of the reception points. Besides the regional units of generation, a unit of central generation was implanted, at the headquarters of the program coordination. A teleconference recording studio has also been structured at the Foundation Priest Anchieta, autarchy of the State of Sao Paulo, sponsor of the TV Culture (Mello & Dallan, 2002).

The learning environments in their great majority have been installed in the CEFAMs and are compound of the following facilities:

- Videoconference classrooms, with the capacity for about 40 students, arranged with video-conference equipment, two televisions sets of 34”, and a television set of 29”, a camera for documents, videocassette and a computer multimedia.
- Learning laboratory, equipped with 15 networked computers and connected to both the intranet/PEC University Education and the internet, destined to the work on-line, in virtual learning environment.
- Study room environment, equipped with 5 networked computers and connected to the internet, destined to the support sessions for works either in small groups or individual. In many cases also keeps the library with the books of the basic bibliography of the program that has been formed in elapsing of the works, as well as support materials. Now, in some cases, that basic library is incorporated to the collection of the library of CEFAM unit to which the en-

vironment is linked.

- Operation room, equipped with a microcomputer, 2 printers and 1 scanner.

Facilities of the universities:

- Studio of videoconference generation, installed in the poles of UNESP. It is a small studio of about 12m² with videoconference equipment, a 33" TV set, camera for documents, video-cassette, multimedia computer, and media integrator podium and sound system.
- Laboratory for on-line monitored works, constituted of 2 networked microcomputers, and connected to the Intranet.

The UNESP generator poles, in a total of 7, have been installed in the UNESP units of Araraquara, Rio Claro, Assis, Presidente Prudente, Franca, Marilia and Bauru. The number of reception points associated to each generator pole varied among 3 and 8 points. Some of the reception points were associated to more than one generator pole. The total number of the reception points associated to the generator poles of UNESP was 21. In the total, 34 reception points have been installed in the State of Sao Paulo. In these poles a total of 46 learning environments have been structured.

The communication network IntraGov (Pontes, 2001) has been used to the project interconnection. This net is based on the technology "Frame Relay", contracted from Telefonica, Brazilian telephony company.

2.2. Pedagogic Proposal

The universities participating in the program detailed the pedagogical proposal, developed the contents and the methodology of the course. As the public to be reached was already constituted of experienced teachers, it was possible to propose the organization of the course in a differentiated way. The period for the accomplishment of the course should be of 18 months, reaching a total of 3100 hours, distributed in the following way: 2000 class-hours (deliberation of CEE), 300 hours of activities: practices of teaching, and 800 hours of recognition for the professional exercise. The weekly hourly load of the course should be about 28 hours.

The program, due to be based on the national curricula guidelines, adopted to focus on the curricula driven to build the professional competences related to the teaching. Besides, it also represented an initiative in that it was tried to break with the focus to individual subject matters, being emphasized the work by thematic axes (Mello & Dallan, 2002), distributed in modules, as presented in the following table. The thematic modules have been linked among themselves, in way to give support and consistency to the pedagogic proposal (Scavazza & Sprenger, 2002). The program modules details, as well as a cast of "competences of reference" for the student-teachers education in the context of PEC, can be found in the document PEC—University Education Basic Proposal of the Program (2001).

Module	Thematic Axes
Introduction	Training in Basic Computer science
Module I	PEC—University Education and the dimensions experimental, reflexive and ethics of the teacher's work
Module II	Education for the school teaching: current educational policy scenery, contents and didacticisms of the curricula areas
Module III	Curriculum: space and time of collective decision
Module IV	School: linked to the knowledge society net

Through activities as educational experiences and cultural workshops, and the development of a supervised final work, the transversality aspect among the module contents has been emphasized in the program. These activities have also allowed the development of parallel activities to the modules. As Ramos observes (2001), the interdisciplinary presupposes the existence of an integrating element, which could be “the object of the knowledge, an investigating project, an intervention plan.” Beyond this aspect, it should be mentioned the objective of having the curricula contents permanently contextualized to both the reality and educational policy of the State of Sao Paulo. The contextualization had as goal to turn the learning significant for the student-teachers.

2.3. Activities

As already mentioned, the program development combined activities performed at distance with face-to-face actions of teachers. The distance activities involved the integration of several interactive medias. Briefly, they included the videoconference, the teleconference and the on-line monitored work. As examples of face-to-face activities there were the off-line monitored work and the support work, as well the transversal activities to the contents of the modules. These activities will be detailed ahead.

a) Monitored Work

The monitored work, with a weekly hourly load variable between 12 and 16 hours, has been divided, at the beginning of the Program, in three types of activities:

- *On-line*: activities proposed through the WEB and taking into account the synchronous or asynchronous interaction with an assistant teacher from the university. Those activities were developed in the learning laboratories. An assistant teacher worked with 45 students of three different groups (15 of each group) simultaneously.
- *Off-line*: activities developed with the attendance of the tutoring teacher.
- *Support*: activities previously elaborated that were developed by the student-teachers. Those activities could be developed in groups or individually, either in the study room environments or in other locals. On those moments the academic adviser could establish contact

with part of his group of students.

Initially for the accomplishment of those activities the teams were divided into three groups with approximately 15 student-teachers each. In elapsing of the program, it was possible to notice that during the support activities the student-teachers ended up requesting the presence of the tutoring teacher who should be developing his activities with the students that were in the off-line activities. That situation motivated, after an evaluation, the division of the teams in two groups. In that way, a group worked with the assistant teacher in the activity on-line and other one with the tutor of the group in the off-line activity.

The project, for the creation, management and development of contents in virtual groups, used IBM/Lotus software solutions (Scavazza, 2002). For the on-line monitored work, the platform LearningSpace was used, as the e-learning tool. Other products used in the program were: Lotus Notes—as the messaging tool, QuickPlace—as the collaboration and management tool, Sametime—in the collaborative environment of the LearningSpace and as a tool for internal communication, and Domino.Doc—as the document management system.

b) Videoconferences

The videoconferences were generated from the studios located in the generator poles of the Universities. They were directed for circuits of four classes assisting to an average of students among 120 and 150 students. In terms of conception of the proposal up to 160 students could be assisted (four groups of 40 students each one). In a general way two videoconferences a week were placed.

The videoconferences constituted moments triggering the theoretical-practical contents of each theme or unit. The occurrence of a videoconference was the moment in that the group of students had the opportunity to work with expert teachers in specific themes. In an ideal situation, the developed works in the following day in the activities on-line or off-line should be articulated to the theme treated in the videoconference. That is to say, the themes focused in the videoconferences would be unfolded later in the activities of monitored work.

Initially, the interaction that the resource could provide among teachers and students was jeopardized due to the technical difficulties. The image and the sound were not of good quality; besides frequently the communications was interrupted. However, from the third month a better stability of the network was reached and, since then, there were rare occurrences of problems in the communications between the generator studios and the classrooms located in the learning environments. In that way, the video-lecturers were able to have a good interaction with the student-teachers.

The maximum time for the duration of the videoconferences was four hours and the teachers

(video-lecturers) who handled them had on their disposition a great variety of resources that could easily and quickly be activated. The generator studio had a camera for documents that allowed to show any objects with all details to the learning environment. That resource still served as a type of board where the teacher could make annotations during his videoconferences that were seen by the students in the learning environments. The studio still had a videocassette apparatus and a computer connected to the Internet.

c) Teleconferences

The teleconferences were conducted by experts invited and indicated by the Universities and by SEE. They were transmitted alive, through satellite by Television Culture Net, in Sao Paulo. The teleconferences took place in an average of two a month and always on Saturdays. In that way, all the student-teachers could attend them at the same time. Each teleconference lasted about 2 to 4 hours.

The teleconferences constituted important moments in the sense of allowing the access of students to a learning situation with well-known educators from the Brazilian education scenery. Although the students could participate through e-mail, telephone or fax, it was observed that the obtained interaction was much smaller than in the videoconferences. As in the case of the videoconferences, the themes focused in the teleconferences would, in an ideal situation, be unfolded later in the activities of monitored work.

d) Parallel and Transversal Activities

Educational Experiences

The previous modalities of activities were complemented with the accomplishment of the educational experiences. Those experiences passed by the whole program development and, with differentiated and complementing emphasis, guaranteed the link between the theoretical-conceptual references and the teacher's practice. The hours of experiences were accomplished during the course and comprehended the elaboration of projects, the construction of activities that were detailed later, at the planning and development of researches, etc. Such experiences included several activity modalities and involved different educators participating in the project (video-lecturers, TV-lecturers, Assistant teachers, Tutoring teachers and Academic Adviser), depending on their objectives and on the defined methodological line.

Cultural Workshops

Two were the objectives of the cultural workshops. The first aimed at broadening the student-teachers literacy, by means of the reflection on the different uses of both the reading and the writing, and by the experience of different situations of both reading and the production of texts. The second hoped to contribute to the widening of the cultural universe of the students of the program, overall in what refers to different artistic manifestations, such as literature, movies, theater, picture, plastic arts

and music. According to the conception of the program, part of the work of these cultural workshops could also consider the use of the video and teleconference modalities (Scavazza, Sprenger & Cunha, 2001).

Supervised work

The program foresaw the accomplishment of academic-scientific works, those ones referring to the research works—two independent studies accomplished on each cycle of 36 weeks of the program, and a monograph accomplished at the end of the course, corresponding to an elaborated synthesis of the program. The accomplishment of this practice was supervised by an academic adviser.

e) Other Activities

Meetings with the Advisers

Besides the activities previously described, during the development of the Program several encounters among students and their respective group advisers took place. Initially the work of the advisers was foreseen to happen using the distance teaching resources. However, in the elapsing of the program, the face-to-face encounters of the advisers with their respective groups started to happen with such a great frequency that it resulted in the narrowing of relationships. The commitment that the advisers demonstrated to the program in UNESP contributed a lot to that.

Face-to-face Meetings in the University

During the course two face-to-face encounters took place in the universities, with a medium duration of five days each one. Those encounters were constituted in true educational congresses and they counted with a significant participation of the students. Seminars, lectures, workshops, were some of the activities developed in those encounters. By means of them, it was possible, on one side, to provide to the student-teachers an effective sensation of attachment to the university universe. On the other hand, those encounters contributed so that the university itself also assimilated those students, allowing a more effective understanding about the meaning of the PEC program.

2.4. Involved Educators

As it has already been mentioned, several educators were involved in the course, carrying out several of the functions foreseen in the program. The different functional categories are described ahead.

Academic Coordinator

The academic Coordination of the program inside UNESP was under the responsibility of a teacher from UNESP. He answered for the internal management of the program in the university and coordinated all the actions from the academic point of view. As already mentioned, that educator was one of the members of the Program Management Committee.

Coordinators of Poles

The coordination of the generator poles was accomplished by teachers from UNESP. They answered for the organization and development of the program in each one of the seven generator poles.

Teachers

The teachers of the program were either from UNESP or invited by the University. They participated in the groups of academic work that produced the printed didactic material. They also participated in the remote activities of the program and in the production of the directions for the use of the didactic material by the tutors. Those teachers also dealt with the videoconferences. The developed work should always be in consonance with the work developed by the assistant and tutoring teachers.

Assistant Teacher

An assistant teacher was a teacher either from UNESP or invited by the University. That educator was responsible for the on-line interface with the students, with respect to the activities articulated around the videoconferences transmitted in the intranet. Each assistant teacher worked with up to 60 students at distance.

Tutoring Teacher

The tutoring teacher was selected and hired by UNESP, being responsible for the organization and accompaniment of all the activities accomplished in the face-to-face setting. Having under his responsibility a group with about 40 students and preparing systematic reports on the work developed close to the group. His/Her work should always be articulated with the activities of the Academic Adviser.

Academic Adviser

An academic adviser was either a teacher from UNESP or invited by the University. Each academic adviser accompanied the works of one team during the whole program development. The main activities under the responsibility of this educator were:

- To read and comment on the memories written by the students.
- To support the students in the development of the research works and in the elaboration of the monograph.
- To evaluate the students, being responsible for the centralization of the corresponding data that were supplied by the other involved educators.

The interface of the adviser with the students could happen in a face-to-face way or at distance, by videoconference or through the internet.

2.5. The Project Administration

The administration of the program PEC was under the responsibility of the Foundation Carlos Al-

berto Vanzolini. The description here presented follows Scavazza and Sprenger (2002).

Due to complexity of the program, it was adopted the model of management of projects of the PMI—Project Management Institute (<http://www.pmi.org/info/default.asp>). The adopted model embraced the processes of Planning, Execution/Control and Communication. Tools and management systems were developed, used for control and accompaniment of each process.

The planning process contemplated the organizational and analytic structures, as well as the generation of the chronogram from these structures. The management of the process of Execution/Control involved the generation of monthly reports for the project coordination. In these reports critical points were presented, information of status of the activities, information of alert, and the description of the providences took or suggested with respect to the problems.

The management of communication of the program was based on the employment of the following tools: Home Page of the Program, QuickPlace (Lotus team workplace), Central of Attendance and System PEC of Information. Other used resources were the following IBM/Lotus software solutions: Notes, Domino.Doc and Sametime.

The Home Page of the Program had as objectives to allow the knowledge of several aspects of the program, the fast divulgation of news and warnings, and the up-to-date access, on the part of the students, to their groups and teams, as well as to the on-line monitored work, using LearningSpace.

Referring to QuickPlace, a personalized version, namely the QPCG—QuickPlace of the Management Committee, was used to have an articulation of the work among the Universities, SEE and the management team. This tool, that is to create a collaborative management environment, has been used by the teams of the project for the maintenance of all the resources in a common place, so that everybody could always have access to the up-to-date information, answering the requirements.

The Central of Attendance was established to serve as interface among the internal public and the external community. In addition, it allowed the accomplishment of statistics of the occurrences and the generation of management reports.

The system PEC of information included data relative to the program development, as, for instance, data and information about the student-teachers, the distribution of them in the groups, teams and universities, among others.

2.6. Data Related to the Program Evaluation

The information presented in this section is based on the reports of External Evaluation—PEC University Education (2002). The evaluation points that, in general, the approach of the program, combining face-to-face and distance activities, was well succeeded. The use of the technology improved the student-teachers' formation, providing to these ones the necessary contents and the interaction

with specialists. An important aspect stressed in the evaluation, referring to the technology, was the fact that its use contributed so that the student-teachers became aware of the importance of the application of the technology itself in educational programs. In summary, PEC innovated when offering a “higher education of good quality and wide extent”, with the adoption of different modalities to “promote the appropriation of contents”, attributing “great responsibility to the educational agents that act at distance”.

One of the merits of the videoconference activities has been to allow the contact between the teachers of the Universities and the student-teachers. Without the use of this technology, it would be difficult to these student-teachers from different areas of the state of Sao Paulo to give continuity to their formation. The videoconferences showed to be articulated with other activities of the program, as the monitored work. As already mentioned, some technical problems happened, in the initial phase of the program: bad and interrupted sound, freezing of images and interruption of the transmission. With the development of the program, these problems have practically been solved.

As observed in the reports, the reaction of the student-teachers to the presented contents was related to the teacher attitude, a characteristic that seems to be accentuated in the virtual modality of teaching. Thus, it was observed that, for the success of the videoconference, the lecturer should have a dynamic performance, privileging the alternation of resources and stimulating the interactivity with the student-teachers. It means that, the videoconferences, to be successful, need to be structured in a way different from a face-to-face class, taking into account the available resources and the limitations of the generator environment. A videoconference developed in an uninterrupted way, without calling on the interaction and the use of different resources, becomes tiresome and favors the dispersion of the student-teachers. Based on these facts, it can be said that the video-lecturer training was essential for the success of the videoconferences. The videoconferences, in general, included an initial exhibition of approximately 1:30h, followed by the accomplishment of proposed activities and the posterior discussion with the lecturer. In some videoconferences, the time of exhibition was longer. With respect to the student-teachers’ attitude, a certain resistance was observed with respect to the use of the microphone to contact the lecturer.

The teleconferences, in general, had the participation of three speakers, mediated by a journalist. The type of teleconference used—one-way, in which it was possible to send questions just by e-mail, telephone or fax, did not favor the interactivity, as already mentioned. However, the teleconferences were well succeeded. One of the reasons for this is given by the fact that it was presented on them a specialized content, discussed by famous personalities from Brazilian educational scenery. They also contributed to decrease in the student-teachers the feeling of isolation, with respect to their identification as students of a higher education course, therefore attached to one of the participant Universities of the program.

Referring to the on-line activities, using LearningSpace, a certain resistance was observed in the student-teachers. Possible reasons for this behavior were their difficulties to use the computer and the form of presentation of the contents. According to the proposal conception, the on-line activities should privilege the student-teachers' autonomy. It was observed, on the other hand, that some procedures jeopardized this goal. In relationship to the difficulties in the interaction with the computer, some strategies were followed, as the adoption, for example, in the LearningSpace of a structure following the same pattern of the printed material and the inclusion of links in a gradual way.

Yet with respect to the on-line activities, these included open questions that should be answered by groups of three students and then corrected and commented by the assistant teacher. This interaction with the assistant teacher could propitiate an excellent opportunity for the student-teachers formation. Considering this possibility, a suggestion was that at least part of these activities should be developed individually, in a way that all the students in the group had opportunity to express themselves and to use the tool.

The evaluation also emphasizes the importance of the interaction student-teacher/student-teacher for overcoming the barriers that the use and adoption of the technology represent. This interaction could favor a less passive attitude on the part of the student-teachers, since they interact more easily with their pairs. Another underlined aspect is that the use of synchronous and asynchronous tools could also allow the students to take knowledge of facilities that they could use later on, "giving continuity to their formation and participation in the digital world."

The first evaluation report also presents another option that could be explored in the PEC program, namely the development of works in groups, involving student-teachers from different CEFAMs. Within the benefits that one could obtain from this initiative, according to the report, one can mention the decrease of the isolation feeling among the student-teachers, and the broadening of the types of experiences in which they could participate, providing the "entrance in multicultural environments, that enlarged the spectrum of available knowledge."

With respect to the evaluation instruments of the program, these could be inserted in the system of management of the courses. One of the advantages of the insertion would be given by the fact that all the evaluation data would be stored in the same database. Two possible modalities of instruments are mentioned in the first report: (i) questionnaire on-line, for collection of data for the identification of the profiles of both the student-teachers and the involved educators; and (ii) use of simulations reproducing significant situations for the student-teachers, requesting the taking of decisions on the part of them. The same report stresses the importance of the registration of the steps followed by the student-teachers when working on a simulation. In agreement with the final report, two instruments were used. A questionnaire destined to survey the student-teachers profiles and a second instrument,

available on-line in the LearningSpace, destined to collect the opinion of the student-teachers on several aspects of the program.

With respect to the educators involved in the program, it was observed that the tutoring teachers played a fundamental role, so much in the pedagogic aspect, as in the interpersonal environment. The tutors in general had differentiated conducts and conditioned several elements of the process, as, for example, the course of the works and the autonomy of the student-teachers. They also had a fundamental role in the maintenance of both the interest and the motivation of the teams. In relationship to the interaction between the academic adviser and the tutoring teacher, it was noticed that the work of the last one was eased when a partnership was established with the adviser. It was observed yet that the assistant teachers did not have the same relevance for the student-teachers as the tutoring teachers and the academic advisers. That is to say, the assistant teacher appeared as “a distant educational agent”, being in a disadvantage position comparatively to the academic adviser and to the tutoring teacher, with respect to the establishment of links with the student-teachers. Among the presented suggestions to improve the impact of the on-line activities, one can mention actions in the sense of (i) establishing a more personal interaction; and (ii) providing a fast and effective feedback for the activities developed in the LearningSpace.

As already mentioned, the evaluation evidenced the occurrence, among the student-teachers, of an exclusion feeling, with respect to the university identity. It was noticed that the notion of belonging was directly linked to the frequented physical space. The research experience, supervised by the academic adviser, was pointed out in the evaluation as one of the elements of the program that could favor the “building of a university identity”.

3. Other Programs and Researches—UNESP

The infrastructure implanted for the PEC program is now being used in UNESP for the development of another program, named the Pedagogy for the Citizenship (Villareal, 2002). This program involves a partnership with the Municipalities of the State of Sao Paulo and has as its goal to attend the teachers (without the Licentiate degree) from the public teaching networks of the Municipalities of the State of Sao Paulo, engaged in the elementary education, including the teachers of infantile education and those ones acting from the first to the fourth grade. The development of the program intends to create conditions so that those teachers can obtain the mentioned degree. In the first phase of the development of the Pedagogy for Citizenship program, 4230 student-teachers were enrolled, distributed in 84 teams.

Besides the participation in the program PEC, UNESP made official, in August of 2001, the release of a distance teaching program, seeking to reach, initially, students of extension courses, and, in

a posterior stage, undergraduate students. The program at the beginning stage provided the training of tutors, who should be the persons responsible for the propagation of the knowledge, working as multipliers. In a second stage the development of contents started. At the moment several materials for EAD were prepared, classified, according to the target public, in (i) Support for the undergraduate, graduate and technical school face-to-face classes; (ii) University Extension—Community; and (iii) University Extension—Corporate Training of UNESP.

In terms of other researches related to EAD in UNESP, one can mention the work developed by the Laboratory of Applied Information Technology of the Department of Computation of UNESP—Campus of Bauru (Morgado, Yonezawa and Reinhard, 2003). One of the environments developed in that Laboratory was the VirtualCourse (VC). It corresponds to an improved version of a previous environment, namely the WebCurso, which is a collaborative environment for Distance Teaching. The environment offers several synchronous and asynchronous communication tools, which can be employed to support the teaching activities developed through the Internet. Another environment developed by the Laboratory is the VirtualTeam (<http://www.virtualteam.com.br>), which corresponds to a collaborative groupware environment for the coordination and development of projects. It was developed aiming at facilitating the virtual integration among groups of students involved in traditional classrooms courses. The work groups in VirtualTeam can share information and documents in a safe and private way. The environment offers a large set of tools to facilitate virtual interaction and communication.

4. Other Programs and Additional Comments

A program similar to the Pedagogy for Citizenship is the program PEC—University Education of the Municipalities. This program became viable from a partnership among the Government of the State of Sao Paulo, through SEE, and the municipal districts of the state, through the Union of the Municipal Leaders of Teaching (Undime). This program has the participation of the Universities PUC/SP and USP. Another program in development is the PEC Always Building USP (Scavazza & Sprenger, 2002). This program aims the training and improvement of the teachers PEB II, from the public teaching education network of the state of Sao Paulo, acting in the Fundamental Teaching (2o cycle) and Medium Teaching, with respect to the subject matters of History, Geography, Mathematics, Portuguese Language and Sciences (Physics, Chemistry and Biology). Both programs use the infrastructure implanted for PEC—University Education program.

Scavazza (2002) presents several difficulties observed during the implantation of the PEC network, some of them commented in the following. One of the difficulties was related to the fact that the use of Information and Communication Technologies constituted a culture to which the educators and other agents who acted in the process were not very familiarized. Another difficulty was related to the

process of adaptation of the units of learning to include the learning environments, “leading to the necessity of development of more complex instruments for management, monitoring and integration of actions”. The author also pointed out the very short period for the implantation of the PEC program, since the activities of the course began only six months after planning the activities.

In Pradini (2001) there is a brief report of the difficulties faced by the virtual assistant teachers in one of the participant Universities in the program (PUC/SP), classified by the author as technical, pedagogic and the of content. The teachers initially presented difficulties with respect to the use of the tool LearningSpace. These were due to their inexperience as also to the occurrence of situations not foreseen before its use. Passed this initial phase, difficulties of pedagogic nature and of contents could be observed. The main reason for these ones was the fact that the activities relative to a given module were elaborated by teachers from the Universities that, most of the time, did not have contact with the assistant teachers. Yet in relationship to these difficulties, the work introduces a project that aimed to analyze the virtual assistant teachers’ formation process, from the point of view of their perception “about the process of construction their role”.

Miwa (2003) describes a research accomplished in five North American advanced universities that performed the training of teachers in service, through teaching at distance, using Information and Communication Technologies. The analysis in the study was based on the following categories: (1) Information and Communication Technology for Distance Teaching; (2) The level of the Course development for the Web; (3) Quality Control; (4) Support to the Instructor; (5) Support to the Student; (6) Management of the Distance Teaching Courses; and (7) Appropriate Subjects for Distance Teaching Courses. These categories are, obviously, important elements in the characterization of a distance teaching implementation. From the description of the program PEC, one can conclude that, in general, they have been considered in its development.

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