

ANALYSIS OF EDUCATIVE PROJECTS UNDER THE IPMA COMPETENCE APPROACH. CASE STUDIES IN LATIN AMERICA AND ASIA

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Abstract

Education is considered as one of the bases that lead to development, especially in rural areas. This is quite evident in some rural areas of developing countries in Africa, Asia and Latin America. The alternating system of education implemented by the formative projects of the Family Educative Centers for Training by Alternating Cycle (CEFFA by its acronym in Spanish), permits to verify these impacts on local development and sustainability of agriculture, which is increasingly diversified and multifunctional and tends to transform agricultural employment in rural non-farm employment (RNFE).

This paper shows some of these impacts in the case of a Latin American country (Colombia) and another of Asia (Philippines). After analyzing the CEFFA under the approach of the International Project Management Association (IPMA), some lessons of experience about the competences were described on the cases of the studied countries. Furthermore, the paper suggests some guidelines to define the teacher profile.

Keywords: *project; competencies; alternating cycle education; Colombia; Philippines.*

Resumen

La educación se considera como una de las bases que conducen al desarrollo, especialmente en áreas rurales. Esto es bastante evidente en determinadas zonas rurales de los países en desarrollo de África, Asia y América Latina. El sistema de alternancia que utilizan los proyectos de formación de los Centros Educativos Familiares de Formación por Alternancia (CEFFA), permite comprobar esos impactos sobre el desarrollo local y la sostenibilidad de una agricultura cada vez más diversificada y multifuncional, que tiende a transformar empleos agrícolas en empleos rurales no agrícolas (ERNA).

Esta ponencia muestra algunos de estos impactos en el caso de un país latinoamericano (Colombia) y otro asiático (Filipinas). Tras analizar los CEFFA bajo la visión de la Asociación Internacional de Dirección de Proyectos (IPMA), se extraen algunas lecciones de experiencia sobre algunas de las competencias en juego en los países estudiados. Además, se sugieren algunas pautas para definir el perfil docente.

Palabras clave: *proyecto; competencias; educación en alternancia; Colombia; Filipinas.*

1. Introduction

Education is considered as one of the bases that leads for development, especially in the rural areas. It is mostly evident in the determined rural zones of developing countries in Africa, Asia and Latin America. The system of alternating cycle education used in the training projects of Family Educative Centers for Training by Alternating Cycle (CEFFA by its acronym in Spanish) permits to verify these impacts on local development and sustainability

of agriculture, which is increasingly diversified and multifunctional and tends to transform agricultural employment in rural non-farm employment (RNFE).

In this paper, we are going to compare the results of two different educative projects under alternating cycle pedagogy. Furthermore, we will analyze them from the point of view the competences of International Project Management Association (IPMA). Finally, we will try to provide some key-aspects to define the teaching profile at these schools.

2. Analysis of IPMA competence elements

International Project Management Association (IPMA) developed the IPMA Competence Baseline (ICB) from National Competence Baselines and then enhanced it in a continuous improvement process. It offers access to the technical, behavioural and contextual competence elements of project management. In the ICB there are three ranges containing related competence elements:

- 20 technical competence elements deal with the project management matter, on which the professionals are working;
- 15 behavioral competence elements deal with the personal relationships between the individuals and groups managed in the projects, programmes and portfolios;
- 11 contextual competence elements deal with the interaction of the project team within the context of the project and with the permanent organization.

In this part of the article we are going to analyze the competences of IPMA in the vision of the cases of two projects, implemented in Colombia and Philippines. The range of the analyzed competences – technical, behavioral and contextual – are taken from the contexts of the projects about the system of alternative cycle education that were implemented in the studied countries. The technical competences are mostly related to the projects themselves, describing their structure, objectives and results. The behavioral competences are related to the elements of the teachers' and students' profile in the view of alternating cycle education. The contextual competence elements are related to the organizational structure of the implemented projects.

2.1. Technical competence elements

In the 'Technical' range the competence elements described are needed to initiate and start, to manage the execution of, and to close a Project (Table 1). This order can differ depending on the kind, size and complexity of a project and other influencing factors. The importance or weight of a competence is completely dependent upon the specific project situation.

Table 1: Technical competence elements. ICB - IPMA Competence Baseline Version 3.0

1.01.	Project management success	1.11.	Time and project phases
1.02.	Interested parties	1.12.	Resources
1.03.	Project requirements and objectives	1.13.	Cost and finance
1.04.	Risk and opportunity	1.14.	Procurement and contact
1.05.	Quality	1.15.	Changes
1.06.	Project organization	1.16.	Control and report
1.07.	Teamwork	1.17.	Information and documentation
1.08.	Problem resolution	1.18.	Communication
1.09.	Project structures	1.19.	Start-up
1.10.	Scope and deliverables	1.20.	Close-out

Here are some technical competence elements that we can extract from the project of Alternating cycle education for the case of Colombia (García-Marirrodiga, 2002):

- *Project management success (1.01.)* is the appreciation of the project management results by the relevant interested parties. In the studied case of Colombia it could be considered that the project management has gained success, which could be shown by the following results: Alternating cycle education is the training that mostly targeted for diversification of the activities with the needs of rural population, offering to obtain the relevant education and training and promoting the schools of alternation by the participatory practices of the local actors.
- *Interested parties (1.02.)* are people or groups, who are interested in the performance and/or success of the project, or who are constrained by the project. In the case of Colombia the interested parties are local population, mainly the young people; the rural families; CEFAs (Centers of Family Education for Alternation); Rural Associations.
- *Project objectives (1.03.)* are the set of targets that the project, programme and portfolio managers should attain to provide the expected project benefits to the interested parties. Project objective – Analyze the system of alternating cycle education on the case of "Guatanfur" Center of Family Education for Alternation, Machetá, Colombia.
- *Project structures (the territory) and problem resolution (methodology and results) (1.08. & 1.09.):*

TERRITORY: The studied object – The Center of Family Education for Alternation "Guatanfur" is located at the local Association of Development of Tenza Valley, with municipalities of Machetá, Sesquilé, Manta, Sopo, Chocontá and Villapinzón, Department of Cundinamarca; Guateque and Guayatá, Department of Boyaca, Colombia. In town center of Machetá there are 9,200 inhabitants, 89% are related to agriculture (potatoes, grasses, legumes and fruits) and livestock (dairy cattle, mainly) with predominance of small farms. At CEFA "Guatanfur" there have been taught the four basic secondary education courses in the form of alternation, using the complex of special trainings along with the official curriculum. Students are incorporated with 11-12 years and ending with 15-16. The graduates of this center are intended to be capable of implementing the projects contributing to local development.

METHODOLOGY: The inadequacy of the traditional education to the conditions of the rural territories is the main problem in educational system of Colombia. Because of this inadequacy in training there is a high level of rural unemployment, caused by the migration of the young people to urban centers for being employed. In the case of CEFA "Guatanfur" during the four years of studying there have to be developed a career plan for each student, indicating his plans where and how he would be employed. Mostly the employment is preferred in some agricultural projects of rural sphere at the territory where he lives.

The first two years of the project are connected mostly with the family – studying the agricultural production on the farm, neighbor territories, etc. From the third year the students are getting familiar with other non/agricultural activities in the area (health, commerce, etc.). Thus at the end of training the students would have the vast experience of working in rural environment – both on-farm and business - and have some concerns about their self-employment. The provided trainings, based on professional interests of each student, prepare the young people to lead their own company or implement the projects, targeted for agricultural development.

RESULTS: By using the specially designed methodology for evaluating the validation of the alternating cycle education in Colombia there have been viewed the following conclusions:

- The alternating cycle of education promotes the sustainable development and increases the employability at the territory through giving the young people the relevant training at CEFAs and. Majority of the graduates (233% of graduates in the control group against to those in the traditional system of collages) have the job placement in rural sector.
- Increases the generation of local development by improving the living conditions of the rural family. Thus could be gained by implementing the new and innovative agricultural practices, diversifying the sources of rural income, etc.
- Involves an awareness about the development of own local environment. 100% of CEFA graduates increased active participation in social groups in the area (for 46 times higher than graduates of the traditional education).
- Provides development opportunities for young people in the processes of territory development. The local development is reached by development of each person and their participation in the developing-oriented practices at their own territory.

2.2. Behavioural competence elements

This section describes the behavioural competence elements. These are based on a number of reference documents describing behaviour and include the personal attitude elements. The behavioural competence elements are listed below in Table 2.

Table 2: Behavioral competence elements. ICB - IPMA Competence Baseline Version 3.0

2.01.	Leadership	2.09.	Efficiency
2.02.	Engagement and motivation	2.10.	Consultation
2.03.	Self-control	2.11.	Negotiation
2.04.	Assertiveness	2.12.	Conflicts and crisis
2.05.	Relaxation	2.13.	Reliability
2.06.	Openness	2.14.	Values appreciation
2.07.	Creativity	2.15.	Ethics
2.08.	Results orientation		

During analyzing the behavioral competence elements we are giving the emphasis on the profile of the teacher in the schools of the alternation cycle education. Thus, it is described, what competences are needed for the teachers in this educative system, where the teacher has the role of not only to give knowledge, but mostly to direct and help students to find themselves according to their interests in the local rural community. These competences like leadership, negotiation and assertiveness, mostly related to the teachers' profiles, and results orientation, describing the whole orientation in the schools of alternating cycle education, are described in the next.

- *Leadership (2.01.)* involves providing direction and motivating others in their role or task to fulfill the project's objectives. It is a vital competence for a project manager. In the case of the studied project the sense of Leadership mostly connected to the role students rather than to professors. Because in the system of alternation cycle education the study program and the professor are adapted to the needs of the students and help them to develop themselves, give them orientations and teach only when it is necessary.
- *Assertiveness (2.04.)*, the ability to state your views persuasively and authoritatively, is a competence the project manager needs to help ensure effective communications with the project team and other interested parties, so that decisions that affect the project are taken with full knowledge of their consequences. The project manager avoids being led or manipulated by others into taking or recommending decisions not in the interest of the project. In this case, the professor is not only the teacher that gives the knowledge, but

also the center of relation between the different parties of the educational system – students, groups, adults, and their ambient.

- *Results orientation (2.08.)* means to focus the team's attention on key objectives to obtain the optimum outcome for all the parties involved. The project manager has to ensure that the project results satisfy the relevant interested parties. This also applies to any changes agreed during the course of the project. Whilst focusing his attention on results, the project manager still needs to maintain an awareness of and react to any ethical, legal or environmental issues that affect the project. In the case of studied project the result orientation was focused on analyzing the advantages of alternation cycle education on the example of CEFA "Guatanfur" and comparing with the traditional system of education.
- *Negotiations (2.11.)* are the means by which parties can resolve disagreements concerned with the project or programme to arrive at a mutually satisfactory solution. A well developed ability to negotiate can help the project manager to avoid real conflicts. The professor in the alternating cycle education has to negotiate not only with the students, but also with the other actors of the educational cycle, like parents, responsables for students formation, representatives of the social neighborhood, administratives, team work with other professors. etc.

2.3. Contextual competence elements

This section covers the contextual competence elements. They describe the concepts of project, programme and portfolio and the linkage between these concepts and the organization or organizations that are involved in the Project (Table-3).

Table-3. Contextual competence elements.
Source: ICB - IPMA Competence Baseline Version 3.0

3.01.	Project orientation	3.07.	Systems, products and technology
3.02.	Program orientation	3.08.	Personnel management
3.03.	Portfolio orientation	3.09.	Health, security, safety and environment
3.04.	Project, program and portfolio implementation	3.10.	Finance
3.05.	Permanent organization	3.11.	Legal
3.06.	Business		

- *Project orientation (3.01.)* is the term used to describe the orientation of organizations to managing by projects and the development of project management competence (evaluation of impacts). In assessing the impact of training in alternation of CEFA "Guatanfur", the followings are considered as evaluation criteria:
 - Relevance of the education system to the local rural conditions and demands of the population – employment of the graduates and their impact to local development.
 - Impact of each person served – the local actors could be integrated not only in professional context but particularly in the family itself, and by thus in the territory in general.
 - Sustainability of agriculture and rural development – the trainees live and work at their own territories, which leads to the sustainable development of rural area.

3. The methodology for evaluating the impact of alternation cycle education and the importance of competences in analyzing the educative projects

The methodology of evaluating the alternation cycle education gives the chance to evaluate the results of training in the view of local development and wellness of local community.

The *objectives* of the evaluation are:

- indicating that alternating cycle education in comparing with traditional educational system, leads for local development and considers the needs of local environment at the applied territories;
- indicating the impact validity of the alternation cycle education - both for local beneficiaries and local environment;
- verifying the impact of the studied educational system for local development and sustainable agriculture in the region;

The *criteria*s of the evaluation are described in the following:

- Relevance of the pedagogical system to the needs and conditions of the local environment;
- Impact of the individuals not only in socio-professional sphere, but in their livelihoods and local territories;
- Sustainability for agriculture and rural development;

The evaluation was held on the base of the interviews specially designed for the graduates of these schools, that have graduated at least five years before. Thus, for the criteria of relevance, five indicators on the variables "employment" and "local development" were defined. For the criteria of impact, eleven indicators on the variables "employment", "family situation" and "local development". For the criteria of sustainability, six indicators on the variable "permanence in the environment" were defined. In the studied case, the validation of this methodology of analysis is applied on the first 102 graduates of the first two alternating cycle schools in the Philippines (called "Family Farm Schools", FFS) and on the first 40 graduates of the first alternating School in Colombia (called "Centro de Formación Familiar por Alternancia", CEFA). All of them finished their five years of secondary technical studies in 1996 and were evaluated in 2002. As "control group", the data of the graduates were taken from two colleges of Fusagasuga - for the case of Colombia - and from two colleges of Lipa - for the case of the Philippines - that use traditional pedagogy. The results of applying the defined indicators are shown in the Table-4.

Table 4: The results of validation of impact evaluation methodology in the cases of Philippines (Batangas FFS) and Colombia (CEFA).

Source: GARCÍA-MARIRRODRIGA, R. 2002.

UNIT	INDICADOR	COLOMBIA	PHILIPPINES
%	Response rate	100	98
%	Adequate training received (very high/high level)	100	96
%	Job insertion in the environment (indicates the rate of permanence due to job insertion)	100	86
%	Job satisfaction (very high/high level)	82.5	87
No.	Projects developed by the school association	6	56
%	Graduates' participation in the institutions or activities for encouraging the environment	72.5	88
%	Total job insertion	100	98
%	Improvement in the quality of family nourishment	82.5	91
%	Improvement in the quality of family housing	87.5	78

No.	Innovations on the job	20	93
No.	Improvement projects of their own family business	35	84
%	Participation in the activities of the school association	75	66
%	Uses that incorporate new technologies	60	46
%	Graduates that formulate projects	100	90
No.	Services' projects rendered to the local community	7	18
%	Graduates that think that the processes of development are favoured with received training	90	86
No.	Uses that achieve sustainable practices	19	73
%	Quality and stability of employment (very high/high level)	87.5	71
No.	Total projects in motion	52	113
%	Uses of diversifying activities towards non agricultural	45	53
No.	Non-beneficiary uses that imitate sustainable practices developed by beneficiaries	12	89
%	Level of assistance of graduates' projects by schools' trainers	90	67
%	Graduates who are members of the council of schools association	10	29

After analyzing the two educative projects – in Colombia and Philippines – in the vision of the IPMA competence elements, we could offer some suggestions that could be applied in analyzing any kind of other projects in this direction. Firstly, it is very important to divide the analyzed projects to the three parts, that could refer to the three spheres of competences – technical, behavioral, contextual.

As it seen, mostly in all projects, no matter to their subject, the technical competence elements are the most important ones, because they help to make the foundation or the structure of the projects. The issues like project objective, requirements, results are the bases on which founds any kind of projects.

For the other hand, in the projects that were analyzed in this paper, the second sphere of competences – behavioral competences – is considered as the most import one. This is because of the educational direction of the analyzed projects. Here, the important role in applying the projects is dedicated to the teachers or professors. They are the main actors in bringing the written projects to life, their attitude to the students and mostly their professional profile is the base element in evaluating the effectiveness and the results of the educative projects.

Finally, in analyzing the contextual competence elements, the emphasis was given to the analysis of the context of the proposed educational system – its relevance to the local conditions, differences with the traditional one, etc.

4. Conclusions

The alternation cycle education system satisfies the demands and considers the needs of the young people in the developing countries by strengthening individuals, rural families and communities in rural areas. The proposed methodology for evaluating the impact of the alternation cycle education showed its validation in the following results.

In reference to the control groups, the graduates of CEFA (Colombia) showed a 233% higher job insertion than the colleges with the traditional system. In the case of the Philippines, the rate is 104 % favorable to the FFS.

Regarding the improvement of family livelihood level due to the alternation cycle education, 82.5 % of graduates of the CEFA (Colombia) and 91 % of graduates of the FFS (Philippines),

answered affirmatively. The crop diversification in their own family farms brings to enrichment of the daily diet, and thus permits for improvement of quality of rural life.

That is to say, that the alternation cycle education is valid thanks to the educative methods and especially the teachers' profiles, who not only give knowledge to the students, but also encourages them to find their occupation regarding their interests in their own living areas. Thus, it can be affirmed that the training through alternating has a high relevance in order to favor employment, the improvement of the quality of life and the putting in motion the local development processes with an impact on sustainability of the rural environment. All these contribute to food security and to improve food quality.

References

- ARBOS A. 2003 *"Hacia un modelo sistémico de evaluación del sistema educativo"*. OEI-Revista Iberoamericana de Educación (ISSN: 1681-5653)
- BID. 2000. *"Capacitación profesional y técnica: una estrategia del Banco Interamericano de Desarrollo"*. Washington.
- CAUPIN G., KNOEPFEL H., KOCH G. and editorial comité. 2006. *"ICB IPMA Competence Baseline Version 3.0"*, IPMA International Project Management Association, Nijkerk.
- GARCÍA-MARIRRODRIGA, R. 2002. *"La formación por alternancia en el medio rural: contexto e influencia de las MFR sobre el desarrollo local de Europa y los PVD. Modelo de Planificación y aplicación al caso de Colombia"*. Tesis Doctoral publicada en el Archivo Digital de la Universidad Politécnica de Madrid. Madrid.
- GARCÍA-MARIRRODRIGA, R. 2003a. *"La fase de viabilidad en la planificación de proyectos de educación rural por alternancia"*. Actas del VII Congreso Internacional de Ingeniería de Proyectos. AEIPRO. Pamplona.
- GARCÍA-MARIRRODRIGA, R. 2003b. *"Sostenibilidad de la agricultura y equilibrio territorial. Aportaciones de la educación rural en Europa y América Latina"*. Actas del V Colóquio Hispano-Português de Estudos Rurais. Bragança, 2003.
- GARCÍA-MARIRRODRIGA, R. 2004. *"Enhancing Sustainable Development Processes in Rural areas through Alternating Cycle Education. Some cases in Latin America"*. Proceedings of the VIII European Society for Agronomy Congress ("European Agriculture in a global context"). Copenhagen.
- GARCÍA-MARIRRODRIGA, R. & DE LOS RÍOS, I. 2005a. *"La formación por alternancia y el desarrollo rural en América Latina. El caso de Colombia"*, in Revista de Estudios Geográficos, vol. LXVI, no 258, pp. 129-160, enero-junio 2005. CSIC. Madrid.
- GARCÍA-MARIRRODRIGA, R. 2005b. *"Nueva Ruralidad y capital social: una visión desde los proyectos de educación por alternancia en áreas rurales de América Latina"*. Actas del IX Congreso Internacional de Ingeniería de Proyectos. Universidad de Málaga y AEIPRO. Málaga.

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