PLANNING IN HIGHER EDUCATION THE FUTURE OF THE FACULTY OF STATISTICS AND INFORMATICS, UNIVERSIDAD VERACRUZANA, MEXICO

Jaime JIMÉNEZ and Juan C. ESCALANTE

Universidad Nacional Autónoma de México, Department of Mathematical Modeling of Social Systems, Institute for Research in Applied Mathematics and Systems, Mexico City - Mexico

jjimen@unam.mx

ABSTRACT: A planning exercise was carried out at the Veracruzana University, named after the state of Veracruz, where it is located. The Faculty of Statistics and Informatics of the University was, due to internal distancing among staff, on the verge of dissolution into two separate entities, where neither one would be able to retain faculty status. An intervention was programmed to explore the possibility that the members of the Faculty come up with a unified vision of the institution and thus prevent dissolution. The planning exercise selected was the Reflection and Design Conference (RDC), which is an adaptation of the Search Conference (SC) methodology to the Mexican organizational culture. After an initial period of uncertainty due to conflicting positions of some members of the faculty, a unified and consensual desired future was achieved, and projects were designed upon diverse lines of action with the full participation of faculty members, authorities and students. The intervention proved successful in that members were able to set a path for the Faculty that allowed it to maintain its status. The paper presents a brief summary of the RDC methodology, the process of implementation, and the results achieved by members of the Faculty, with the hope of contributing to the discussion on planning in educational institutional settings.

Keywords: Planning, participative, Reflection and Design Conference, Search Conference

Introduction

The present experience is inserted within processes of profound organizational change, where there is need to remove obstacles to the formulation of effective development plans.

It is natural that power groups form around diverse interests in organizations. They can be legitimate interests, like academic interests, political, social, including union interests if the objective is to improve conditions of its members. However, at some point these interests can come into conflict with the organization and provoke a certain paralysis. The point in time when this occurred in the case of the Faculty of Statistics and Informatics (FEI) of the Universidad Veracruzana (UV, Veracruzan University) was the institutional requirement on the Faculty to elaborate an Institutional Development Plan in order to be allocated funds from the university treasury.

At the Faculty[1] in question there were opposing interests that were retarding the formulation of their Development Plan. An influential academic in the Faculty, with strong leadership and following in the Statistics group, had a different agenda. He would agree to the Institutional Development Plan only if it provided for the separation of Statistics from Informatics, an institutional transformation that could not be accepted by University authorities.

Through a pre-intervention briefing, the attempt was made to convince the academic community of the need to air their differences in an environment of respect and equality, with the aid of outside consultants that would play the role of facilitators of the process. A way to mobilize the academic community around a plan and at the same time trigger an academic renovation that would provoke the creativity and boldness of the staff, the consultants proposed, was the conduction of a Reflection and Design Conference (RDC) (Jiménez, 1987; Jiménez *et al.,* 1997 a, b; Jiménez, 2001), an adaptation of the Search Conference (SC) methodology developed in Tavistock, England. The Conference is an excellent tool that allows groups to converge on common objectives. At the heart of the process lies the socialization among all stakeholders of a common problem, where conflicting interests are

---

[1] The usage of "Faculty" in this paper refers to the disciplinary and administrative distribution that stems from the higher education system that originated in Europe, as opposed to faculty, meaning academic or professorial "staff", in the British and US departmental systems of higher education. Somewhat equivalents in the latter are the "college", or the "school".

invariably exposed, and in the name of a common good, expunged. In fact, the influential academic leader at subsequent meetings, joined colleagues and fully participated in task group work.

The outcome of the Conference was the formulation of 11 specific projects that constitute the main part of the Development Plan. It was agreed that the Faculty's change process would be followed-up with subsequent meetings. At the time, there have been two of such meetings that evidence that various projects have advanced in the attainment of their goals.

The paper will present a brief theoretical and methodological background of the RDC, describe the process of its implementation at the FEI, and the positive results obtained. It is worth noting that during the second follow-up meeting, the academic that had previously rejected the realization of the RDC joined the group, as his intention was to lead the group that would formulate the Development Plan. At the end of the second meeting, the community practically demanded that the head of the Faculty form a work team to elaborate the plan, and the discontented academic agreed to participate in the process.

The results obtained up to now in this intervention are very positive. It shows us the efficacy of the RDC insomuch as once it is realized, a follow-up takes place of the subsequent change process, that will allow the members of the community the opportunity to evaluate the progress of their own projects, of providing feedback amongst colleagues in the different work groups, of knowing the opinion of external observers, all in an environment of absolute respect and equality, encouraged by the facilitators.

Theoretical aspects of the intervention method: The Reflection and Design Conference

The method utilized in the event is named Reflection and Design Conference. This resource provides the conditions necessary for a fruitful convergence among organizational systems whose interactions are weak. The method is based on the *Search Conference (SC),* proposed by Fred Emery and Eric Trist in 1958-59 (Emery M., 1993, 1994).

Among types of interventions (Blake and Mouton, 1976), the Search Conference shares the essence of the *confrontational* approach described by these authors. It is an approach that challenges the *status quo,* and asserts that the future can be built by the members of a system. The Search Conference accepts that the individual is able to learn and experiment by himself the processes of participative, strategic planning that will lead the system toward a desired future, designed by the participants.

The Search Conference was conceived as an alternative to planning efforts that had had scarce impact. It is centered on a participative philosophy of planning. Its focus coincides with the assumption that centralized planning, promoted from "the top", inhibits the creativity of the people involved, that is, of those that are responsible for carrying out actions, and reduces their level of commitment and identification with drawn plans: "…the Search Conference works adequately in the generation of commitments and therefore improves the possibilities of implementation." (Crombie, 1984, p.2).

The Search Conference is a useful instrument especially in turbulent environments such as those in which organizations are currently immersed (Emery, F. and Trist, 1965; Schon, 1971; Ackoff, 1974; Emery, M., 1994), as when it is conducted, planning takes place in a viable and adaptive way "…it provides a "social" space where reflection and design can take place in an environment free of self-imposed restrictions" (Jiménez, 1987, p. 1).

In their effort to import the virtues of a method of this nature, the strategic planning research group at the Department of Mathematical Modeling of Social Systems of the Institute for Research in Applied Mathematics and Systems, after experimenting on a number of occasions, saw the need to effect some adaptations at an operating level to the original method of the SC, to be applied successfully in the Mexican organizational context. Out of this effort, emerges the Reflection and Design Conference, a modality of the SC that preserves the basic principles that make it a robust group method (Rodríguez, 1998), of which the following are the most important:

- Provide a platform so that the processes of reflection and design can take place with the most liberty possible, and in a spatial-temporal mosaic as broad as considered by participants.

- Guarantee a broad participation of the involved in a complex problematic situation, creating a democratic environment.

- Encourage an environment of trust and respect so that people, which attend as individuals and not as representatives of the groups they belong to, put forth their opinions even when these are antagonistic.

- Encourage both the design of desirable futures as well as the joint effort for their achievement.

- Promote the social learning that will increase the ability to self-organize, adapt and plan.

The RDC emphasizes the importance of the two principal moments of the method: the **reflection** on the problematic and the **design** of courses of action to overcome it. It is a procedure that propitiates the adequate conditions to propose solutions to complex problems, where the participation of those involved constitutes a fundamental element. It is based on the premise that the future can be modified by the intervention of those interested. There is no single future, there are various possible. The name of the game consists of achieving one that is desired and agreed by all.

It takes advantage both of the experience and the knowledge of the participants to enrich with their creative ideas the formulation of action in the short, medium and long terms. In addition, it facilitates a coming together among members of different sectors, creating an environment of collaboration. It allows participants to complement their vision with that of others, achieving an understanding of the problematic in a different way, generating new options, and creating the possibility of greater cohesion among them.

The RDC structures group work, stimulates participation, organizes the generation of creative ideas, and facilitates the convergence toward the realization of concrete actions and the establishment of commitments oriented toward a common ideal. The method has the delicate but necessary purpose of opening new paths and stimulating creativity without usurping the role of the members' respective organizations. These types of events are designed to provoke substantial changes, thus their effects are appreciated in the mid and long term. They are not conceived as isolated events, but as the beginning of a continuous effort of periodic evaluation-modification of the course of action agreed upon.

In synthesis, the method implies the task of jointly designing the desired future and needed actions to reach it, instead of being passively "overrun" by a future that is to be avoided.

It is a horizontal event. All participants' opinions have the same value. As group work consists in the building of a desired future and the means to reach it, no one is able to consider himself "expert" in those tasks.

With the aim of having participants feel free to expand their field of alternatives, they attend the event as individuals interested in overcoming the problematique in question, not as representatives of the organizations where they work.

The facilitators of the Conference do not intervene in the generation of the "substance". Their role is to help propitiate an environment of trust, learning, mutual respect and collaboration, and ensure that the rules established in the work dynamic are observed.

Methodology

The RDC consists of five stages (See Figure 1). In the first, participants explore in depth the contextual conditions under which the system has functioned in the past, how it performs in the present, and how it will perform in the future if nothing is done to modify the current situation. In the second stage, attendants reflect upon the manner in which the system performs in the present, and how it has arrived at such a situation. The third stage consists of an exercise in creative design. Participants work, free of self-imposed restrictions, in the bold design of the system's ideal future, within a time frame of 5 to 10 years. The idea is to configurate a system that responds to the needs and desires of all involved. In the fourth stage, participants return to the present and reflect on current and future obstacles and opportunities that obstaculize or facilitate the attainment of the future defined in the previous stage. In the fifth stage, participants propose courses of action to approximate the desired future and, depending on their degree of involvement, in a final sixth stage, they commit to work on those courses identified as of high priority.

Participants are organized in groups of 10 to 12 persons each which will work in parallel during the first four stages, holding plenary sessions at the end of each stage, to share their points of view. In the fifth stage new groups are formed according to each participant's personal interest, to work on the design of a priority course of action. At the end of this stage, a plenary session is held where the specific designs developed by the new

groups are presented. Each one of the initial groups is aided by a process facilitator, whose role is to ensure that the rules of the method are observed rigorously.

As only the attendants participate in the elaboration of the content of the topics, they experience full authorship of the ideas and assume total responsibility over them. Since the results belong to all, it is probable that they establish commitments toward them, and elaborate on activities that will lead to drawn objectives.

The RDC is a method immersed in a process of intervention; in consequence it requires careful pre-planning and post-implementation of the courses of action drawn. To omit this point is to provoke deceit and frustration among participants.

An RDC requires previous preparation and careful planning, since it is not an isolated event. Generally, it produces conditions for change that needs preparation, and sets the ground for the starting-off of processes of improvement in the long-term.

To take advantage of the impulse that this type of events provides to change processes, it is necessary to count on the participation and support of authorities from beginning to end. It is only so that the achievements obtained can be capitalized on to confront and channel change.
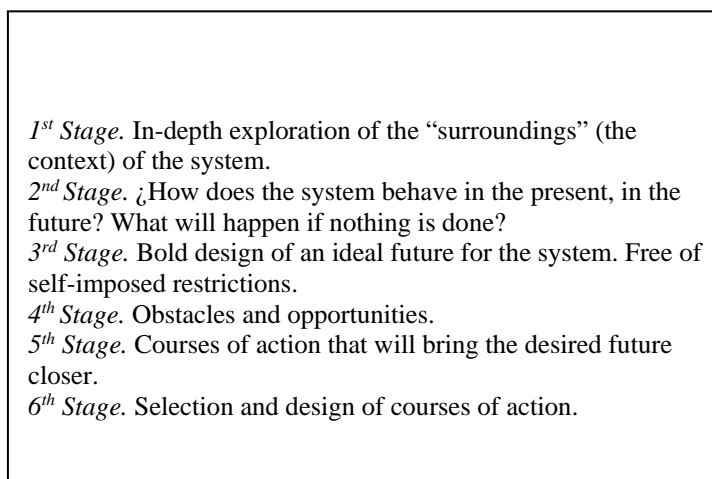

1st Stage. In-depth exploration of the "surroundings" (the context) of the system.
2nd Stage. ¿How does the system behave in the present, in the future? What will happen if nothing is done?
3rd Stage. Bold design of an ideal future for the system. Free of self-imposed restrictions.
4th Stage. Obstacles and opportunities.
5th Stage. Courses of action that will bring the desired future closer.
6th Stage. Selection and design of courses of action.

Figure 1. Stages of an RDC.

Need to follow-up on the RDC

The RDC is designed to provide members of a planning community the basic elements to liberate themselves from self-imposed restrictions, overcome current obstacles that seem insuperable and detect opportunities that had until then gone unnoticed. It is an exercise that, through a correct management, allows the community itself to plan its own future and establish procedures and mechanisms to reach it. The result of the RDC is not a plan designed by consultants, it is an exercise conducted by the community itself with the aid of a group of facilitators. As Merrilyn Emery (1994) asserts, its objective is not the plan in itself, but the creation of the *planning community*. In the past, this maxim had been followed with rigor. No subsequent follow-up was implemented by the consultant. The consulting team acted exclusively as facilitator of a process of dialogue whose end was to plan the future, and retired once the community had designed its plan, which took place in a period of 2 to 3 days of intense collective work. If there was some "follow-up", this took place only informally, with no established commitment. The RDC, as the SC (Emery, 1994), is a process immersed in another that is broader that includes preparatory planning, the event itself, and the implementation of the resulting plans. The planning community must know from the start, that the presence of the facilitator ends with the RDC's conclusions. In the moment that this occurs, the planning community must continue the process on its own, following the assumption that the community learned to plan and implement formulated plans.

However, in the Mexican organizational environment, throughout the years the research group at IIMAS, as was said before, has felt the need to adapt the SC method, designed in the developed world and thought for its own idiosyncrasy, to certain aspects that are unique to local culture. Thus the change that took place even in the name of the method itself, which now reflects more truthfully local sentiments: a process of deep **reflection**, first, followed by a **design** stage. **Conference** denotes lecture, and **search** tends to be associated more to some

esoteric activity that has scarce relation to the most immediate environment of "developing" countries. In addition, the Conference has undergone other changes that have to do with a more immediate reality of the local environment. The most recent innovating proposal, still in a testing stage, revolves around the need to monitor the evolution of the planning community that emerges with the completion of the RDC, through follow-up visits throughout a period of two years, and spaced between themselves by periods of three to four months.

The intervention: The "warming up" process

The formulation of the School's Development Plan was being confronted with obstacles to its elaboration. A group of the teaching staff was opposed to the fact that the Plan was led by the head of the Faculty, and wanted to have control over its implementation. On the other hand, it was imperative that such a Plan was carried out by virtue of the fact that the support by the University's presidency was granted based on such a plan in each academic unit.

The Faculty's administrative body made contact with the IIMAS, knowing that the group utilizes regularly the RDC to start-off participative strategic planning processes, with the aim of having the group disseminate the method throughout the university community via a meeting with professors and students. The attendance to the meeting was a bit scarce due to a degree of rejection to the administration's initiative. However, the procedure raised interest among those attending.

In order to familiarize a greater number of academics with the concept of the RDC, a new presentation was programmed. The intention was convince the academic body that the realization of a RDC would be beneficial as a prior step to the formulation of a Development Plan. On this occasion, the format of the presentation was changed, and it was turned into a dialogue among colleagues in search of alternatives for the advancement of the Faculty. The attendance was much more numerous than on the prior meeting, and at the end of the presentation it was agreed to carry out the RDC almost unanimously.

Part of the problem of the Faculty resides in the fact that two differing disciplinary careers are imparted in it, and the academic personnel is assigned to one career or the other, with some exceptions. However, as there is affinity between the disciplines, it is possible to propose joint projects that aid in the promotion of the Faculty as a whole.

On the other hand, as was mentioned earlier, the opposition of one of the professors, leader of one of the disciplines, to carry out the reflection and design exercise, was known beforehand. This opposition, however, gradually became diluted as it was observed that the personnel in general became associated to a concrete project, and that it advanced in the attainment of its goals.

Results of the RDC

To fulfill the objectives described in the five different stages of the work method, the participants were divided in three groups. At the end of each stage a plenary session was carried out where each group shared results achieved with the other groups.

In the last stage, in line with the methodology, new groups were organized around the courses of action that the participants considered priority. The final plenary session consisted in the presentation of the projects elaborated by the new groups.

In what follows, a synthesis of the projects formulated by the participants is presented, preceded by a shared vision of the desired future.

The desired future

It is in this stage where one of the most cherished results of the RDC is obtained. It is here where the attempt is made to plan a bold and ambitious future for the Faculty, free of restrictions. The most relevant points on the future of the Faculty were obtained, in which both students and professors made a commitment toward an improvement of the activities that are established within the Faculty. The vision of that shared future is the following:

> We are a Faculty leader in the formation of professionals in both disciplines, with a staff of professors immersed and committed in the process of teaching-learning and in the research and personal development that complements the formation of students with leadership and with a high demand in the labor market. Our students have an adequate formation, are motivated and have vocation in the careers that are imparted. They are students that are more

linked to society, have more real practice and there are lower indices of desertion and failure. They are of high academic level. The professors, on their part, encourage innovating projects that are actually projected into practice, where students and professors converge. They also have a high academic level, with adequate profiles, are integrated, committed, with capacity and vocation and apply innovating methods of teaching.

The design of the projects

In the following, the courses of action or projects designed by the new work teams aiming to approximate the collectively drawn desired future are shown:

Group 1. *To implement a program that stimulates, foments and regulates the work of the academic bodies (remedial courses, departmental exams).*

Group 2. *Establish a program to link the Faculty with productive sectors that allows the realization of professional practices, social and employment service (client and supplier registries, training of consultants).*

Group 3. *To develop a permanent labor, lecturing and disciplinary training program in compliance with the MEIF (Integral and Flexible Educational Model) and the new technologies.*

Group 4. *To implement a program that promotes, stimulates and regulates the work of academic bodies, disciplinary groups and existing lines of generation and application of knowledge.*

Group 5. *To elaborate a plan that tends to the needs of academic personnel..*

Group 6. *Creation of a program for the promotion of knowledge (identification and dissemination of current competences and interests).*

Group 7. *Establish an integral program for the improvement of infrastructure (Mixed Committee for Improvements).*

Group 8. *Establish graduate programs, Ms and PhDs, as well as technically-oriented Bachelor's, in accordance with the requirements of the labor market.*

Grupo 9. *Academically link Statistics with Informatics and with other Faculties.*

Grupo 10. *To develop a student's admissions program that is coherent with the MEIF and with the entrance profile of the Informatics and Statistics study programs.*

Grupo 11. *Development of a program for the (soft) incorporation of Statistics to the MEIF.*

Follow-up interventions

There were two follow-up meetings at 4 and 8 months since the RDC. The format that was followed in both consisted of allowing all of the groups to present their advances and provide comments concerning support or obstacles that they had encountered during the development of thier tasks, the changes that they had had to implement in their original goals, and in come cases, the need to rename their course of action in order to better express its nature.

Through this process, it was possible to enroll the participation of the totality of the attendants, who were able to clarify doubts concerning some points, but above all, it was possible to witness the will of all the groups to support each other, contributing with ideas and information to bring projects to good terms.

First follow-up meeting

After the presentations on advances, which took place in the morning, an intense feedback session followed in which many ideas and recommendations emerged. It was suggested that the projects should consider the role of Faculty and university authorities, which should go beyond the sole creation of the colleges, and verify that they conduct activities for which they were created, observing their normative and operational frameworks. The need to establish guidelines that guarantee congruence and convergence in the work of these collegiate bodies was

also recommended. The elaboration of a Teacher's Development Program that would explain the need for training based on the Faculty's Development Project was suggested to one group, and that it should be considered as a fundamental part of the change effort. It was also suggested that they incorporate all the training needs of the other projects, offer open courses with recovery fees, and the resources obtained be used to implement new courses.

Another group was asked to incorporate Statistics professors in the analysis. New staff implies new activities, evolution of the curricula, new projects, new profiles, etc. In addition, they were asked to elaborate the Staff Growth Program that explains the need to hire new personnel with a profile that is congruent with the educational model, related to the Faculty's development program. The work group on infrastructure was asked to define clearly an integral program for the improvement of the infrastructure that sees to academic needs. The group was also asked to elaborate an integral diagnostics of the library: technical services, collection, furniture, normative framework, security instruments, satisfaction levels of library users, etc. Finally, they were asked that policies on waste, acquisitions, substitutions, etc., be made public. In other words, they were asked to socialize the library project.

Of foremost importance, participants agreed:

–   that all formal applications to the different university units should be conducted by the corresponding authority figure, and

–   to present the projects to the university president, as part of a Faculty development strategy.

Second follow-up meeting

The same format was followed for this meeting, although the order of presentation was inverted with the aim providing a more adequate space to the academic which was being incorporated for the first time. This individual, which had exercised a certain pressure to nullify the RDC, intended now to collaborate with the rest of the group. In light of the results that had been achieved so far, he reverted on his decision to maintain himself away from the exercise and joined the rest of his colleagues.

The individual was included in group 11, which was the first to make its presentation, under the title *Development of a program for the (soft) incorporation of Statistics to the MEIF,* which is a government-mandated model with which all the career programs must comply. The reason he was invited to this Project is because the incorporation of Statistics to the MEIF was very delayed, partly because of this professor's opposition. Additionally, being a professor of Statistics and a leader of that group, it was very stimulating that he would now assume responsibility to advance the project.

The general recommendations that came out of this second meeting were:

–   To strengthen the activity of the projects incorporating more students, either as an integral part of their course matter, through elaboration of theses or fulfillment of the social service requirement.

–   To invite those professors which were not in any of the groups to participate in the projects.

–   Identify meeting hours that are compatible with the majority. For example, early in the mornings before classes, or at break times ("active" lunch).

–   The formal *Development Plan* is being implemented through the projects that are being conducted and begin to fructify. We believe that it is time to elaborate the document that formalizes the *PLADEA* (Development Plan) in accordance with the corresponding instructions.

Of these, the last is the most important: ***comply with the requirement to formulate the Institutional Development Plan without further delay.*** It was the appropriate time to formalize the existence of a development plan through its formulation, following the guidelines indicated by the university presidency, now that resistance to its materialization had been diminished. The Plan would be constituted by the projects in process, in addition to other elements that could be considered for inclusion.

Conclusions

This experience showed the capability of the Reflection and Design Conference to bring about a rapid convergence of points of view in face of a complex problem, like the one here presented. The difference in results obtained in an RDC with respect to those that could be obtained with different methods is notable. Normally in a traditional event, a series of papers are presented that are previously elaborated with no consensus behind them. In an RDC, the results are the product of the active participation of all attendants, which go through a gradual process of convergence and collective learning.

The RDC method is effective as a catalyzer of continual planning efforts. Subsequent actions, which are analyzed during the follow-up events, are irrefutable proof of results achieved in an intervention of this nature. Even though, as was expected, the Institutional Development Plan did not emerge during the exercise, the need for its existence and the will to give it a concrete form did. A good part of the Plan was in effect formulated during the RDC and its subsequent meetings.

With respect to the results achieved in the event, a clear vision of the important changes that the Faculty must face to improve the quality of its academic and administrative performance was reached, and with emphasis on the national demand for greater scientific and technological development. Above all, the need to implement such changes toward the inside of the institution were made evident, with the finality of preventing excisions or fractures that damage the capability of the Faculty to confront not only the challenge of academic excellence, but the challenge of survival in an environment that is extremely competitive and demanding such as the one that higher education presents in the country.

Even though the efficacy of the RDC to initiate processes of far-reaching change is recognized, it is necessary, and this does not always occur, to conduct a longitudinal follow-up of the implementation of the plans. This was done in the case that is being reported here and the results were very positive. Based on this experience, from this point on the RDC will be conducted only if the agreement with client organizations includes the follow-up of the process. That is, if it included several follow-up meetings, conducted in the course of at least one year.

References

Ackoff, R.L. (1974). *Redesigning the future: A systems approach to societal problems*, New York, NY: Wiley & Sons.

Blake, R. R., and Mouton, J. S. (1976). *Consultation, a handbook for individual and organizational development.* Reading, Mass: Addison-Wesley.

Crombie, A. (1984). The Nature and Types of Search Conferences. *International Journal of Lifelong Education*. 4 (1).

Emery, F, y Trist, E. (1965). The Causal Texture of Organizational Environments. *Human Relations*. 18 (1).

Emery, M. (1993). *Participative Design for Participative Democracy*, Centre for Continuing Education, Australian National University, Canberra.

Emery, M. (1994). *The Search Conference: State of the Art*, Centre for Continuing Education, Australian National University, Canberra.

Jiménez, J. (1987). El Papel de la Reunión de Reflexión y Diseño en Procesos de Evaluación. *Comunicaciones Técnicas (70).* IIMAS, UNAM, México.

Jiménez, J., Escalante, J. C., and Aguirre-Vázquez, J. (1997 a). Application of the Search Conference Methodology to Planning in Higher Education. *Systems Practice,* **10**(3), 255 – 269.

Jiménez, J., Escalante, J. C., and Aguirre-Vázquez, J. (1997 b). The Role of External Experts' Intervention in Higher Education Institutions for Radical Change. *Tertiary Education and Management,* **3**(3), 257 – 264.

Jiménez, J. (2001). Creatividad en la Planeación; la Reunión de Reflexión y Diseño. *Memorias del II Congreso Internacional de Creatividad e Innovación Organizacional.* Fundacrea y Universidad Autónoma del Estado de México, 1-4 de marzo de 2001. pp. 19 – 25.

Rodriguez, C. (1998). La Conferencia de Búsqueda en el Contexto Organizacional Mexicano: Reunión de Reflexión y Diseño. Tesis de Maestría. En línea en el sitio web: http://crc.iimas.unam.mx/tesis

Schön, D.A. (1971). *Beyond Stable State*, New York, NY: WW Norton.