Strategic Teaching in a Virtual Context: A Study on Tutor Training in Continuing Education

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Summary

Adult students who start a distance-studying program need to develop a strategic learning that allows them to adapt themselves to the demands of distance education and achieve their learning goals successfully. The tutor becomes a fundamental factor when it comes to facilitating these students' adaptation process to distance studying as well as the development of their strategic learning. In this article it is presented a qualitative study on the training process of a group of tutors in strategic distance teaching and learning; it is also presented the analysis of the changes generated in them regarding conceptual and strategic knowledge, both in an academic (as students in the course) and a professional (as tutors) level. Results point out that those tutors who managed to develop higher levels as strategic learners during the training course, accordingly developed a bigger conceptual knowledge and a better performance as strategic tutors.

Keywords

Distance education; Tutorship; Teacher training; Strategic Learning; Distance studying skills; Strategic teaching

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INTRODUCTION

Nowadays, the modality of distance education is recognized as a valid option for permanent development since it offers an evident number of advantages for adult people's learning, such as the flexibility in organizing one's study time and space, or the possibility of combining other working or personal activities. However, these same adults, as students, are not always prepared to successfully face the modality of distance study. Regarding this problem, we consider that educational psychology should provide theoretical and empirical answers about the process of distance learning, which should be based on a psychopedagogical model that goes beyond the technological aspect.

This research is set on a socio-constructivist approach over the processes of distance teaching and learning (Ally,2004; Barberá et al., 2001). This approach is centered on the student and his/her processes of personal and collaborative learning through communication and interaction mediated by the materials, the tutor and the classmates (Duart y Sangrá, 2000; Hirumi, 2002; y Perez i Garcias, 2002, Onrubia, 2005). Likewise, this study includes the strategic learning approach in distance education, which is understood as a conscious and intentional decision taking process. Moreover, the students are supposed to perform this decision taking process over what knowledge and procedure to select and execute in order to reach the learning goals, taking into consideration the personal conditions of the tasks and the circumstances in which the process of teaching-learning is developed, in particular those related to distance education.

The main focus of our research is the tutor and his/her formation. The importance of the tutor's role in distance education cannot be refuted since he/she is the real architect of the successful learner's adaptation to this learning modality. In this respect, it is crucial the need of forming these tutors in strategic distance learning and teaching areas.

This study consisted of the design and development of a training course for university tutors about "Strategic distance education and learning" in a virtual context, and the analysis of the changes experienced by each tutor academically (as learners) and professionally (as tutors).

This research tried to respond to the following three needs present in the process of distance education and learning: the convenience of having a student with specific learning strategies for distance learning; the existing methods to teach these learning strategies and the tutor's formation so that he/she could acquire those methods and employ them adequately. Now we'll briefly analyze each one of these aspects:

a) The first need emerges once when facing the difficulties that adult students experience in this modality since it implies a new learning experience not only because of its own peculiar features, but also because it implies a return to the student's role for the active professional, in parallel with his/her daily activities (Östlund, B, 2005).

Studies such as those developed by Karsenti, Larose & Núñez (2002) and Brown & Voltz (2005) approached the study of the difficulties experienced by students when entering into a virtual formative

process, identifying the student's own lack of autonomy and self-direction as the major problems; that is, their difficulty in managing their own learning.

In this line of research, we acknowledge the need for the development of various skills in distance learners. Among these we highlight metacognitive skills, whose main dimensions are: self-knowledge and knowledge of strategies, together with the knowledge of the tasks, and learning programs and goals (White, 1999, Land, 2000; Shrum, 2002; Garrison, 2005; Richardson, & Newby, T., 2005; Coll, 2005).

Several studies focused on the definition of the characteristics or skills that students should have in order to success in distance education have stressed that self-regulated learning is a desirable function not only for students, but also for teachers and staff members (Ardí & Boaz, 1997; Eastmond, 1995 in Paulsen, 2003).

Therefore, in order to succeed in this modality the adult student must become a strategic learner capable of self-regulating his/her own learning process, developing favorable attitudes, as well as organizational and study planning skills; understanding, analyzing and interpreting the information; managing of new information and communication technologies; communicating and interacting for a collaborative learning, all these with responsibility and autonomy.

b) From the socio-cultural constructivism, the need for "someone" to teach learning strategies is identified because we understand distance learning as an interactive process, not a solitary one. Therefore, it is necessary that tutors provide a set of rules that allow students to develop the skills and strategies they need for distance study.

The interaction with the tutor is a significant factor (Valenta et al., 2001) in helping distance students to be able to plan, supervise and assess their own studying activities due to "a set of guidelines, indications and criteria that were once taught by their teachers and now accompany and help them in their learning processes" (Monereo, 2001, p. 2).

Studies on the tutoring in distance education are addressed to identify its general roles and functions as well as those focused on moderating collaborative learning environments (García Aretio, 1999, Charlier, 2000, Adell & Sales, 2002, Anderson, 2004; Silva Quiroz, 2004; Salmon, 2000; Collison, 2000; Xiaojing et al, 2005). Nevertheless, studies about the tutor's role at providing pedagogical assistance for strategic distance learning are still very few.

With the conviction that the tutor's role is genuinely relevant, a diagnostic research was performed (Del Mastro, 2001) about pedagogical assistance given via tutorship in order to develop the strategic learning of students of two Second Specialty Diploma courses, which were offered by the department of Education of the Pontificia Universidad Católica del Perú. These courses were addressed to in-service teachers.

This research revealed that tutors acknowledged the students' adaptation to this specific modality as part of their job, but in practical terms, they did not completely develop the procedural and strategic

aspects needed for this adaptation. Besides, the spaces of presential tutoring were given priority and the technological tools for interaction between tutor and students were not employed as expected.

c) The third and last necessity is tutors' training conceptually and methodologically in the field of strategic e-learning and e-education. This training must be based on a continuing teacher training approach of reflection and action (Shön, 1994). This approach should be oriented toward the development of significant mutual relationships between academic and professional knowledge. That is, between theoretical concepts (academic, conceptual, declarative knowledge), their practical application (professional knowledge), and the reflection upon one's own action both as an apprentice and a teacher (strategic academic and professional knowledge, respectively) (Pérez Cabani, 2000).

Most research about distance education and e-learning related teacher training are more focused on the technological aspect of this issue than on how students could build up their learning in situations mediated by tutors and technological devices (Blanton, Moorman & Trathen, 1998; Moore, 2001 in Sigalés, 2001). Nevertheless, some teachers' training experiences (Monereo & Badía, 2004) and on-line constructivist training programs for teachers (Gold, 2001) are valuable precedents of training processes with a solid theoretical foundation for the teachers' formation in learning and education strategies.

RESEARCH DESIGN

Objectives

The training course about strategic distance learning and teaching was aimed to have teacher-tutors experience, as learners, the formation process of virtual distance modality (e-learning, e-teaching), by means of reflection and being aware of their role in the disposition and provision of pedagogical help, so their students may benefit from more strategic teaching and learning.

Concerning the aims of this research, the following objectives and analytical units were formulated:

Table 1
OBJECTIVES, ANALYTICAL UNITS AND LEVELS

OBJECTIVES	ANALYTICAL UNITS	ANALYTICAL LEVELS
Characterizing the tutors' and students' previous conceptions as a starting point of the formation process in a virtual environment.	1. Previous conceptions.	• Students' previous experiences • Tutors' previous experiences
Identifying and characterizing the interaction formats: demands and assistance during the teaching-learning of the formation course.	2. Interaction formats during the formation process.	• Virtual interactions • Presential interactions • Feedback
Identifying the main changes that have taken place in every tutor's speech and practice in their own course (academic context).	3. Changes in every tutor regarding the academic context (speech and practice).	• Conceptual knowledge • Procedural knowledge • Strategic knowledge

OBJECTIVES	ANALYTICAL UNITS	ANALYTICAL LEVELS
Identifying the main changes that have taken place in every tutor's speech and practice in his performance as a teacher and a tutor (professional context).	4. Changes in every tutor regarding the academic context (speech and practice).	• Planned assistance • Applied assistance
Identifying the methodological devices present during the formation, which have influenced in the production of the tutors' changes	5. Methodological devices that have influenced in the production of changes during the formation.	• Tutor – trainer tutor interaction • Communication from the tutor trainer • Interaction between tutors • Interaction contents/activities-tutor

Method

The methodology employed was the case study through recorded sources (audio, electronic documents, and video) and the consecutive qualitative analysis of the interactions that occurred before, during and after the tutors' formation process. The computing program used for data processing and analysis of the qualitative data was Atlas-ti 4.2.

Based on a careful reading of the data in each unit and analytical levels, some representative statements were identified, selected and registered in "descriptive" specific categories. Later, these specific categories were grouped in families of "interpretative" general categories. In order to establish the validity and reliability of the categories, an agreement among judges technique was employed. A sample of categories and documents were randomly delivered to be categorized, using a blind technique. After this, all the revised categories were compared for the judges to observe similarities and differences. All the categories that obtained a good score in the Kappa's index were maintained. The fuzzy categories were eliminated and those evasive categories were recategorized by consensus.

a) Participants

The sample of participating tutors in the formation course was selective. There were 6 female tutors from three Second Specialty Diploma Programs of the Department of Education at the Pontifica Universidad Católica del Perú: all of them were active tutors in the first semester of the career. All of them had studied education and had graduated in various specialties; furthermore, they had experience as teachers or assistant teachers in an expositive format, as well as some hours of tutorial duties.

b) Training course and Visual support

The procedure used was the course of virtual formation, which was developed through a web page specifically designed under the constructivist principles of learning. Access to the course was done through the Virtual Campus – PUCP; e-mail and a forum were also used as communication and interaction tools.

The course was organized in three didactic sequences. Each unit included a group of 3-4 texts and an individual reading guideline, as well as a collaborative or individual activity, as shown in Table 2.

Table 2
DIDACTIC SEQUENCES AND TASKS FOR EACH THEMATIC UNIT

DIDACTIC SEQUENCE	READINGS	TASKS
THEMATIC UNIT 1: CONCEPTIONS AND ROLES IN DISTANCE TEACHING AND LEARNING.	1. Distance Teaching and Learning 2. The Student's Role 3. The Teacher-Tutor's Role	Reading Guideline 1 Activity 1: • Forum "The Tutor's Role"
THEMATIC UNIT 2: STRATEGIC LEARNING IN DISTANCE EDUCATION	4. Study process and distance learning 5. What are learning strategies 6. Strategic learning in distance education	Reading Guideline 2 Activity 2: • Analysis of strategic learning cases: individually and by pairs • Forum 2 on case analysis
THEMATIC UNIT 3: STRATEGIC TEACHING IN DISTANCE EDUCATION	7. Conceptions about the teaching of strategies 8. Objectives and instances of Strategic Teaching 9. Methodology for the teaching of strategies 10. Planning and provision of pedagogical assistance	Reading guideline 3 Activity 3: • Design of strategic teaching and learning activities

From a didactic point of view, the sequence of the three thematic units was based on the fundamental principles of strategic teaching, the constructivist virtual environments, and the formation of teachers and distance tutors (Pozo & Monereo, 1999, Jonassen, 1999; Monereo & Barberá, 2000; Putnam & Borko, 2000; Prendergast, G., 2003).
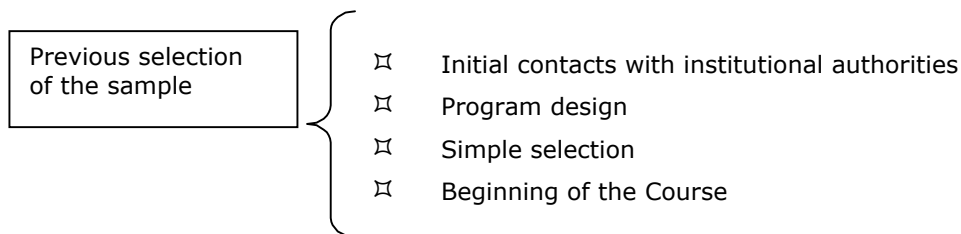
- Moving from implicit theories about distance tutoring and learning toward explicit, conscious and verbalized concepts. Tutors' previous conceptions were registered in an initial interview (before) and these were compared to the expressed conceptions in the learning activities of each unit (during) and the final conceptions expressed in an interview and a final questionnaire (after).
- Experience vividly the course as a strategic learner in order to transfer strategic learning to strategic teaching. During the course, strategic reading activities and metacognitive analysis performed by tutors, as learners, were registered. Later, their (planned and executed) actions as strategic tutors were also recorded.
- Progressively giving up the control and regulation of strategies from external control and regulation toward self-control and self-regulation of the learning process. The progressive session of control was mainly conducted by the reading guidelines of each thematic unit. During the first one, very directive indications about reading strategies were offered. In the second one, a lined support was presented, and in the third one was self-directed.

- Moving from social mediation in collaborative learning spaces toward the internalization of knowledge. The learning activities of the first unit promoted the social interaction among the whole group, in the second unit, there were paired-work activities, and in the third one, an individual activity was proposed.
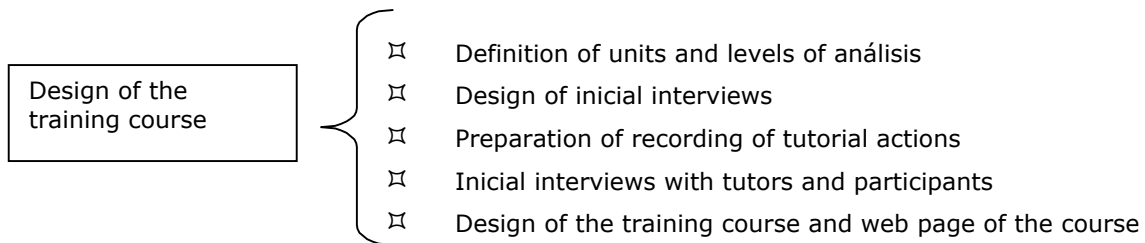
c) Procedure

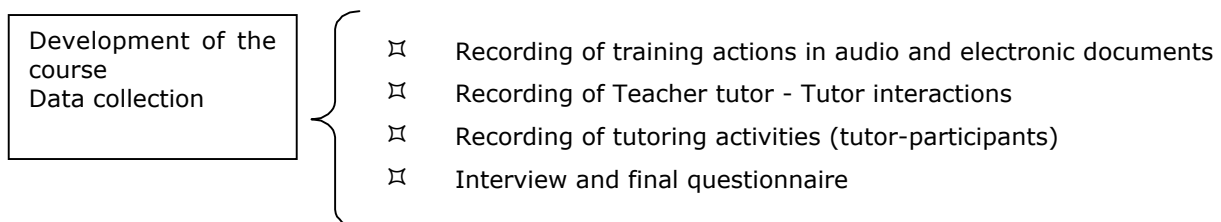In order to achieve the research objectives, the procedure carried out was organized across the following phases:
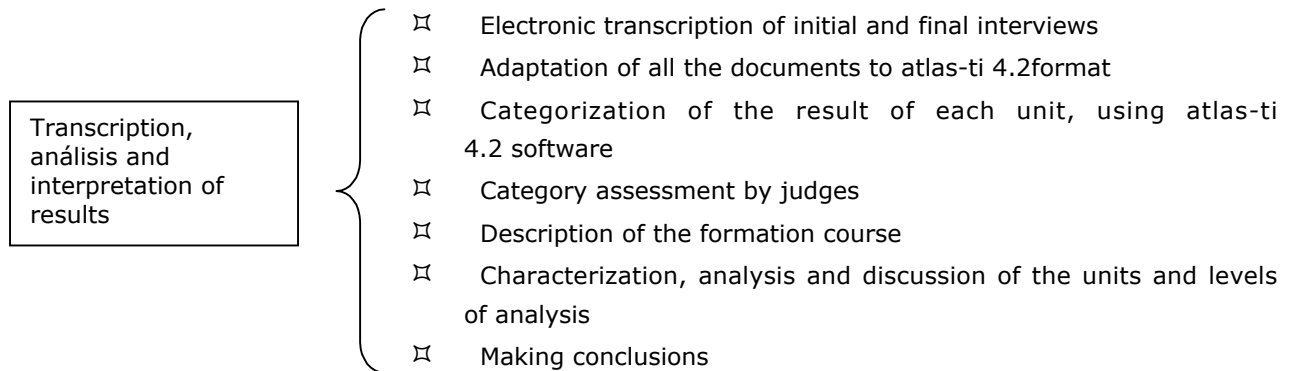
PHASE 1

Previous selection of the sample

- ¤ Initial contacts with institutional authorities
- ¤ Program design
- ¤ Simple selection
- ¤ Beginning of the Course

PHASE 2

Design of the training course

- ¤ Definition of units and levels of análisis
- ¤ Design of inicial interviews
- ¤ Preparation of recording of tutorial actions
- ¤ Inicial interviews with tutors and participants
- ¤ Design of the training course and web page of the course

PHASE 3

Development of the course
Data collection

- ¤ Recording of training actions in audio and electronic documents
- ¤ Recording of Teacher tutor - Tutor interactions
- ¤ Recording of tutoring activities (tutor-participants)
- ¤ Interview and final questionnaire

PHASE 4

Transcription, análisis and interpretation of results

¤   Electronic transcription of initial and final interviews

¤   Adaptation of all the documents to atlas-ti 4.2format

¤   Categorization of the result of each unit, using atlas-ti 4.2 software

¤   Category assessment by judges

¤   Description of the formation course

¤   Characterization, analysis and discussion of the units and levels of analysis

¤   Making conclusions

RESULTS AND DISCUSSION

1. FIRST UNIT OF ANALYSIS: STUDENTS AND TUTORS' PREVIOUS EXPERIENCES AND CONCEPTIONS

The information about the first unit was obtained through the focal interview with a group of 12 former students about their experiences as students in the modality (graph 1), a focal interview of the tutors and individual interviews with each tutor about his/her previous conceptions.

Graph 1
STUDENTS' PREVIOUS EXPERIENCES
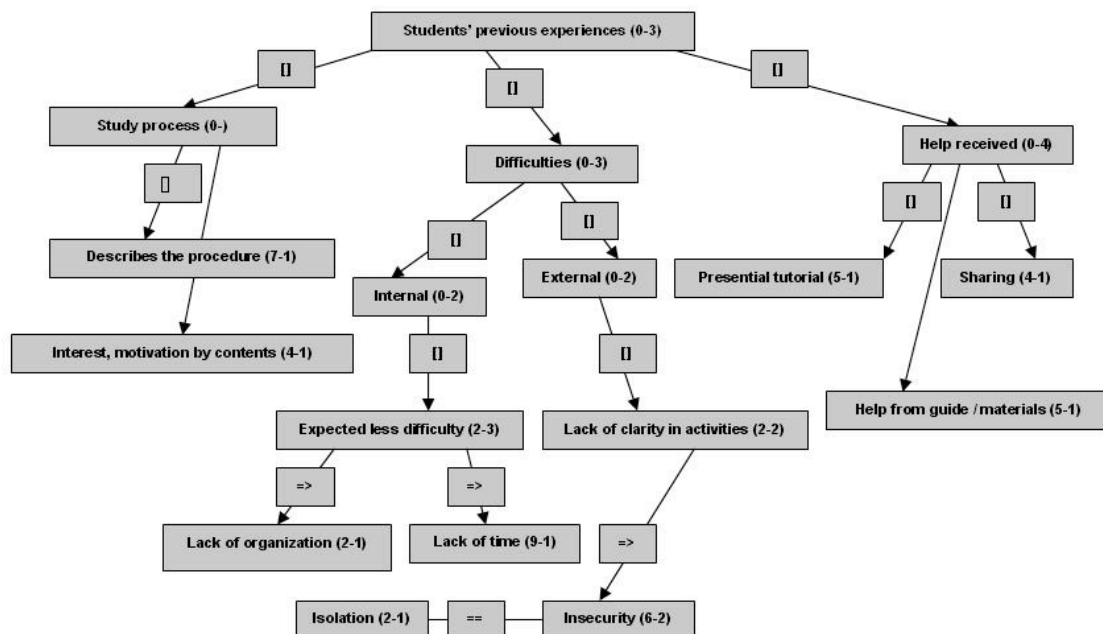
As you can see in the graphic, the main difficulties found in the distance students during their initial study process were: time management, organization and planning when and how to study. Moreover, they were confused about the conditions and demands of the learning tasks since they admitted that they did not know how to react to a new learning experience. A mismatch between their initial expectations of commitment and effort and the real demands of the distance study was observed. Besides, students do not recognize that they received explicit help from their tutor so they could adapt themselves to the modality and face the experienced difficulties.

These results confirm the students' need to developf developing learning strategies so they can learn to identify the learning goals and become aware of their personal, learning task-related, distance-education-related conditions. Otherwise, they experience this process in isolation and as a "discovery", adapting to this modality by means of a "trial and error" method. This way, they expose themselves to have more failed than successful experiences.

Regarding the female tutors' previous conceptions, they admit fundamental features of distance modality, such as non-presentiality, flexibility and a greater accessibility. There is lack of clarity and depth in their conceptions about the studying process and learning strategies in the modality. Nevertheless, as shown in graph 2, a very precise practical knowledge about the students' needs and difficulties is observed, but they do not point out experiences or proposals to improve this situation via tutorship.

Graph 2
FEMALE TUTORS' PREVIOUS CONCEPTIONS: STUDYING PROCESS
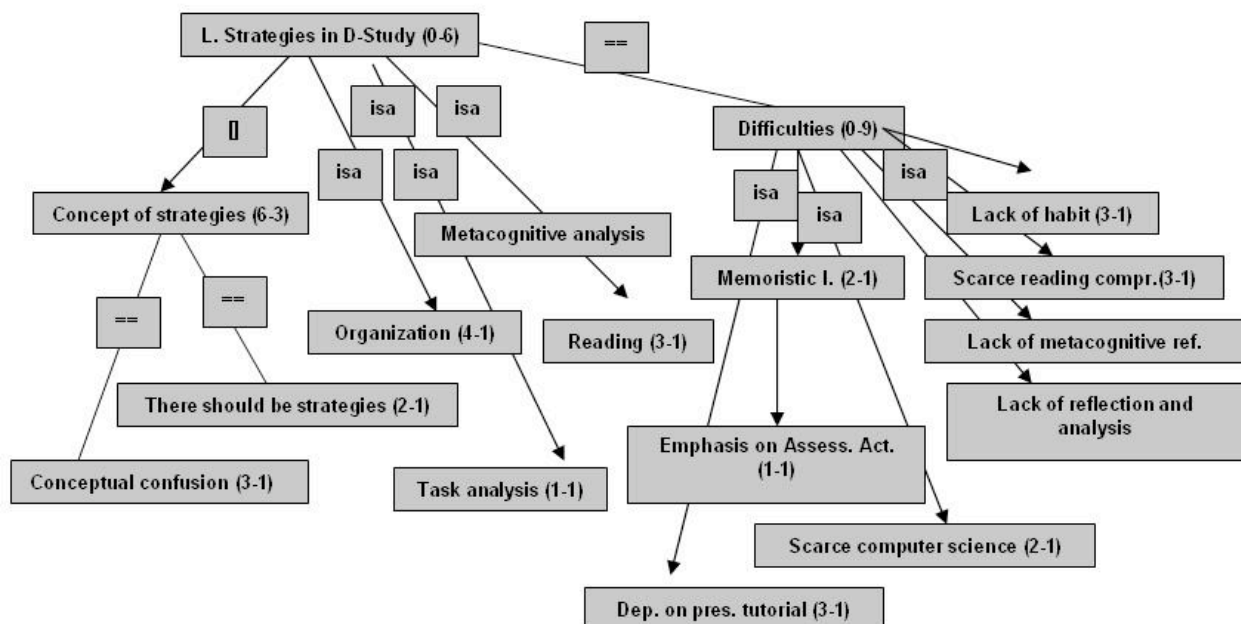
Students and female tutors' previous conceptions and experiences show a distance education approach as an "independent" studying process in which the tutor's role is either passive or reactive to the students' eventual inquiries. A small degree of tutor's proactivity restricted to spaces where the student is present has been observed, as well as a lack of conceptual management and practical experience in the field of strategic distance teaching and the tutor's role. All this corroborates the need of a formation of female tutors in both conceptual and methodological levels in the field of strategic learning and teaching in a virtual context, and from a more constructive, interactive and communicative learning approach.

2. SECOND UNIT OF ANALYSIS: FORMATS OF INTERACTION DURING THE FORMATION PROCESS

Virtual interactions:

The tutor trainer's general messages (planned and sent to all female tutors) were oriented toward the development of the group's strategic knowledge: guiding time organization, orienting the forum participation, guiding the learning activities and promoting metacognitive analysis. The tutor trainer sent guidelines to develop these activities (to promote strategic learning and awareness about the goals and sequence of the activities). These messages were basically unidirectional because they responded to the female tutors' difficulties to assume progressively the management of their own cooperative learning spaces. Nevertheless, the tutor trainer did not promote a more bi-directional, interactive dialog to benefit a collective search for the sense and meaning of the activities.

Also, the tutor trainer performed a more personalized monitoring and interaction, through individual messages that were adjusted to the three interaction styles identified in the female tutors: independent, communicative and strategic.

a) The *independent* interactions belong to female tutors 2 and 3 who employed the e-mail to send activities and information about the difficulties found to be sent on time. In these cases, the tutors did not ask for help to the tutor trainer and showed a low level of metacognitive analysis to detect and communicate their difficulties during the learning process. At this level, the tutor trainer used the e-mail space solely for the distribution of learning activities and her respective feedback.

b) The *communicative* interactions belong to the female tutors 4 and 5 that reported advances or limitations of their studying process, as well as the difficulties that they found along the way. Nevertheless, and despite the constant communication (either after their own initiative or to reply the tutor trainer's messages), they did not request specific help in due time, showing limitations at the level of awareness and decision-making to solve problems. In such cases, the tutor trainer performed a personal monitoring in order to obtain information about the female tutors' advances and studying process. Although the tutor trainer did not solve specific doubts or difficulties, she possibly facilitated the female tutors' time organization.

c) The *strategic* interactions were assumed by the female tutors 1 and 5, and they were focused on requesting help from the tutor trainer in order to solve specific problems that emerged during the learning process, as well as to report the respective advances. These actions show the awareness of their own difficulties or doubts and their capacity to make decisions and seek solutions or aids via e-mail. Meanwhile, the tutor trainer sent more strategic messages whenever there was a bi-directional communication concerning the doubts addressed by the female tutors, so they could be helped in their studying process.

In general, e-mail was not employed to clarify, broaden or deepen the knowledge but to inform about specific issues, communicate difficulties or solve doubts. However, given the fact that e-mail was used during the course, this influenced its later incorporation in planned and applied tutorial actions.

On the other hand, the use of the forum as a space for virtual interaction was not enough exploited during the formation course. The female tutors showed difficulties regarding its use and the access frequency was low. The forum space was employed as another task to be made by giving an answer as participation. However, the forum did not work as an interactive space to share and build meanings in a collaborative way. As shown in Table 5, most of the interventions were unidirectional, and in some cases interactive, but very few were genuinely collaborative.

Table 6
LEVELS OF INTERACTION AT THE FORUM AND COLLABORATIVE ACTIVITIES

Level	Description	Female tutors
1	Unidirectional: They communicate their contribution but do not take others' ideas into account	2
2	Interactive communication: they take others' ideas into account during their interventions	1, 3 and 4
3	Collaborative work: they integrate ideas with others	5 and 6

The tutor trainer's moderating role was oriented to picking up each she-tutor's main efforts and encourages their participation. A more active communication was achieved when the questions got more open-ended, motivating and related to practical experience. Knowledge and experimentation of the forum's tool allowed she-tutors to use them more extensively in their courses.

Presential interactions:

Besides, the tutor trainer convened some presential meetings in which she tracked the group's progresses and scheduled dates and deadlines for the course's delivery. Also, she clarified conceptual and procedural contents, using examples for that.

These sessions helped she-tutors become aware of and assess their main achievements and difficulties during the distance study process and concerning their own tutorial work. There was also a comparison between the contents exposed in the course and their tutorial practice, in which they discussed the changes that were just getting incorporated into their work.

Feedback:

The tutor trainer, through the feedback on the activities and the e-sending of additional notes, carried out a unidirectional, unsynchronic communication. She not only did perceived or point out mistakes in the she-tutors' performances, but also she sought to promote new learning, by specifying concepts and by relating the learned income to their practical application at the tutorial work or their individual study process. There were two levels of feedback (Table 7).

Table 7
EXAMPLES OF INTERACTIONS IN THE FORUM ABOUT THE TUTOR TRAINER'S ROLE

T01 I think the tutor trainer should fulfill a function, as T07 mentioned in the case analysis 1 "proactive", that is, a person that could anticipate her participants' difficulties during the learning process and not to wait the participants to realize about them in order to solve them. Sometimes, the tutor trainer only answered doubts and inquiries. Otherwise, the tutor trainer should be a dynamic agent of the little learning community in which she is a part of. She should orient, facilitate, and emotionally support but also generate interaction and communication spaces among all the participants. As a mainly motivating agent, the tutor trainer should promote awareness processes about their own participants' abilities and design strategies and resources to be applied (…)
T06 When we talked about an interactive approach in distance education, I think we are in a specific position to define the tutor's role since it is not only an observer of the student's learning process, waiting for questions, doubts or inquiries made by the students who study in an autonomous way. The tutor trainer is continuously participating in the process mentioned before, its main role is to mediate between the contents and the student, the tutor facilitates the students' reflection, new questions about the contents and everything that helps the participants' learning process (that it was only made with the materials). There is a special stress in relation to this function: the possibility of creating interaction among students in order to promote debates and group actions toward a collaborative learning, in parallel with the self-learning.
T07 What is shown in the materials (…) and commented by T06 and T01, the tutor's role from an interactive approach in distance education requires interaction, communication, bidirectional dialog as Holmberg stated but with a series of additional resources needed in the student's learning process and the means he/she uses. Somewhere I read about the interactive nature of the multimedia means and they make more demands to take advantage of the technology as a way to promote educational processes of more quality. The quality as a concept has changed in the history of distance education (…) Well, we will see you.

The moderator role was oriented to rescue the main contributions of each female tutor and encourage participation. A more interactive communication in the group was achieved when the questions of the Forum were more open and related to practical experience. The knowledge and experimentation of the forum were employed by the tutors in later courses.

Presence interactions

The tutor trainer organized some meetings in which she monitored the advances of the group and developed dates and deadlines for the course advance. Likewise, she clarified conceptual and procedural contents and oriented with examples.

These sessions favored the tutors' awareness and assessment of their own main achievements and difficulties during the study distance process and their tutorial work. Similarly, they contrasted the contents developed in the course with their tutorial practice and shared the changes they included in their labor.

Feedback:

The tutor trainer developed a unidirectional and asynchronous communication through the feedback of activities and sending notes in the margin. Not only the achievements were confirmed or mistakes in the tutors' performance pointed out, but also new ways of learning were promoted by specifying concepts or relating what was learned with its practical application in their tutorial work or personal study process. Two levels were identified in feedback (Table 8).

Table 8
FEEDBACK LEVELS OF TUTOR'S LEARNING ACTIVITIES

Level	Description	Tutors
1	Congratulates and points out the achievements in the first unit as well as clarifies the sense of the activity of question.	2 y 3
2	Congratulates and points out the achievements during the three units / promotes the relationship with the practice.	1, 4, 5 y 6

These guidelines and comments were received by each tutor via e-mail, but they failed to generate a subsequent interaction that might guarantee an improvement in learning and the assimilation of the tutor trainer's suggestions into each tutor's work; the exceptions were tutors 1 and 6, who formulated questions (either via e-mail or in a context where tutors were present) in order to seek further clarification.

3. THIRD UNIT OF ANALYSIS: CHANGES IN THE ACADEMIC CONTEXT (as learners)

Changes in conceptual knowledge

The change in the *conceptual knowledge* was based on the comparison between tutors' previous *implicit theories and conceptions*, identified in an earlier interview before the course development and the concepts, more *explicit, conscious and verbalizable*, observed in the forum participation were the development of reading guidelines and a final questionnaire. Three levels of conceptual change in the three main notions of the course were observed: tutor's role, strategic learning and strategic teaching

Table 9
LEVELS OF CHANGE IN CONCEPTUAL KNOWLEDGE

Level	Description	Tutors
1	States information about the topic	2 and 3
2	Explains and establishes concepts	4 and 5
3	Explicitly acknowledges a conceptual change	1 and 6

The social interaction (specially through forums) and the execution of all the activities proposed in the strategic reading guides, all of them contributed to the change in the conceptual knowledge.

In the forum that turned out to be the most interactive (Unit 1) (see table 7), a major change in the conceptual knowledge about the tutor's role in the distance education was observed. Therefore, the social interaction and the exchange of meanings with their classmates favored the change.

Furthermore, the tutors improved their conceptual understanding when they discussed their conceptual doubts with their classmates or tutor trainer and received explanations.

Finally, the tutors who followed the complete sequence of control transfer proposed in the Reading Guides achieved conceptual changes, more conscious and verbalizable, in the three main notions. This fact could be explained because of a major level of internalization.

Table 10
EXAMPLE OF CONCEPTUAL CHANGE ABOUT STRATEGIC LEARNING (UNIT 2)

BEFORE (Initial Interview) Strategies depend on the students, they should have them before. The strategies do not depend on the tutor.	DURING (Guide 2) Conceptual clarity about learning strategies, characteristics, and metacognition.	AFTER (Final Questionnaire) Identifies changes in her conception about learning strategies. Recognizes the importance and necessity of the development of a strategic learning in the students.
• They are mechanisms, procedures, and techniques that participants employ to understand specific contents to process them so as to collect the relevant information and create knowledge. The participants are not usually conscious about them or they have a low level of development of strategies. Along the process, they discover their own potentials and foster them. • I would wish the students to have the strategies developed or master them and not to have difficulties but when this does not occur, they become despaired.	• Particularly, I think it is important to identify the differences between autonomous and independent learning, as mentioned in text 1, any learning is conditioned somehow by external factors and agents, and this is not isolated but personal and embedded into interactive processes and relationships (…) • A second relevant aspect was the opportunity to deepen in the concept of metacognition and its importante in the development of strategic learning. • Being conscious and valuing their own capacities, the procedures we usually employ are indispensable to clarify what, when, and why of learning	• Before I had the idea that learning strategies were individual, now I mean each person uses a certain amount of them and tutorship functions are not to develop or rediscover them. • The idea of strategic learning as a process of decision-making in order to build new knowledge where to want, to be able and to know how to learn interact. • I perceive the users of distance courses with more possibilities of developing complex cognitive processes , who are able to recognize their own learning abilities and conditions. Thus, they will generate new knowledge (...). But, above all, they are able to learn strategically, that is, to incorporate kinds of knowledge they have built themselves; moreover, they apply specific learning strategies in concordance with the nature and purpose of the study process.

Some tutors experienced difficulties to understand the concept of strategic learning and strategic teaching. The units related to these concepts did not include social interaction activities. Besides, activities and reading guides of these units demanded more autonomy for their production. These data showed that some tutors needed more social interaction and external control in guides 2 and 3 since they presented difficulties in the tutors' autonomous development.

Changes in strategic knowledge:

These changes were recorded mainly in the strategic learning and metacognitive analysis.

- To identify the changes in the *strategic reading*, the development of reading strategies "before, during and after" in guides of each unit was analyzed. Regarding strategic reading, four levels were identified:

Table 11
LEVELS OF STRATEGIC READING

Level	Description	Female tutors
0	Answers questions only "after" (female tutors 5 and 6)	3 and 4
1	External control: develops questions proposed before, during and after the session (female tutor 2)	2
2	Intermediate control: takes into account guidelines during and after the session	5
3	Self-control: develops their own reading guide before, during and after the session	1 and 6

At the highest level, a transition from an externally guided reading (reading guide 1) to a more strategic self-controlled and self-regulated reading (reading guide 3) was noticed. This was feasible when all proposed activities in the reading guides 1, 2 and 3 were developed, following a sequence of progressive concession of control on the strategies before and after the reading session.

- The changes in the *metacognitive analysis* were observed in the answers to the questions of the reading guides, the final questionnaire and the final interview. The changes were the awareness and communication of the main achievements and difficulties during the study and learning process, as well as the search and application of solutions. These changes were noticed in three levels:

Table 12
LEVELS OF METACOGNITIVE ANALYSIS

Level	Description	Female tutors
1	Analysis only at the end: answers questions from the final questionnaire and interview	2
2	Analysis in one unit and at the end	5
3	Analysis in more than one unit and at the end	1 and 6

In the table 13, an example of level 3 of metacognitive analysis can be observed. In this case, the tutor analyzes her difficulties along the course and during the study process, and proposes solutions to improve it.

Table 13

EXAMPLE OF DEVELOPMENT OF METACOGNITIVE ANALYSIS DURING THE COURSE

MOMENT	IN READING GUIDE 1	IN READING GUIDES 2 AND 3	IN THE QUESTIONNAIRE AND THE FINAL INTERVIEW
Assessing difficulties	Detected difficulties in time management for activity production.	Detecting difficulties in time management	Assessing technological dificulties, time and application problems, etc. Analyzing the reasons, pointing out as achievements the overcoming of the problems.
	Guide 1- During the study of Unit, none but the short time to be devoted to make simultaneous products, whose dates to be delivered coinciding with the datelines of the Unit. Guide 1 However, when checking the compliance of the activities required by the unit, implicit goal in my study process, the results have not been satisfactory to me, though this is not because of disorganization, but I was not able to detect them on time.	Guide 3 Checking my notes on previous reading (from the same or different unit) to facilitate the articulation among the diverse contents. I overcame this by taking more time to check my notes, having in mind that this checking will finally reinforce my knowledge. Guide3 -T01 Another difficulty was the compliance of my study schedule since some activities did interfere with the normal compliance of my schedule.	Final Questionnaire Difficulty 1: Initial exploration of the web page. Reason 1: Scarce ability developed in this field before the course started. Difficulty 2: Prejudices about function and scope of the tutorial action. Reason 2: Notion that learning strategies are individually determined, each person has a certain amount of them and the tutorship is not for developing and/or rediscovering them. Difficulty 5: Obstacles related to every distance learner (website material management, assessment system, virtual communication, etc.). Reason 5: Having not previous experience as a participant distance IT
Solving problem	Searching solutions to difficulties and applying them	Searching solutions to difficulties and applying them	Indicating achievements obtained when overcoming the identified difficulties during the course.
	Guide-T01. I overcame difficulties by having a strict schedule I prepared myself, Though I was quite tired because of the other activities. Guide1- I would be more careful in the phase of getting know the website so as to know all the features and activities included in the unit.	Guide3 I overcame it by taking the required time in order to review and this would reinforce my knowledge. Guide 3 I overcame the difficulty by recovering the lost minutes in some other moments of the next day.	Final questionnaire 1. Progressive good management and familiarity of the resources offered by the web site and the IT. 2. Acknowledgement of the possibilities offered by the tutor ship as a space to enhance the development of learning strategies in the participants. 3. Development of a more empathic and understanding attitude toward my participants, since they have fulfilled their role as a student experiencing worries, needs and distress.

It can be observed that tutors developed all the activities proposed in the three guides, above all, the strategies before and during the reading, they reached higher levels of strategic knowledge due to a more autonomous and conscious practice of the reading comprehension strategies and their distance learning process. This strategic knowledge is directly related to higher levels of conceptual knowledge.

FOURTH UNIT OF ANALYSIS: CHANGES IN EACH TUTOR IN THE PROFESSIONAL CONTEXT

Assistance planning:

The making of the final work was the planning of tutorial actions for the development of students' strategic learning. In this planning, three levels were identified, as it is shown on Table 14:

Table 14
LEVELS OF ASSISTANCE PLANNING

Level	Description	She-tutors
1	Organizing and planning tutorial actions	2 and 3
2	Selecting learning strategies to be taught and proposes general actions	4, 5 and 6
3	Selecting learning strategies to be taught and specifies concrete actions and recourses necessary to develop them	1

During the course, most of the tutors selected the learning strategies to be developed in their students with clarity and efficiency. These strategies were usually: the analysis of the course or the conditions of the distance study, the time organizations, and the reading comprehension. The tutors also proposed learning and teaching activities of these strategies and incorporated the use of media such as e-mail and the forum in their tutorial actions. In table 15, some examples of planning tutorial assistance for strategic learning are observed.

TABLE 15
Examples of planning tutorial assistance for strategic learning

To develop time management in group through actions such as "Thinking about the availability of personal time for study and the ways for optimizing this resource. Making plans for the individual study, using a readjustable matrix during the study process". Consequently, some aids are proposed from the tutorship, for example, "providing a matrix to facilitate the time organization. Planning future actions in function of the demands and requirements of the group expressed in the session."
To analyze in a metacognitive way, helping them "to reflect in group over the real learning conditions of each of them: previous knowledge personal goals, study spaces, expectations, strategies to be applied because of the nature of the course and final activity that is required. Answering individually orienting questions about some of the aspects previously mentioned.
At the end of the course, the students should "review their initial goals, motivations, and expectations, identifying to which extent they were fulfilled, which difficulties they had for not doing it and how much the final product matches with the expected results. Assessing the final product, identifying good choices, omissions and mistakes. Socializing experiences with their classmates." Hence, this activity will cause "the value of their good choices and the acknowledgement of their omissions and deficiencies.

Assistance application:

The information on application of assistance for strategic learning was obtained through e-mails sent and received by the tutors and their students, from filming the group tutorships and the self-report of the telephone and face-to-face tutorships. Each tutor developed a different style of strategic learning in the practice, identifying the following levels

Table 16
LEVELS IN THE APPLICATION OF ASSISTANCE

Level	Description	Tutors
0	Conceptual learning	2
1	Technical recommendations	3
2	General guidelines "unidirectional"	4
	Specific guidelines "directive"	5
3	Strategic aids: guiding, inquiring, engaging in a dialog, explaining, giving examples	1 and 6

The levels of change in the professional knowledge showed that tutors who acted as strategic students (unit of analysis 3) incorporated more and better strategic teaching actions in their work with their student group (unit of analysis 4), which allowed identifying three types of tutors

a) *Tutors who plan* (2 and 3), as students, they were not able to overcome their conceptual confusion among learning and teaching strategies, they did not act as strategic learners and did not develop a metacognitive analysis about their study process. They were also unable to put themselves as students. However, they included a vocabulary related to the role of the tutor and distance learning. In a professional level, they experienced changes in basic aspects such as planning and organization of their tutorial actions, but without identifying the learning strategies they were supposed to develop in their students. In practice, they were unable to incorporate strategic teaching actions.

b) *Procedural tutors* (4 and 5) achieved remarkable changes with respect to their initial conceptions but they did not explicit these conceptual changes in a conscious way. Likewise, they developed a strategic knowledge in the reading, the metacognitive analysis or the analysis of their practice, but they did not ask an external support or control and did not internalize their decision-making, control and assessment process.

In their professional knowledge, they achieved to design and select learning strategies to be developed in their students and general actions to be carried out in their tutorial working. Nevertheless, they did not give control to the student in application of these actions since they only offered general orientations about the study process (tutor 4) or very specific and directive guidelines (tutor 5), without giving students the chance of making explicit decisions. They incorporated the teaching of procedures for the study and learning into their work but they were not able to develop a strategic approach completely.

c) *Strategic tutors* (1 and 6) presented positive interdependence between the level of academic and professional knowledge. During the formation course, the tutors obtained an elevated change in the academic conceptual knowledge, verbalizing the changes experienced (discourse). They also developed a high level of strategic knowledge (practical), achieving to self-control and regulate their reading process. They were also able to exercise their metacognitive ability by means of both analysis of their achievements and difficulties and search and application of actions to overcome the previous situation. They developed a more interactive teaching, creating in their students the awareness about their own study process as well as the decision-making guided or autonomous of the possible solutions.

The tutors who showed a better performance as strategic students incorporated more and better strategic learning actions in their teaching work with their students. That is to say, conceptual comprehension and strategic knowledge as learner contributed to a better planning and application of distance strategic learning.

4. FIFTH UNIT OF ANALYSIS: METHODOLOGICAL DEVICES THAT DURING THE FORMATION HAVE CONTRIBUTED TO THE PRODUCTION OF CHANGES IN THE TUTORS

During the formation process, the devices that influenced favorably the production of changes in the tutors were identified. We define device as a methodological, intentional or not, option that allow the tutor to have control over the building of strategic knowledge and the development of tutors' autonomy. In these devices, there is an interaction between tutor and contents (through the learning activities proposed), between tutor and trainer or between tutors.

The analysis of the levels achieved by each tutor in their use of the methodological devices and in their academic and professional changes allowed identifying the following relationships:

- Interaction with the tutor trainer via e-mail facilitated the change in the strategic knowledge related to metacognitive analysis.
- Tutors' interaction with their classmates in the collaborative activities and forums was an aid for the negotiation of the meanings of the content and the development of the proposed activities, which in turn mainly contributed to the change in conceptual knowledge.
- Interaction with the reading guides and development of all the activities proposed with the progressive cession of control in each unit favored a change in strategic and conceptual knowledge.
- Tutors' conceptual comprehension and strategic knowledge as learners was an aid for the design and application of changes in strategic distance teaching, from tutorial work.

CONCLUSIONS

From the analyzed results, we can state the following:

1. The female tutors who followed the whole process of control cession developed a more strategic and self-regulated knowledge at both academic and professional level because they achieved a larger degree of assimilation and autonomous practice. Consequently, taking into account the future tutors'

formation, it is essential to design reading guides with precise guidelines that allow going from a very detailed level of control to more autonomous levels. It is necessary to be explicit about the need to ask the questions before the reading in order to clarify the objectives, the expectations about the topic to be studied, the previous knowledge as well as the time planning and the reading strategies to be used.

2. Some female tutors did not achieve an autonomous practice of strategic learning, possibly due to time limitations and the social interactions that took place; these factors determined that they could only reach an externally controlled stage of guided practice. Hence, it is necessary to balance the duration of each unit and the time planning for the development of the activities suggested in the future tutors' formation. Furthermore, interaction social activities should also be included, by the means of forums, in all the units.

3. Guided reading and participation in collaborative e-spaces have contributed to a larger elaboration and conceptual change.

4. Metacognitive analysis has contributed to larger strategic knowledge and conceptual elaboration due to the development of a major awareness of the experienced change. Consequently, it is essential to include questions that facilitate both the metacognitive analysis and allow identifying achievements, difficulties and improvements in their own learning and reading process

5. All the female tutors improved the planning of their teaching actions due to a major awareness of their role. Hence, it is convenient to reinforce both the development of planning activities and its application (and later self-assessment) in the tutors' formation process

6. Some tutors developed a strategic teaching in the planning and application of tutorial actions oriented toward their students' strategic learning because of the development of a more self-regulated and autonomous strategic learning. Consequently, distance tutors' formation should start considering their role as distance learners who are able to be aware of their own process of distance study student. Furthermore, it will be important to offer guidelines to analyze the achievements and difficulties they experience as tutors as well to provide advice about their tutorial practice.

7. All the tutors incorporated the use of virtual media in their tutorial work with their students, due to a satisfactory practice with them. Therefore, it is necessary to develop tutors' formation process through virtual contexts so that tutors can experience these different technological tools as users.

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