ZACHMAN ARCHITECTURE-BASED EDUCATION SERVICE DELIVERY

ALEJANDRO DOMÍNGUEZ
JADOMING@MAIL.UNITEC.MX
(+52+55) 5128-1308

SCHOOL OF POSTGRADUATE STUDIES
UNIVERSIDAD TECNOLÓGICA DE MÉXICO
MARINA NACIONAL 500, COLONIA ANÁHUAC
C.P. 11320, MÉXICO CITY
MÉXICO

Keywords: Education, policies, service, Zachman architecture, 5WH scheme.

ABSTRACT

Education service delivery represents a challenge for any academic institution since there must satisfy academically and administratively both students and lecturers. In delivering this kind of service, academic institution personnel must have a sort of particular expertise to guarantee education excellence, otherwise service delivered would be limited to certain activities. This is not the case if expertise of institution in a particular level is either poor or null. So the main question to be answered in delivering education service is what an institution of education should do to implement, operate, monitor, supervise, and control service in order to pass from the achievement of opening requirements to satisfy students' expectations. Answering this question also lets institution satisfy the accreditation criteria of external entities (when required) as well as standardise education service when implemented and operated in other sites.

One way of proceeding to answer such a question is firstly to identify a set of functional institution areas that are directly related to service delivering. These functional areas have to be identified precisely in order to establish their participation in planning, implementing, and operating education service. As a second step, each area is fully described if it is used a 5WH scheme (What, Where, Who, When, Why, and How). This description leads to a Zachman architecture (matrix) for education service, in which rows represent functional areas and columns represent elements of the 5WH scheme. After filling each Zachman matrix cell and analysing each column as a whole it is derived a set of representative policies to deliver education service. In order to illustrate an application of method and policies so derived to a real case, an example of the corresponding policies is shown for a postgraduate education service in a Mexican private university.

EDUCATION SERVICE IN PERSPECTIVE

Students are and must be the main reason of being for any institution dedicated to provide education at any level. For higher education institutions this reason is vitally important since in them students are provided of knowledge, and acquire abilities and capabilities to develop successfully their professional life. Without students there is no reason for having lecturers, syllabus, courses, classrooms, laboratories, technology, and staff. On the basis of this perspective, education service must be understood as the result of the actions of the institution, and their composite functional areas, to satisfy the requirements of academic formation of its students.

In order to offer this education service, an institution has to satisfy a set of preliminary requirements which depend on if the institution is either public or private based. These requirements are, in any case, related to people, information, processes, and infrastructure and technology.

Once the institution has satisfied these requirements, the responsibility of implementation and operation of educative service depends on the actions of some functional areas which have a direct contact with students. Although implementation and operation are monitored, supervised, and controlled by the institution, results are visualised when students and alumni either promote or not education service offered. A more concrete way of visualising results of the provided education service is when the institution is subject to a self-evaluation and then to an evaluation by external certification entities.

In any case, once the institution receives feed-back, it has to perform modifications and corrections recommended. In This way, the main question to be answered is:

> **What should an institution of education do to implement, operate, monitor, supervise, and control its provided education service in order to pass from the achievement of opening requirements to satisfy students' expectations, and consequently also satisfy the accreditation criteria of external entities?**

In such a situation, an answer to this question is to develop a theoretical and practical based model to deliver education service and, from it derive a set of policies in order to have a first approach to education service activities standardisation. In fact, some authors point out (Álvarez Torres, p.27) that "every institution, either conscious or not, are ruled by written or not written policies".

However in many institutions of education that set of policies do not always exist. Moreover, in some cases when these policies exist, they are not always built on a solid structure, and in another cases they are not attached to service requirements.

OBJECTIVES

From discussion so far, in order to deliver education service it is necessary to carry out the following objectives:

- To abstract from reality and to create an appropriate model to offer education service.
- To write a set of general policies to offer education service.

Both model and policies derived from it acquire more value if they are put in practice for a particular case; even more, if they are easy to transfer to similar environments. Thus a third objective is:

- To show an example of the corresponding policies for a postgraduate education service.

A MODEL TO OFFER EDUCATION SERVICE

Before defining the model to be used as a basis for enouncing education service policies, it is necessary to identify entities (people, departments or functional areas) and their corresponding responsibilities related to service. Reconsidering ideas given by John Zachman (Zachman) for education service case, in an education institution may be distinguished entities described in Table 1.

Table 1. Entities for education service.

ENTITY	DESCRIPTION
ACADEMIC PLANNING ENTITY	It detects the society requirements related to education service and also defines its scope when service is on implementation and operation phases.
ACADEMIC DEVELOPMENT ENTITY	It conceptualises, defines, and develops education model to be put in practice when the service is on implementation and operation phases.
IMPLEMENTATION ENTITY	It defines the logic to offer education service when it is on implementation and operation phases.
ACADEMIC COORDINATION ENTITY	It defines how education service is operated in practice
LECTURERS	It offers directly education service and is in contact with the user of this service.
STUDENTS	It uses education service.

Functions performed by these entities is completely established if for each one can be defined all participation aspects on education service. For it, it must define the following question indicators (Álvarez Torres p.32, Zachman) given by the well known 5WH scheme: What (data), How (processes), Where (place), Who (entities, infrastructure, technology), When (time), and Why (motivation). Description of them is shown in Table 2.

Table 2. Question indicators: 5WH scheme.

QUESTION INDICATOR	DESCRIPTION
WHAT (DATA)	It is data to define and understand education service requirements.
HOW (PROCESSES)	They are processes to translate education service requirements into more detailed implementation and operation definitions.
WHERE (PLACE)	It is related to physical distribution of places where education service will be implemented and operated.
WHO (ENTITIES, INFRASTRUCTURE, AND TECHNOLOGY)	It defines who is related to education service, and also defines infrastructure and technology required to implement and to operate it.
WHEN (TIME)	It describes how time perturbs education service.
WHY (MOTIVATION)	It translates education service strategies and objectives into specific meaning.

If both entities and question indicators are arranged as a matrix where rows represent entities and columns represent questions indicators, then it is obtained a model containing information to be present in education service delivery. This is shown in Figure 1.

It is important to notice that in this model (DVA-US):

- Every row represents a different view of education service.
- Every column is complementary to each other.
- Every cell is unique and complementary to each other.
- Combination of cells on a row is a complete description of each education service view.

Filling cells is not an easy task and requires having a complete view of education service. If not, it may be a problem to define the required policies; in fact, it may be obtained a partial or misinterpreted set of policies. For filling cells it is invoked author expertise and ideas established in DVA-US, Hay-a y Zachman. This filling is shown in Figure 1.

It is important to notice that information contained in each cell may be considered as a minimum unit of information to be used to create policies and it has the following properties:

- It is common for any education service offering.
- It generates new information about education service.
- It is time independent.
- It is replicable on other contexts with no lose of meaning.

Thus, according with Richard Dawkins' definition (Wikipedia-Meme), each cell may be considered a "meme". Hence, model of Figure 1 allows to:

- Visualise information to be integrated in the offering of education service.
- Give a fine detail of responsibilities of each participating entity in the offering of education service (Hay-b).
- Provide distinctive views of education service (Hay-b).

Figure 1. Model to offer education service.

	WHAT (DATA)	HOW (PROCESSES)	WHERE (PLACE)	WHO (ENTITIES, INFRASTRUCTURE, TECHNOLOGY)	WHEN (TIME)	WHY (MOTIVATION)
ACADEMIC PLANNING ENTITY (CONTEXTUAL MODEL)	List of society requirements important to define education service	List of general processes to offer education service	List of places where education services will be implemented and operated	List of participating and significant entities, infrastructure, and technology to offer education service	List of significant events to offer education service	List of objectives and strategies to offer education service
ACADEMIC DEVELOPMENT ENTITY (CONCEPTUAL MODEL)	Semantic model of requirements to offer education service (Programme Plan and Syllabus)	Process model to offer education service	Relational model among places where education service will be implemented and operated	Workflow model to offer education service	Event model to offer education service	Plan to offer education service
IMPLEMENTATION MODEL (LOGIC MODEL)	List of general internal requirements to offer education service	Application architecture to offer education service	Distribution architecture of places where education service will be implemented and operated	Interaction architecture among participants in offering education service	Event architecture to offer education service	Rules model to offer education service
ACADEMIC COORDINATION MODEL (PHYSICAL MODEL)	List of specific internal requirements to offer education service	Implementation and operation navigation diagrams to offer education service	Relationship diagram of places where operation service will be implemented	Interaction diagram among participants in offering education service	Event diagram to offer education service	Rule design to offer education service
LECTURERS (DETAILED MODEL)	Requirements fulfil	Detailed process to implement and operate syllabus components	Places versus lecturer assignation	List of lecturers, lab equipment, and technology	Time-table	Objectives of courses
MEETING POINT OF EDUCATION SERVICE						
STUDENTS	Reception and assimilation of course topics	Processes to develop assignments, task, and lab practices	Attend classrooms, labs, library and other facilities	Interaction with classrooms, labs, library and other facilities	Attend time-table	Need of education service

Rows in Figure 1 represent points of view of different participating entities in education service delivery, while columns represent different aspects of this delivery. The view of each entity is ([Hay-b](#)) shown in Table 3.

Table 3. Views of participating entities to offer education service.

ENTITY	EDUCATION SERVICE VIEWS
ACADEMIC PLANNING ENTITY (CONTEXTUAL MODEL)	It is the strategic view of education service. It is needed to establish the context of any offering service effort.
ACADEMIC DEVELOPMENT ENTITY (CONCEPTUAL MODEL)	In terms of education service, this view defines the nature of service, including its structure, functions and organisation.
IMPLEMENTATION ENTITY (LOGIC MODEL)	It describes the conceptual model in a logic way.
ACADEMIC COORDINATION MODEL (PHYSICAL MODEL)	It describes how resources are to be used according to information obtained from previous models.
LECTURERS (DETAILED MODEL)	It translates academic programmes and relationships among them into information understood by students.
STUDENTS	It is the user's view of education service.

POLICIES TO OFFER EDUCATION SERVICE

As it was pointed out above, policies have to include information from each cell in Figure 1. However either this information is not always explicitly present on daily basis or, when present, is on a number of documents belonging to different functional areas.

On the other side, it is important to notice that the responsibility at the moment of offering education service is not the same for each participating entity (see Table 1). In fact, this responsibility vanishes gradually from Lecturers to Academic Planning entities. Thus policies must be controlled by the academic authority closer to students. In this case such an entity is Academic Coordination Entity, and supervised by Implementation Entity.

Since Academic Coordination agglutinates policies information and, at the same time, is responsible of implementation and operation of models derived from other entities, it is very important that the Academic Coordination Entity generates a unique manual containing these policies. Three more reasons to create this manual are:

- In case there is a doubt about how to manage a problem related to education service; manual can be consulted, look on it for policy or policies related to the problem, and then apply them.
- Manual can be used as a tool to behave and proceed when similar cases come out.
- Manual can be used as a reference to standardise education service when implemented and operated on other locations.

Of course, manual structure must have a more logical order than that of structure shown in Figure 1. In fact, in looking up policies, it is more convenient if they have an order according to implementation and operation in time of education service. Hence, columns (question indicators) must be ordered starting with Motivation (Why), and followed by Data (What), Places (Where), Time (When), Entities (Who), and then Processes (How). This order and its associated derived policies are shown in Table 4. It is important to point out that in derivation of policies associated to a same column, they have to be complementary among them and their description must be at the same level of complexity.

Table 4. Question Indicators and policies.

QUESTION INDICATOR	ASSOCIATED SET OF POLICIES
WHY (MOTIVATION)	Policies related to type, mission, and vision of education service.
WHAT (DATA)	Policies related to public information of education service. Policies related to promotion of education service.
WHERE (PLACE)	Policies related to where education service is offered.
WHEN (TIME)	Policies related to when education service is offered.
WHO (ENTITIES, INFRASTRUCTURE, AND TECHNOLOGY)	Policies related to who manage academic coordination. Policies related to student candidates, and students. Policies related to lecturer candidates, and lecturers. Policies related to requirements and use of infrastructure and technology.
HOW (PROCESSES)	Policies related to programme management, courses and syllabus. Policies related to monitor and control of education service. Policies related to finishing education service. Policies related to other academic processes.

In practice, policies must be written using a straightforward, homogeneous and plain language style. Moreover, for some of them there should be attached documents providing more information about their meaning. Of course, policies manual must contain some paragraphs containing about their context, control, and general management (Álvarez Torres). This last information is important since provides an application and use framework.

MODEL FEATURES

Matrix obtained by crossing entities with questions indicators is known in literature as Zachman Architecture (Zachman) and it has been documented widely (AdCom, DVA-US, Hay-a, Hay-b, Zachman). There are a number of applications of it; some of them are Health Care, Municipal Government, Logistics, and Information Technology (AdCom). However, nowadays it seems there is no documented application of it to create a model to deliver education service and its associated policies.

A Zachman-type architecture, like that shown in Figure 1, has many features. Some of them are (AdCom):

- **It communicates**. It allows communication among participants related to education service.
- **It agglutinates**. It allows making components of education service stay glued together as a whole.
- **It is simple**. Its structure is not technical but logical: go from basic notions to detail description and use.
- **It is expressive**. It helps communicating in a non-technical precise way complex concepts about education service.
- **It helps planning**. It allows taking better decisions in planning education service.
- **It is a problem solving tool**. It enables abstraction and simplification without neglecting the complexity of the education service as a whole.
- **It is "product" neutral**. It does not depend on any methodologies or tools.

Notice that these features are inherited to rows, columns, and cells. Moreover, these features allows concluding that if there is not policies to deliver education service, there may exists conflicts, misunderstandings, preferences, and restlessness inside Academic Coordination and Implementation Entities since there could be a particular interpretation of some "over-understood policies".

POLICY MANUAL EXAMPLE

A simplified example of policy manual is shown on Appendix below. Such a manual was created for delivering education service on postgraduate level in a Mexican private university. Structure of this manual is shown in Table 5 (according with Table 4). An early version of it helped performing a self-assessment on postgraduate area, as well as to approve a certification evaluation performed by an external entity. Moreover, manual has been used as a reference to standardise education service when implemented and operated in other university campi.

Table 5. Manual structure example: Policies to deliver postgraduate programmes.

1. Policy context
2. Policy control
   2.1. Controlling functional area
   2.2. Review controls
3. Policy management
   3.1. Policies application functional areas
   3.2. Policies purpose and scope
   3.3. Policies application responsible
   3.4. Distribution list
   3.5. Preliminary definitions
4. Policy statements
   4.1. Policies related to type, mission, and vision of postgraduate programmes
   4.2. Policies related to public information of postgraduate programmes
   4.3. Policies related to promotion of postgraduate programmes
   4.4. Policies related to where postgraduate programmes are offered
   4.5. Policies related to when postgraduate programmes are offered
   4.6. Policies related to academic coordination manager
   4.7. Policies related to student candidates, and students
   4.8. Policies related to lecturer candidates, and lecturers
   4.9. Policies related to requirements and use of infrastructure and information technology
   4.10. Policies related to postgraduate programmes management, courses and syllabus
   4.11. Policies related to operate, monitor and control of postgraduate programmes
   4.12. Policies related to finishing postgraduate programme studies
   4.13. Policies related to other academic processes

As usual, application of these policies has permitted to revise them, to assess them, and improve them. Particularly, policies have permitted to that Mexican university:

- Acquire criteria to act in similar events occurring when offering education service.
- Make easy to take decisions on recurrent events when offering education service.
- Act as a self-defined entity when offering education service.
- Accelerate and improve quality in activities related to education service.

During implementation and use of policies, Academic Coordination Entity have adopted a disciplined attitude, and in cases where logic and reason command to take action in a different way as policies say, both entities agree what to do in such cases, always avoiding repeat similar actions to same people or entity.

Finally, and in order to save space and go directly to statement of policies, example described in Appendix omits account from point 1 to point 3.

CONCLUSION

Delivering education service is not an easy task if there are no policies to guarantee a minimum of accomplishment. In most of cases, policies are created once that experience is gained by an education institution. However in order to gain this experience a considerable number of trials and amount of time is required. A more effective and efficient way of creating policies for education service is to derive them from a proved and documented model.

Although it seems that Zachman Architecture model has not been used yet to deliver education service, it has been proved to be useful to deliver other kind of services, such as those related to information technology. Its usefulness is due to it is based on well established organisational and practical views as well as on 5WH scheme, which in turn helps describing precisely any abstract or concrete entity.

Thus, as it was shown herein, using a Zachman-based model helps reducing misunderstandings and setbacks in producing a set of policies useful to delivering and standardising education service in any education institution, and particularly in those offering postgraduate programmes.

REFERENCES

AdCom (Administrative Computing Services). *Zachman Framework Applied to Administrative Computing Services*. http://apps.adcom.uci.edu/EnterpriseArch/Zachman. Visited on April 2006.

Álvarez Torres, M. Manual para Elaborar Manuales de Políticas y Procedimientos. Editorial Panorama. México, 2001.

DVA-US (United States Department of Veteran Affairs). *A Tutorial on the Zachman Framework for Enterprise Architecture*. http://apps.adcom.uci.edu/EnterpriseArch/Zachman/Resources/ZachmanTutorial.ppt. Visited in april 2006.

Hay-a, D. C. *A Different Kind of Life Cycle: The Zachman Framework*. www.essentialstrategies.com/documents/zachman2000.pdf. Visited in april 2006.

Hay-b, D. C. *The Zachman Framework: An Introduction*. www.tdan.com/i001fe01.htm. Visited on April 2006.

Wikipedia-Meme. *Meme*. http://es.wikipedia.org/wiki/Meme. Visited on April 2006.

Zachman, J.A. *A framework for Information Systems Architecture*. IBM Systems Journal, Vol. 26, No. 3, 1987.

APPENDIX: POLICIES TO DELIVER POSTGRADUATE PROGRAMMES

1. POLICY CONTEXT

Omitted

2. POLICY CONTROL

Omitted

3. POLICY MANAGEMENT

Omitted

4. POLICY STATEMENTS

4.1. POLICIES RELATED TO TYPE, MISSION, AND VISION OF POSTGRADUATE PROGRAMMES

1. All of entities (Academic Planning, Academic Development, Implementation, Academic Coordination, and Lecturers) participating in delivering postgraduate programmes must have a copy and read the document "**Type, Mission, and Vision of Postgraduate Programme**s" which state:

    *   Type of Postgraduate Programmes offered by the University according to Government classification.
    *   Mission and Vision of Postgraduate School.

2. All of entities participating in delivering postgraduate programmes must have a copy and read the document "**Postgraduate Regulations Handbook**".

4.2. POLICIES RELATED TO PUBLIC INFORMATION OF POSTGRADUATE PROGRAMMES

3. There must be soft (electronic) and hard (paper) public information related to postgraduate programmes.
4. Soft information (electronic) for each postgraduate programme must be accessed from the main university Internet site.
5. Hard information (paper) for each postgraduate programme must be printed in a brochure.
6. Both soft and hard information must be coincident for each postgraduate programme.

4.3. POLICIES RELATED TO PROMOTION OF POSTGRADUATE PROGRAMMES

7. There must be a term promotion plan to offer postgraduate programmes which must be described in document "**Term Promotion Plan to Postgraduate Programmes**".
8. Promotion plan must consider promotion through the following media:

    *   Electronic mail.
    *   Specialised periodic journal.
    *   Newspapers.
    *   Kiosks in fairs related to postgraduate programmes.

4.4. POLICIES RELATED TO WHERE POSTGRADUATE PROGRAMMES ARE OFFERED

9. Postgraduate programmes can only be offered in campi previously approved by the Postgraduate University Board (Academic Planning, Academic Development, Academic Director and Academic Coordinator entities) and by the Government Education Authority.

4.5. POLICIES RELATED TO WHEN POSTGRADUATE PROGRAMMES ARE OFFERED

10. Postgraduate programmes must be offered in time terms approved and defined by Postgraduate University Board.

4.6. POLICIES RELATED TO ACADEMIC COORDINATION MANAGER

11. Postgraduate Academic Coordination Manager must agree to requirements established in document "**Postgraduate Academic Coordination Manager Job Description**".

4.7. POLICIES RELATED TO STUDENT CANDIDATES, AND STUDENTS

12. Postgraduate student candidates must fulfil requirements established in document "**Criteria and Requirements to be Accepted as Postgraduate Students**"
13. The registry process to a postgraduate programme must be performed without setbacks and, when needed, Academic Coordination Manager must help solving arisen problems.
14. All of postgraduate students (accepted postgraduate candidates) must have a copy and read the document "**Type, Mission, and Vision of Postgraduate Programmes**".
15. All of postgraduate students must have a copy and read the document "**Postgraduate Regulations Handbook**".
16. In course choosing, students must be advised by Academic Coordination Manager.

4.8. POLICIES RELATED TO LECTURER CANDIDATES, AND LECTURERS

17. All of postgraduate lecturer candidates must fulfil requirements established in document "**Criteria and Requirements to be Accepted as Lecturer**"
18. Academic Coordination Manager must interview with lecturer candidates. In this interview Academic Coordination Manager must:

    - Provide the syllabus of course to be lectured
    - Evaluate knowledge and attitude based on a question-answer method related to course to be lectured. Points to be addressed are

        o Academic status of postgraduate studies (degree obtained and university where studied).
        o Academic lecturing experience at postgraduate level.
        o General knowledge about topics of course to be lectured.
        o Professional experiences about topics of course to be lectured.
        o Knowledge and experience of new topics about course to be lectured.
        o Knowledge about classical and new bibliographical references about course to be lectured.
        o Knowledge and use of information technology related to course to be lectured.

19. Academic Coordination Manager must guarantee that each course has an assigned lecturer.
20. All of lecturers must have a copy and read the document "**Type, Mission, and Vision of Postgraduate Programmes**".
21. All of lecturers must have a copy and read the document "**Postgraduate Regulations Handbook**".

4.9. POLICIES RELATED TO REQUIREMENTS AND USE OF INFRASTRUCTURE AND INFORMATION TECHNOLOGY

22. Infrastructure and information technology for postgraduate programmes must hold requirements established in document "**Infrastructure and Information Technology Description for Postgraduate Programmes**".

4.10. POLICIES RELATED TO POSTGRADUATE PROGRAMMES MANAGEMENT, COURSES AND SYLLABUS

23. Academic Coordination Manager must plan with lecturers the use of infrastructure and technology associated to the respective course. This planning must be aligned with objective established in each postgraduate programme as well as the course syllabus.

24. At the beginning of each academic period, Academic Coordination Manager must organise a welcome and induction to postgraduate programmes short session to new students, and in it there must be present Academic Director, Academic Coordination Manager, and Lecturers.
25. As part of welcome and induction session, Academic Coordination Manager must explain and deliver to students the following documents: "**Induction to University**", "**Induction to Postgraduate Programmes**", "**Postgraduate Regulations Handbook**", and the corresponding "**Programme Course Syllabus**".
26. Before the first lecture of each academic period, Academic Coordination Manager must organise a previous meeting with lecturers in order to clarify any topic about courses and other related topics. In this meeting Academic Coordination Manager must deliver to each lecturer a preliminary list of students.
27. At the first lecture of each course, Academic Coordination Manager must introduce lecturer to students.
28. At the first lecture of each course, lecturer must deliver to students a copy of topics to be covered in the course and the way they will be assessed.

4.11. POLICIES RELATED TO OPERATE, MONITOR AND CONTROL OF POSTGRADUATE PROGRAMMES

29. Academic Coordination Manager is responsible for operating, monitoring, and controlling postgraduate education service.
30. Academic Coordination Manager must monitor continuously the delivery of academic and administrative aspects of postgraduate programmes. Academic monitoring is to:

- Prevent and detect any setbacks limiting performance of lecturers and students.
- Propose, agree and follow course improving actions.

31. Before ending each term, Academic Coordinator Manager must invite students to assess performance of lecturers using the document "**Template for Assessment of Lecturers**".
32. If a lecturer obtains a low qualification, then (s)he must not be included for lecturing next term.

4.12. POLICIES RELATED TO FINISHING POSTGRADUATE PROGRAMME STUDIES

33. If required by postgraduate programme:

- Before ending postgraduate programme studies, Academic Coordination Manager must help students choosing a thesis supervisor according with thesis topic to be developed.
- In developing thesis document, Academic Coordination Manager and elected student's supervisor must assure student follows guidelines indicated in documents "**Postgraduate Thesis Creation Handbook**" (related to theoretical and experimental topics), "**Style Guide to Creation and Presentation of Postgraduate Thesis**" (related to writing aspects), and "**Format Guide to Creation of Thesis**" (related to format aspects).
- Before ending postgraduate programme, Academic Coordination Manager must assure that all of students finish the corresponding postgraduate thesis.

34. Academic Coordination Manager must deliver to students a copy of the following document: "**Requirements and Process to Obtain Postgraduate Degree**".

4.13. POLICIES RELATED TO OTHER ACADEMIC PROCESSES

35. Academic Coordination Manager and lecturers must agree other academic activities such as: conferences, publication of development and research papers, and link with professional associations and universities.

***** End of Policies *****