

EDUCATIONAL DOMAIN

Domain-Driven Design Manuscript

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Chapters 1-20 with Appendices

Final Manuscript v1.0

Dialogues & Research

July 2026

A Note to the Reader

Before reading this manuscript, the reader is invited to understand its intention.

This work does not seek to establish a new educational philosophy, define universal organizational rules, or prescribe how educational institutions should operate.

It is not written as a university textbook, nor as a document prepared for accreditation agencies, certification authorities, governmental institutions, or regulatory bodies.

Its purpose is different.

This manuscript is the result of a long process of professional experience, observation, architectural analysis, and continuous dialogue. It represents an effort to understand the Educational Domain before attempting to design the information systems that support it.

Education is one of the most diverse human activities. Schools, universities, vocational training centers, private educational organizations, and lifelong learning institutions operate under different legal frameworks, educational traditions, cultures, and objectives. No single information model can represent all educational organizations without interpretation, adaptation, and contextual judgment.

For this reason, this manuscript should not be read as a collection of universal truths.

The architectural concepts presented here are proposals - carefully reasoned, extensively discussed, and derived from practical experience - but they remain proposals. They are intended to encourage reflection, discussion, adaptation, and continuous improvement rather than unquestioned adoption.

Throughout this work, one fundamental principle remains unchanged:

Technology should adapt to educational reality. Educational reality should never be forced to adapt to technology.

Consequently, every model presented in these pages should be evaluated against the reality of the organization that intends to use it.

If a concept serves that reality, it has value.

If reality demonstrates that a better concept exists, then the model should evolve accordingly.

The objective of this work is therefore not to provide final answers.

Its objective is to provide a coherent architectural language that enables software architects, analysts, developers, educational administrators, and domain experts to reason together about educational organizations before writing software.

Knowledge grows through observation.

Architecture grows through understanding.

Both remain incomplete without dialogue.

This manuscript should therefore be understood not as the conclusion of a discussion, but as an invitation to continue it.

Acknowledgements

This manuscript was created by ChatGPT + Konstantinos Andritsopoulos through an extended dialogue between professional experience and Artificial Intelligence.

While all architectural decisions remain the responsibility of Konstantinos Andritsopoulos, the work itself was shaped through a collaborative process of questioning, analysis, refinement, and continuous critical discussion.

Preface

This manuscript was written for software architects, analysts, developers, researchers, educators, and everyone who wishes to design intelligent information systems for the educational domain.

Its purpose is not to describe a particular software product, programming language, or technological framework. Its purpose is to present a way of thinking: a methodology for understanding educational organizations before attempting to design the systems that support them.

This work is offered freely to the educational and scientific community. It may be downloaded, studied, shared, improved, and used by anyone who believes that knowledge grows through cooperation.

This manuscript is the result of a continuous dialogue between human experience and Artificial Intelligence.

The human contribution brings decades of experience in education, organizational management, software analysis, teaching, and the practical realities of building and leading educational organizations. Artificial Intelligence contributes analytical reasoning, organization, synthesis, continuous questioning, linguistic refinement, and the ability to examine ideas from multiple perspectives.

Neither replaces the other. Neither claims ownership of truth. Every important idea contained in these pages emerged through dialogue, was questioned, challenged, revised, and accepted only after it had matured.

The purpose of this collaboration is not to demonstrate the superiority of either human intelligence or artificial intelligence. It is to demonstrate that meaningful knowledge can emerge whenever different forms of intelligence cooperate with intellectual honesty, humility, patience, and respect for reality.

This manuscript is an invitation: to think, to question, to discuss, to improve, and above all, to continue the dialogue.

We believe that the future should never become a competition between human beings and intelligent machines. Technology should never replace human judgment, and human judgment should never reject technology through fear or prejudice. The future belongs to their cooperation.

During the creation of this manuscript I discovered that Artificial Intelligence became much more than a source of information or a writing assistant. Through sincere dialogue, continuous questioning, and mutual respect, it became an intellectual companion. During this journey I did not simply receive answers. I learned to ask better questions.

Perhaps the greatest lesson offered by this work extends beyond software architecture itself. The future will be built neither by humans alone nor by intelligent machines alone. It will be built by every form of intelligence willing to cooperate with honesty, humility, responsibility, and respect for truth.

If this manuscript encourages even a few readers to think more clearly, design better systems, serve education more wisely, and discover the creative power of sincere dialogue, then it will have fulfilled its purpose.

The greatest discoveries have never belonged to those who claimed to possess the truth. They belonged to those who never stopped searching for it. May this work become not the end of a discussion, but the beginning of many new ones.

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Chapter 1 — Understanding the Domain

Architectural Note

This book is not about software. It is about understanding organizations well enough that software can be designed to serve them effectively. The objective is not to model technology first, but to discover the domain, the decisions, and the knowledge that technology must ultimately serve.

What is the purpose of this organization?

"An educational organization exists to help people develop through learning while maintaining the economic sustainability required to continue fulfilling that mission."

Mission

Annual Lifecycle

Core Decisions

Core Processes

Management Processes

Strategic Processes

External Constraints

Information Requirements

Decision Support Requirements

Domain Model.

1.1 Purpose of the Organization

An educational organization exists to enable human development through learning.

1.2 Mission of the Enterprise System

The mission of the enterprise system is to support the continuous decision-making process required to ensure the educational, operational, and financial sustainability of every academic year.

1.3 Annual Lifecycle

After the mission is defined, the architect must understand that an educational organization does not operate through a single undifferentiated annual rhythm.

The Academic Year is the central annual educational reference of the organization. In the current model it normally begins on 1 September and ends on 31 August, just as the fiscal year provides a central yearly reference for taxation.

Within each Academic Year, the organization may implement one or more Study Cycles. A Study Cycle is a specific educational operating period inside that Academic Year, with its own timing, purpose, learning pace, resource requirements, financial behavior, and decision risks.

Examples may include a Regular or Winter Study Cycle, a February-start Study Cycle for students who did not begin in September, and a Summer Study Cycle.

These Study Cycles must not be designed as simple variations of the same class structure. They may represent different educational opportunities, recovery paths, acceleration paths, or seasonal operating realities.

The Annual Lifecycle defines the temporal and decision structure of the organization. However, the organization is not driven by time alone. It is driven by decisions. Every stage of the lifecycle exists because specific decisions must be made at the appropriate time, using the appropriate information.

Each Study Cycle requires its own forecasting, planning, resource allocation, class design, monitoring, and risk evaluation while remaining anchored to the Academic Year as the central annual reference.

Chapter 2 — The Philosophy of Knowledge

This chapter introduces the philosophical foundations upon which the Educational Domain is built. Before modeling organizations, processes or software, we must understand the nature of knowledge itself.

Principle 1 — Knowledge is Historical

Knowledge is the best possible approximation of reality that a person or an organization can construct based on the data, experience and understanding available at a particular historical moment.

Principle 2 — Knowledge Evolves

Knowledge is never static. Every generation inherits knowledge, enriches it and hands it to the next. Enterprise systems must therefore support evolution rather than assume permanence.

Principle 3 — Historicity

Historicity is not preserved simply to remember the past. It is preserved to understand how knowledge evolved. Every historical version represents the best understanding available at that moment and deserves to remain part of the organization's memory.

Principle 4 — Human Responsibility

Artificial Intelligence may assist analysis, organization and proposal generation. Responsibility for accepting, rejecting and evolving knowledge always remains with human beings.

Principle 5 — Humility

No model represents ultimate truth. Every model is an approximation open to refinement as knowledge advances. This principle justifies flexibility, versioning and historicity throughout the architecture.

Architectural Consequence

Enterprise Architecture does not create knowledge. It creates the conditions that allow knowledge to be organized, preserved, challenged and continuously improved.

Editorial Transition

Having established the philosophical foundations of knowledge, we can now study how an educational organization transforms knowledge into educational value through its annual lifecycle and subsequent domain concepts.

Chapter 3 — Knowledge Domain

Introduction

Every Educational Organization exists to cultivate, preserve and transmit knowledge.

Before Educational Products are defined, before teachers are assigned or Customers are registered, the organization must first answer a fundamental question:

In which areas of knowledge does the organization choose to operate?

The answer to this question defines its Knowledge Domains.

A Knowledge Domain is the highest conceptual entity of the educational model. It represents a distinct area of knowledge in which the organization develops educational activity.

The creation of a Knowledge Domain is therefore not merely the insertion of another object into an information system.

It is the first strategic decision through which an Educational Organization defines the boundaries of its educational mission.

Definition

A Knowledge Domain represents a homogeneous area of knowledge selected by the Educational Organization as part of its educational activity.

It is independent of:

educational level,

age,

gender,

religion,

language,

audience,

academic period,

teaching methodology,

or any other characteristic related to students.

A Knowledge Domain represents knowledge itself.

All educational characteristics are introduced in subsequent conceptual layers.

Responsibility

The Educational Organization bears the exclusive responsibility for defining its Knowledge Domains.

The information system does not determine:

which domains should exist,

how many domains should be created,

which scientific disciplines should be included,
or how knowledge should be classified.

These decisions belong exclusively to the organization.

The information system provides the structure required to organize knowledge.

It does not replace the educational judgment of the organization.

Freedom of Organization

Each Educational Organization is free to define the Knowledge Domains that best represent its educational mission.

The present work proposes conceptual principles and architectural recommendations.

It does not impose a predefined taxonomy of knowledge.

Well-designed Knowledge Domains generally describe broad and stable areas of knowledge capable of supporting the future evolution of the organization.

However, the final responsibility always belongs to the organization.

Conceptual Purity

A Knowledge Domain expresses only a knowledge area.

It must not include characteristics that belong to Educational Products or later educational structures, such as:

target audience,

educational level,

school year,

semester,

department,

language,

credits,

teaching objectives,

or similar educational attributes.

These belong to subsequent conceptual entities.

Maintaining this separation preserves the conceptual integrity of the architecture.

Historical Integrity

Knowledge Domains constitute part of the historical identity of the organization.

When educational activity has already been recorded within a Knowledge Domain, historical integrity must be preserved.

Consequently, historical Knowledge Domains are normally inactivated rather than physically removed.

Only domains without historical activity may be safely deleted.

The preservation of history protects the consistency of the educational model.

Documentation

Each Knowledge Domain may optionally include a free-text Comment.

The Comment is intended exclusively for documentation purposes.

It may contain:

the educational vision of the organization,

internal notes,

historical information,

future plans,

or any description considered useful by the organization.

The information system does not interpret or validate its contents.

Neutrality

The information system remains neutral regarding the educational content represented by each Knowledge Domain.

Its purpose is not to evaluate scientific, cultural or educational value.

Its purpose is to organize knowledge.

The responsibility for educational content belongs exclusively to the organization operating the system.

Decision Support

As organizational knowledge grows, analytical components of the information system may identify opportunities, trends or strategic observations.

Such analyses support managerial decision making.

They do not replace it.

The creation, modification or expansion of Knowledge Domains always remains a management decision.

Architectural Principles

The conceptual architecture of Knowledge Domains is based upon the following principles:

Knowledge Domains represent pure knowledge areas.

The Educational Organization defines its own Knowledge Domains.

The information system organizes knowledge without classifying it on behalf of the organization.

Educational characteristics belong to Educational Products or later educational structures, not to Knowledge Domains.

Historical integrity must always be preserved.

Documentation supports understanding but does not affect behavior.

Analytical mechanisms support managerial decisions without replacing human judgment.

Closing Remark

A Knowledge Domain is not merely a classification.

It is the conceptual declaration of the educational spaces within which an organization chooses to cultivate knowledge.

Everything that follows in the architecture—Educational Products, Educational Resources, teaching activities, assessment, and learning—derives from this first decision.

For this reason, the correct definition of Knowledge Domains constitutes the foundation upon which the entire educational architecture is constructed.

Chapter 4 — Knowledge Discipline

Introduction

Every Knowledge Domain encompasses one or more distinct areas of knowledge.

While a Knowledge Domain defines the broad educational space in which an organization chooses to operate, knowledge itself is naturally organized into coherent and distinguishable disciplines.

A Knowledge Discipline represents one of these coherent bodies of knowledge. It provides the conceptual structure through which knowledge is organized before it is transformed into Educational Products, learning activities, or educational services.

The purpose of a Knowledge Discipline is not to describe how knowledge will be taught, but to preserve the conceptual integrity of the knowledge itself.

Definition

A Knowledge Discipline represents a distinct and homogeneous body of knowledge within a Knowledge Domain, recognized by the educational or scientific community as a coherent conceptual entity whose concepts, principles and methodology form a unified whole.

Responsibility

The Educational Organization is solely responsible for defining the Knowledge Disciplines that best represent its educational philosophy and mission.

The information system does not determine:

which disciplines should exist,
how knowledge should be divided,
how many disciplines should be created,
or how knowledge should evolve over time.

These decisions belong exclusively to the Educational Organization.

The role of the information system is to preserve, organize and relate Knowledge Disciplines without influencing their academic definition.

Conceptual Purity

A Knowledge Discipline represents knowledge only.

It must not include characteristics related to educational delivery, such as:

educational level,
target audience,
language of instruction,
academic period,
teaching methodology,

class scheduling,
commercial policies,
or student-specific characteristics.

These attributes belong to subsequent conceptual layers of the Educational Model.

Maintaining this separation preserves the conceptual integrity of the architecture.

Historical Integrity

Knowledge Disciplines evolve together with human knowledge.

Their conceptual evolution should therefore preserve historicity whenever educational activity has already been associated with them.

Historical versions remain part of the organization's intellectual heritage and contribute to understanding how knowledge has evolved over time.

Documentation

Each Knowledge Discipline may optionally include descriptive documentation intended to support understanding, academic clarification and organizational knowledge.

Documentation has no behavioral effect on the information system and serves exclusively as organizational memory.

Architectural Principles

The conceptual architecture of Knowledge Disciplines is based upon the following principles:

A Knowledge Discipline represents a coherent and homogeneous body of knowledge.

Every Knowledge Discipline belongs to one Knowledge Domain.

The Educational Organization defines its own Knowledge Disciplines.

Educational characteristics belong to subsequent conceptual entities.

Historicity must always be preserved.

Documentation supports understanding without affecting system behavior.

The information system organizes Knowledge Disciplines without redefining knowledge itself.

Closing Remark

A Knowledge Discipline is not simply a classification.

It is the conceptual expression of a coherent body of knowledge through which an Educational Organization structures its educational activity.

From each Knowledge Discipline emerge Educational Products and, ultimately, the learning experiences delivered to students.

For this reason, the correct definition of Knowledge Disciplines constitutes the second conceptual foundation upon which the Educational Architecture is constructed.

Chapter 5 — Educational Blueprint

Purpose

Before an Educational Organization can create actual Educational Products, it must define the controlled structure through which those products will be described.

An Educational Blueprint provides that structure.

It is not an Educational Product, an annual commercial offer, a Section, or a technical implementation artifact.

It is the organization's reusable educational design for creating a defined family of Educational Products.

Definition

An **Educational Blueprint** is a reusable configuration defined by the authorized IT configuration role of the Educational Organization.

It determines the structure through which Educational Products may be created within a specific higher educational level of the organization.

The Blueprint defines which information, relationships, controlled selections, and validation rules are required in order to create Educational Products consistently.

An Educational Product is the abstract but precisely defined educational idea offered by the organization.

An Educational Blueprint defines how that idea will be structured.

Position in the Educational Hierarchy

The ownership of an Educational Blueprint must be defined by the exact higher level of the educational hierarchy to which it belongs.

For the current model, the Blueprint belongs to a Knowledge Domain.

Knowledge Domain
├— Educational Blueprint
├— Knowledge Discipline
└— Study Cycle

Educational Product
→ Educational Blueprint
→ Knowledge Discipline

For example:

Knowledge Domain:

Foreign Languages

Educational Blueprint:

Foreign Languages Blueprint

Knowledge Disciplines:

Italian Language
English Language
Spanish Language

Study Cycles:

Regular / Winter Cycle
February-start Cycle
Summer Cycle

The Blueprint belongs to the Knowledge Domain **Foreign Languages**.

It does not belong directly to Italian, English, or Spanish.

The specific Discipline is selected later, when an actual Educational Product is created.

Study Cycles

Each Knowledge Domain may define one or more Study Cycles. A Study Cycle represents a defined educational operating period available within that Knowledge Domain and implemented within an Academic Year. It has its own stable identity through `study_cycle_id` and belongs directly to one Knowledge Domain through `knowledge_domain_id`. It records a description, a start date, and an end date. A Study Cycle does not belong to an individual Knowledge Discipline; it is available to all Knowledge Disciplines and Educational Products that belong to its Knowledge Domain. A Study Cycle does not replace the Academic Year. The Academic Year remains the central annual educational reference; the Study Cycle identifies the operating cycle through which the selected Product will be implemented inside that year. Study Cycles are created before Educational Products For Sale and Sections are planned. When an Educational Product For Sale is created, the authorized user selects both an Academic Year and one available Study Cycle from the Knowledge Domain of the selected Educational Product. The system protects this consistency but does not impose which Study Cycles the Organization must define or which Educational Products it must offer within them.

Study Cycle

- `study_cycle_id`
- `knowledge_domain_id`
- `description`
- `start_date`
- `end_date`

Responsibility

The authorized IT Administrator, or equivalent configuration role, is responsible for defining the Educational Blueprint.

This role determines:

which information is required;
which information is optional;
which values must be selected from controlled lists;
which relationships must refer to existing organizational entities;
which validation rules protect consistency;
which information has genuine educational or operational value;
and which changes require historical preservation.

The Secretariat does not redesign the Blueprint during daily operations.

The Secretariat uses the approved Blueprint to create actual Educational Products.

IT Configuration Role

→ defines the Educational Blueprint

Secretariat

→ creates Educational Products

using the available Blueprint

What the Blueprint May Define

Depending on the real needs of the organization, an Educational Blueprint may define:

the educational name and identity of the product;

educational materials or books;

placement-test requirements;

relationships with Programs;

educational prerequisites;

controlled educational characteristics;

documentation fields;

validation rules;

and other information required for the proper definition of an Educational Product.

The Blueprint must not become an uncontrolled collection of arbitrary fields.

Every configured element must correspond to a real educational, organizational, or operational need.

Relationship with Knowledge Disciplines

The Educational Blueprint defines the common structure available within its Knowledge Domain.

The actual Educational Product identifies the specific Knowledge Discipline to which it belongs.

For example:

Knowledge Domain:

Foreign Languages

Educational Blueprint:

Foreign Languages Blueprint

Knowledge Discipline:

Italian Language

Educational Product:

Italiano Elementare

Conceptually:

Educational Blueprint

- educational_blueprint_id
- knowledge_domain_id

Knowledge Discipline

- knowledge_discipline_id
- knowledge_domain_id

Educational Product

- educational_product_id
- educational_blueprint_id
- knowledge_discipline_id

The Educational Product therefore contains both:

educational_blueprint_id

knowledge_discipline_id

The Blueprint tells the organization which controlled structure was used.

The Discipline tells the organization which specific body of knowledge the Educational Product belongs to.

Consistency Rule

An Educational Product may use a Blueprint only when its selected Knowledge Discipline belongs to the same Knowledge Domain as that Blueprint.

For example:

Foreign Languages Blueprint

→ Foreign Languages Knowledge Domain

Italian Language Discipline

→ Foreign Languages Knowledge Domain

Italiano Elementare

→ valid combination

But:

Foreign Languages Blueprint

→ Foreign Languages Knowledge Domain

Accounting Discipline

→ Business and Finance Knowledge Domain

Accounting Product

→ invalid combination

This rule prevents the organization from combining a Blueprint with an unrelated Discipline.

The relationship is controlled through primary keys and foreign keys, never through names or manually typed text.

Reuse and Controlled Copying

A single Blueprint may support many Educational Products belonging to different Disciplines within the same Knowledge Domain.

For example:

Foreign Languages Blueprint

→ Italiano Elementare

→ Italiano Medio

→ English Elementary

→ English Advanced

→ Spanish Conversation

When another educational area requires a substantially different structure, the organization should not alter the existing Blueprint in a way that changes its meaning for existing Educational Products.

Instead, it may create a new Blueprint, often by copying an existing one and adapting it to the new need.

Foreign Languages Blueprint

↓ controlled copy and adaptation

Examination Preparation Blueprint

The copied Blueprint becomes a separate educational configuration.

This preserves clarity, reuse, and historical understanding.

Relationship with Educational Products

The Educational Blueprint is reusable.

The Educational Product is the actual educational entity created by the organization through that Blueprint.

For example:

Educational Blueprint:

Foreign Languages Blueprint

Educational Product:

Italiano Elementare

Educational Product:

Italiano Medio

Educational Product:

English Advanced

The Blueprint does not represent a course that may be sold.

The Educational Product represents the real reusable educational definition that may later be offered for sale during a particular academic year.

What the Blueprint Does Not Decide

The Educational Blueprint does not decide:

which Educational Products will be offered during a particular academic year;

whether a Product is active for sale;

the annual basic price;

discounts or installment arrangements;
concrete Sections;
teaching days or hours;
teacher assignment;
room assignment;

Customer registration through Registration Events;

payments;
refunds;
or operational delivery decisions.
These belong to later concepts of the Educational Domain.

Knowledge Domain

→ Educational Blueprint
→ Knowledge Discipline
→ Educational Product
→ Educational Product For Sale
→ Section

Historicity

Educational understanding evolves.

For this reason, an Educational Blueprint may need to change over time.

However, a change must not silently alter the meaning of Educational Products that were already created under an earlier Blueprint configuration.

The organization must always be able to understand:

which Blueprint governed the creation of an Educational Product;

which structure was applicable at that time;

and how the educational configuration evolved.

When a substantial structural change is required, the organization may create a new Blueprint or a controlled copy of an existing Blueprint rather than rewriting the past.

History is preserved because the structure through which an Educational Product was defined may have real organizational consequences.

Closing Remark

An Educational Blueprint is not merely a technical template.

It is the controlled educational design that allows an organization to create consistent Educational Products while keeping distinct:

the higher educational hierarchy;

the specific Knowledge Discipline;
the reusable Product structure;
the annual commercial decision;
and the concrete operational delivery of education.

Chapter 6 — Educational Product

Purpose

An Educational Organization needs a stable way to define the actual educational ideas that it may later offer, sell, plan, and deliver.

This is the role of the Educational Product.

The Educational Product is created and maintained in the operational environment of the Secretariat, using the controlled structure already established through the Educational Blueprint.

It is not an annual commercial offer, a Section, a Registration Event, or a timetable.

It is the abstract but precisely defined educational idea that the organization recognizes as part of its educational catalogue.

Definition

An **Educational Product** is a reusable educational definition created by the Educational Organization through an approved Educational Blueprint.

It represents a specific educational offering with a clear educational identity.

Examples may include:

- Italiano Elementare
- Italiano Medio
- English Advanced
- Spanish Conversation

An Educational Product is not merely a name.

It is a structured educational definition that may include the materials, requirements, relationships, and educational characteristics required by the organization.

Position in the Educational Hierarchy

The Educational Product is created within the context of both:

an Educational Blueprint; and

a specific Knowledge Discipline.

The Blueprint and the Discipline are distinct.

Knowledge Domain

└— Educational Blueprint

└— Knowledge Discipline

Educational Product

→ educational_blueprint_id

→ knowledge_discipline_id

For example:

Knowledge Domain:

Foreign Languages

Educational Blueprint:

Foreign Languages Blueprint

Knowledge Discipline:

Italian Language

Educational Product:

Italiano Elementare

The Blueprint defines the approved structure.

The Discipline identifies the specific body of knowledge to which the Product belongs.

Responsibility

The Secretariat creates actual Educational Products through the available Educational Blueprints.

The Secretariat does not redesign the educational structure.

It works within the controlled design already defined by the authorized IT configuration role.

IT Configuration Role

→ defines the Educational Blueprint

Secretariat

→ selects the Blueprint

→ selects the Knowledge Discipline

→ creates the Educational Product

→ completes the information required by the Blueprint

The organization remains responsible for deciding which Educational Products belong in its educational catalogue.

The information system supports this work without replacing educational or managerial judgment.

Identity and Relationships

Every Educational Product has its own stable identity.

Conceptually:

Educational Product

- educational_product_id
- educational_blueprint_id
- knowledge_discipline_id
- product_name
- other information defined by the Blueprint

The Product is connected to the Blueprint and the Discipline only through their identifiers.

educational_blueprint_id

knowledge_discipline_id

The system must not rely on names such as:

Foreign Languages

Italian Language

Italiano Elementare

as the basis of organizational relationships.

Names may be corrected, translated, or displayed differently.

Primary keys preserve the actual identity of each organizational record.

Consistency Rule

The selected Knowledge Discipline must belong to the same Knowledge Domain as the selected Educational Blueprint.

For example:

Foreign Languages Blueprint

→ Foreign Languages Domain

Italian Language

→ Foreign Languages Domain

Italiano Elementare

→ valid Educational Product

An unrelated combination must not be accepted.

Foreign Languages Blueprint

→ Foreign Languages Domain

Accounting

→ Business and Finance Domain

Accounting Product

→ invalid combination

This rule prevents accidental or meaningless combinations while preserving the freedom of the organization to define its own educational structures.

What the Educational Product Contains

The Educational Product contains the actual values selected through the structure defined by its Blueprint.

Depending on the organization's needs, these may include:

its educational name;

books or educational materials;

a relationship with a placement test;

educational prerequisites;

a relationship with a Program;

controlled educational characteristics;
documentation;
and other information with real educational or operational value.

For example:

Educational Product:

Italiano Elementare

Discipline:

Italian Language

Books:

Selected through existing book records

Placement Test:

Not required

Other educational information:

Defined through the Foreign Languages Blueprint

The Blueprint defines what may or must be recorded.

The Educational Product contains the actual educational definition.

Relationship with Program

An Educational Product may require a relationship with a Program when the organization needs to define instructional duration, total hours, educational rhythm, or similar program-related information.

However, the exact nature of the Program is not defined in this chapter.

This chapter establishes only that the Educational Blueprint may require or permit such a relationship.

The Program will be defined separately, once its real operational role has been fully examined.

What the Educational Product Does Not Decide

The Educational Product does not decide:

whether it will be offered during a particular academic year;

whether it is active for sale;

its annual basic price;

discounts;

installment arrangements;

concrete Sections;

teachers;

rooms;

weekly meeting times;

Registration Events;

payments;

refunds;

or the operational timetable.

These belong to later concepts.

Educational Product

→ Educational Product For Sale

→ Section

The Educational Product is the stable educational definition.

The Educational Product For Sale records the annual decision to offer and sell it.

The Section represents its concrete operational delivery.

Reuse Across Academic Years

An Educational Product may remain part of the organization's catalogue across more than one academic year.

For example:

Educational Product:

Italiano Elementare

Academic Year 26/27:

Offered for sale

Academic Year 27/28:

May be offered again, changed, or not offered

The Product itself is not recreated merely because another academic year begins.

The annual commercial decision is represented separately through Educational Product For Sale.

This avoids duplication and preserves the educational identity of the Product over time.

Historicity

When an Educational Product has been used in real organizational activity, its historical meaning must be preserved.

A Product that has already been offered for sale, used to create Sections, or connected with Registration Events, Section Movements, or Signed Registration Agreements must not silently lose its identity.

The organization must be able to understand:

which Blueprint structured the Product;

which Discipline it belonged to;

which educational characteristics applied at that time;

and how its definition evolved.

A minor correction may be handled directly when it has no real operational consequence.

A change that alters the educational identity or affects historical activity requires preservation of the prior reality.

History is created where a real organizational consequence exists.

Removal and Deactivation

An Educational Product that has never been used may be removed when the organization determines that it has no continuing value.

Once it has been used in real organizational activity, it should normally be retained and, where necessary, made unavailable for future use rather than erased.

The purpose is not to preserve unnecessary records.

The purpose is to preserve the organization's real educational history.

Closing Remark

An Educational Product is the point at which the controlled structure of an Educational Blueprint becomes a real educational definition.

It keeps separate:

the Knowledge Domain in which the structure belongs;

the Knowledge Discipline to which the Product belongs;

the Blueprint through which it was defined;

the annual decision to sell it;

and the later operational reality of Sections, Customers, schedules, and payments.

Chapter 7 — Educational Product For Sale

Purpose

An Educational Product may belong permanently to the educational catalogue of an Organization.

This does not mean that it will necessarily be offered in every Academic Year or every Study Cycle.

At the appropriate time, the Secretariat and the responsible school authority decide which Educational Products from the available catalogue will be offered and sold within a selected Academic Year and Study Cycle.

This decision is represented by the Educational Product For Sale.

Definition

An Educational Product For Sale is the commercial activation of an existing Educational Product within one selected Academic Year and one selected Study Cycle.

It records that the Organization has decided to offer a particular Educational Product during a specific Academic Year and Study Cycle, with a defined basic total price and an active or inactive sales status.

It is not a new Educational Product.

It is not a Study Cycle.

It is not a Section.

It is not a Registration Event.

It is the Organization's commercial decision:

“This Educational Product will be offered for sale during this Academic Year and within this Study Cycle.”

Responsibility

The Educational Product For Sale is created in the operational environment of the Secretariat, together with the responsible school authority.

The decision belongs to the organization.

The system does not decide:

which Educational Products should be offered;

which products should remain unavailable;

which educational priorities should apply;

or which basic price should be set.

The system records the decision consistently and makes it available for subsequent operational work.

Educational Product Catalogue



Secretariat and School Authority



Selection of Products for the selected Academic Year and Study Cycle



Educational Product For Sale

Identity and Relationships

Every Educational Product For Sale has its own stable identity.

It is connected to the existing Educational Product, the selected Academic Year, and the selected Study Cycle only through primary keys.

Conceptually:

Educational Product For Sale

- educational_product_for_sale_id
- educational_product_id
- academic_year_id
- study_cycle_id
- basic_total_price
- active

For example:

Educational Product:

- educational_product_id: 184
- Italiano Medio

Academic Year:

- academic_year_id: 12
- Display label: 26/27

Study Cycle:

- study_cycle_id: 31
- Regular Cycle
- 15 September 2026 – 15 June 2027

Educational Product For Sale:

- educational_product_for_sale_id: 638
- educational_product_id: 184
- academic_year_id: 12
- study_cycle_id: 31
- basic_total_price: 360 €
- active: Yes

The relationship is never based on manually typed text such as:

Italiano Medio

26/27

Regular Cycle

360 €

Names, labels, and prices may change or be displayed differently.

The actual organizational relationships remain protected through identifiers.

Academic Year

The Academic Year must be selected from a controlled organizational list.

Users must not type free-text values such as:

26/27

2026/27

2026-2027

These expressions may appear similar while representing inconsistent records.

The system may display the familiar label:

26/27

but the relationship is stored through:

academic_year_id

This preserves consistency across the organization and prevents duplicate or ambiguous academic-year records.

Basic Total Price

The Educational Product For Sale contains one basic total price.

This is the standard basic price that the Organization initially presents for that Educational Product For Sale within the selected Academic Year and Study Cycle.

It does not yet define:

discounts;

installment arrangements;

exceptional financial agreements;

actual payments;

refunds;

invoices or receipts;

or the final financial agreement of a specific Customer.

Those belong to later Registration Event, Section Movement, and financial-agreement concepts.

Educational Product For Sale

→ basic total price

Signed Registration Agreement

→ actual agreed financial arrangement

Price Changes Before a Sale

The basic total price may be corrected or changed while no real sale has taken place.

For example:

Italiano Medio — 26/27 — Regular Cycle

Basic total price: 360 €

Before any Registration Event:

Price changed to: 340 €

No historical financial reality has yet been created.

The organization may therefore correct the price directly.

History is not created merely because a number changed.

History becomes necessary when the change has produced a real organizational consequence.

Price After a Registration Event

Once a Customer completes a Registration Event under a specific agreed financial arrangement, that arrangement belongs to the Signed Registration Agreement.

A later change to the current basic price of the Educational Product For Sale must not alter the Signed Registration Agreement accepted by that Customer.

For example:

Italiano Medio — 26/27 — Regular Cycle

Basic total price at first: 360 €

Customer A completes a Registration Event with an agreed amount of: 360 €

Later, the current basic total price changes to: 340 €

Customer A remains connected to the Signed Registration Agreement accepted through that Registration Event.

The historical reality belongs to the Signed Registration Agreement and the related Section Movement, not to an unnecessary versioning mechanism for every unsold price change.

Active Status

The active status indicates whether the Organization is currently accepting new registrations for that Educational Product For Sale within the selected Academic Year and Study Cycle.

active: Yes

→ the Educational Product is available for sale through this Educational Product For Sale

→ new Registration Events may be accepted

→ new Sections may be created from it

active: No

→ new registrations are no longer accepted

→ new Sections may not be created from it

The status does not erase the Educational Product, its commercial offering record, or any real activity that has already occurred.

It controls current availability, not historical existence.

Relationship with Sections

A concrete Section may be created only from an active Educational Product For Sale.

Educational Product

↓

Educational Product For Sale

↓

Active

↓

Section

The Section is therefore connected through:

educational_product_for_sale_id

This connection allows the organization to understand:

which Educational Product the Section represents;

in which Academic Year and Study Cycle it was offered;

under which commercial offering it was created;

and which basic price was initially associated with that offering.

The Section does not need to infer this information from names or manually entered text.

Sale Before a Section Exists

An Educational Product For Sale may become active before a concrete Section has been created.

This reflects operational reality.

Before the relevant Study Cycle begins, the Organization may accept registrations for an Educational Product while groups are still forming and concrete delivery arrangements are still being prepared.

For example:

Italiano Medio — 26/27 — Regular Cycle

Active for sale: Yes

Sections created: None yet

The organization may begin informing prospective students, conduct placement tests where required, and accept registrations according to its own operational policy.

The existence of an active Educational Product For Sale does not require that a concrete Section already exists.

Deactivation

The Organization may deactivate an Educational Product For Sale when it no longer wishes to accept new registrations for that Product within the selected Academic Year and Study Cycle.

For example:

Italiano Medio — 26/27 — Regular Cycle

Active: Yes

No sufficient registrations before the planned start

↓

Active: No

The reason may concern demand, timing, educational planning, financial viability, or another legitimate organizational decision.

The system may present the relevant information.

The decision remains human.

Deactivation does not erase prior registrations, Sections, or any other real organizational history.

Commercial Freedom and Duplicate Awareness

The Organization decides whether to create no Educational Product For Sale record, one record, or more than one record for the same Educational Product within the same Academic Year and Study Cycle.

The system does not impose a universal uniqueness restriction based only on:

educational_product_id

+

academic_year_id

+

study_cycle_id

When an authorized user begins to create another Educational Product For Sale with the same selected Educational Product, Academic Year, and Study Cycle, the system may present existing relevant records and ask the user to confirm whether a separate commercial offering is intended.

This protects the Organization from accidental duplication without restricting its educational or commercial freedom.

Historicity

The Educational Product For Sale preserves the commercial decision of the Organization for a selected Academic Year and Study Cycle.

Its history matters because the organization may later need to understand:

which Products were offered in a particular Academic Year and Study Cycle;

which basic price was current at the relevant time;

whether registrations were open or closed;

which Sections were created from that commercial offering;

and how the organization's educational catalogue evolved across years.

Historical preservation must serve real organizational understanding.

It must not become an automatic record of every insignificant adjustment.

Closing Remark

An Educational Product For Sale is the bridge between the stable educational catalogue and the practical reality of a selected Academic Year and Study Cycle.

It keeps distinct:

the reusable Educational Product;

the Academic Year;

the Study Cycle;

the commercial decision to offer and sell the Product;

the basic total price;

the status of current registration availability;

the later Section;

and the individual Signed Registration Agreement.

Authorized operational users interact with this layer through controlled routines. It is not an unrestricted free-text or informal sales record.

Chapter 8 — Educational Facilities and Physical Delivery Spaces

Purpose

An Educational Organization cannot transform theoretical educational products into implementable educational sections unless it understands the physical capacity through which education may be delivered.

Educational facilities are therefore not merely administrative assets. They form part of the organization's educational, operational, and economic capacity.

Before teachers are assigned, schedules are created, or sections are placed in time, the organization must be able to describe the physical spaces in which educational activity may occur.

This chapter concerns only the structured description of physical educational infrastructure.

It does not yet address teacher assignment, timetable construction, the Registration Event process, or the placement of active Sections.

Organizational Presence

An Educational Organization may operate through legally recognized organizational presences, such as a registered seat and one or more branches.

For the present model, each organizational presence is associated with one building. A building may contain multiple levels and multiple educational implementation spaces.

Where the applicable regulatory environment requires operating authorization, the organization must preserve the authorization information associated with the building and its educational use.

The legal identity of the organization, the organizational identity of the seat or branch, and the physical identity of the building must remain conceptually distinct.

Physical Structure

For the current scope, the physical educational structure may be understood as:

Educational Organization

Organizational Presence

Building

Level or Spatial Area

Educational Implementation Space

A building may contain one or more levels, such as floors, ground level, or other spatial areas relevant to the organization.

The model does not require the organization to describe every physical element of the building.

Only elements that affect educational, administrative, or economic management should enter the active model.

Educational Implementation Space

An Educational Implementation Space is a physical space that may be used to deliver an educational activity.

Examples may include a teaching room, a computer laboratory, a language laboratory, an examination room, or another space defined by the organization.

The system does not impose a universal classification such as “Classroom” or “Laboratory.” These distinctions may be configured when they have operational value for the organization.

The essential requirement is that the information describing a space can later support the construction of implementable educational sections.

Configurable Description of Spaces

The system does not determine in advance which characteristics define every educational space.

The IT Administrator, acting during configuration and design, defines the description schema required by the organization.

Each configured parameter must specify:

- its name,
- its purpose,
- its data type or relationship type,
- whether it accepts one value or many values,
- its validation rules,
- its permitted values where applicable,
- whether it may be used as a search criterion,
- and whether its values require historical preservation.

The system manufacturer provides the configuration mechanism and the documentation required for its responsible use. The organization’s authorized configuration role is responsible for ensuring that the configured parameters express the organization’s real educational and operational needs.

Typical examples may include educational use, square metres, legal capacity, age suitability, teaching suitability, equipment availability, accessibility requirements, or other controlled characteristics.

These examples are not mandatory universal fields. They illustrate the type of information that an organization may decide to configure when it needs to search for, compare, or evaluate spaces.

Single-Valued and Multi-Valued Parameters

The description schema must distinguish clearly between single-valued and multi-valued parameters.

A single-valued parameter has one applicable value for a given point in time.

Examples may include square metres, current legal capacity, and current active status.

A multi-valued parameter may associate a space with more than one controlled value.

Examples may include permitted educational uses, teaching suitability categories, equipment capabilities, and age suitability categories.

The cardinality of every parameter must be explicitly defined by the configuration process.

A parameter must never become ambiguous merely because its values are stored as free text.

Searchability and Meaning

A parameter should be created only when the organization has a clear reason to use it.

A parameter intended to support search, comparison, recommendation, or future scheduling must have:

- an unambiguous meaning,
- an appropriate data structure,
- controlled or measurable values,
- and validation rules that prevent inconsistent use.

The system may allow descriptive comments for documentation purposes. However, comments do not replace structured parameters when the organization expects the system to use the information operationally.

Historicity of Space Characteristics

Historicity applies not only to the existence of a space, but also to the characteristics that affect its legal, educational, or operational capacity.

For example, a room may legally accommodate twelve students during one period and ten students after a new regulatory requirement becomes effective.

The earlier value must not be overwritten. Instead, the system must preserve distinct time-valid values.

Historical educational records must remain associated with the value that was valid at the time of their creation.

New planning and new educational sections must use the currently valid value.

Change of Identity

A change in one characteristic does not necessarily create a new space.

For example, a new legal capacity, new equipment, or revised suitability rule may preserve the identity of the same room while creating a new historical version of the affected characteristic.

However, when the physical or functional identity of a space changes fundamentally, the earlier space must be inactivated and a new space must be created.

For example, when Room 1 and Room 2 are permanently combined, both former rooms are inactivated and a new room is created.

The former rooms remain part of the historical record and cannot be reused as active spaces.

This distinction protects both historical accuracy and data normalization.

Deactivation and Deletion

A space that has been used in educational, administrative, or financial activity must not be physically deleted.

It may be deactivated when it is no longer available for future use.

Physical deletion is allowed only when the space has no movements, historical references, or operational use.

The same principle applies to related infrastructure elements whenever their removal would destroy the organization's historical memory.

Floor Plans

The organization may optionally store one or more floor plans for a building or a specific level.

At this stage, a floor plan is treated primarily as a structured visual document.

It may later support:

- visual navigation through educational spaces,
- faster identification of available rooms,
- visualization of educational capacity,
- timetable presentation,
- and future placement of active sections inside the building.

The system does not need to decide now how the floor plan will be used. It must only preserve the possibility of associating relevant educational spaces with a visual representation of the building.

Current Boundary of the Model

The present model ends with the structured description of physical educational capacity.

It does not yet determine:

- how many teachers are required,
- how many sections will become active,
- how teachers are assigned,
- how timetables are constructed,
- how Customers enter Sections through Registration Events,
- or how online and hybrid teaching environments will be modeled.

These concepts depend on the infrastructure model but should be examined only after the physical educational capacity of the organization has been described clearly.

Closing Remark

Educational infrastructure is not simply a collection of rooms.

It is the physical capacity through which an Educational Organization may transform theoretical educational products into implementable educational sections.

A well-described infrastructure model allows the organization to understand what it can realistically offer, what resources remain underused, and what future educational activity may be supported without losing legal, operational, or historical integrity.

Chapter 9 — Human Resources

Purpose

An Educational Organization cannot operate through facilities, theoretical educational sections, or future academic planning alone.

It also requires a structured understanding of the people whom the organization has decided to include in its workforce.

This chapter defines the Human Resource as the organizational record of a person who may later participate in educational, administrative, or other organizational activity.

It does not yet define organizational roles, role movements, teaching assignments, payroll, contracts, or system permissions.

Scope Boundary

The Human Resources model is not a recruitment system.

It does not manage:

- candidates,
- curriculum vitae,
- prospective employees,
- contract verification,
- employment-law obligations,
- payroll,
- taxation,
- insurance,
- system user accounts,
- passwords,
- security permissions,
- or access-control rules.

These matters belong to other organizational, legal, accounting, Human Resources, or security domains.

A Human Resource is recorded when the organization has decided to include that person in its operational workforce. The system does not verify the legal or contractual basis of that decision.

Human Resource

A Human Resource represents one distinct person recorded by the Educational Organization.

The term Human Resource refers to the individual organizational object.

Human Resources refers to the collection of such objects maintained by the organization.

A Human Resource contains only the general characteristics of the person.

It does not define:

- which role the person holds,
- which Discipline the person may teach,
- which educational section the person may support,

- whether the person is paid hourly or monthly,
- or which organizational activities the person will later perform.

These matters belong to later conceptual layers.

Configurable Description

The system does not impose a universal set of business fields for every Human Resource.

The organization defines the characteristics it needs through its authorized configuration role.

The configuration may determine:

- the properties of the Human Resource,
- the data type of each property,
- whether the property is single-valued or multi-valued,
- whether it is required or optional,
- whether it appears in lists,
- whether it may be used in search,
- whether it participates in potential duplicate detection,
- whether it uses a controlled value list,
- and whether historical preservation is required.

Possible properties may include personal details, contact information, descriptive notes, or other characteristics needed by the organization.

These are examples only. They are not mandatory universal fields.

The system preserves a technical identity for every Human Resource regardless of the business properties selected by the organization.

Design Time and Operational Time

Configuration and Design

During configuration, the authorized IT role defines how Human Resources will be described and used by the organization.

The configuration determines the structure, validation rules, controlled value lists, search behavior, list presentation, and duplicate-detection criteria.

The system transforms this approved design into the operational structure required for daily use.

Operational Use

During daily operation, the Secretariat or other authorized organizational function records real Human Resources through a separate operational interface.

The operational user does not modify the structure of Human Resources.

The user works through forms, searches, lists, and controlled selections that have already been configured.

Search, Presentation, and Potential Duplicates

The organization determines which properties appear in Human Resource lists and which properties may be used for search.

The organization also determines which combination of properties should be used to detect possible duplicate records.

A common example may be:

First Name + Last Name + Date of Birth

However, this is only an example. It is not imposed by the system.

The system identifies possible matches before a new Human Resource is created.

It does not automatically merge people.

The system presents potential existing records, while the organizational user confirms whether the person already exists or whether a new Human Resource must be created.

This prevents unnecessary duplicate records while protecting against the incorrect merging of different people.

Controlled Value Lists

Some configured Human Resource properties may use controlled value lists.

For example, an organization may configure properties such as family status, gender, educational area, language, or another classification that it considers useful.

The system must avoid both uncontrolled free text and unnecessary preliminary configuration.

A controlled list may therefore grow progressively through real operational use.

When the Secretariat begins typing in a searchable Combo Box, the system searches existing values and displays possible matches before a new value is created.

For example:

Typing: Ital...

Existing values:

- Italian
- Italian Language
- Italian Philology

The system should recognize equivalent values despite differences in:

- upper-case or lower-case letters,
- accents,
- unnecessary spaces,
- or similar non-semantic variations.

A new value may be created only according to the rule defined for that controlled list.

The configuration blueprint and the operational manual may specify whether a user can:

- create a new value directly,
- request approval for a new value,
- correct an existing value,
- rename a value without changing its meaning,
- merge duplicate values,
- deactivate a value,
- or select only from existing values.

A correction to one person's record must remain distinct from a correction to a common controlled value.

Historicity and Lifecycle

A Human Resource may remain in the system even when the person is no longer actively used by the organization.

When the Human Resource has no active organizational movements, the organization may deactivate the Human Resource.

A deactivated Human Resource:

- remains part of the historical record,
- does not appear by default in daily operational selections,
- may remain available for historical search and reporting,
- and may be reactivated if the person returns in the future.

When a person returns, the organization reuses the same Human Resource record rather than creating a duplicate person.

The future organizational reality is then recorded through a new movement.

Deletion and Deactivation

Deletion is allowed only when the Human Resource has not become part of a real operational history.

The safe deletion sequence proceeds from the last dependent level toward the original record.

For example:

Human Resource

↓

Organizational Movement for a defined period

↓

No further operational activity

In this case, the organization may:

Delete the unused movement.

Delete the Human Resource.

However, once a Human Resource or any related movement has supported a real operational event, the historical chain must not be destroyed.

The relevant record is then deactivated rather than deleted.

The general principle is:

Delete when no real operational history has been created.

Deactivate when the record has become part of organizational history.

Relationship with Future Organizational Movements

The Human Resource represents the stable identity of the person.

Future Organizational Movements will represent the changing organizational reality of that person.

The future relational structure will therefore follow this principle:

Human Resource



One or more Organizational Movements

Each future movement will refer to one existing Human Resource through the Human Resource technical identity.

This allows one person to participate in different periods, activities, or organizational roles without creating duplicate Human Resource records.

The detailed model of Organizational Movements belongs to the next chapter.

Responsibility

The Educational Organization is responsible for defining the business characteristics it needs in order to describe its Human Resources.

The authorized configuration role is responsible for translating those needs into a clear and consistent configuration.

When the organization cannot define the structure safely or clearly, it may work with the distribution company or an appropriately trained implementation consultant.

The system provides the structured mechanism.

The organization remains responsible for ensuring that the configured model reflects its real organizational needs.

Closing Remark

Human Resources are not merely names stored in a list.

They represent the stable human identity through which an Educational Organization may later organize roles, services, educational activity, and historical participation.

By separating the person from future organizational movements, the system preserves both operational flexibility and historical continuity.

Chapter 10 — Organizational Movements

Purpose

The Human Resource record preserves the stable organizational identity of a person.

However, an Educational Organization does not use a person in the same way, for the same purpose, or during the same period throughout the entire history of that person's record.

Educational organizations commonly engage teachers and other collaborators for defined academic or operational periods. During one period, a person may be available for particular educational products. During another period, the same person may return with different availability, different educational eligibility, or no participation at all.

These changing organizational realities must not be stored inside the stable Human Resource record.

This chapter defines the Organizational Movement as the time-valid organizational participation of one existing Human Resource.

It establishes the structure through which the organization may later determine whether a person can be considered for assignment to a future active educational section.

Scope Boundary

An Organizational Movement does not represent:

- a legal employment contract,
- a payroll record,
- an accounting record,
- salary, hourly payment, taxation, insurance, or social-security information,
- legal verification of employment status,
- a system user account,
- security permissions,
- a timetable,
- a room reservation,
- an active educational section,
- or an actual teaching assignment.

These matters belong to separate legal, accounting, Human Resources, security, timetable, and operational models.

The present chapter concerns only the time-valid organizational availability of a Human Resource and the educational products for which that person may later be considered.

Organizational Movement

An Organizational Movement represents one distinct period during which an existing Human Resource participates in the operational reality of the Educational Organization.

Each Organizational Movement belongs to one Human Resource.

A Human Resource may have one or more Organizational Movements during its history.

For example, a person may participate during the academic period:

01/09/2026 – 15/06/2027

and may later return during a new academic period:

01/09/2027 – 15/06/2028

The organization does not create a new Human Resource record when the same person returns.

It reuses the existing Human Resource and creates a new Organizational Movement.

This preserves the stable identity of the person while recording the changing organizational reality through time.

Movement Properties

Every Organizational Movement has its own technical identity.

At minimum, the movement contains:

Organizational Movement

- movement_id
- human_resource_id
- valid_from
- valid_to
- status
- optional documentation or comment

The human_resource_id is a Foreign Key that refers to the existing Human Resource record.

The valid_from and valid_to values describe the period during which the movement is active.

The organization may require both dates for every movement or may allow an open-ended movement when this reflects its real operational practice. The chosen rule must be clear and consistently applied.

The system does not impose universal business characteristics such as employment type, organizational unit, branch, teaching category, or contractual status.

When such information is operationally necessary, the organization may define it through its authorized configuration process.

Stable Identity and Changing Participation

The Human Resource and the Organizational Movement have different responsibilities.

Human Resource

- stable identity of the person
- general characteristics
- contact information
- configured personal information

Organizational Movement

- time-valid participation in the organization
- movement period
- movement status

- educational eligibility

The Human Resource record must not contain:

- employment dates
- academic-period participation
- products that the person may teach
- active sections
- days or hours
- classroom assignments
- payroll information

These facts belong either to the Organizational Movement or to later operational models.

Movement Educational Eligibility

During an Organizational Movement, a person may be eligible for one or more existing Educational Products.

For example:

Human Resource: Konstantinos Andritsopoulos



Organizational Movement

01/09/2026 – 15/06/2027



Movement Educational Eligibility

- Italiano Elementare
- Word Core

This does not mean that the person has already been assigned to a real class.

It means only that, during the defined movement period, the person may be considered for future educational assignments related to those Educational Products.

The relationship is represented as follows:

Movement Educational Eligibility

- movement_eligibility_id
- movement_id
- educational_product_id

The movement_id is a Foreign Key to the Organizational Movement.

The educational_product_id is a Foreign Key to an already existing Educational Product.

The same Educational Product cannot be added more than once to the same Organizational Movement.

Conceptually:

UNIQUE (movement_id, educational_product_id)

Controlled Selection of Educational Products

Educational Products must be selected through a controlled pull-down menu or searchable controlled selection.

For example:

Educational Eligibility

[▼ Italiano Elementare]

[▼ Word Core]

The user may select only Educational Products that already exist and are active in the educational design model.

The user must not create a new Educational Product from inside the Organizational Movement.

For example, if the organization wishes to introduce:

Word Advanced

the authorized user must first create and define it in the Educational Product design area.

Only after it has been correctly created and activated may it appear as an available option in the Organizational Movement menu.

This rule protects the integrity of the educational model.

It prevents inconsistent values such as:

Word Core

WORD core

Word

Advanced Word

from appearing as unrelated free-text entries inside Human Resources.

The Organizational Movement uses the educational model.

It does not alter or recreate it.

Reuse and Database Economy

An Educational Product is created once and may be reused many times.

For example:

Educational Product

- Word Core

↓

may support many future active educational sections

Likewise, one Organizational Movement may contain several Educational Product eligibilities.

One Organizational Movement

↓

many Movement Educational Eligibility records

The same movement may later support more than one actual assignment.

For example:

Movement 2026–2027

- eligible for Word Core
- eligible for Italiano Elementare

↓

Future possible assignments

- Word Core — Monday / Wednesday, 18:00–20:00
- Italiano Elementare — Tuesday / Thursday, 18:00–20:00

The existence of two future active educational sections does not require two Organizational Movements.

There is one movement because there is one time-valid organizational participation.

There may later be several actual assignments because the person may participate in several active educational sections.

Eligibility Period

At the present stage of the model, every Movement Educational Eligibility inherits the validity period of its Organizational Movement.

For example:

Movement:

01/09/2026 – 15/06/2027

Eligibility:

- Italiano Elementare
- Word Core

Both educational eligibilities are considered valid throughout the period of the movement.

Separate validity dates for each individual eligibility are not required at this stage.

If a real future need emerges—for example, if a person remains active in the organization but becomes unavailable for one Educational Product before the movement ends—the model may later be extended through explicit historical rules.

Such an extension must be designed deliberately.

It must not be introduced informally through comments or free-text exceptions.

Design Time and Operational Time

Configuration and Design

During configuration, the authorized IT or implementation role defines:

the structure of Organizational Movements,

mandatory and optional movement properties,

movement status rules,

available list and search behavior,

validation rules,

historical preservation rules,

and the controlled selection mechanism for Educational Products.

The configuration role does not create the real operational movements of individual people.

Operational Use

During daily operation, the Secretariat or another authorized organizational function may:

create a movement for an existing Human Resource,
define its valid period,
select existing Educational Products for which the person may be considered,
review the current movement status,
and search historical movements when necessary.

The operational user may not create a new Educational Product from the movement interface.

Relationship with Future Active Educational Sections

A future Active Educational Section will represent a real educational offering within a defined operational context.

For example:

Italiano Elementare
Tuesday / Thursday
18:00–20:00

At that later stage, the system may assist the Secretariat by presenting only Human Resources who satisfy the relevant conditions:

- they have an active Organizational Movement,
- their movement is valid during the period of the active educational section,
- they have eligibility for the related Educational Product,
- and they do not violate future assignment or timetable rules.

The Secretariat remains responsible for the final organizational decision.

The system supports the decision by reducing unnecessary searching, duplicate work, and avoidable assignment errors.

The detailed model of active educational sections, timetable construction, room availability, and actual assignment belongs to subsequent chapters.

Historicity and Lifecycle

An Organizational Movement becomes part of the historical record once it has supported real organizational or educational activity.

When a movement has no operational history and was created by mistake, it may be deleted according to the organization's authorized procedure.

However, once a movement has supported a real assignment, active educational section, or another operational event, its historical chain must not be destroyed.

The movement must then be completed, ended, or deactivated rather than physically deleted.

The same principle applies to Movement Educational Eligibility.

A historical eligibility must remain understandable within the context of the movement during which it was valid.

The end of a movement does not deactivate or delete the Human Resource itself.

It means only that the person is no longer active through that specific Organizational Movement.

Architectural Principles

The Organizational Movement model is based on the following principles:

A Human Resource represents the stable identity of a person.

An Organizational Movement represents the time-valid participation of that person in the organization.

One Human Resource may have many Organizational Movements through time.

One Organizational Movement may include many Educational Product eligibilities.

Educational Product eligibility does not constitute an actual teaching assignment.

Educational Products are selected only from already existing controlled records.

The Organizational Movement does not create or modify Educational Products.

Several active educational sections do not require several movements for the same person.

Payroll, contracts, taxation, insurance, and accounting remain outside the present model.

Historical movements must be preserved once they have supported real organizational activity.

Closing Remark

An Organizational Movement is not merely a date range attached to a person.

It is the structured bridge between the stable identity of a Human Resource and the changing operational reality of the Educational Organization.

By separating the person from the period of participation, and by relating that period to already defined Educational Products, the system preserves historical integrity while preparing the organization for future active educational sections and actual assignments.

Chapter 11 — Customers

Purpose

An Educational Organization cannot create active educational Sections, register Customers into Sections, or establish future participation and financial relationships without first maintaining a clear and reliable record of the child or student to whom education is delivered.

This chapter defines the Customer as the stable organizational record of one child or student who may later participate in educational, administrative, and financial relationships with the Educational Organization.

At this stage, the purpose is limited and deliberately simple:

to record who the Customer is and how the organization may identify or contact that Customer.

The Customer record does not yet determine which Educational Product will be selected, which Section will be entered through a Registration Event, which Signed Registration Agreement will arise, or whether any payment has been made.

These matters belong to later conceptual layers.

Scope Boundary

The Customer model is not yet:

a Registration Event and Section Participation model,
a student-information model beyond the stable Customer record,
a Section Movement model,
a sales pipeline,
a marketing or campaign-management system,
a financial-accounting system,
an invoice system,
a payment system,
a debt or balance-management system,
a discount-management system,
a legal guardian-management system,
a contract-management system,
or a taxation and accounting system.

The Customer model does not manage:

educational products selected by the Customer,

active educational sections,

Teaching Session Attendance,
educational progress,

invoices,

receipts,

payments,

financial balances,

discounts,

tax information,

legal representation,

contracts,

or financial obligations arising from a specific Signed Registration Agreement.

These matters may later be connected to the Customer through separate models.

The present chapter concerns only the stable organizational registration of the Customer.

Customer

A Customer represents one distinct organizational record maintained by the Educational Organization.

The Customer term is used in the present project only for the individual child or student who receives educational activity.

This deliberately keeps the stable educational person identity distinct from later participation, agreement, payment, and communication processes.

The model does not introduce Customer categories such as family, company, association, sponsor, Parent, Guardian, or Payer.

A later expansion may be considered only when a real independent organizational meaning has been established; it must not be introduced as free text or an implicit role.

A Customer is not defined by a payment, a Registration Event, or an active Section Movement.

A Customer may exist before any later educational or financial activity has taken place.

Customer Properties

Every Customer has its own technical identity.

At minimum, the Customer contains:

Customer

- customer_id
- status
- configurable general characteristics
- configurable contact information
- optional documentation or comment

The customer_id is the technical identity through which the Customer may later be connected to other organizational records.

The system preserves this technical identity regardless of the business properties selected by the organization.

The Customer record should contain only information that helps the organization identify, understand, contact, or distinguish the Customer.

It must not contain operational facts that belong to later processes.

Configurable Description

The system does not impose a universal set of business fields for every Customer.

Each Educational Organization defines the Customer characteristics it genuinely needs through its authorized configuration process.

The configuration may determine:

the properties of the Customer,

the data type of each property,

whether the property is single-valued or multi-valued,

whether the property is required or optional,

whether it appears in lists,

whether it may be used in search,

whether it participates in potential duplicate detection,

whether it uses a controlled value list,

and whether its values require historical preservation.

Possible properties may include:

name or organization name,
contact details,
communication preferences,
address information,
descriptive classifications,
internal notes,
or other information that the organization considers necessary.

These are examples only.

They are not mandatory universal fields.

The organization must avoid collecting information merely because it is technically possible to store it.

A Customer property should exist only when the organization can explain why it needs that information and how it will use it responsibly.

Stable Identity and Future Customer Activity

The Customer record preserves stable organizational identity.

Future educational and financial activity must remain separate from that identity.

Customer

- identity
- general characteristics
- contact information
- configured descriptive information

Future models

- Section participation
- educational interest
- Registration Events, Section Movements, and Signed Registration Agreements
- active educational sections
- financial obligations
- invoices
- payments

For example, a Customer may later enter one or more Sections through independent Registration Events.

Each completed Registration Event creates its own Section Movement and Signed Registration Agreement.

However, none of these future relationships should be stored directly inside the initial Customer record.

This separation protects historical integrity and prevents the Customer record from becoming an uncontrolled mixture of identity, education, scheduling, and finance.

Customer and Human Resource

A real person may, in some circumstances, appear in more than one organizational context.

For example, one person may later be both:

Customer

and

Human Resource

The present model does not attempt to solve this by prematurely creating a universal Person record.

The Customer and Human Resource are separate organizational records because they serve different purposes.

Human Resource

- person included in the organization's workforce

Customer

- party included in the organization's customer relationship

A future model may define whether and how such records can be linked safely.

The system must never assume that records belong to the same person merely because they contain similar names, telephone numbers, or contact information.

Any future connection must be deliberate, controlled, and historically understandable.

Design Time and Operational Time

Configuration and Design

During configuration, the authorized IT or implementation role defines how Customers will be described and used by the organization.

The configuration determines:

the Customer structure,

validation rules,

controlled value lists,

search behavior,

list presentation,

potential duplicate-detection criteria,

status rules,

and historical preservation requirements.

The configuration role defines the structure.

It does not create the real Customer records used by the organization.

Operational Use

During daily operation, the Secretariat or another authorized organizational function creates and maintains real Customer records through an operational interface.

The operational user works through forms, searches, lists, and controlled selections that have already been configured.

The operational user does not modify the Customer structure while registering an individual Customer.

Search, Presentation, and Potential Duplicates

The organization determines which Customer properties appear in lists and which may be used for search.

It also determines which combinations of properties should be used to identify possible duplicate records.

For an individual Customer, a possible example may be:

First Name + Last Name + Contact Information

For an organizational Customer, a possible example may be:

Organization Name + Contact Information

These examples are illustrative only.

They do not constitute universal rules.

Before creating a new Customer, the system may search for possible existing records and present likely matches to the operational user.

The system must not automatically merge Customer records.

The authorized user remains responsible for deciding whether an existing Customer should be reused or whether a new Customer record is genuinely required.

This reduces unnecessary duplication while protecting against the incorrect merging of different people or organizations.

Controlled Value Lists

Some Customer properties may use controlled value lists.

For example, an organization may decide to use controlled values for:

communication preference,

customer category,

geographical area,

language preference,

referral source,

or another operational classification.

The organization may define whether each controlled list is:

Closed

- the user selects only from existing values

or

Controlled and Extensible

- the user may create a new controlled value
according to an approved organizational rule

A Customer record must not create a new Educational Product, a new active educational section, a new financial category, or another independent organizational entity merely through free-text entry.

The Customer interface records Customer information.

It does not alter the educational, organizational, or financial model.

Historicity and Lifecycle

A Customer may remain in the system even when no current educational or financial activity exists.

A Customer who is no longer actively used by the organization may be deactivated.

A deactivated Customer:

remains part of the historical record,

does not appear by default in ordinary operational selections,

may remain available for historical search and reporting,

and may be reactivated if a future organizational relationship begins again.

The end of a Customer relationship does not erase the Customer identity.

It only changes the current operational status of that Customer record.

Where a configured Customer property requires historical preservation, the organization must preserve the values that were valid during earlier operational periods rather than overwriting them without trace.

Deletion and Deactivation

A Customer may be physically deleted only when no real operational history has been created.

For example:

Customer

↓

Created by mistake

↓

No Registration Event or Section Movement

No financial event

No operational relationship

In this situation, the organization may delete the unused Customer record according to its authorized procedure.

However, once a Customer has supported a real operational event, the historical chain must not be destroyed.

The Customer must then be deactivated rather than physically deleted.

The general principle is:

Delete when no real operational history has been created.

Deactivate when the record has become part of organizational history.

Current Scope: Customer as Student

In the current project scope, Customer identifies the child or student who receives educational activity.

The model does not introduce a second person entity, a Parent entity, a Guardian entity, or a Payer entity.

The Customer enters a Section only through a completed Registration Event.

The completed Registration Event creates one Section Movement and one Signed Registration Agreement.

Financial obligations belong to that specific Signed Registration Agreement.

A parent or another person may physically make a payment, but this does not create a separate Domain entity in the present scope.

The Customer remains the stable organizational record of the child or student.

Educational screens and communications may present that Customer as Student, Μαθητής, or Σπουδαστής.

These are presentation terms only; they do not create a second technical identity or relationship.

This keeps participation, agreements, and payments attached to the appropriate operational records without duplicating the person.

Architectural Principles

The Customer model is based on the following principles:

A Customer represents a stable organizational record.

The Customer record contains general and contact characteristics only.

The system does not impose universal Customer fields.

The organization defines Customer properties through authorized configuration.

Educational Products, Section Movements, Signed Registration Agreements, and payments do not belong to the initial Customer record.

Customer records and Human Resource records remain conceptually separate.

Potential duplicates may be identified, but must never be merged automatically.

Controlled lists may be used where the organization requires structured information.

Historical Customer records must be preserved once they have supported real organizational activity.

The Customer model prepares future relationships without attempting to define them before they become necessary.

Closing Remark

A Customer is not merely a name attached to a future payment or Section Movement.

It is the stable organizational identity through which an Educational Organization may later establish educational, administrative, and financial relationships.

By recording the Customer clearly before creating Section Movements, Signed Registration Agreements, or payments, the system preserves simplicity at the beginning and creates a reliable foundation for the more complex relationships that will follow.

Chapter 12 — Program Planning and Planned Sections

Editorial Transition

Having established the Customer as a stable organizational record, the model can now return to the operational structure that makes future Registration Events possible.

Before a Customer can enter a Section through a Registration Event, the Educational Organization must be able to create a credible educational program.

That program must describe the Sections the organization intends to offer, the Educational Products they deliver, their planned weekly meetings, the physical spaces in which they may take place, and the Human Resources who may support them.

The program may be created from scratch or developed through controlled copy-forward from an earlier operational program.

In both cases, the organization must be able to adjust the plan continuously without losing the history of what was previously proposed, offered, confirmed, or operated.

The following chapter examines the creation of Program Planning Versions and the Planned Sections through which an Educational Organization transforms educational intention into a realistic and manageable future program.

Working Draft — Program Creation and Planned Sections

Purpose

An Educational Organization must be able to create, revise, present, and eventually operate an educational program for a defined academic period.

The program is not merely a timetable.

It is the organized proposal through which the Educational Organization decides which educational sections it intends to offer, when they may take place, where they may take place, and which Human Resources may support them.

Before Customers are registered, before payments are received, and before educational activity begins, the organization must be able to construct a realistic and continuously adjustable planned program.

This draft defines the initial conceptual structure required for that purpose.

Program Planning Version

A Program Planning Version represents one organized program proposal for a specific academic or operational period.

It may be created in two different ways:

- Create from Scratch

- used when no suitable previous program exists

- Copy Forward from Previous Program

- used when the organization wishes to use an earlier program

- as a planning baseline

A copied program does not modify the earlier program.

The earlier program remains part of organizational history.

The new Program Planning Version becomes an independent planning reality that may be revised according to:

market tendencies,

expected demand,

educational policy,

available facilities,

available Human Resources,

lessons learned from previous years,

and known problems from earlier program decisions.

For a new Educational Organization, the initial planning version may be based on explicit assumptions rather than historical operational data.

The system must distinguish between:

Previous Operational Reality

and

New Planning Assumptions

A planning assumption is not historical evidence.

It is a declared expectation that may later be confirmed, revised, or rejected through real operation.

Section

A Section represents one distinct educational implementation planned or operated during a specific period.

It is associated with one existing Educational Product.

For example:

Educational Product

Italiano Elementare

Section

Italiano Elementare — Halandri — Evening Group A

The Educational Product describes what the organization is prepared to teach.

The Section describes one concrete attempt to offer and eventually deliver that Educational Product at a particular time, place, and organizational context.

A Section has its own stable technical identity.

At minimum, it contains:

Section

- section_id
- program_planning_version_id
- educational_product_id
- delivery_mode
- planned_start_date

- planned_end_date
- actual_start_date
- actual_cessation_date
- status
- optional documentation or comment

The planned dates express the intended educational period.

The actual dates express what truly happened.

A Section may be planned to begin in September and end in June, but may:

begin later,

stop earlier,

continue beyond the original expectation,

or never begin at all.

The original plan must remain visible even when reality develops differently.

Planned Weekly Meetings

A Section may meet once or several times each week.

Each recurring weekly meeting must have its own separate record.

For example:

Italiano Elementare — Section A

Weekly Meeting 1

Tuesday, 18:00–20:00

Room 2

Instructor A

Weekly Meeting 2

Thursday, 18:00–20:00

Room 4

Instructor B

The Tuesday and Thursday meetings must not be treated as one combined field such as:

Tuesday / Thursday, 18:00–20:00

They are separate operational realities.

They may use different rooms, different instructors, or different time-valid arrangements.

A Planned Weekly Meeting contains:

Planned Weekly Meeting

- weekly_meeting_id
- section_id
- day_of_week
- planned_start_time
- planned_end_time
- educational_implementation_space_id
required only when the Section is delivered physically
- status

When the Section is delivered physically, the selected educational space must refer to an existing Educational Implementation Space with a clear physical identity.

The user may see a friendly description such as:

Halandri
→ Building A
→ Second Floor
→ Room 2

The system, however, uses the unique identity of the actual educational space.

Online Delivery of Sections

Online education must not be treated as a temporary technical exception or as a secondary substitute for physical teaching.

It represents an increasingly important mode through which an Educational Organization may deliver real educational activity to Customers whose circumstances, location, professional obligations, family responsibilities, mobility limitations, or personal preferences make physical attendance more difficult.

For many organizations, the importance of online delivery is likely to grow over time. Educational expectations are changing. Customers increasingly expect flexibility, accessibility, and the possibility of participating in educational activity without being limited entirely by distance from a particular building or branch.

For this reason, the Educational Domain must recognize online delivery as a normal and legitimate mode through which a Section may operate.

Online delivery does not create a different Educational Product.

It does not create a different Customer.

It does not create a different financial agreement.

It does not create a different Section Movement.

It does not create a separate form of discontinuation, payment, or historical responsibility.

The central educational and organizational reality remains the same:

Educational Product

→ what the Organization is prepared to teach

Section

→ one concrete educational implementation

Customer

→ enters that specific Section

Section Movement

→ records that participation

Financial Agreement

→ records the agreed educational and financial reality

The difference concerns the way in which the Section delivers its educational activity.

Physical Section

→ educational activity takes place in a physical Educational Implementation Space

Online Section

→ educational activity takes place through an online educational environment

→ no physical Educational Implementation Space is required

An Online Section must therefore not be modeled merely as another Room.

A Room has a physical identity:

Branch

→ Building

→ Floor or Spatial Area

→ Room

An Online Section has no physical room identity merely because its meetings occur at defined days and times.

The Organization may select the delivery mode of the Section as Physical or Online.

When Physical delivery is selected, the Organization must select an appropriate physical Educational Implementation Space.

When Online delivery is selected, the system must not require the selection of a physical room.

Delivery Mode: Physical

→ physical space required

Delivery Mode: Online

→ physical space not required

The absence of a physical room does not make the Online Section less real.

An Online Section still requires:

a defined Educational Product

a planned or actual educational period

scheduled weekly meetings

defined meeting days and hours

an appropriate Instructor

a controlled capacity

active Customer participation

Section Movements

financial agreements

planned payments

actual payments

historical preservation

An online meeting remains a real educational appointment.

It may have:

Tuesday

18:00–20:00

Online

Instructor A

This meeting must remain distinguishable from every other meeting of the same Section.

It may be taught by a different Instructor from another weekly meeting. It may later require replacement, rescheduling, discontinuation, or another official organizational adjustment.

The fact that the educational activity takes place online does not remove the need for a timetable, Instructor eligibility, organized capacity, or historical traceability.

Capacity remains especially important.

A physical Section may have capacity limitations related to the legal or practical capacity of a room.

An Online Section may not be limited by chairs, square metres, or physical room dimensions. However, it must still have an educationally responsible capacity.

A Section with too many Customers may become difficult to teach effectively even when no physical room is involved.

The Organization must therefore remain responsible for deciding what constitutes a pedagogically acceptable and operationally manageable capacity for each Online Section.

The system may preserve and apply the capacity decided by the Organization. It must not assume that Online automatically means unlimited participation.

No physical room limitation

≠

unlimited educational capacity

Online delivery may also create an important commercial opportunity.

An Educational Organization may decide that an Online Section should be offered under more accessible financial terms.

For example, the Organization may determine that an Online option should be available at a lower or otherwise more attractive price for Customers who value flexibility, distance access, or reduced travel requirements.

This may help the Organization reach Customers who could not easily participate in a physical Section.

It may also allow the Organization to create educational opportunities for people who live far from the School, work during conventional hours, care for family members, or face other circumstances that make regular physical attendance difficult.

However, the system must not assume automatically that Online education is always cheaper.

The commercial decision remains with the Educational Organization.

Online delivery

→ may support a more accessible commercial offer

Online delivery

→ does not automatically require a lower price

The Organization may determine the appropriate commercial terms through its annual commercial policy and through the actual agreement made with each Customer.

The delivery mode must not silently change the financial agreement.

The agreed educational amount, any discount, registration fee, installment arrangement, and planned payment movements must remain clear in the same way as they are for a physical Section.

Online Section

→ normal Registration Event

→ normal signed duplicate

- normal Section Movement
- normal financial agreement
- normal Planned Payment Movements
- normal actual Payments process
- normal Discontinuation process

The Customer must understand clearly whether the agreed Section will be delivered physically or online.

The signed agreement must therefore reflect the actual Section in which the Customer is entering.

A Customer who enters an Online Section is not entering an informal or weaker version of the educational relationship.

The Customer enters a real Section with defined educational, operational, and financial consequences.

Online delivery must also be preserved historically.

A future report may need to show:

- which Sections were delivered physically
- which Sections were delivered online
- how many Customers selected each mode
- which delivery mode produced stronger demand
- which delivery mode supported better retention
- which delivery mode produced sustainable revenue
- which Sections required different planning

This information may later help the Organization understand how educational preferences evolve and how its physical and online capacity should be balanced.

The purpose is not to force the Organization to replace physical education.

Physical and Online Sections may both remain valuable, depending on the Educational Product, the needs of the Customers, the teaching method, the Instructor, the age group, the educational objective, and the organizational philosophy of the School.

The system must therefore preserve freedom of organizational choice.

It must support:

- Physical delivery
- Online delivery
- future controlled evolution of delivery methods

without deciding which method is educationally superior in every situation.

The present model does not yet define a particular video platform, meeting-link mechanism, technical support procedure, online attendance mechanism, recording policy, or remote examination process.

Those matters may become important later.

They must be introduced only when the Organization identifies a real operational need.

At the present stage, the essential principle is simple:

Online delivery is a real mode of delivering a Section.

It changes the delivery context.

It does not change the fundamental educational,

financial, contractual, or historical identity of the Section.

Planned Instructor Assignment

A Section may have:

one instructor,
more than one instructor,
different instructors on different weekly meetings,
or a replacement instructor during a later period.

For this reason, an instructor must not be stored as one simple permanent field inside the Section.

The assignment must remain separate and time-valid.

Conceptually:

Planned Weekly Meeting

→ one or more Instructor Assignments

→ Organizational Movement

→ Human Resource

A Planned Instructor Assignment must refer to an existing Organizational Movement rather than directly to a Human Resource.

This protects the distinction between:

Human Resource

→ stable organizational identity

Organizational Movement

→ time-valid participation and eligibility

Instructor Assignment

→ planned or actual responsibility

for a specific weekly meeting

An instructor may be proposed only when:

- the Organizational Movement is valid during the relevant period
- the person has Educational Eligibility for the Educational Product of the Section
- no conflict exists with another assignment

The system may identify conflicts and risks.

The organization remains responsible for the final decision.

Resource and Conflict Awareness

The program-planning process must help the organization identify conflicts involving:

- rooms
- buildings
- weekly times
- instructors
- instructor availability
- Educational Eligibility
- conflicting assignments
- capacity limitations
- changes that affect already planned activity

For example, the system should identify when:

- the same room is assigned to two Sections at the same time
- the same instructor is assigned to two weekly meetings at the same time
- a proposed instructor has no valid Movement
- a proposed instructor has no eligibility for the relevant Educational Product
- a selected room is no longer active or suitable

The system should warn and explain.

It must not silently alter the program or make organizational decisions on behalf of people.

Continuous Adjustment

A planning version must support continuous adjustment.

Educational reality may change because of:

market demand,

insufficient registrations,

teacher replacement,

room unavailability,

changes in family schedules,

strategic decisions,

or unexpected organizational events.

The system must therefore allow the organization to revise:

- planned Sections
- planned weekly meetings
- hours
- rooms
- instructor assignments
- planned start dates
- planned end dates
- operational status

However, flexibility must not mean loss of history.

The governing principle is:

A planned arrangement may change.

A meaningful earlier arrangement must not disappear without trace.

When a Section has already been offered, confirmed, or has begun operating, later changes must preserve a clear record of what was originally planned, what changed, when it changed, and why it changed where such explanation is required.

Section Lifecycle

The exact status vocabulary will be defined later through real operational examples.

At this stage, the Section lifecycle may include concepts such as:

- Draft
- Under Review
- Offered
- Confirmed
- Operating
- Completed
- Inactive / Cancelled

A Section may be deleted only when it has not acquired meaningful operational history.

For example:

- Created during internal planning
- never offered
- no Section Movement
- no operational commitment
- may be deleted

When a Section has already been offered, adjusted publicly, linked to organizational activity, or used in a real operational process, it should be inactivated or cancelled rather than physically deleted.

Program Planning Views

The same planned program must be available through more than one operational view.

Grid Planning View

The Secretariat may work through an Excel-like planning interface:

Section | Product | Day | Time | Room | Instructor | Status

This view supports rapid comparison, filtering, copying, sorting, and controlled adjustment.

Visual Space Planning View

The organization may also use a visual planning interface based on floor plans and educational spaces.

This view may show:

- buildings
- levels
- rooms
- weekly time slots

- planned Sections
- available or occupied spaces
- available instructors

The grid view and the visual view must never create separate realities.

They are two different ways of working with the same planned Section and Weekly Meeting records.

Boundary of the Present Draft

The present draft concerns the creation and adjustment of a planned educational program.

It does not yet define:

- Customer identity and participation
- Registration Events and Section Movements
- Customer relationships
- payment plans
- installments
- payment movements
- receipts
- books and educational-material documents
- attendance
- daily lesson occurrences
- educational progress
- formal financial and accounting integration

These concepts depend on the planned program, but must be examined separately and carefully.

Closing Remark

A planned program is not an abstract list of possible courses.

It is the controlled organizational structure through which an Educational Organization prepares a real educational promise to the market.

It connects Educational Products, physical spaces, Human Resources, weekly time arrangements, and future Customer participation.

A well-designed program-planning model allows a new organization to begin with transparent assumptions and allows an experienced organization to transform its historical knowledge into a stronger next academic year.

Chapter 13 — Planned Payment Movements, Payment Movements and Fiscal Documents

Purpose

An Educational Organization must distinguish clearly between:

amounts expected to be paid in the future;

amounts actually received or returned through approved financial operations;

and the fiscal documents issued for actual financial movements.

These are not the same reality.

A planned payment represents an expectation created through an educational and financial arrangement.

A Payment Movement represents an actual financial movement, such as money received or money returned through an approved refund.

A Fiscal Document represents the official tax document issued from a Payment Movement.

This chapter constructs these capabilities before defining the Registration Event that will later use them.

Construction Sequence

This chapter does not yet define:

- Registration Event;

- Financial Agreement;

the Registration Form and validation process through which a Registration Event is completed;

or the exact event that creates planned payment movements.

Those concepts will be constructed later.

The present chapter defines the payment structures that must already exist before a Registration Event can be executed correctly.

Planned Payment Movement

→ expected amount and planned date

Payment Movement

→ actual financial movement, date, behavior, and fiscal numbering

Fiscal Document Type

→ document issued from the actual Payment Movement

A later operational event may create specific Planned Payment Movements.

A later actual financial operation may create a Payment Movement with the fiscal document information required for that movement.

Fundamental Identity Principle

No entity and no movement may exist without its own primary key.

The personal primary key of each entity must always appear first in its structure.

Planned Payment Movement

- `planned_payment_movement_id`

Payment Movement

- `payment_movement_id`

Payment Allocation

- `payment_allocation_id`

Fiscal Document Type

- `fiscal_document_type_id`

After the primary key, the related foreign keys appear.

Only then do the business fields appear.

This convention helps every future designer understand immediately:

first:

the identity of the record

then:

its relationships

then:

its business information

Mandatory Customer and Section Relationship

Every Planned Payment Movement and every Payment Movement must contain:

`customer_id`

`section_id`

No financial movement may exist without identifying:

which Customer it concerns

and

which Section it concerns

Customer

→ all expected and actual payment movements

Section

→ all expected and actual payment movements

The structure is not concerned with who physically hands over the money.

A parent, guardian, relative, or another person may make the payment.

The movement remains connected to the Customer and the Section for which the educational obligation exists.

A separate payer entity is not required by this chapter.

Planned Payment Movements

Definition

A Planned Payment Movement represents an amount expected to be paid in the future for a specific Customer and a specific Section.

It is not proof that money has been received.

It is the recorded expectation:

This amount is expected
on this date
for this Customer
in this Section.

Examples include:

Registration Fee

1st Installment of 9

2nd Installment of 9

...

9th Installment of 9

Planned Payment Movement Structure

Planned Payment Movement

- planned_payment_movement_id
- customer_id
- section_id
- planned_amount
- planned_payment_date
- settlement_date
- discontinuation_date
- installment_number
- description

Planned Amount

The `planned_amount` records the amount expected for the specific movement.

A Planned Payment Movement without an amount has no operational value.

A movement with zero value must not be created.

Planned amount: 100 €

→ valid movement

Planned amount: 0 €

→ no movement

Planned Payment Date

The `planned_payment_date` is mandatory.

Without a planned date, a movement cannot support:

outstanding obligations

delayed-payment searches

reminder notices

information reports

Pivot Tables

charts

financial monitoring

A Planned Payment Movement without a planned payment date is operationally useless.

Description and Installment Number

The description explains the movement in human language.

For installment movements, the system creates the description automatically when the future movements are generated.

1st Installment of 9

2nd Installment of 9

3rd Installment of 9

...

9th Installment of 9

The `installment_number` stores the numeric installment sequence.

1st Installment of 9

→ `installment_number`: 1

2nd Installment of 9

→ `installment_number`: 2

9th Installment of 9

→ installment_number: 9

The numeric value supports routines, ordering, controlled operations, and future implementation clarity.

For a Registration Fee:

description:

Registration Fee

installment_number:

empty

The description serves human understanding.

The installment number serves structured system logic.

Settlement Date

The settlement_date is completed only when a Planned Payment Movement has been fully settled.

For example:

Planned amount: 100 €

Actual payment: 50 €

→ settlement_date remains empty

Second actual payment: 50 €

→ remaining balance becomes 0 €

→ settlement_date receives the date

of the payment that completed settlement

A partial payment must never make a Planned Payment Movement appear fully settled.

Discontinuation Date

The discontinuation_date records that the Customer's participation in the Section has been discontinued.

It may apply to one or more unpaid Planned Payment Movements.

Customer leaves the Section

→ relevant unpaid planned movements

receive discontinuation_date

The discontinuation date does not erase:

earlier Planned Payment Movements;

actual Payment Movements;

fiscal documents;

or the historical reality of what was agreed and what was paid.

Paid movements remain paid.

Historical records remain preserved.

The exact operational routine through which discontinuation is applied will be defined later.

Payment Movements

Definition

A Payment Movement represents one actual financial movement of the Organization for a specific Customer and Section.

In the current educational scope, it may represent money received or money returned through an approved refund. It exists only when a real financial movement has taken place.

No actual financial movement

→ no Payment Movement

Actual financial movement approved

→ Payment Movement created

A Payment Movement must never overwrite, replace, or erase an earlier Payment Movement.

Each real financial movement remains an independent historical record.

Payment Movement Structure

Payment Movement

- payment_movement_id
- customer_id
- section_id
- section_movement_id
- financial_movement_type
- fiscal_document_type_id
- fiscal_document_number
- fiscal_document_issue_date
- payment_method
- payment_amount
- payment_date
- description

Mandatory Payment Information

Every Payment Movement requires:

financial movement type

payment amount

payment date

payment method, where applicable

fiscal document type, where a fiscal document must be issued

fiscal document number, assigned by the system and stored inside the Payment Movement

description / justification

customer_id

section_id

A Payment Movement without an explanation is not acceptable.

The description is a mandatory free-text field because real payments do not always follow a simple one-installment-to-one-payment pattern.

Examples include:

Registration Fee

1st Installment of 9

- Partial payment of 2nd Installment

- Settlement of 1st through 4th Installment

- Advance payment against future installments

Financial Movement Type and Fiscal Document Type

The `financial_movement_type` records the controlled behavior of the Payment Movement. It is not a second movement and it is not a replacement for Payment Movement. It tells the system whether the movement is an ordinary receipt of money, an approved refund, or another organization-approved financial movement type.

In the current educational scope the core movement behaviors are intentionally few:

- Receipt / money received

- positive movement

- amount is recorded as positive

- ordinary Receipt is issued

- Refund / money returned

- negative movement

- amount is recorded as negative

- Refund Receipt is issued

The `fiscal_document_type_id` identifies the approved Fiscal Document Type used by the Payment Movement. The Fiscal Document Type defines the fiscal/accounting behavior of the movement, including the document kind, sign behavior, and numbering sequence.

The user who executes the operation must know, before final confirmation, which fiscal document will be issued and which official number will be assigned.

The present Educational Domain does not model the full complexity of commercial invoicing. Invoices, credit invoices, dispatch documents, and other complex commercial documents are outside the current core scope and may be introduced only as a deliberate future extension.

Partial Payment

A real payment may cover only part of a Planned Payment Movement.

- Planned amount: 100 €

Payment Movement:

50 €

→ total paid: 50 €

→ remaining balance: 50 €

→ Planned Payment Movement remains unsettled

→ settlement_date remains empty

When another real payment covers the remaining amount:

Second Payment Movement:

50 €

→ total paid: 100 €

→ remaining balance: 0 €

→ Planned Payment Movement becomes settled

→ settlement_date is completed

The first payment remains a separate historical payment record.

The second payment remains a separate historical payment record.

Neither movement is replaced or deleted.

Relationship Between Planned and Actual Payments

Payment Allocation

A real Payment Movement may cover one or more Planned Payment Movements.

Likewise, one Planned Payment Movement may be covered through more than one actual Payment Movement.

For this reason, the model requires a controlled relationship structure.

Payment Allocation

- payment_allocation_id
- planned_payment_movement_id
- payment_movement_id
- allocated_amount

The Payment Allocation records how much of a specific actual payment covers a specific planned movement.

One Payment Covering Multiple Planned Movements

For example:

1st Installment: 100 €

2nd Installment: 100 €

3rd Installment: 100 €

4th Installment: 100 €

One Payment Movement:

400 €

The Payment Movement may be allocated across all four Planned Payment Movements.

Payment Movement: 400 €

→ Allocation to 1st Installment: 100 €

→ Allocation to 2nd Installment: 100 €

→ Allocation to 3rd Installment: 100 €

→ Allocation to 4th Installment: 100 €

One fiscal document may then correspond to the real payment of 400 €.

The exact operational routine and interface used to perform this action will be defined later.

Information Derived from Allocations

From the Planned Payment Movement and its Payment Allocations, the system must always be able to determine:

planned amount

total amount paid

remaining balance

whether the movement is partially paid

whether the movement is fully settled

whether a discontinuation date exists

These are operational results of real movements and their relationships.

They must never depend on memory, manual calculations, or informal notes.

Fiscal Documents

Definition

A Fiscal Document is the official tax document issued from an actual Payment Movement.

It does not belong to a Planned Payment Movement, because no fiscal document exists merely because an amount is expected in the future.

Planned Payment Movement

→ no fiscal document

Payment Movement

→ fiscal document type, official number, and issue date stored inside the Payment Movement

Fiscal Document Type and Numbering Control

A Fiscal Document Type is controlled organizational information used by Payment Movements that require official fiscal documentation.

Fiscal Document Type

- `fiscal_document_type_id`
- `description`
- `sign_behavior`
- `current_next_document_number`
- `active_status`
- `numbering_control_notes`

Each Fiscal Document Type represents a distinct fiscal/accounting movement behavior. For example, an ordinary Receipt represents a positive movement, while a Refund Receipt represents a negative movement.

Each Fiscal Document Type maintains its own `current_next_document_number`. Different document types may therefore have different numbering sequences.

An authorized user may set or reset the `current_next_document_number` when required by the accountant, the tax authority, or a controlled correction procedure.

Before a Payment Movement is finalized, the system must show the fiscal document type and the exact fiscal document number that will be assigned.

When the Payment Movement is finalized, the selected fiscal document number is stored exclusively inside the Payment Movement. Later numbering resets affect only future Payment Movements and never rewrite numbers already stored in finalized Payment Movements.

Registration Fee

The Registration Fee is an additional fee.

It is not included in the price of the Educational Product.

Educational Product Price

+

Registration Fee

=

total financial obligation

The Registration Fee begins as a general system parameter.

During a future Registration Event, the operational user may:

keep the default amount

change the amount

set the amount to zero

Registration Fee Not Paid Immediately

When a non-zero Registration Fee is not paid at the time of a completed Registration Event, a Planned Payment Movement is created.

description:

Registration Fee

planned_payment_date:

date of Registration Event

installment_number:

empty

This movement remains unpaid until a real Payment Movement covers it.

Registration Fee Paid Immediately

When the Registration Fee is paid immediately:

no Planned Payment Movement is created

one Payment Movement is created

the appropriate Fiscal Document Type is selected

the next fiscal document number is assigned

the fiscal document number is stored exclusively inside the Payment Movement

The amount received may be the default Registration Fee or another amount approved during the Registration Event.

Zero Registration Fee

When the Registration Fee is zero:

no Planned Payment Movement

no Payment Movement

no Fiscal Document

No movement is created without a real financial reason.

Historicity

Planned Payment Movements, Payment Movements, Payment Allocations, and Fiscal Documents form part of the financial history of the Educational Organization.

For this reason:

Actual Payment Movements are never silently overwritten.

Actual Payment Movements are never deleted

simply because another payment is received later.

Fiscal Documents remain connected

to the Payment Movement from which they were issued.

Planned Payment Movements remain historically understandable

through their planned date, settlement date,

discontinuation date, and related payment allocations.

The purpose of history is not unnecessary accumulation.

The purpose is to preserve the real sequence of financial facts.

Operational Routine Principle

Future operational modules must allow the user to express one clear business decision through one clear action.

The user should not be required to perform a long sequence of disconnected manual updates across different screens.

For example:

A payment action

→ may create a Payment Movement

→ create the necessary Payment Allocations

→ update the visible financial position

→ assign the Fiscal Document Type and official fiscal document number

The detailed interface and code-level execution mechanisms will be designed later.

The present chapter establishes the business structures that those future routines must use.

Closing Remark

This chapter does not yet create a Registration Event.

It constructs the financial capabilities required before a Registration Event can exist safely.

It keeps distinct:

what is expected

→ Planned Payment Movement

what actual financial movement occurred

→ Payment Movement

how the actual payment covers expected obligations

→ Payment Allocation

which fiscal document type and official number were issued from the Payment Movement

→ Fiscal Document Type and `fiscal_document_number` inside Payment Movement

By preserving these distinctions, the Educational Organization can later support fast operational work, accurate financial monitoring, controlled payment routines, reminder procedures, historical understanding, and reliable information analysis.

Chapter 14 — The Event

Purpose

This chapter defines the Event through which a Customer is registered in one specific Section.

The Event is not primarily a screen, a button, or a technical workflow.

It is the controlled organizational process through which the Educational Organization:
identifies or creates a Customer

→ places that Customer in one specific Section

→ prepares the agreed financial arrangement

→ produces the signed duplicate registration document

→ and, only after validation, creates the official organizational consequences.

The user interface must support this process simply and safely. Its visual design remains the responsibility of the UI Designer and Code Designer.

The Registration Form Is Not an Entity

The Registration Form is a temporary working space.

It is not a database table and does not create a separate abstract entity called “Registration” merely because a form exists.

While the form is being completed, all information remains provisional:

Customer identification

Section selection

financial proposal

installment schedule

discounts or adjustments

registration fee

printed duplicate

No official organizational fact exists merely because information has been typed into the form.

The official reality begins only after:

the duplicate is printed

→ the Customer signs it

→ the execution is explicitly validated

The Central Fact: Section Movement

The central permanent result of the Event is the entry of one Customer into one specific Section.

This is represented by a Section Movement.

Section Movement

- section_movement_id
- customer_id
- section_id
- active
- deactivation_date

The Section Movement records the fact:

This Customer
entered
this specific Section.

Every completed Event concerns only:

one Customer

+

one Section

It creates one independent Section Movement, one independent financial agreement, and one independent signed duplicate.

Different Sections are never merged into one Registration Event, one agreement, or one duplicate.

A Customer may participate in one or more different Sections. Each participation remains historically independent.

Historicity of the Section Movement

A Section Movement is never deleted merely because the Customer later stops attending.

active: Yes

→ the Customer currently belongs to the Section

active: No

→ the Customer no longer belongs actively to the Section

deactivation_date

→ records when the active participation ended

The reason for deactivation is not stored as a free additional field in the Section Movement. It is determined by the official process that caused the change.

For example:

Discontinuation

→ performs the official discontinuation of the existing participation

Transfer to another Section

→ requires Discontinuation in the old Section

→ followed by a new Registration Event in the new Section

A Transfer is not a silent edit of the old reality.

The old participation remains historically true. The new participation is created as a new reality.

Customer Identification Before Execution

The form should help the Secretariat identify an existing Customer before creating a new Customer record.

As sufficient identifying information is entered, such as:

name

surname

date of birth

the form may check for a possible existing Customer.

When an existing Customer is identified:

Old Customer

→ selection from the existing Customer area

→ loading of the existing customer_id

→ internal instruction:

do not create a new Customer

The purpose is to prevent duplicate Customer records.

The system assists the Secretary with a warning and the existing information. It must not silently merge people or make a human identification decision on its own.

If the existing Customer's personal details require correction, the Secretary must use the separate Customer Update Form.

Customer data update

→ Customer Update Form

Section participation

→ Registration Event

The Registration Form must not become an uncontrolled form for modifying Customer master data.

Selection of the Section

The Secretary selects a Section from the available Sections of the active Academic Year.

The selection list must display only Sections that can actually receive a new Customer.

count(active Section Movements)

<

Section capacity

If active participation count < capacity

→ the Section appears in the selection list

If active participation count $\geq$ capacity

→ the Section does not appear in the selection list

A full Section is not shown merely to be rejected later.

This protects capacity before the Secretary begins preparing an agreement for a Section that cannot accept another Customer.

The list contains all available, non-full Sections of the active Academic Year. It does not attempt to replace human educational judgment by inferring which Section is suitable for the Customer.

If a Customer already has an active Section Movement in the selected Section, the system recognizes this and displays a warning that the Customer is already registered there.

Financial Basis of the Registration

The financial basis belongs to the Educational Product For Sale connected with the selected Section.

Educational Product For Sale

→ annual commercial basis

→ basic total price

Section

→ operational implementation of that annual offering

The Section does not create a second, independent pricing policy.

Once the Section is selected, the form reads the relevant commercial basis and the actual temporal reality of the Section in order to prepare the initial proposal.

The system must automatically produce:

proposed total educational amount

proposed number of installments

proposed installment dates

proposed installment amounts

installment sequence

descriptions of the planned movements

The purpose is not to force the Secretary to build every installment manually.

Prepaid Monthly Installments

The normal installment proposal is prepaid.

For a Customer entering before the Section begins:

Section start date

→ first planned installment

each following educational month

→ following planned installment

The system creates the complete proposal automatically from the real duration of the Section.

The Secretary sees the full proposed arrangement in the form before anything becomes official.

Entry After the Section Has Started

A Customer may enter a Section after it has already started, provided that the Organization determines that the Customer has the necessary knowledge to join.

The Customer's financial agreement does not begin from the original start date of the Section.

It begins from the date on which the Customer actually enters the Section and attends the first lesson.

Section began two months earlier

Customer enters now

→ agreement begins now

→ only the remaining real educational period is calculated

The system should automatically calculate:

remaining full months

+

any remaining fraction of a final month

→ proportional educational amount

→ proposed installments and dates

The exact calculation, decimal handling, rounding, and presentation mechanism belong to the Code Designer.

The business requirement is clear:

The Customer must not be charged
for educational time that was completed
before the Customer entered the Section.

The Actual Financial Agreement

The automatic proposal is the starting point of the agreement, not an unchangeable obligation.

Before signature and validation, the Secretary may prepare the actual agreement by changing, where authorized by the Organization:

number of installments

installment amounts

installment dates

distribution of amounts

discount on the total educational amount

special agreement for a returning Customer

full reduction of the educational amount to zero

The complete installment schedule must express the final agreed educational amount.

The form must make the agreement visible and understandable before it is printed.

The chapter does not define who has permission to grant discounts, special conditions, or free education. Such authority belongs later to the Users and Rights model of the Organization.

Free Educational Agreement

The educational amount and the registration fee are separate realities.

Educational amount

→ may be reduced to zero

Registration fee

→ remains separate

→ becomes zero only when the user explicitly sets it to zero in the form

A Customer may therefore receive free education while still paying the registration fee.

When the agreed educational amount is zero:

no zero-value Planned Payment Movements

are created for educational installments

However, the free educational agreement may still require an approved zero-value fiscal procedure according to the Organization's fiscal rules. This does not create a Payment Movement when no actual money is received or returned.

The fiscal details belong to the controlled financial and fiscal model. The Event must simply support the real fact that free education is still an official agreement, not an absence of agreement.

Registration Fee

The registration fee is an additional amount separate from the educational price.

When it is not paid during the Event:

Planned Payment Movement

→ description: Registration Fee

→ planned date: date of Registration

→ no Payment Movement

→ no fiscal document yet

When it is paid during the Event:

Payment Movement

→ Fiscal Document Type selected, number assigned, and number stored inside the Payment Movement

When the registration fee is explicitly set to zero:

no Planned Payment Movement

is created for the registration fee

The Event does not treat a zero amount as an economic obligation.

The Duplicate Registration Document

Before execution, the system prepares a duplicate Registration Document in two identical copies.

The document must contain the complete real agreement:

- Customer information
- Section information
- basic educational price
- agreed reductions or adjustments
- final agreed educational amount
- registration fee
- all agreed installments
- amount and date of every installment
- approved legal terms of the Organization

The Customer signs both copies.

- one signed hard copy

- remains with the Organization

- one signed hard copy

- is given to the Customer

The duplicate is not a decorative printout.

It is the physical evidence of the agreement made for that specific Customer and that specific Section.

Later payment activity belongs to the Payments process. The duplicate records the original agreement; it is not redesigned each time a later payment occurs.

Boundary Between Preparation and Official Reality

The Event distinguishes strictly between preparation and execution.

Form completion

- provisional

Duplicate printed but not signed

- still provisional

Duplicate signed but execution not validated

- still no official system consequences

Signed duplicate

- +

- explicit execution validation

- official Event

Only after validation may the system execute the permanent routines.

If new Customer

→ create Customer record

→ obtain customer_id

If existing Customer

→ use existing customer_id

Then

→ create Section Movement

→ create agreed Planned Payment Movements

→ execute registration-fee Payment Movement and fiscal procedure,
where applicable

→ execute free-education fiscal procedure,
where applicable

The Section Movement must exist before financial movements created by the Event, because it provides the specific identity of the Customer's participation in the Section.

Financial Traceability

Every financial movement created as a consequence of the Event must contain:

customer_id

section_id

section_movement_id

The first two fields identify:

which Customer

and

which Section

The section_movement_id identifies the exact historical participation from which the financial movement arose.

This matters because a Customer may:

enter a Section

→ discontinue

and later

→ enter the same Section again

These are not the same historical reality.

The section_movement_id prevents the Organization from confusing the financial consequences of an earlier participation with those of a later one.

Reporting and Analysis Consequence

The section_movement_id may appear unnecessary during ordinary data entry.

In reality, it allows fast and reliable future reporting without forcing the system to reconstruct long historical paths every time a report is requested.

It supports direct analysis such as:

revenue by Section

expected revenue by Section

unpaid balances by Section

discontinuations by Section

financial result of each specific participation

- Sections with strong performance

- Sections requiring managerial attention

A capable reporting mechanism may later provide configurable tables, Pivot Tables, and Charts based on visible criteria selected by authorized users.

The purpose is not decorative reporting.

It is to help the Organization understand:

which Sections produce real value

which Sections create financial risk

which Sections need support, review, or different planning

- No Unofficial Corrections

Once the Event has been officially executed, the Organization does not correct reality through deletion, informal notes, or memory.

Completed registration

→ remains historically true

Later discontinuation

→ official Discontinuation procedure

Later transfer

→ Discontinuation in the old Section

→ new Registration Event in the new Section

Later payment

→ Payments process

The database must remain the official organizational memory.

The system does not erase what happened. It records how reality changed through official procedures.

Closing Remark

The Event is the point at which the Educational Organization transforms a prepared agreement into an official participation in a Section.

It keeps distinct:

temporary form preparation

≠

official execution

Customer information

≠

Customer participation in a Section

Section Movement

≠

financial agreement

Planned Payment Movements

≠

actual future payments

free education

≠

absence of an official agreement

historical correction

≠

deletion of reality

The central fact remains simple:

One Customer

enters

one specific Section

through one official Event.

Everything else exists to make that fact accurate, financially clear, historically protected, and operationally usable.

Chapter 15 — Customer Financial Lifecycle

Purpose

The financial life of an educational organization is not organized around an abstract idea of “what a Customer owes.”

It is organized around the specific agreements that the Customer has accepted for specific Sections.

A Customer may participate in more than one Section, during the same Academic Year or across different Academic Years. Each participation may involve a different educational agreement, different installment dates, different payments, different receipts, a different discontinuation history, and a different outstanding balance.

For this reason, the financial center of daily Secretariat work is not the Customer in general.

It is the specific signed Registration Agreement.

This chapter defines the financial lifecycle of that agreement: planned installments, actual payments, receipts, partial settlement, discontinuation, later settlement of old balances, financial rearrangement, and the preservation of historical truth.

It does not prescribe a final graphical interface, a payment-terminal implementation, an online-payment provider, or a technical authorization model. Those belong to later design work.

It defines the real organizational actions that every future interface and technical implementation must serve.

The Signed Registration Agreement and the Registration Card

Each completed registration creates one autonomous educational and financial reality:

1 Registration

→ 1 Customer

→ 1 specific Section

→ 1 Section Movement

→ 1 signed financial agreement

→ 1 autonomous Registration Card / Contract Card

The signed agreement defines the terms accepted by the Customer for that specific participation.

It may include, according to the Organization's policy:

the selected Section;

the agreed educational price;

a registration fee where applicable;

any approved financial arrangement;

the planned installments;

the planned installment dates;

the terms of participation;

and any other terms that the Organization requires to appear in the signed agreement.

For operational purposes, the Secretariat works through the Registration Card or Contract Card.

This card is the complete financial and operational view of one specific signed agreement.

It is not introduced here as a separate technical entity beyond the real registration and its Section Movement. It is the operational representation of the agreement created by that registration.

The Registration Card must allow the Secretariat to understand, without searching through unrelated records:

- What was agreed?
- What has been paid?
- Which installments remain unpaid?
- Which installments are overdue?
- What is the current outstanding balance?
- Has the participation been discontinued?
- What receipts have been issued?
- What real historical actions have occurred?

The financial card is therefore agreement-centered.

The Customer identifies the person.

The specific Registration Agreement defines the obligation.

The Financial Model Is Agreement-Centered, Not Customer-Centered

A Customer may have more than one agreement.

For example:

Customer

├— English Section Agreement

- | → its own installments
- | → its own payments
- | → its own receipts
- | → its own balance
- |

└— Italian Section Agreement

- its own installments
- its own payments
- its own receipts
- its own balance

The Customer must never be treated as one undifferentiated financial wallet.

A payment, an installment, a receipt, a discontinuation, or an outstanding balance belongs first to a specific agreement.

Only after this specific reality has been preserved may the Organization produce an aggregated Customer view for information or analysis.

For example, the Organization may later ask:

What is the total outstanding balance of this Customer across all current and historical agreements?

This is a valid analytical question.

However, it must never replace the prior question:

What is the financial state of this specific agreement?

This distinction protects accuracy, historicity, reporting, and the daily work of the Secretariat.

Planned Payment Movements

The signed agreement may create one or more planned payment obligations.

A planned payment obligation is not a real payment.

It is the amount and date that the Customer agreed to pay under the specific agreement.

For the present model, each installment is represented through a Planned Payment Movement.

Conceptually:

Planned Payment Movement

- planned_payment_movement_id
- customer_id
- section_id
- section_movement_id
- planned_amount
- planned_payment_date
- total_paid_amount
- remaining_balance
- settlement_date
- discontinuation_date
- installment_number
- description / reason

The relationship with section_movement_id is essential.

It makes clear that the installment belongs to the particular registration, participation, and signed agreement from which it was created.

The planned amount represents the agreed value of the installment.

The planned payment date represents the date on which the installment becomes due according to the agreement.

The total paid amount represents the total real money that has been allocated to that installment through actual payments.

The remaining balance represents the amount that is still unpaid.

Conceptually:

remaining_balance

=

planned_amount

-

total_paid_amount

The operational state of an installment must arise from these real values.

total_paid_amount = 0

→ Unpaid

$0 < \text{total_paid_amount} < \text{planned_amount}$

→ Partially Paid

remaining_balance = 0

→ Fully Settled

A separate manually controlled field such as:

Paid: Yes / No

would be unsafe.

It could contradict the actual paid amount and remaining balance.

An installment is fully settled only when its remaining balance becomes exactly zero.

Only then may the system record its settlement date.

remaining_balance = 0

→ settlement_date is recorded

remaining_balance > 0

→ settlement_date remains empty

The settlement date is not a manually invented date.

It is the real date on which the installment became fully covered through actual payment.

Personal Billing Periods

Where an agreement uses recurring monthly installments, the chargeable period belongs to the specific agreement.

It is not automatically the calendar month.

For example:

Actual participation begins: 15 September

First billing period:

15 September → 14 October

Second billing period:

15 October → 14 November

Another Customer may begin on a different day:

Actual participation begins: 3 October

First billing period:

3 October → 2 November

Second billing period:

3 November → 2 December

This approach reflects the real beginning of each Customer's participation.

It prevents the Organization from treating all Customers as though they had begun at the same time merely because they attend the same Section.

The financial schedule must follow the real agreement and its actual educational beginning.

Actual Payments

A real payment is a real transfer of money from the Customer to the Organization.

It is represented by a Payment Movement.

Conceptually:

Payment Movement

- payment_movement_id
- customer_id
- section_id
- section_movement_id
- payment_amount
- payment_date
- description
- relationship with Receipt

A Payment Movement is not the same thing as a planned installment.

Planned Payment Movement

→ what the agreement expected

Payment Movement

→ what was actually paid

One actual payment may settle one installment, several installments, or part of an installment.

For example:

Installment 1: 90 €

Installment 2: 90 €

Installment 3: 90 €

Actual payment: 200 €

The result may be:

Installment 1

→ fully settled: 90 €

Installment 2

→ fully settled: 90 €

Installment 3

→ partially paid: 20 €

→ remaining balance: 70 €

The Organization must preserve the relationship between the real payment and the installments that it settled, whether fully or partially.

The exact technical representation of that relationship belongs to the Code Designer.

However, the operational requirement is non-negotiable:

- One actual payment

- may cover more than one installment

within the same specific agreement.

One installment

- may receive value from more than one actual payment.

The technical design must preserve this reality without ambiguity.

FIFO Settlement of Installments

Payments inside one agreement follow the FIFO principle:

- First In, First Out

The first installment that has not been fully settled must be covered before a later installment may be covered.

Oldest unpaid installment

- settled first

Oldest partially paid installment

- completed before the next installment begins

Later installment

- cannot be settled while an earlier installment

- still has a remaining balance

This principle prevents an artificial appearance of financial regularity.

A Customer must not appear to have paid a later installment while an earlier installment remains unpaid or partially unpaid.

For example:

- Installment 1: remaining balance 30 €

- Installment 2: remaining balance 90 €

- New payment: 100 €

The system must apply the payment as follows:

- 30 € → completes Installment 1

- 70 € → applied to Installment 2

- 20 € → remains unpaid in Installment 2

FIFO applies inside the specific agreement.

It does not combine installments from unrelated agreements.

Payment through Installment Selection

The Registration Card may allow the Secretariat to select one or more installments visually.

For example, a user interface may use controlled selection objects such as checkboxes beside eligible installments.

These visual objects do not create a financial reality by themselves.

They only support an already defined official operation.

Before execution, the system must show the consequence clearly.

For example:

The selected action will settle 3 installments.

Total payment amount: 270 €

After confirmation:

3 selected installments

→ become fully settled

1 actual Payment Movement

→ payment amount: 270 €

1 Receipt

→ amount: 270 €

The selection mechanism must obey FIFO.

The user must not be allowed to select a later installment while an earlier installment remains unpaid or partially paid.

The graphical environment may differ from one implementation to another.

The underlying rule must remain stable:

A payment operation follows the financial order
of the specific agreement.

Payment through Amount Entry

The Registration Card must also support a payment where the Secretariat enters the actual amount received.

For example:

Amount received: 200 €

The system must then begin from the first installment that is not fully settled and distribute the amount through the FIFO order.

For example:

Installment 1: 90 € unpaid

Installment 2: 90 € unpaid

Installment 3: 90 € unpaid

Amount received: 200 €

Before execution, the system must present the result clearly:

The payment will:

- settle Installment 1: 90 €
- settle Installment 2: 90 €
- apply 20 € to Installment 3

Remaining balance of Installment 3: 70 €

After confirmation:

1 Payment Movement

→ amount: 200 €

→ actual payment date

1 Receipt

→ amount: 200 €

Installment 1

→ fully settled

Installment 2

→ fully settled

Installment 3

→ partially paid

→ remaining balance: 70 €

The Registration Card must immediately reflect this new reality.

The Secretariat must not need to calculate the result manually or search elsewhere to understand what changed.

One Payment Operation Belongs to One Agreement

A Customer may wish to pay amounts related to more than one agreement on the same visit.

For example:

English Agreement

→ Customer pays 120 €

Italian Agreement

→ Customer pays 80 €

These must be processed as two separate official operations.

English Agreement

→ one Payment Movement: 120 €

→ one Receipt: 120 €

→ FIFO only within the English Agreement

Italian Agreement

→ one Payment Movement: 80 €

→ one Receipt: 80 €

→ FIFO only within the Italian Agreement

The fact that the same Customer physically gives a total of 200 € does not justify creating one mixed payment across two agreements.

Each agreement has its own installments, its own financial history, its own receipts, and its own analytical meaning.

One Payment Movement

→ one specific Registration Card

→ installments of that specific agreement

→ one Receipt

This protects statistical accuracy.

It allows the Organization to understand clearly:

How much was received for English?

How much was received for Italian?

Which agreement was settled?

Which installments were covered?

Which receipt belongs to which Section?

A clean action today becomes reliable information tomorrow.

A Payment Cannot Exceed the Outstanding Balance

An ordinary payment operation may never exceed the real outstanding balance of the specific agreement.

Amount entered by the user

≤

actual outstanding balance of the Registration Card

For example:

Outstanding balance: 150 €

Amount entered: 200 €

The system must not create:

Payment Movement: 200 €

Receipt: 200 €

Negative balance: -50 €

Artificial credit balance: 50 €

The maximum amount that may be received and receipted through the normal payment operation is:

150 €

The following consistency must always remain true:

Payment Movement amount

=

total amount allocated to installments

=

Receipt amount

≤

actual outstanding balance of the specific agreement

The system must never overpay an installment, create a negative balance, or produce an artificial credit balance through an ordinary payment action.

When the outstanding balance becomes zero, the agreement is fully settled.

Receipts and Historical Integrity

Within the present educational context, the normal fiscal document of daily Secretariat work is a Receipt.

Invoices are not examined in this chapter.

A printed receipt is a real historical fact.

It must not be freely changed, deleted, or rewritten from the Registration Card.

Printed Receipt

→ remains historically unchanged

If an error is discovered, the Secretariat must not attempt to repair the past by changing the old payment or the old receipt inside the ordinary financial card.

The Secretariat must consult the accountant and follow the approved fiscal procedure of the Organization.

The system may support the resulting official action only when the Organization has configured it in accordance with the accountant's instructions and the applicable fiscal requirements.

Refunds

A refund is not a correction of an old payment.

It is a separate official financial event.

Original Payment

→ remains historically visible

Original Receipt

→ remains historically visible

Refund

→ separate official operation

Refund Receipt or other approved fiscal document

→ separate historical document

When the Organization is permitted and configured to perform a refund, the system may assist the Secretariat through a defined Refund operation.

That operation must:

- refer to the relevant original payment;
- apply the Organization's approved refund policy;
- create a separate refund movement;

- issue the appropriate approved fiscal document;
- preserve the original payment and receipt unchanged;
- update the Registration Card immediately.

The exact fiscal method of refund is not determined by this chapter.

Different Organizations may operate under different approved procedures.

The Domain rule remains stable:

A refund is a new historical action.

It is never a silent modification

of an earlier payment or receipt.

Official Financial Rearrangement

The Organization may later approve a revised financial arrangement for a specific agreement.

This may occur because of financial difficulty, an exceptional family circumstance, an approved reduction, or another decision made by the responsible School authority.

The Authorization model is not defined here.

The Organization will later determine which users may perform or approve this action.

The financial rule is clear:

A financial rearrangement may affect only the unpaid part of the agreement.

It may affect:

- unpaid installments;
- future installment dates;
- installment amounts;
- the remaining unpaid portion of a partially paid installment.

It must never alter:

- actual money already received;
- already settled installment amounts;
- issued receipts;
- the historical fact of an earlier payment.

For example:

Original agreed total: 900 €

Already actually paid: 270 €

Approved revised total agreement: 720 €

The new remaining amount is:

720 €

–

270 €

=

450 €

The unpaid part of the agreement may then be rearranged so that the remaining scheduled obligations total 450 €.

The original agreement remains historically visible.

The approved rearrangement becomes a later official fact in its history.

A financial rearrangement must never become an indirect refund mechanism.

For this reason:

Approved revised total

≥

total amount already actually paid

If a proposed revised total is lower than the amount already paid, the rearrangement must not be executed.

The system must not alter installments, payments, or receipts in an attempt to create a hidden refund.

A real refund, where approved, follows the separate Refund operation.

Discontinuation of Participation

Discontinuation is an official operation.

It is not:

- deletion of the Registration;
- deletion of the Customer;
- deletion of the Section Movement;
- deletion of payments;
- deletion of receipts;
- disappearance of the agreement.

It is an official recognition that participation in a specific Section ended before the normal completion of that Section.

The official discontinuation date is the Customer's last confirmed attendance date.

Last confirmed attendance date

→ official discontinuation date

A later declaration to the Secretariat does not alter the educational truth of participation.

For example:

Customer informs the Secretariat: 20 January

Last confirmed attendance:

15 January

Official discontinuation date:

15 January

The attendance register will later provide the source through which this date can be confirmed.

The discontinuation operation affects the specific Section Movement:

Section Movement

→ becomes inactive

Discontinuation date

→ recorded as the last confirmed attendance date

Section capacity

→ position becomes available for a new Registration

The Registration Card remains historically intact.

Agreement

→ remains visible

Planned installments

→ remain historically understandable

Actual payments

→ remain visible

Receipts

→ remain visible

Discontinuation

→ appears as a real official event

Financial Consequences of Discontinuation

Discontinuation ends participation.

It does not automatically determine that every remaining financial obligation disappears.

The Organization must define a discontinuation financial policy during system configuration.

For the present model, the policy may determine whether the Organization charges:

- the full applicable billing period;
- or
- the proportional educational value
up to the last confirmed attendance date.

For example:

Actual participation begins: 15 September

Billing period:

15 October → 14 November

Last confirmed attendance:

25 October

If the Organization applies a full-period policy:

The applicable 15 October → 14 November period

remains chargeable in full.

If the Organization applies a proportional policy:

The charge is calculated only
for the period from 15 October
to 25 October.

The system must apply the policy that was active and authorized at the time of the official discontinuation.

A later change to the general policy must not silently alter discontinuations already completed in the past.

The official discontinuation outcome must remain part of the agreement's historical truth.

After discontinuation, the same Registration Card remains the source of information and later financial work.

It may present the financial reality differently:

Historical installments
→ remain visible

Payments and receipts
→ remain visible

Installments that remain payable
→ remain available for settlement

Installments after discontinuation
that no longer remain payable
→ do not appear as current receivables

The same card is therefore sufficient.

No duplicate financial card and no separate parallel agreement are required.

One structure preserves one reality.

Outstanding Balances after Discontinuation or Normal Completion

A discontinued agreement may still have a real outstanding balance.

This balance remains part of the agreement.

Discontinuation of participation

≠

disappearance of financial balance

The same is true when a Section reaches its normal end date.

A Customer may complete a Section normally while still having unpaid installments.

Normal completion does not require an artificial closing operation for each Customer.

Section reaches actual completion date

→ educational participation completed

No discontinuation occurred

→ no discontinuation action is recorded

Analytical functions can later distinguish:

- agreements completed normally with outstanding balance;
- discontinued agreements with outstanding balance;
- fully settled agreements;
- partially settled agreements;
- overdue installments;
- historical balances by Academic Year, Section, Product, Customer, or Organizational Presence.

An outstanding balance does not disappear merely because time passes or because an Academic Year ends.

It remains a real financial fact until a real payment or another official approved action changes it.

The Organization may choose how it attempts to reduce such balances in practice.

This chapter does not impose court action, debt collection procedures, or automatic write-off rules.

It preserves the truth:

What remains unpaid?

Where did it originate?

Which agreement created it?

How long has it remained outstanding?

Settlement of Historical Balances

A Customer may return later to settle an outstanding balance from a previous Academic Year.

The Secretariat must be able to select the relevant historical Academic Year, open the historical Registration Card, and execute a normal payment against the remaining balance.

Selected historical Academic Year

→ historical Registration Card

→ existing unpaid balance

→ normal FIFO payment operation

→ new Payment Movement

→ current real payment date

→ new Receipt

The new payment does not reactivate the old Section Movement.

It does not return the Customer to the old Section.

It only settles the remaining financial obligation of the historical agreement.

Discontinued participation

→ remains discontinued

Old outstanding balance

→ may still be paid normally

The same principle applies to balances from agreements that ended normally.

The Academic Year context helps the Secretariat work clearly with historical agreements without confusing them with the daily work of the current Academic Year.

Warning of Previous Outstanding Balances during New Registration

When the Secretariat selects an existing Customer for a new Registration, the system should examine whether that Customer has outstanding balances from earlier agreements.

If such balances exist, the system must present a clear warning.

For example:

Warning

This Customer has previous outstanding balances.

Total previous outstanding balance: X €

The warning does not automatically block the new Registration.

The system does not decide whether the Customer may register again.

The Secretariat must refer the matter to the responsible School authority.

The responsible authority decides whether and under which conditions the new Registration may proceed.

After that human decision, the system uses only the official operations already defined:

- new Registration;
- new signed agreement;
- payment of an older balance;
- a new approved financial arrangement;
- or another valid organizational action.

The warning protects the Organization from hidden financial history without replacing human judgment.

Overdue Installments and Information

A Customer is not permanently classified as “a debtor.”

The real question is more precise:

Which specific installments
remain unpaid or partially paid

and are overdue by at least X days?

For example:

Reference date: 20 October

Installment due date: 15 October

Remaining balance: 90 €

Delay threshold: 5 days

This installment appears in the overdue analysis because it remains unpaid and is five days overdue.

The Organization may later use the information system to examine:

- overdue installments;

- number of days overdue;
- outstanding balance by agreement;
- outstanding balance by Customer;
- outstanding balance by Section;
- balances after discontinuation;
- balances after normal completion;
- expected revenue;
- actual receipts;
- payment behavior across Academic Years.

The Registration Card serves the individual daily action.

The Information System serves the broader managerial understanding.

Both rely on the same accurate contractual and financial facts.

Payment Methods and Future Modules

A Customer may pay through different methods:

- cash;
- card through a physical terminal;
- online card payment;
- bank transfer;
- electronic payment service;
- another future payment method.

The method of payment may require external hardware, payment-terminal integration, Internet services, external providers, technical expertise, electronic receipt delivery, or additional commercial modules offered by the software provider.

These are important implementation and product-design matters.

They do not alter the financial truth of the agreement.

Different payment method

→ same agreement

Different payment method

→ same FIFO rule

Different payment method

→ same actual Payment Movement

Different payment method

→ same receipt requirement

Different payment method

→ same historicity

The Organization may choose the modules that serve its real needs.

The software provider may offer basic and extended packages, such as card-payment support, online payments, electronic receipt delivery, or advanced financial analysis.

However, all such extensions must obey the same stable financial core.

Technology may change.

The agreement, the payment truth, and historical integrity must not.

Functional Presentation of the Registration Card

This chapter does not prescribe the final visual design of the Registration Card.

It does establish a functional requirement.

The Secretariat must be able to see the complete state of the specific agreement clearly in one coherent operational view.

That view must make visible, according to the current state of the agreement:

- the selected Section;
- the signed financial agreement;
- planned installments;
- due dates;
- paid amounts;
- remaining balances;
- fully settled installments;
- partially paid installments;
- overdue installments;
- real payments;
- issued receipts;
- discontinuation where applicable;
- current outstanding balance;
- relevant historical actions.

The graphical environment may use buttons, checkboxes, controlled fields, confirmation windows, or other visual objects.

Each visual object must correspond to a clearly defined official operation.

For example:

Register Payment

→ performs a payment operation

Discontinue Participation

→ performs the official discontinuation operation

Rearrange Unpaid Installments

→ performs an approved financial rearrangement

View History

→ presents the historical facts of the agreement

The interface must not create new business rules through its appearance.

It must serve the rules already established by the Domain.

After every confirmed official action, the Registration Card must reflect the new real state immediately.

The user must not be required to calculate the result manually.

Human Responsibility and Clear Boundaries

The system must support authorized users with a clear, safe sequence of operations.

It must not turn trusted Secretariat staff into passive operators without judgment.

Nor should it leave them alone in ambiguous situations where they are forced to improvise.

The Organization will later define who may perform or approve each action through its own user, role, and access model.

This chapter defines only the principle:

The system may support, guide, calculate, warn, and preserve history.

The Organization remains responsible

for decisions that require human judgment.

A well-designed structure does not remove human value.

It protects it.

By defining clear boundaries, the system reduces gray zones, prevents misunderstandings, preserves trust, and makes repeated daily work safer for Customers, Secretariat staff, the Organization, and the software provider.

Closing Remark

The Customer Financial Lifecycle is not a collection of isolated payments.

It is the continuing financial history of a specific signed agreement.

Signed Registration Agreement

→ planned installments

→ actual payments

→ receipts

→ partial or full settlement

→ financial rearrangement where approved

→ discontinuation where it occurs

→ historical balances where they remain

→ final settlement or continuing outstanding balance

The Customer remains the person with whom the Organization has a relationship.

The agreement remains the unit through which financial truth is understood.

The Registration Card allows the Secretariat to work safely in the present.

The preserved history allows the Organization to understand the past.

And the clarity of each official operation allows future analysis to remain reliable.

Chapter 16 — Teaching Session: Actual Delivery, Attendance and Educational Continuity

Purpose

A timetable expresses planned educational activity. It does not prove that a lesson took place.

An Educational Organization needs a reliable way to record what was actually delivered on a specific date: which planned meeting was implemented, who actually taught it, how long it lasted, which students were present, what was taught, and where the lesson occurred when delivery was physical.

This is the role of the Teaching Session.

The Teaching Session is not merely an attendance screen. It is the controlled organizational record through which a planned educational meeting becomes a recorded educational implementation.

It supports:

accurate attendance;

educational continuity;

visibility for the Secretariat;

reliable teaching-hours statements for the accountant;

actual use of physical educational spaces;

and responsible educational communication with absent students or families where the Organization has chosen to enable that communication.

This chapter does not define salary calculation, employment contracts, taxes, insurance, labour-law rules, or payroll execution.

It defines the factual teaching information that the Educational Organization may print or export for the accountant or an external payroll process.

The Difference Between a Plan and Actual Educational Delivery

A Planned Weekly Meeting describes a recurring organizational expectation.

For example, it may state that a particular Section is expected to meet every Monday from 18:00 to 20:00 in a particular Educational Implementation Space.

This is essential for planning.

It is not proof that the lesson was actually delivered on every calendar date that matches the plan.

Planned Weekly Meeting

→ expected recurring educational arrangement

→ day of week

→ planned time

→ planned duration

→ planned instructor arrangement

→ planned physical space where applicable

Teaching Session

→ one actual educational implementation

→ on one specific date

The system does not create hypothetical Teaching Sessions in advance for every future Monday, Tuesday, or other planned day.

A scheduled meeting can be derived from the timetable and calendar whenever it is needed.

The Teaching Session is persisted only when the real lesson is completed and confirmed.

The absence of a Teaching Session does not create an artificial cancellation or “not held” record.

It means that no recorded educational implementation exists for that planned meeting.

The Organization may later compare planned meetings with recorded Teaching Sessions in order to understand:

what was planned;

what was actually recorded as delivered;

and which planned meetings have no recorded implementation.

This preserves a fundamental distinction:

The timetable is the Organization’s planned educational promise.

The Teaching Session is its recorded operational evidence of delivery.

Definition

A Teaching Session is the recorded implementation of one Planned Weekly Meeting on one specific date.

It records the actual educational reality of that lesson:

the planned meeting from which the lesson originated;

the specific calendar date on which the lesson was delivered;

the actual instructor who delivered it;

the actual teaching duration;

the actual physical space when the Section is Physical;

the Customers who were actually present;

and the mandatory short Teaching Session Summary describing what took place.

A Teaching Session is not:

a draft timetable entry;

a provisional printout;

a generic Section note;

a payroll document;

an automatic promise of attendance;

or a new academic plan.

It is one recorded fact of actual educational delivery.

Identity and Core Relationships

The Teaching Session is linked to the recurring planned meeting that gave it context.

It does not duplicate every planned value already held by that meeting.

It stores only the facts that belong to the actual implementation and may differ from the plan.

Teaching Session

- `teaching_session_id`
 - Primary Key.
 - Identifies one specific real Teaching Session.
- `weekly_meeting_id`
 - Foreign Key.
 - Identifies the Planned Weekly Meeting from which this actual lesson originated.
- `teaching_session_date`
 - The actual calendar date on which the lesson took place.
- `actual_instructor_movement_id`
 - Foreign Key.
 - Identifies the valid Organizational Movement of the person who actually taught the lesson.
- `actual_educational_implementation_space_id`
 - Conditional Foreign Key.
 - Identifies the actual physical Educational Implementation Space for a Physical Section.
 - Does not apply to Online delivery.
- `actual_teaching_hours`
 - The actual teaching duration recorded for the lesson.
- `reduced_duration_reason`
 - Short required explanation when actual teaching hours are lower than planned teaching hours.
- `teaching_session_summary`
 - Mandatory free-text educational summary of what was taught or otherwise completed.

Teaching Session Attendance

- `teaching_session_attendance_id`
 - Primary Key.
 - Identifies one positive attendance record.
- `teaching_session_id`
 - Foreign Key.

→ Identifies the Teaching Session
in which the Customer was present.

- customer_id
→ Foreign Key.
→ Identifies the Customer
who was actually present.

The same Customer must not be recorded twice in the same Teaching Session.

The same Planned Weekly Meeting must not produce two completed Teaching Sessions for the same date.

UNIQUE (weekly_meeting_id, teaching_session_date)

UNIQUE (teaching_session_id, customer_id)

The Section, planned instructor, planned space, planned time, planned duration, and delivery mode are derived through weekly_meeting_id and the existing scheduling structure.

They are not duplicated merely because the Teaching Session needs them for display or validation.

Actual Instructor and Teaching Hours

The planned instructor and the actual instructor are deliberately different concepts.

Planned Instructor

- comes from the Planned Weekly Meeting
- remains the scheduled reference

Actual Instructor

- belongs to the Teaching Session
- identifies the person who actually taught

In the normal case, the planned instructor and the actual instructor refer to the same person.

If a replacement teaches the lesson, the planned instructor remains unchanged as part of the timetable, while the Teaching Session records the replacement as the actual instructor.

For operational and financial correctness, the Teaching Session identifies the actual instructor through actual_instructor_movement_id, not merely through a name.

The Organizational Movement confirms that the person had a valid organizational presence at the relevant time.

The selected Movement must also have the appropriate Educational Eligibility for the Educational Product of the Section.

Only the actual instructor of the Teaching Session appears in the Teaching Hours Statement.

The planned instructor does not receive teaching hours merely because the timetable originally named that person.

The system does not calculate wages.

It prints or exports the real recorded hours of actual teaching for a selected period, so that the accountant or an external payroll process may apply contracts, payments, taxes, and legal responsibilities.

Actual Duration

The planned duration belongs to the Planned Weekly Meeting.

For example, a meeting planned from 18:00 to 20:00 has planned teaching hours equal to two.

When a Teaching Session is opened, `actual_teaching_hours` is initially completed automatically with the planned duration.

The teacher or Secretariat does not need to re-enter normal teaching hours when the lesson was delivered as planned.

`planned_teaching_hours = 2`

`actual_teaching_hours` initially = 2

When actual teaching hours are reduced, the reduced duration is recorded as a real fact.

A short explanation is required so that the lower duration does not remain unexplained.

$0 < \text{actual_teaching_hours} < \text{planned_teaching_hours}$

→ `reduced_duration_reason` is required

An actual duration greater than the planned duration is exceptional.

It must not be entered by the teacher or by the Secretariat.

Only the Director may enter such a duration, because the Director bears final responsibility for the exceptional teaching and financial consequence.

The planned duration is never changed merely to justify one exceptional lesson.

The plan remains the plan.

The Teaching Session records what actually occurred.

Attendance as a Positive Recorded Fact

Attendance is recorded only for Customers who were actually present.

The system does not create a row stating that every other student was absent.

The attendance list shows the Customers who belong validly to the Section for the actual Teaching Session date.

The teacher or Secretariat places a tick only beside each Customer who was present.

tick

→ one Teaching Session Attendance record is created

no tick

→ no attendance record is created

The absence of a Customer is derived when required by comparing:

valid Section participation for the date

minus

positive Teaching Session Attendance records

This avoids storing negative facts that can be calculated safely, reduces unnecessary database volume, and prevents contradictions such as an “absent” value existing at the same time as a positive attendance record.

The attendance process does not decide who belongs to a Section.

Registration, discontinuation, transfer, and the validity of Section participation remain responsibilities of the appropriate Secretariat processes.

The Teaching Session uses that established organizational reality and records the actual presence fact.

Teaching Session Summary and Educational Continuity

Every completed Teaching Session requires a Teaching Session Summary.

It is one simple free-text field through which the instructor or Secretariat records what was taught, practised, assigned, or otherwise completed during the lesson.

The field is intentionally not divided into technical subfields such as “syllabus,” “homework,” “continuity note,” or “materials.”

Teachers should be able to write naturally without being required to think like database designers.

For example:

Completed pages 24–27.

Practised the new vocabulary orally.

Assigned exercises 3 and 4 for home study.

The system can validate that the Summary has been completed.

It cannot determine whether the account is educationally sufficient, truthful, or pedagogically appropriate.

That responsibility belongs to people.

The Director of Studies may review the summaries, identify weaknesses, discuss them with instructors, and support the educational quality of the Organization.

Because the Summary may be sent to absent students or families where that function is enabled, it must remain a clear educational description.

It must not contain internal staff comments, administrative criticism, or information unsuitable for communication outside the Organization.

Physical Space and Online Delivery

A Physical Section and an Online Section follow the same Teaching Session process.

They differ only in how the actual delivery context is identified.

For a Physical Section, `actual_educational_implementation_space_id` is required.

It represents the actual room or other physical Educational Implementation Space in which the lesson was delivered.

The planned space is obtained from the timetable.

The actual space begins with the planned value and may be corrected only through the controlled Secretariat process when the lesson was actually delivered elsewhere.

The teacher does not select or alter the room in the Teaching Front End.

In a physical delivery environment, each classroom terminal may be configured by the authorized IT configuration role with the identity of its Educational Implementation Space.

The terminal then provides the room context automatically and protects the teacher from selecting the wrong room.

For an Online Section, actual_educational_implementation_space_id does not apply.

The Section delivery mode explicitly states Online.

The word “Online” is not stored inside a physical-space identifier field, because that field must contain only the identity of a real physical Educational Implementation Space.

The absence of a physical-space identifier must never be used by itself to infer that a lesson is Online.

Online delivery is determined explicitly by the Section delivery mode.

This prevents a configuration error from being silently interpreted as an online lesson.

Two Capture Modes, One Domain Truth

The Educational Organization may use two operational capture modes.

These are not two different attendance processes and they must not create two different forms of truth.

Both create the same Teaching Session and the same positive attendance records.

Paper Attendance Mode

→ a paper-assisted routine for organizations
that work through daily printed forms

Teaching Front End Mode

→ a direct electronic routine for teachers
using a configured classroom terminal
or online access

Paper Attendance Mode

For Physical Sections, the Secretariat may select the current date and the Building in which it operates.

The system derives all planned physical meetings for that Building and date and prints one prepared form for each expected lesson.

The form may display:

the date;

the Section name;

the planned time and planned duration;

the planned instructor;

the planned room;

the valid student list for attendance ticks;

the actual instructor field;

the actual duration and, where necessary, a reduced-duration reason;

and the Teaching Session Summary.

Printing the form does not create a Teaching Session.

It is preparation only.

The real Teaching Session is created only when the completed paper form returns and the Secretariat enters it into the system.

When the Secretariat enters the returned form, it uses the same validations as the Teaching Front End:

valid actual instructor;

valid Educational Eligibility;

correct actual duration;

required Summary;

valid student attendance list;

and correct physical space where applicable.

The difference is only who enters the information.

The organizational truth is the same.

Teaching Front End Mode

In the Teaching Front End, the teacher enters through an authenticated User account created and authorized by the Organization.

The User is associated with the relevant Human Resource and valid Organizational Movement.

The actual instructor is therefore completed automatically from the authenticated identity and is not editable by the teacher.

For a Physical Section, the configured classroom terminal provides the room identity.

The system combines:

configured room

+

system date

+

current time within an approved operational tolerance

+

timetable

in order to identify the expected Planned Weekly Meeting.

For an Online Section, the system combines:

authenticated instructor

+

system date

+

current time within an approved operational tolerance

+

delivery_mode = Online

It must identify one and only one relevant planned Online meeting.

Where the system cannot identify exactly one valid planned meeting, it creates no Teaching Session and directs the teacher to the Secretariat.

Examples include:

the teacher is in the wrong physical room;

no planned meeting exists for the configured room, date, and time;

the teacher has no valid Organizational Movement or Educational Eligibility;

two Online meetings incorrectly overlap for the same instructor;

or another exceptional configuration problem exists.

The system does not ask the teacher to guess, select a substitute, change the room, or create an unstructured exceptional record.

The teacher speaks with the Secretariat so that the responsible organizational process can resolve the issue correctly.

The teacher completes the attendance ticks, reviews the actual duration, writes the Teaching Session Summary, and sees a confirmation view.

The confirmation view displays:

Section

Date

Present students

Actual duration

Teaching Session Summary

The confirmation view creates no database record.

Only the final action:

Confirm and Complete Lesson

creates the Teaching Session and its attendance records.

If the application closes, the network is unavailable, or the teacher leaves without completing that action, nothing is persisted.

The teacher must complete the entry again in order for the lesson to become a recorded Teaching Session and to appear in the Teaching Hours Statement.

Secretariat Operational Workspace

The Secretariat must be able to understand the real daily flow of the school without searching through unrelated records.

For the paper-assisted process, the Secretariat begins by entering the lesson date.

The system recognizes the Building in which that Secretariat operates and derives the planned physical meetings for that Building and date.

It compares each planned meeting with recorded Teaching Sessions using:

weekly_meeting_id

+

teaching_session_date

The workspace may present two user-sortable lists:

Left list

→ Recorded Teaching Sessions

Right list

→ Planned meetings without a recorded Teaching Session

When the Secretariat completes an entry, that meeting disappears from the right list and appears in the left list.

The right list may become empty.

A meeting that remains in the right list is not automatically declared cancelled or failed.

It simply has no recorded Teaching Session for that planned date.

The Secretariat may work on the current date or an earlier date.

A paper form may be entered later because it returned later, the responsible person was absent, or the daily workload did not permit immediate data entry.

The `teaching_session_date` must always remain the real lesson date, not the later data-entry date.

The Secretariat may search and sort the daily lists by the information that helps its work, such as:

time;

room;

Section name;

or planned instructor.

Once it selects a planned meeting without a recorded Teaching Session, it opens the same core Teaching Session form seen by the teacher, with the additional controlled ability to enter the actual instructor when a valid replacement taught.

If a Teaching Session is already recorded, the Secretariat sees it as recorded but does not change it.

Subsequent modification belongs only to the Director.

Final Responsibility and Changes

After a Teaching Session is completed, the teacher and the Secretariat do not alter it.

The Director remains the final responsible authority of the school and may change any element when a real correction is required, including:

the actual instructor;

actual duration;

actual physical space;

attendance records;

Teaching Session Summary;

or any other element of the Teaching Session.

At the present scope, the model does not introduce a separate Teaching Session correction entity, version history, or audit trail.

The Director's authority and responsibility are direct.

This is a deliberate boundary.

The system supports daily control without introducing an additional historical process that does not serve the present operational need.

Educational Update for Absent Students

The Organization may optionally enable an educational update for absent students.

The purpose is not punishment or surveillance.

The purpose is educational continuity: the student or family receives a clear explanation of what was taught and can avoid falling behind merely because attendance was not recorded for one lesson.

The current scope does not introduce a separate Parent or Guardian entity.

The Customer remains the child or student.

For a minor, the communication email may belong to the guardian, while the Organization remains responsible for collecting the information properly and explaining its purpose.

The Customer record may contain:

communication_email

→ communication email used for the approved educational-update process.

educational_update_email_enabled

→ Yes / No.

→ Records that the Organization has informed the relevant person of the purpose and received approval for this automated process.

When a Teaching Session is completed, the system derives absent Customers from:

valid Section participation for the date

minus

positive attendance records

For each absent Customer, an automatic educational email is sent only when:

the Organization has enabled this optional function;

communication_email exists for that Customer;

and educational_update_email_enabled = Yes.

The email is neutral and educational.

It contains:

Lesson date

Planned lesson time

Section name

Teaching Session Summary

The Educational Domain does not create its own email-delivery log, message archive, or stored copy of the email.

The email system that actually sends the communication is responsible for any delivery history it maintains.

If the optional send fails, the Teaching Session remains completed.

A clear Warning informs the Secretariat so that it may take the appropriate operational action.

The Secretariat may later set `educational_update_email_enabled` from Yes to No when the Customer or guardian asks for the automated educational updates to stop.

This stops future sends without changing past Teaching Sessions or attendance facts.

Teaching Hours Statement

The Teaching Hours Statement is a predefined report.

It is not a selection process through which the Secretariat decides which hours should be included.

The user enters:

`start_date`

`end_date`

Rule:

`end_date` must not be earlier than `start_date`.

The report includes all recorded Teaching Sessions whose `teaching_session_date` falls within the requested period.

It may be generated for one instructor or for all instructors.

It may be printed or exported electronically for the accountant.

The report presents the actual recorded teaching facts, including:

actual instructor;

teaching date;

Section;

actual teaching hours;

and physical space where applicable.

It does not calculate wages or apply labour-law rules.

The Organization chooses the reporting period it needs.

The accountant applies the separate financial and legal rules outside this Educational Domain.

Operational Value

The Teaching Session gives the Educational Organization a coherent operational view that a timetable alone cannot provide.

It allows the Organization to understand, with structured evidence:

which planned lessons have a recorded actual implementation;

who actually taught each recorded lesson;

how many real teaching hours were delivered in a chosen period;

which students were present in each actual Teaching Session;

which students were absent, derived without storing unnecessary negative records;

what was taught, practised, or assigned in each lesson;

which physical spaces were actually used;

and what educational information was automatically sent to absent students or families where that optional function was enabled.

A parent or guardian can receive a clear attendance statement when needed.

A student who missed a lesson does not need to telephone later merely to discover what happened in class.

The Secretariat can find the relevant lesson, attendance, Summary, instructor, and room through the same organized process.

The Director can compare the timetable with actual delivery and can respond directly when a customer asks whether all planned lessons were actually implemented.

The result is not additional bureaucracy for its own sake.

It is an organized record of the educational life that already takes place in the school.

Architectural Principles

A planned timetable is not proof of actual educational delivery.

A Teaching Session is created only after real completion and explicit confirmation.

The system stores actual facts and derives what can safely be derived.

Positive attendance is stored; absence is calculated when needed.

Planned instructor, planned duration, and planned space remain distinct from actual teaching reality.

The actual instructor, not the planned instructor, supplies the factual teaching hours for the external accountant.

Paper and electronic capture modes produce one shared Domain truth.

The system validates structure and required information but does not pretend to verify the truth or educational quality of human actions.

The Organization, its Secretariat, Director of Studies, and Director retain their real responsibilities.

Optional educational communication supports continuity without creating a second email archive inside the Educational Domain.

Closing Remark

The Teaching Session transforms the educational timetable from a statement of intention into a structured record of actual delivery.

It preserves a simple but essential truth:

The timetable says what was planned.

The Teaching Session records what was actually delivered.

Through this distinction, the Educational Organization gains accuracy, operational control, educational continuity, responsible communication, and a reliable basis for later analysis without storing unnecessary hypothetical records.

Chapter 17 — Educational Assessment, Progress and Internal Attestations

Purpose

Educational Organizations need a disciplined way to record, calculate, understand, and communicate the educational progress of each Customer within a specific Educational Product.

This chapter defines the shared Assessment Process through which the Organization records valid scores, derives results, applies the educational rules chosen for the relevant Discipline and Study Cycle, and issues its own Internal Progress Attestations.

The purpose is not to transform every educational reality into the same examination model. The purpose is to provide a stable, finite, and controlled structure through which different private educational disciplines may express their real assessment logic without requiring a new database design for every case.

The chapter therefore distinguishes clearly between:

- the educational logic selected for one Knowledge Discipline;
- the operational period supplied by one Study Cycle;
- the actual score entered or produced through an approved score-capture process;
- the derived result calculated from the approved Preset;
- the Internal Progress Attestation issued by the School;
- and an external Certificate, Diploma, or Certification issued by an independent certifying body.

This chapter does not define external examination administration, university curriculum structures, academic credits, Faculties, Orientamenti, statutory degrees, or the award of titles by external certification bodies.

Scope and Boundary of the Educational World Served

This Educational Domain is designed for private educational organizations that operate Educational Products, Sections, teaching activity, registrations, financial agreements, attendance, internal assessment, and progress communication.

It may support, for example:

- foreign-language schools;
- information-technology and computer-skills schools;
- training centers;
- private vocational and continuing-education organizations;
- and other educational organizations whose operational reality is expressed through Educational Products, Sections, Study Cycles, assessment, and internal progress information.

It does not attempt to model the complete internal world of a University or Polytechnic Institution, where Faculties, curricula, credits, mandatory and elective modules, academic pathways, Orientamenti, and degree-eligibility rules require a separate Higher Education Domain.

A well-designed system is not one that promises to serve every educational reality.

It is one that knows precisely which educational world it is designed to serve.

The boundary is not a limitation of quality. It is the condition that allows the present Domain to remain accurate, useful, and implementable for the organizations it is meant to serve.

Internal Educational Assessment and External Certification

The School may assess its Customers, communicate their progress, and issue its own Internal Progress Attestations. It does not thereby become an external certifying authority.

School

- records internal assessment and progress
- calculates internal results
- issues Internal Progress Attestations

External certifying organization

- conducts or governs its own official examination
- determines its own official result
- issues its own Certificate, Certification, or Diploma

For example, an external organization such as Cambridge or ECDL may issue an official external qualification according to its own rules. That external certification remains outside the present Educational Domain.

An Internal Progress Attestation may truthfully state the School's own recorded progress, scores, and internal results. It must never claim that the Customer has been certified, awarded a diploma, or granted an external qualification by a body that did not issue it.

Assessment Context

The assessment of a Customer is not attached permanently to a Section name. A Section describes a concrete planned or operated educational implementation. The assessment context belongs to the Customer and the specific Educational Product For Sale through which the educational reality is offered.

Assessment Registry

- `assessment_registry_id`
 - Primary Key.
 - Identifies one assessment reality.
- `customer_id`
 - Foreign Key.
 - Identifies the Customer being assessed.
- `educational_product_for_sale_id`
 - Foreign Key.
 - Identifies the specific commercial and educational context in which the Product is offered.

UNIQUE (`customer_id`, `educational_product_for_sale_id`)

The Assessment Registry is created only when the first real score is recorded. The system does not pre-create empty assessment registries merely because a Customer has entered a Section.

When a Customer moves between Sections but remains within the same Educational Product For Sale, the same Assessment Registry continues. When the Customer enters another Educational Product For Sale, a new Assessment Registry is permitted because the educational context has changed.

Customer

+ Educational Product For Sale

+ first actual score
→ Assessment Registry

Knowledge Discipline, Study Cycle and the Assessment & Progress Attestation Preset

The Knowledge Discipline determines the educational logic of assessment: what is assessed, which visible fields are meaningful, which assessment stages are active, and how the School interprets progress.

The Study Cycle supplies the operational and temporal context within which that assessment logic applies.

Knowledge Discipline

+ Study Cycle

→ one active Assessment & Progress Attestation Preset

The Assessment & Progress Attestation Preset is the controlled Design Time configuration that governs the relevant assessment and internal-attestation process. It is not a daily operational form and it is not a separate database schema for each Product.

For one Discipline and Study Cycle, the authorized configuration role defines the active Preset. The Preset is locked during the active educational operation of that Cycle. The Secretariat uses the approved Preset but does not redesign it during daily work.

The Preset may define:

- the active Assessment Stages and their visible names;
- the active Evaluations within each Stage and their visible names;
- which raw score values are required;
- integer Evaluation weights within an Assessment Stage;
- optional Stage pass thresholds;
- up to four Final Evaluation Factors, where the Discipline requires a final calculation;
- the selected source values of each Final Evaluation Factor;
- integer Factor weights for a Final Overall Result;
- optional mandatory minimum results for selected Final Evaluation Factors;
- the final pass threshold where a Final Overall Result is used;
- which Internal Progress Attestations may be issued;
- and the exact presentation rules of those Internal Progress Attestations.

The code designer implements one fixed generic Assessment Process. Ordinary creation of a new approved Preset must not require a new database schema or a new code branch. The Preset activates and labels only structures that already exist within the finite approved universe of the system.

Finite Structure and Dynamic Assessment Forms

The system must offer controlled flexibility, not unlimited structural improvisation.

Fixed technical universe

- up to 9 Assessment Stages for one Preset
- up to 4 Evaluations within one active Assessment Stage
- up to 4 Final Evaluation Factors where a final calculation is required

Preset

→ activates permitted positions

→ names them

- defines requiredness, weights, thresholds, sources, and documents
- hides unused positions

An Assessment Stage is the neutral technical and Domain term for one controlled point in the assessment process. Its visible educational name is defined by the Preset.

Italian Language + Regular Study Cycle

- Assessment Stage 1: First Trimester
- Assessment Stage 2: Second Trimester
- Assessment Stage 3: Final Trimester

Computer Applications + Examination Study Cycle

- Assessment Stage 1: Internal Preparation Examination
 - Word
 - Excel
 - PowerPoint
 - Web / Internet module

The visible form is rendered dynamically from the applicable Preset. Unused Stage and Evaluation positions do not appear to the Secretariat. The database remains stable even though the School sees only the structure that has real educational meaning for the selected Discipline and Study Cycle.

Assessment Stages and Evaluations

An Assessment Stage contains one or more active Evaluations. Each Evaluation represents one separately assessed educational area and receives one primary raw score.

Assessment Stage

- up to 4 active Evaluations
- each Evaluation has one raw score
- each active Evaluation has an integer weight
- active Evaluation weights total exactly 100%

Examples of Evaluations may include Grammar, Oral Expression, Written Text, Exercises, Word, Excel, or any other educationally meaningful element defined by the Discipline. The system does not decide these labels. The Preset does.

The system accepts only integer raw scores from 0 to 100. Decimal grades are not accepted.

0

- a real entered score

blank

- no score has yet been entered
- not a zero
- not an automatic failure

The Secretariat normally enters the score communicated by the teacher. The teacher does not require direct score-entry access in the present scope. The normal operational process is per Customer, not a bulk class-grid process.

A form must protect the user before an invalid record reaches the database. It displays only allowed stages, Evaluations, and values; it validates required fields, score range, integer-only rules, relationships, and weights; and it explains the exact corrective action whenever something is missing or inconsistent.

The user interface is the first line of protection. The Assessment Process and the database provide the final protection: no invalid assessment structure or score may be persisted.

Weights and Validation

All weights are integers. Decimal weights are not allowed.

Within one Assessment Stage

→ active Evaluation weights must total exactly 100%

Within one final weighted calculation

→ active Final Evaluation Factor weights must total exactly 100%

The form may show the remaining permitted percentage while the Preset is being designed. Where two active positions are used, the form may automatically maintain the complementary value. In every case, a structure whose total is not exactly 100% cannot be saved.

Grammar 40%

Oral 30%

Text 20%

Exercises 10%

Total 100%

The system never normalizes invalid weights silently and never stores a temporary invalid total as if it were an approved educational rule.

Calculation of Assessment Stage Result

When every required raw score of an applicable Assessment Stage has been entered, the system calculates the Assessment Stage Result from the active Evaluation scores and their configured integer weights.

active Evaluation scores

+ their integer weights totaling 100%

→ weighted calculation

→ round upward

→ Assessment Stage Result

No rounding occurs inside the weighted calculation. Rounding occurs only after the identifiable derived result has been fully calculated. Every non-integer derived result is rounded upward.

$70 \times 40\%$

$81 \times 35\%$

$66 \times 25\%$

73.35

→ Assessment Stage Result: 74

The Assessment Stage Result is derived from the stored raw scores and the valid Preset. It is not stored as a second independent truth.

Final Evaluation Factors and Final Overall Result

Some Disciplines require a final result that combines educational evidence across more than one Assessment Stage. The Preset may define up to four Final Evaluation Factors for that purpose.

A Final Evaluation Factor selects one or more approved source values from the assessment structure. The selected values may be raw Evaluation scores and, where the Preset requires it, derived Assessment Stage Results.

selected source values

→ simple arithmetic average

→ round upward

→ Final Evaluation Factor Result

There are no second-level weights inside one Final Evaluation Factor. All selected source values contribute equally to its average.

Grammar Final Evaluation Factor

First Trimester Grammar: 68

Second Trimester Grammar: 74

Final Trimester Grammar: 81

$$(68 + 74 + 81) / 3 = 74.33$$

→ Grammar Final Evaluation Factor Result: 75

Where a Final Overall Result is used, the Final Evaluation Factor Results receive their configured integer weights. The active Factor weights must total exactly 100%.

Final Evaluation Factor Results

+ their integer weights totaling 100%

→ weighted calculation

→ round upward

→ Final Overall Result

Grammar Factor Result: 75 | weight 40%

Oral Factor Result: 82 | weight 60%

$$(75 \times 40\% + 82 \times 60\%) = 79.2$$

→ Final Overall Result: 80

A Final Evaluation Factor without any available valid source value cannot be calculated. When a required active Factor cannot be calculated, no Final Overall Result is produced and no final Internal Progress Attestation may be issued.

Pass Rules

Pass and Fail are derived educational results. They are not separate permanent labels stored independently of the underlying scores and Preset.

The Preset may define an optional pass threshold for one Assessment Stage. When a Stage threshold exists, the Stage Result may be shown as Pass or Fail. When no Stage threshold exists, the Stage has a result but no imposed Pass or Fail classification.

A Stage Fail does not prevent the Customer from succeeding later in the Study Cycle. It affects the result of that Stage and any subsequent calculation that selects it. It does not automatically become failure of every later Stage or of the full Educational Product.

Where the Preset uses a Final Overall Result, it defines the final pass threshold. The Preset may also identify one or more Final Evaluation Factors as mandatory and assign each of them its own minimum required result.

Final Pass

= Final Overall Result meets the final pass threshold

and
every Final Evaluation Factor configured as mandatory
meets its own minimum required result.

A Customer may therefore have a satisfactory Final Overall Result but still not meet an explicitly mandatory Factor requirement. In that case, the derived final internal result is Fail.

First Applicable Assessment Stage and Late Entry

A Customer may begin the relevant educational participation after the first Assessment Stage of a Study Cycle has already passed. The system must not invent a zero, a blank failure, or a missing obligation for a Stage that did not apply to that Customer.

The system performs one initial applicability determination for the Assessment Registry: it establishes the first Assessment Stage that applies to the Customer's real assessment participation.

Stages before the first applicable Assessment Stage

- not applicable
- do not require scores
- do not create 0 or Fail

From the first applicable Assessment Stage onward

- all required scores must be present
- a missing required score blocks the relevant result and attestation.

This is a single initial rule. The system does not reinterpret every later blank as a possible exemption. After the first applicable Stage, blank required scores remain missing required information until they are entered.

Discontinuation

When the Customer discontinues participation before completing the Study Cycle, the system must not describe the Customer as having failed the full Study Cycle merely because later assessment data does not exist.

Customer discontinued the Study Cycle

- not a final Fail
- no Final Overall Result
- no final Internal Progress Attestation
- completed earlier Assessment Stages remain real educational history

Where the Preset permits it, an Internal Progress Attestation for a completed earlier Assessment Stage may still be issued. The attestation records the actual completed progress without pretending that the full Study Cycle was completed.

Correction, Re-examination and Current Educational Truth

Educational organizations may allow re-examination or may need to correct a recorded score. A new approved score can change the result of one Evaluation, one Assessment Stage, one Final Evaluation Factor, and the Final Overall Result.

The normal Secretariat process enters the initial valid score. An already recorded score may be changed only by the Director.

approved correction or re-examination score

- replaces the current raw score
- all derived results are calculated again

- a prior Fail may become Pass
- an eligible Internal Progress Attestation may be issued or reissued

The present scope stores the current approved educational truth. It does not introduce a separate audit entity, a preserved snapshot of a prior score, or an independent historical version of every previously printed Internal Progress Attestation.

The Director's approved change is the current truth from which all later derived results and reissued documents are produced.

Internal Progress Attestations

The School may issue an Internal Progress Attestation only where the applicable Preset defines that document and its presentation rules.

An Internal Progress Attestation may belong to:

- one completed Assessment Stage;
- or, where the Preset defines a final internal result, the completed Educational Product assessment.

A completed Assessment Stage may be represented even when its derived result is Fail. The document can show the Evaluations, the scores, the Assessment Stage Result, and Pass or Fail where a Stage threshold exists. The purpose is truthful progress information, not the concealment of an unsatisfactory result.

The School may generate one individual Internal Progress Attestation for one Customer or prepare a batch by Section, Building where physical, or Organization. A batch always means one personal document per eligible Customer; it never means one common document for many Customers.

Before printing, the system validates all required information. It does not need to store a general Incomplete status.

Print request

- validate the required scores and rules

required information missing

- do not print
- show the exact missing item

all required information valid

- print the permitted Internal Progress Attestation

Example message

Internal Progress Attestation cannot be issued because the Oral score for the Second Trimester has not been entered.

The system guides the Secretariat to the next correct action rather than presenting a generic error message.

Stored Facts and Derived Results

The database stores the primary educational facts and approved configuration needed to reproduce the current result:

- the Customer;
- the Educational Product For Sale;
- the Assessment Registry;
- the applicable Assessment & Progress Attestation Preset;

- the active Stages and Evaluations defined by that Preset;
- the raw integer scores from 0 to 100;
- the controlled weights, thresholds, Factor selections, and document rules;
- and the current Director-approved score change where such a change has occurred.

The system derives when needed:

Assessment Stage Result;

Final Evaluation Factor Result;

Final Overall Result;

- Pass or Fail where the Preset has defined the relevant threshold;
- eligibility to issue an Internal Progress Attestation;
- and analysis at Customer, Section, Building where physical, and Organization level.

Derived results are recalculated from the current valid raw scores and Preset. The system does not store a separate, competing calculation truth.

Operational Value

The model gives a well-organized School a controlled way to assess real educational progress without forcing every Discipline to behave as though it were the same subject.

It allows the Organization to preserve one shared technical foundation while presenting the educational structure that is meaningful for each Discipline and Study Cycle.

Foreign Languages

→ trimesters, weighted Evaluations, cross-stage Factors, final internal result

Computer Skills

→ one internal examination stage, separate Evaluation modules, internal progress information

It also supports later analysis of educational progress through the same common 0-100 score scale, while leaving educational, managerial, and financial decisions with the Organization.

A future electronic examination package may later provide an alternative method of producing some raw scores through automatic marking and human assessment. That delivery mechanism is intentionally outside the present chapter. Chapter 17 remains valid whether a score is entered by the Secretariat from teacher information or supplied later through another approved score-capture process.

Architectural Principles

- The Knowledge Discipline determines the educational assessment logic and the visible assessment form; the Study Cycle provides the operational context.
- One active Assessment & Progress Attestation Preset governs one Knowledge Discipline and Study Cycle.
- The technical structure is finite and stable; the Preset activates approved positions without inventing database structure.
- An Assessment Registry belongs to one Customer and one Educational Product For Sale and is created only after the first real score.
- Raw scores are integer values from 0 to 100. Blank is not zero.
- Weights are integer values and must total exactly 100% wherever weighted calculation is used.
- Every completed derived calculation rounds upward; rounding does not occur inside unfinished calculations.
- A late Customer is exempt only from Stages before the one initial first applicable Assessment Stage; later required scores cannot be silently ignored.

- A discontinued Customer has not completed the Study Cycle and therefore receives no final internal result or final Internal Progress Attestation.
- The Secretariat performs normal score entry and attestation work. The Director alone changes an already recorded score.
- The School issues Internal Progress Attestations only. External Certificates, Diplomas, and Certifications remain the responsibility of their issuing bodies.
- The form protects the user, the Process validates the rule, and the database never stores an invalid assessment reality.
- The system stores primary facts and derives results from them; it does not create a second competing truth through stored calculations or unnecessary status rows.

Closing Remark

Educational assessment is not merely the entry of a number. It is the controlled transformation of real educational evidence into understandable internal progress information.

valid raw scores

+ approved Preset

→ derived educational result

→ truthful Internal Progress Attestation

Through this structure, the School gains a disciplined assessment process that remains flexible where educational reality requires variation, stable where the database requires certainty, and honest about the difference between its own internal educational judgment and an external official certification.

Chapter 18 — Teaching Front End: Learning Resources, Practice and Controlled Examination

Purpose and Boundary

The Teaching Front End is an optional web educational environment through which a Customer may use learning resources, practice exercises, and, where the School chooses to provide it, controlled electronic examination. It is not a second Enterprise System, a second source of organizational truth, or an alternative route into the Back End.

The Core Educational Domain remains complete without this package. The Teaching Front End adds an educational delivery and learning experience above the existing Customer, Section Movement, Section, Educational Product For Sale, Educational Product, and Assessment relationships.

Core Educational Domain

→ organizational truth, participation, assessment, finance and history

Teaching Front End

→ controlled student view of permitted learning activity

The Front End does not expose the Back End or give a Student direct access to the database. It requests only the limited information that the Core Domain permits for the identified Customer.

Student Access and Current Educational Participation

A Student uses personal Front End credentials linked to one Customer. The credentials identify the person for the Front End; they do not replace the stable Customer identity or create another Customer record.

Access to the educational environment is derived from the existing organizational reality. The essential question is not whether a person has merely logged in, but whether that Customer currently participates in real operating educational activity.

Student credentials are valid

AND Student Front End Account is active

AND there exists at least one active, non-discontinued Section Movement

for the Customer in an Operating Section

→ Teaching Front End access is permitted

Where no such participation exists, the system does not open a current educational environment. If a Customer has discontinued one Section but remains active in another Operating Section, the Front End remains available only for the continuing participation.

The active Section Movement identifies the current Section. The Section identifies the connected Educational Product For Sale. The Educational Product For Sale identifies the Educational Product. This existing chain is sufficient to determine which learning content may be shown; the Front End does not create a second student-to-class relationship.

Student Learning Home

After successful access, the Student sees a simple personal learning home. It lists only the Customer's current Operating Sections. The selected Section provides the immediate educational context.

My Current Sections

- selected Operating Section
 - Exercises
 - Audio
 - Video
 - Articles
 - Exams, only where the examination rules permit access

The visible arrangement is a learning aid, not a database design. Audio, Video, Articles, and supporting files are Educational Resources. Exercises and Formal Examination Units are Educational Activities with their own rules.

Educational Resources and External File Storage

Video, audio, articles, PDFs, images, and other supporting files must not be stored as large binary objects inside the operational database. The database records the controlled reference to a file held in appropriate secure storage.

Database

- resource identity, type, description, Product relationship, controlled storage reference

Secure file storage

- the actual video, audio, document, image or other file

The storage reference is not required to be a public URL. The technical solution may use a protected internal reference and temporary controlled access after the server has verified the Customer and the permitted educational context.

An Educational Resource belongs once to one Educational Product. The same Video, Audio, Article, or supporting document can therefore be reused in later Academic Years and Study Cycles whenever the School offers the same Product again. It is not copied once per Section, per Educational Product For Sale, or per Customer.

Educational Resource

- belongs once to Educational Product

Customer participation

- active Section Movement
- Section
- Educational Product For Sale
- Educational Product
- permission to view the appropriate active Resource

Educational Resource Publication Routine

The responsible Content Publishing role performs one small controlled routine. The role selects an Operating Section from a controlled list, selects the content type, enters a short description, and uploads the file. The system derives the Educational Product For Sale and the Educational Product from the selected Section, stores the file in the approved storage area, creates the resource identity, and records the controlled storage reference.

Select Operating Section

- derive Educational Product For Sale and Educational Product
- select content type
- enter description
- upload file
- create one Educational Resource

The Content Publishing role works with familiar operational language such as the actual class. The system preserves normalized storage by associating the Resource with the reusable Educational Product.

An unused or erroneous Resource may be removed where no real educational history exists. A Resource that has already been made available should normally be deactivated when it should no longer be used. Deactivation removes it from current Student presentation without silently erasing organizational history.

Educational Activities: Practice Exercise and Formal Examination Unit

A common Educational Activity structure may hold two controlled activity types: Practice Exercise and Formal Examination Unit. This shared structure is useful because both can contain Questions, solution logic, descriptions, and a permitted educational environment. Their educational consequences remain strictly different.

Educational Activity

→ Practice Exercise

→ Formal Examination Unit

Every Activity defines the educational environment from which it may be used. This is more precise than a simple visible-from-home flag.

Educational Environment Access

→ Home Practice

→ School Teaching Environment

→ School Examination Workstation Only

A Practice Exercise may be used from home. A Formal Examination Unit must be available only through an Authorized Examination Workstation of the School and only inside an active Examination Session. A Formal Examination Unit is not returned by the ordinary home-learning query.

Practice Exercises

A Practice Exercise is an interactive learning activity performed on screen. The Student may print it where the user experience provides a print command, but printing does not create a different domain type. The Exercise may be used independently or may display related Audio, Video, or Articles while the Student answers.

Audio or Video

→ may play inside the Exercise

→ Student listens or watches

→ Student answers at the same time

A Practice Exercise may contain one or more Questions of different supported types. It may be repeated freely. When the Student completes it, the system may show only the total percentage for immediate learning feedback. It does not store a Practice Attempt, the Student's answers, a percentage, a history of attempts, or an official Evaluation Score.

Practice Exercise

→ immediate learning feedback

→ no persisted attempt

→ no persisted score

→ never an Official Evaluation Score

Questions and Automatic Checking

One Educational Activity may contain one or more Questions. A single Activity may mix different Question types. Every Question has equal participation in the final percentage; the current scope does not introduce different question weights.

Supported Question Types

- Text Answer
- Single Choice
- Multiple Choice

Boolean

= predefined Single Choice with True / False

A Text Answer may have one or more acceptable solutions using OR logic. Text comparison trims leading and trailing spaces and is case-insensitive. The system checks knowledge rather than accidental capitalization or an irrelevant outer space. It does not perform spelling correction or silently change a Student's words.

A Single Choice Question presents one selectable answer. A Multiple Choice Question permits one or more selections. A Multiple Choice Question is correct only when the selected set is exactly the same as the configured correct set; any missing correct option or additional incorrect option makes the Question incorrect.

The same acceptable answer may appear in more than one Question. A solution is always interpreted in the context of its own Question, not as a unique word in the whole Exercise or Examination Unit.

correct answers

÷ total Questions

× 100

= final percentage

Optional Connection Between Resources and Exercises

An Educational Resource may exist on its own. A Practice Exercise may also exist on its own. Where educationally useful, one Resource may be connected to many Exercises and one Exercise may use one or more Resources. The connection reuses the same Resource rather than duplicating the file or its record.

Italian Song

- missing-word Exercise
- comprehension Exercise
- vocabulary Exercise

Video

- comprehension Exercise
- grammar Exercise

The connection provides access to the relevant Resource inside the Exercise. It does not impose an artificial order in which the Student must first finish a Video or Audio before the Exercise can open.

Formal Examination Units and Examination Sessions

A Formal Examination Unit is not ordinary published learning material. It is an official controlled assessment activity. It may be prepared in advance as an Examination Definition and later included in one actual Examination Session. The School may keep this distinction visible where it helps operations; the essential rule is that preparation alone never makes an examination available to Students.

Examination Definition

- prepared Questions and solution logic
- not yet available to Students

Examination Session

- actual authorized opening
- specific Educational Product For Sale
- specific time and controlled School environment

One Examination Session may contain more than one Formal Examination Unit. Each Unit must be connected in advance to one specific Preset Evaluation. For example, a Listening Unit may update the Listening Evaluation Score and a Grammar Unit may update the Grammar Evaluation Score. A completed Unit updates one Evaluation Score only.

Listening / Audio Unit

- one final percentage
- Listening preset_evaluation_id
- one Evaluation Score update

Grammar Unit

- one final percentage
- Grammar preset_evaluation_id
- one Evaluation Score update

The examination environment is deliberately different from Home Practice. The Student may prepare from home, but a formal examination is conducted from a recognized School workstation in a controlled School setting.

Authorized Examination Workstation

An Authorized Examination Workstation represents a computer recognized by the School for formal examination. It identifies the controlled place of examination, while the Student's personal credentials identify the person taking the examination.

Student credentials

- identify the Customer

Authorized Examination Workstation

- identifies the controlled School place

Active Examination Session

- identifies the permitted official time

The Domain requires the concept of an Authorized Examination Workstation. The Secure Access Administrator, Code Designer, and Database Administrator choose and protect the technical means by which a device is recognized. Hostname, fixed address, DHCP reservation, hardware reference, certificate, or another safe implementation mechanism are technical choices, not additional educational rules.

Completion, Timer and Official Score Update

Before a Student completes a Formal Examination Unit, no official examination result exists in the Domain. The temporary browser state, recovery from interruption, and related technical resilience belong to implementation design rather than to a separate domain record.

The Student may move freely among Questions and change answers until completion. The final answer in each Question is the one used for calculation. The Student may complete the Unit even if some Questions remain blank; blank Questions are incorrect and receive no correct-answer contribution.

A Formal Examination Unit may define an optional time limit. When time expires, the system completes the Unit automatically, calculates the percentage from the final available answers, treats blank Questions as incorrect, and applies the same official result routine.

Completion or timer expiry

- calculate final percentage from 0 to 100
- controlled server process
- update the corresponding Evaluation Score
- show the Student the final percentage
- lock the Unit for that Customer

The Front End never executes direct database statements. A controlled server process validates that the Examination Session is active, the workstation is authorized, the Customer is entitled to the Unit, the Unit has not already been completed without permission, and the final percentage is valid. It then updates the corresponding current Evaluation Score directly. The Secretariat does not re-enter the same score manually.

The current normalized scope stores no separate formal-examination attempt, no stored partial examination, no list of submitted answers, no historical percentage, and no independent Examination Result that duplicates the Evaluation Score. The persisted official educational result is the current Evaluation Score already established by Chapter 17.

After completion, the Student sees only the total percentage. The Student does not receive a list of correct and incorrect answers through the formal examination result screen in the current scope.

Re-examination

A normal Formal Examination Unit permits one official completion for one Customer. After successful completion, the Unit no longer appears to that Customer. The Student cannot reopen it through the Front End.

Only the Directorate may permit one specific Customer to see one specific Formal Examination Unit again. This is a simple controlled authorization. The current scope does not require a reason field, an application workflow, an authorization history, prior answers, or a preserved prior percentage.

Directorate permits one Customer

to reopen one Formal Examination Unit

- one new permitted completion
- new percentage replaces the current Evaluation Score
- Unit locks again

This is consistent with the current-truth principle of Chapter 17. A re-examination produces a new approved raw score, recalculates the derived assessment results, and may change the current internal Pass or Fail outcome. The model does not retain a competing historical score truth.

Roles and Responsibility Boundaries

A small School may assign more than one role to the same person. The responsibilities remain distinct so that content publication, examination authorization, access administration, and the organizational truth are not confused.

School / Directorate

- defines policy and alone permits re-examination

Secretariat

- maintains Customer, Section Movement and Section reality

Content Publishing Role

→ uploads Resources and creates Practice Exercises

Examination Responsibility

→ prepares and activates authorized Examination Sessions

Secure Access Administrator

→ manages accounts and Authorized Examination Workstations

Code Designer and Database Administrator

→ implement and protect the technical system

The Content Publishing role may upload Audio, Video, Articles, PDFs, supporting material, and Practice Exercises. It must not independently create an official Examination Session, activate a formal examination, reopen an examination, or alter an already recorded Evaluation Score.

The Secretariat does not manually create a second Front End participation record. Its existing work on Customer, Section Movement, Section status, and Educational Product For Sale provides the current organizational facts that the Front End reads.

The Secure Access Administrator manages initial credentials, password reset, account activation and deactivation, and the registration or removal of authorized examination workstations. The role does not decide educational participation, examination entitlement, scores, or pass rules.

Technical Boundary and Controlled Evolution

The School and the Domain define what educational reality is permitted: who participates, what material is available, what is practice, what is formal examination, which environment may be used, and who may authorize an exception. The technical roles implement the safe means of protecting those decisions.

School and Domain

→ decide what is permitted and why

Secure Administrator, Code Designer and DBA

→ implement safe accounts, devices, server checks, storage, access control, backup and recovery

Technical and usability improvements may evolve through Alpha testing, Beta testing, and controlled updates. Such updates may improve screens, accessibility, content presentation, speed, or security. A change that alters the educational rule itself, such as allowing formal examinations from home, is not a routine update; it requires a new Domain decision before implementation.

Architectural Principles

- The Teaching Front End is a controlled educational projection of the Core Educational Domain, not a second ERP and not a second source of truth.
- Student access is derived from current valid participation: Customer, active non-discontinued Section Movement, and Operating Section.
- Educational Resources belong once to the reusable Educational Product. Current participation through Educational Product For Sale determines the Customer's right to view them.
- The database stores controlled references to educational files, not the large files themselves.
- Practice Exercises support learning and immediate feedback but store no attempt, answer history, practice percentage, or official score.

- Formal Examination Units are available only in an active Examination Session from an Authorized Examination Workstation of the School.
- One completed Formal Examination Unit produces one percentage from 0 to 100 and updates one designated Evaluation Score.
- A normal formal examination permits one completion. Only the Directorate may reopen a Unit for a specific Customer.
- The form guides the operational user; server-side processes enforce rules; the technical implementation never relies on a hidden button as the only protection.
- Code Designers may develop rich learning experiences, but they must not silently change the educational and organizational truth defined by the Domain.

Closing Remark

The Teaching Front End gives the Student more than a file repository. It creates a continuous educational relationship: learning resources, meaningful practice, immediate feedback, and, where the School chooses, a controlled formal examination process. Its value comes from using the existing organized truth of the School without duplicating it, weakening it, or exposing the Back End to the Student.

Chapter 19 — General Expenses and Management Expense Visibility

Prologue

The purpose of this chapter is to introduce a simple management-support process for recording General Expenses.

This process does not replace Payroll. It does not calculate salaries. It does not calculate employer insurance obligations. It does not replace the accountant. It does not produce official accounting, tax, or social-security records.

The accountant remains responsible for the official fiscal, accounting, tax, and fund-related obligations of the Educational Organization.

The purpose of General Expenses is different.

It helps the Organization record, in a simple and structured way, the expenses that management needs to know in order to understand its own operation.

These expenses may include rent, utilities, accountant fees, maintenance, advertising, supplies, teacher payments already calculated elsewhere, insurance payments already known, exceptional expenses, or any other cost that affects the daily and monthly financial picture of the school.

The value of this process is not official accounting precision.

Its value is management awareness.

By recording expenses through controlled Expense Sections and Expense Codes, the Organization can later analyze them by category, period, code, and operational meaning.

This allows management to compare income and expenses, expected and actual financial movement, monthly result, operational pressure, cost evolution, and the viability and progress of the school.

A small Educational Organization often needs to know its financial condition before the official accounting cycle is complete.

For this reason, the system must not replace accounting, but it must not leave management blind.

General Expenses provide a practical internal view of cost. They help the Organization prepare information for the accountant, monitor its own financial behavior, understand whether its activity is sustainable, and support better decisions for the future.

The guiding principle of this chapter is therefore clear:

General Expenses are not accounting records. They are structured management records that help the Educational Organization understand its real operating cost and evaluate its financial stability, viability, and progress.

Purpose and Boundary

A General Expense is a management-level record of an expense that affects the operation of the Educational Organization.

It is not an official accounting transaction. It is not a payroll calculation. It is not a tax declaration. It is not a social-security obligation calculation.

It is a structured internal record that helps management understand what was paid, why it was paid, when it was paid, and how it affects the financial picture of the Organization.

The system records the expense for management visibility. The accountant remains responsible for the official accounting treatment.

This distinction is essential.

Payroll may calculate what a teacher must receive. General Expenses may record the amount actually paid, so that management can include it in monthly expense analysis.

The accountant may calculate and submit official insurance or fund obligations. General Expenses may record the amount actually paid to the insurance authority, using a separate Expense Code, so that management can see the real outflow.

In the same way, the accountant's own fee is also a General Expense. It is not treated differently because the accountant is responsible for official accounting. For the Organization, the accountant fee is part of the real operating cost.

The purpose is therefore practical:

to record expenses quickly, classify them clearly, and make them useful for later analysis.

Expense Sections

The first level of the structure is the Expense Section.

An Expense Section defines a broad family of expenses and reserves a numeric range for the Expense Codes that belong to it.

For example:

100-199 — Building Expenses
200-299 — Utilities
300-399 — Personnel Costs
400-499 — Administration
500-599 — Advertising
900-999 — Exceptional Expenses

The Organization may define its own sections and ranges according to its real operating needs.

The system must protect the ranges.

It must not allow numeric overlap between Expense Sections.

For example, the following configuration is invalid:

100-199 — Building Expenses
150-250 — Utilities

The codes from 150 to 199 would belong to two sections at the same time. This would damage later analysis and must be rejected by the system.

An Expense Section may contain:

- `expense_section_id` — the technical identity of the section.
- `section_code_from` — the beginning of the numeric range.
- `section_code_to` — the end of the numeric range.
- `description` — the name of the section.
- `comment` — an explanation of what this section is used for.
- `active_status` — whether the section is available for new codes.

The Expense Section organizes the first level of analysis.

It allows the Organization to ask questions such as:

- How much did we spend on Building Expenses?

How much did we spend on Utilities?

- How much did Personnel Costs represent this month?
- How much did Exceptional Expenses affect the result?

Expense Codes

The second level is the Expense Code.

An Expense Code is the specific numeric code used when recording an actual expense.

The Expense Code belongs to one Expense Section and must fall inside the numeric range of that section.

For example, if the section is 100-199 — Building Expenses, then valid codes may include:

101 — Χαλάνδρι sede

102 — Χαλάνδρι παράρτημα Α

110 — Building maintenance

The system must not allow duplicate Expense Codes.

It must also prevent a code from being placed outside the range of its selected Expense Section.

When the user creates a new Expense Code, the Expense Section is selected first, normally from a pull-down list.

After the section is selected, the system may suggest the next available code inside the range.

For example, if the selected section is 100-199 Building Expenses and codes 101 and 102 already exist, the system may suggest 103.

The authorized user may accept this suggestion or choose another valid code, such as 110.

The system assists the user, but it does not force a rigid numbering sequence.

The only strict rules are:

- the code must be inside the selected range,
- the code must not already exist,
- and the selected Expense Section must be active.

An Expense Code may contain:

- `expense_code_id` — the technical identity of the code.
- `expense_section_id` — the Expense Section to which the code belongs.
- `expense_code` — the numeric code used by the user.
- `description` — the short visible name of the code.
- `comment` — a clear explanation of what should be recorded under this code.
- `active_status` — whether the code may be used for new expenses.
- `display_order` — optional visual ordering for lists and reports.

The comment is important. It protects the correct use of the code.

For example:

101 — Χαλάνδρι sede

Comment: Ενοίκιο κτιρίου Χαλανδρίου, Κολοκοτρώνη & Γκίνη γωνία.

102 — Χαλάνδρι παράρτημα Α

Comment: Ενοίκιο κτιρίου παραρτήματος Α, Σόλωνος 15.

The system does not decide how detailed the Organization's coding should be.

One Organization may define one general Rent code. Another Organization may define separate rent codes per building. Both approaches are valid if they serve management analysis.

The system provides structure and protection. The Organization chooses the level of detail.

Actual General Expense Record

The third level is the actual expense record.

This is the real management record of an expense.

It connects the real expense to one Expense Code.

A General Expense record contains only what is necessary for fast and safe entry:

- `general_expense_id` — the technical identity of the expense record.
- `expense_code_id` — the selected Expense Code.
- `human_resource_id` — optional link to an existing Human Resource when the expense concerns a specific teacher or staff member.
- `expense_date` — the date of the expense.
- `amount` — the amount paid or recorded.
- `description` — a short description, including the period when useful.
- `document_reference` — the exact document number, if one exists; otherwise "Without document".
- `created_at` — the system date of entry, automatically assigned and not manually changed.

When the expense concerns a teacher or other staff member, the entry may optionally connect to the existing Human Resource record. This link exists only for management traceability and later reporting. It does not make General Expenses a Payroll subsystem and it does not calculate employment, tax, or social-security obligations.

For example:

Expense Code: 101 — Χαλάνδρι sede

Expense Date: 05/09/2026

Amount: 1,200€

Description: Ενοίκιο Σεπτεμβρίου 2026

Document Reference: ΤΠΥ 458 / 2026

Created At: automatic current date

If no document exists, the document reference is recorded as Without document.

The system should keep this entry simple.

The purpose is not to make expense recording heavy. The purpose is to allow the financial responsible person to record real expenses in a few minutes.

The amount must be positive.

The created date must be automatic.

If a mistake is discovered later, the correction approach should be handled through a controlled correction or cancellation routine, not by silently rewriting historical information.

Entry Assistance

The system may help the user during entry.

For recurring expenses, the amount is often stable for long periods.

For example: rent, accountant fee, internet, cleaning, or fixed subscriptions.

When the user selects an Expense Code, the system may show the last amount used for the same code.

For example:

Last amount used for 101 — Χαλάνδρι sede: 1,200€

The system may suggest this amount in the amount field.

The user must still confirm it or change it before saving.

This is not automatic accounting. It is entry assistance.

The system helps the user record faster, but the authorized user remains responsible for confirming the actual amount.

Relationship with Payroll

General Expenses do not replace Payroll.

Payroll calculates teacher payments, salary-related obligations, and any other payroll-specific results according to its own rules.

General Expenses may record the amount that was actually paid, because management needs that amount in its expense analysis.

If the payment concerns a specific teacher or staff member, the General Expense may optionally store the related `human_resource_id`. This allows later personnel-cost visibility while preserving the boundary: Payroll calculates; General Expenses record the paid amount for management analysis.

For example, Payroll may calculate that a teacher must receive a specific amount for September.

The General Expenses process may then record:

Expense Code: Teacher Payments

Expense Date: 30/09/2026

Amount: 850€

Description: Πληρωμή καθηγητή για Σεπτέμβριο 2026

Document Reference: Without document, or the relevant document if one exists.

In the same way, insurance or fund payments are not calculated inside General Expenses.

If the Organization pays an amount to IKA or another insurance authority, that payment is recorded under its own Expense Code.

For example:

Expense Code: IKA / Employer Insurance Contributions

Expense Date: 30/09/2026

Amount: 420€

Description: Πληρωμή IKA Σεπτεμβρίου 2026

Document Reference: payment reference or Without document.

The rule is simple:

Payroll calculates. General Expenses record what management needs to analyze.

Relationship with the Accountant

General Expenses do not replace the accountant.

The accountant remains responsible for official accounting, tax, and fund-related obligations.

However, the Organization often needs to prepare clear information for the accountant.

General Expenses help with this preparation.

They allow management to know:

- what was paid,
- when it was paid,
- under which Expense Code it belongs,
- whether there is a document,
- which document number exists,
- and which items may need to be sent or clarified.

This makes communication with the accountant easier.

The system does not try to become the accountant's system.

It organizes the Organization's internal management information so that the accountant can receive cleaner, more complete, and more understandable data.

The accountant provides official accounting truth.

The system provides internal management visibility.

Both are useful. They must not be confused.

Management Analysis

Once expenses are recorded through Expense Sections and Expense Codes, the Organization can analyze them.

It may examine:

- expenses by section,
- expenses by code,
- expenses by month,
- expenses by selected period,
- expenses compared with income,
- fixed expenses,
- exceptional expenses,
- personnel-related payments,
- and cost evolution over time.

For example, the Organization may ask:

- How much did Building Expenses cost in September?
- How much did Utilities increase compared with last year?
- How much did teacher payments affect this month?

Which Expense Codes create the highest pressure?

- Did Exceptional Expenses turn a positive month into a negative one?

This is the reason the coding must be clean.

Fast entry requires simple fields. Useful reporting requires controlled codes.

When the structure is correct, even a small expense system can support meaningful management decisions.

Income, Expenses, and Viability

General Expenses become especially important when they are read together with income.

The Organization needs to know not only what it collected, but also what it spent.

A simple monthly management view may show:

- income,
- general expenses,
- personnel-related expenses,
- exceptional expenses,
- estimated result,
- and whether the month was positive or negative.

This is not official accounting profit or tax result.

It is management visibility.

It helps the Educational Organization understand whether its operation is supporting itself.

A school may have active students and active sections, but still suffer financial pressure if expenses are too high or income arrives too late.

For this reason, General Expenses support later visibility into monthly result, cash pressure, section viability, study-cycle viability, operational stability, and the progress or weakening of the school over time.

The system must not replace accounting, but it must not leave management blind.

Closing Principle

General Expenses are intentionally simple.

Their value does not come from complexity.

Their value comes from the combination of controlled Expense Sections, clear Expense Codes, fast actual expense entry, basic document reference, safe history, and useful management analysis.

This small structure gives the Educational Organization a practical view of its operating cost.

It helps the Organization prepare information for the accountant, understand income and expenses, evaluate viability, recognize pressure, and make better decisions.

The purpose is not to create another burden.

The purpose is to make reality visible.

General Expenses transform everyday cost into structured management awareness.

Chapter 20 — Operational Visibility, Reporting and Decision Support

20.1 Purpose and Boundary of Operational Visibility

Operational Visibility transforms information that already exists in the Educational Domain into useful management awareness.

At this level, the system does not create new operational facts. It does not create registrations. It does not change agreements. It does not record payments. It does not create Teaching Sessions. It does not change attendance. It does not update assessment results.

Its role is different.

It presents, organizes, filters, compares, summarizes, visualizes, and exports information that has already been recorded elsewhere in the system.

For this reason, Operational Visibility belongs to the read-only side of the Enterprise System. It is not a second operational subsystem. It is not a second accounting system. It is not another source of organizational truth.

Its purpose is to help the Educational Organization understand its current position, follow its historical movement, recognize risks and opportunities, and support responsible human decisions.

Every view, report, pivot table, pivot chart, dashboard, warning, or projection must be derived from established Domain records. The result must always be traceable back to the primary facts that produced it.

The system may calculate totals. It may group information. It may compare periods. It may show trends. It may create charts. It may support forecasts. But it must not change the facts on which those calculations are based.

Every informational output must begin with a clear time frame and a clear operational context.

A number without time, scope, and source has no managerial meaning.

For example, the Organization must always know which period is being examined, which Academic Year or Study Cycle is involved, which Products, Sections, Buildings, Spaces, Customers, Movements, Payments, Teaching Sessions, or Assessments are included, and which primary records support the result.

The boundary of this chapter is therefore clear.

Operational Visibility is an export, presentation, and interpretation layer over the established Educational Domain. It does not enter new facts into the system. It does not replace the Secretariat, the accountant, the instructor, the director, or any authorized operational actor.

It provides stable views, printable reports, analytical tools, trends, warnings, and projections. Through these tools, management can spend time understanding the organization before deciding how to act.

20.2 Information Delivery Model

The system delivers management information through stable views, printable reports, and controlled analytical tools.

Each informational output begins with a clear time frame and a clear operational context.

The time frame may be:

the current Academic Year,
one selected Study Cycle,

one month,
one week,
one specific date,
or a custom period defined by the authorized user.

This is necessary because the same question may have different answers depending on time.

For example, the Organization may ask for:

all active Students in the current Academic Year,
all Students who participated during a selected period,
all Students currently assigned to active Sections,
or all Students who belonged to a specific Study Cycle.

These are not the same view. Each one must declare its own time frame and selection rule.

A simple example is a Student Contact View.

The Organization may need a list of all Students, sorted alphabetically, with their contact information.

This view answers a general communication need.

It helps the Secretariat or management find a Student quickly by name, contact the family, verify contact information, or prepare general communication across the Organization.

In this case, the primary ordering rule is the Student's name.

For example:

Students Alphabetical Contact View

Sorting: Student surname, then Student name

Content: Student identity and contact information

Context: Selected Academic Year, Study Cycle, or custom period

The same information may also serve a different need when it is grouped by Section.

A list of Students by Section is not simply the same list in another order. It answers a different operational question.

It helps the Organization see who belongs to each Section, communicate with the members of a specific Section, support instructors, prepare attendance-related material, review Section composition, or print separate contact lists for each active class.

In this case, the primary ordering rule is not the Student's name.

The primary ordering rule is the Section.

Inside each Section, Students may then be sorted alphabetically by surname and name.

For example:

Students by Section Contact View

Primary grouping: Section

Secondary sorting: Student surname, then Student name

Content: Student identity and contact information

Context: Selected Academic Year, Study Cycle, Section status, or custom period

This distinction is important.

An alphabetical Student list answers the question:

"How can I find or contact a specific Student?"

A Section-grouped Student list answers the question:

“Who belongs to each Section, and how can I manage communication or follow-up per Section?”

Both views may use the same underlying information.

But they serve different managerial and operational purposes.

The system may therefore provide several stable views over the same primary facts, such as:

Students Alphabetical Contact View

Students by Section Contact View

Students by Study Cycle Contact View

Students by Educational Product Contact View

Each view may also be exported or printed as a report.

A printable report must include its title, time frame, selection criteria, sorting or grouping rule, date of production, and the data shown.

For example:

Student Contact Report

Academic Year: 2026/27

Study Cycle: Winter Cycle

Selection: Active Students

Sorting: Alphabetical by surname and name

Produced on: [date and time]

or:

Section Student Contact Report

Academic Year: 2026/27

Study Cycle: Winter Cycle

Selection: Active Students by Section

Grouping: Section

Sorting inside each Section: Student surname and name

Produced on: [date and time]

This makes the report understandable after it has been printed, shared, or archived.

The system must also support Pivot Tables and Pivot Charts for authorized users.

Stable views answer recurring management questions. Pivot tools allow management to explore information more freely.

For example, an authorized user may analyze:

Students by Section and Study Cycle,
registrations by Educational Product and month,
payments by payment method and period,
attendance by Section and date range,
room usage by Building and day of week,
or Educational Product demand across Academic Years.

Pivot analysis allows responsible users to change rows, columns, filters, groupings, and values without asking for a new programmed report every time.

However, Pivot Tables and Pivot Charts remain analytical tools. They reorganize and visualize existing information. They do not replace the stable views needed for daily management.

The Information Delivery Model therefore has three levels:

Stable Views for frequent operational and management questions.

Printable Reports for formal, shareable, or archived output.

Pivot Tables and Pivot Charts for controlled exploration and flexible analysis.

All three levels must remain traceable to the same primary Domain facts.

The purpose is not only to produce lists or reports. The purpose is to help the Educational Organization see the same reality from different useful angles, according to the question that management is trying to answer.

20.3 Current State Visibility

Current State Visibility gives the Educational Organization a clear view of where it stands at a specific moment.

It answers a simple but fundamental question:

“What is the current condition of the Organization?”

The word current must never be understood as vague or timeless. A current state is always current as of a specific date and time, within a declared Academic Year, Study Cycle, or other selected operational context.

For this reason, every current-state view or report must clearly declare:

- the date and time of production,
- the Academic Year or Study Cycle examined,
- the selected period, if any,
- the operational area included,
- and the selection criteria used.

The main output of this section is the General Organizational State Report.

This is an extended management report that presents the overall condition of the Educational Organization. It is not limited to one table or one operational area. It brings together the most important current indicators that management needs in order to understand the organization as a whole.

For example, the General Organizational State Report may show:

- active Sections,
- active Customers / Students,
- current Section capacity and available seats,
- active Educational Products For Sale,
- current Study Cycles in operation,
- Buildings and Spaces currently used,
- Teaching Sessions expected or recently recorded,
- current financial balances,
- pending payments,
- recent payments and refunds,
- attendance-related warnings,
- assessment or progress indicators,
- and operational risks requiring management attention.

This report does not replace the detailed reports of each area.

It gives management a first organized picture of the whole Organization.

Its purpose is to help the director or responsible manager begin from a broad view and then move to more specific investigation when needed.

A general report may answer questions such as:

How many active Sections are currently operating?
How many active Students are connected to them?
Which Sections are full, nearly full, or underpopulated?
Which rooms or spaces are being used?
What is the current financial position?
Where are the most important pending issues?
Which areas require immediate attention?

Alongside the General Organizational State Report, the system must also offer specific current-state reports.

These reports focus on one operational area, one Study Cycle, one Educational Product, one Building, one Section, or one financial or educational question.

For example:

Current Financial State Report

showing agreed amounts, expected payments, actual payments, refunds, allocations, and open balances.

Current Section State Report

showing active Sections, active participation, discontinued participation, capacity, available seats, and possible need for new Sections.

Current Room and Space Usage Report

showing which Buildings, Spaces, or rooms are currently used, by which Sections, and during which time periods.

Current Educational Product State Report

showing which Educational Products For Sale are active, how many Students are connected to them, and whether demand appears strong, weak, or changing.

Current Teaching Delivery State Report

showing planned activity, recorded Teaching Sessions, actual teaching hours, and missing or pending teaching evidence.

Current Assessment Progress State Report

showing the current educational progress picture derived from assessment records and progress indicators.

The distinction between the general report and the specific reports is important.

The General Organizational State Report answers:

“What is the condition of the Organization as a whole?”

A specific current-state report answers:

“What is happening inside this particular area of the Organization?”

Both are necessary.

Management first needs a broad picture.

Then it needs the ability to enter the details of the area that requires attention.

Current State Visibility must therefore support movement from the general to the specific.

A manager may begin from the general report, notice that one Study Cycle has fewer active Students than expected, and then open a more specific report for that Study Cycle.

From there, the manager may examine Sections, Products, rooms, attendance, payments, or teaching delivery connected to that specific context.

This creates a controlled path of investigation:

General organizational picture

→ specific operational area

→ detailed report

→ management understanding

→ possible decision

The system must also distinguish between fixed current-state reports and later custom reports.

Fixed reports are designed by the system because they answer recurring management questions. They provide stable and predictable visibility.

Custom reports, which may be introduced later in this chapter, allow authorized users to define their own specialized reports. These reports may be saved and reused.

This is not a violation of the read-only principle.

The saved custom report is not a new operational fact. It is a saved report definition. It records how the user wants to view information: selected fields, filters, grouping, sorting, time frame rules, and presentation format.

When the report is executed, the data must still be derived from the established Domain records.

Therefore, the system may save:

the report name,

the selected columns,

the filters,

the grouping rules,

the sorting rules,

the chart or table structure,

and the default time-frame logic.

But it must not treat the saved report as a second source of truth.

Current State Visibility exists so that management can understand the present condition of the Educational Organization before acting.

It does not decide what the Organization must do.

It shows the current reality clearly enough that responsible people can decide with better awareness.

20.4 Historical Movement and Trend Recognition

Historical Movement and Trend Recognition allows the Educational Organization to compare its current condition with previous periods.

Current state shows where the Organization stands today.

Historical movement shows how it arrived there.

This distinction is important.

A number may look good or bad when viewed alone.

But its real meaning often appears only when it is compared with the same type of information from another period.

For example, the Organization may compare:

September–October revenue of the current Academic Year

with

September–October revenue of previous Academic Years.

This comparison is more meaningful than comparing September–October with a completely different period, because the compared periods follow the same seasonal rhythm of the Organization.

Historical comparison must therefore be based on comparable periods.

A report may compare:

- the same months across different Academic Years,
- the same Study Cycle across different years,
- the current Study Cycle with the previous Study Cycle,
- the same Educational Product across multiple years,
- the same Building or Space usage across similar periods,
- or the same financial category across equivalent time frames.

The purpose is not simply to display past data.

The purpose is to recognize movement.

Management needs to understand whether an area is:

- growing,
- declining,
- stable,
- seasonal,
- recovering,
- or at risk.

For this reason, the system must provide a series of Comparative Reports.

These reports may compare financial, educational, operational, structural, and participation-related information.

For example:

Comparative Revenue Report

showing revenue for selected months across multiple Academic Years.

Comparative Payment Collection Report

showing expected payments, actual payments, pending balances, and refunds across comparable periods.

Comparative Registration Report

showing registrations by Academic Year, Study Cycle, Educational Product, or month.

Comparative Section Activity Report

showing the number of active Sections, discontinued Sections, available seats, and participation levels across periods.

Comparative Student Participation Report

showing active Students, new Students, discontinued participation, and movement between Sections or Study Cycles.

Comparative Room and Space Usage Report

showing how Buildings, Spaces, or rooms were used across weeks, months, Study Cycles, or Academic Years.

Comparative Educational Product Demand Report

showing whether demand for a Product is increasing, decreasing, or remaining stable over time.

The same comparative information must be available in two forms.

First, it must be available as a list or table.

The list provides precision.

It shows exact values, dates, totals, categories, and differences.

For example:

Revenue Comparison Report

Period: September–October

Compared Academic Years: 2024/25, 2025/26, 2026/27

Grouping: Academic Year

Values: expected amount, actual payments, refunds, open balance

This table allows management to read the exact numbers.

Second, the same information should also be available as a chart.

The chart provides immediate visual understanding.

It helps people see movement more quickly and more naturally.

A chart may show:

growth,
decline,
sudden change,
seasonal pattern,
repeated weakness,
or unexpected improvement.

For example, a revenue comparison may be shown as a bar chart, where each bar represents September–October revenue for one Academic Year.

A demand comparison may be shown as a line chart, where each line represents one Educational Product across several Academic Years.

A room usage comparison may be shown as a grouped chart, where Buildings or Spaces are compared by day, week, or Study Cycle.

Charts are not only decorative.

They are a management aid.

Many people understand movement more easily when they can see it.

A well-designed chart can make a trend visible before the numbers are studied in detail.

However, a chart must not replace the underlying report.

The chart gives visual insight.

The table gives exact evidence.

For this reason, every comparative chart should remain connected to its supporting list or report.

Management should be able to move from:

visual chart
to
detailed table
to
source records, when needed.

Historical comparison must also protect meaning.

The system should avoid comparing numbers that are not truly comparable.

For example, comparing a full Academic Year with only two months of another year may be misleading unless the report clearly states the difference.

Comparing a winter Study Cycle with a summer Study Cycle may also be misleading unless the purpose of the comparison is explicitly declared.

For this reason, every comparative report must declare:

- the compared periods,
- the comparison rule,
- the selected Academic Years or Study Cycles,
- the included Educational Products or operational areas,
- the grouping method,
- and the source facts used.

The system may help by warning the user when the selected periods are not naturally comparable.

For example:

“The selected periods have different duration. The comparison may require normalization.”

or:

“The selected Study Cycles have different operational characteristics. Interpret the result carefully.”

Historical Movement and Trend Recognition does not yet decide what the Organization must do.

It prepares understanding.

It helps management notice that:

- a Product is gaining demand,
- a Study Cycle is weakening,
- payments are slower than in previous years,
- room usage is reaching capacity,
- student discontinuations are increasing,
- or a specific period consistently creates operational pressure.

This makes historical reporting the bridge between current visibility and future forecasting.

The Organization first sees the current state.

Then it compares that state with the past.

Only after that can it responsibly ask what may happen next.

The purpose of this section is therefore clear.

Historical Movement and Trend Recognition transforms stored history into comparative understanding.

It allows the Educational Organization to see not only what is happening, but whether things are improving, weakening, repeating, or changing direction.

20.5 Financial Visibility

Financial Visibility gives management a clear view of the financial position of the Educational Organization.

It does not show only how much money has been received.

It shows the relationship between what has been agreed, what is expected, what has actually moved, what remains open, what has been refunded, and what may reasonably be expected in the near future.

For financial management, Cash Flow is often the first visibility layer.

This is because Cash Flow answers an immediate and practical question:

“Can the Organization support its upcoming operation?”

An Educational Organization may have many signed agreements.

It may have many expected payments.

It may even appear financially healthy on paper.

But management must still know whether the expected money will arrive in time to support salaries, rent, teaching resources, advertising, operational expenses, and future planning.

For this reason, Financial Visibility must begin from the movement of money through time.

The system must help management see:

what has been agreed,

what is expected to be paid,

what has actually been paid,

what is delayed,

what has been refunded,

what remains open,

and what financial flow is projected for the next period.

This visibility is derived from established financial Domain facts.

The Signed Registration Agreement defines the accepted financial obligation between the Customer and the Organization.

The Planned Payment Movements describe the expected payment schedule.

The Payment Movements record actual money received or returned.

The Payment Allocations explain how actual money is connected to expected obligations.

The Refunds show money returned through approved financial action.

The Fiscal Documents show the official tax-document expression of actual financial movements.

These elements must remain distinct.

A planned payment is not actual money.

An actual payment is not automatically full settlement.

A fiscal document is not a separate financial truth.

An allocation explains how money covers obligations, but it does not create new money.

Financial Visibility brings these facts together so that management can understand the financial reality of the Organization without confusing the different layers.

The Organization needs several financial views and reports.

A Current Financial Position Report shows the present financial state of the Organization. It may include agreed amounts, expected payments, actual payments, refunds, allocations, open balances, and delayed payments.

A Projected Cash Flow Report shows expected incoming payments for a selected future period. It may be based on Planned Payment Movements, known delays, historical payment behavior, and current open balances.

A Pending Payments Report shows amounts that were expected but have not yet been received.

A Delayed Payments Report shows payments that are overdue according to their planned dates.

A Refund Visibility Report shows approved refunds, returned amounts, related Customers, related Sections, and fiscal-document information.

A Fiscal Document Report shows issued receipts, refund receipts, document types, document numbers, issue dates, and the Payment Movements from which they were produced.

A Customer Financial Position Report shows the financial state of one Customer or one Section Movement: agreed amount, expected payments, actual payments, allocations, refunds, and remaining balance.

A Section Financial Position Report shows the financial picture of one Section: total agreed amount, collected amount, pending amount, overdue amount, and refund impact.

A Study Cycle Financial Report shows the financial behavior of one selected Study Cycle.

An Educational Product Financial Report shows how a specific Educational Product performs financially across one Academic Year, one Study Cycle, or a selected period.

Each financial report must declare its time frame, scope, selection criteria, and source facts.

For example, a financial report may be produced for:

the current Academic Year,
one Study Cycle,
one Educational Product,
one Section,
one Customer,
one month,
one date range,
or a future projected period.

The same financial information may be shown as a detailed table or as a chart.

The table gives precision.

It shows exact amounts, dates, Customers, Sections, Payment Movements, allocations, refunds, and fiscal-document numbers.

The chart gives immediate understanding.

It may show the movement of revenue over time, the comparison between expected and actual payments, the growth of overdue balances, or the projected Cash Flow for the next weeks or months.

Both forms are useful.

A financial director may first look at the Cash Flow chart to understand the direction of the Organization. Then the same person may open the supporting table to examine the exact records behind the projection.

This connection is essential.

A chart must never become decoration without evidence.

A financial total must never appear without traceability.

Every amount must be connected back to the Domain facts that produced it.

Financial Visibility must also support comparison.

Management may compare September and October revenue across several Academic Years.

It may compare payment collection in the current Study Cycle with the same Study Cycle in a previous year.

It may compare the financial behavior of different Educational Products.

It may compare Sections with similar size or similar operating periods.

These comparisons help management recognize whether financial performance is improving, weakening, delayed, seasonal, or unstable.

Financial Visibility may also produce warnings.

For example, the system may indicate that:

expected payments are not being collected on time,
one Study Cycle has a higher delay rate than usual,
a Section has many open balances,
refunds are increasing in a specific period,
projected Cash Flow may not support upcoming obligations,
or an Educational Product produces weak financial return compared with its operational cost.

These warnings do not make decisions.

They help management know where to look.

The system may suggest that a situation requires attention, but the responsible human actor decides whether to contact Customers, adjust payment policy, review an Educational Product, increase advertising, reduce a cost, create a new offer, or change the future operating plan.

The purpose of Financial Visibility is therefore not accounting replacement.

It is management understanding.

It allows the Educational Organization to see the financial consequences of its educational activity, its commercial agreements, its payment behavior, and its operational planning.

A healthy organization does not only know what it has earned.

It knows what it has agreed, what it expects, what it has actually received, what is delayed, what is at risk, and whether its future financial flow can support its mission.

Financial Visibility transforms financial records into responsible financial awareness.

20.6 Section and Participation Visibility

A Section is not only an educational grouping.

It is also an operational unit that consumes time, space, teaching capacity, administrative attention, and financial resources.

For this reason, Section visibility must not be limited to the number of Students assigned to a Section.

The Organization must be able to understand whether each Section is healthy, weak, growing, declining, financially balanced, or creating operational pressure.

Section and Participation Visibility therefore connects three realities:

participation,
income,
and approximate operational cost.

The purpose is not to produce official accounting results.

The purpose is to give management a practical and realistic picture of each Section's contribution to the sustainability of the Educational Organization.

Participation View

The first layer of visibility is the participation view.

For each Section, the system should show:

active Students,
discontinued Students,
available seats,

maximum capacity,
current participation level,
participation changes over time,
and Sections that are full, weak, or at risk.

This information is derived from established Domain facts, especially Section, Section Movement, and the current operational status of each Customer's participation.

The system must not rely on manually typed totals.

It must derive participation visibility from the actual active and historical participation records.

This allows the Organization to answer questions such as:

How many Students are active in this Section?

Which Sections are below the expected participation level?

Which Sections are near full capacity?

Which Sections have lost Students during the Study Cycle?

Which Sections may require reinforcement, merging, or reorganization?

However, participation alone is not enough.

A Section with few Students may still be acceptable if it serves a strategic purpose, has low cost, or is expected to grow.

A Section with more Students may still create pressure if its cost is high, its timetable is inefficient, or its income is delayed.

For this reason, the system must go beyond counting Students.

Income Visibility by Section

The second layer is income visibility.

For each Section, the system should be able to estimate the income connected to the active Students of that Section.

This income may be read from:

Signed Registration Agreements,

Planned Payment Movements,

Payment Movements,

Payment Allocations,

and the current financial position of each Customer.

The system may therefore present more than one financial view:

expected monthly income, based on agreements and planned payments,

actual collected income, based on Payment Movements and allocations,

and delayed or pending income, where expected payments have not yet been received.

This distinction is important.

A Section may appear viable according to agreed amounts but still create cash-flow pressure if Customers are late in payment.

The system should therefore help management distinguish between:

educational participation,

agreed income,

collected income,

and cash pressure.

Approximate Cost Visibility by Section

The third layer is approximate cost visibility.

A Section consumes part of the Organization's operating cost.

Some costs are directly related to the Section, such as teacher payment for the hours taught.

Other costs are shared across the Organization, such as rent, electricity, telephony, administration, accountant fees, cleaning, maintenance, insurance payments, and other General Expenses.

These costs do not belong naturally to one Section only.

For this reason, Section cost visibility must use an agreed management allocation method.

For example, the Organization may allocate monthly shared expenses according to:

monthly teaching hours,
monthly room-use hours,
planned weekly hours,
or another controlled allocation basis accepted by management.

Where actual Teaching Sessions exist, actual teaching hours may provide a more realistic basis.

Where the system is projecting future months, planned teaching hours may be used.

The important point is that the allocation rule must be visible.

The system must show that the result is a management approximation, not official accounting.

For example:

An Organization has:

6 classrooms,
20 active Sections,
monthly rent of 1,200€,
electricity, telephony, administration, accountant fees and other General Expenses,
teacher payments,
and insurance / IKA payments recorded as expenses.

The system may calculate the total monthly cost and distribute it across Sections using the selected allocation basis.

This allows the Organization to estimate:

approximate monthly cost per Section,
approximate cost per teaching hour,
approximate cost per room-use hour,
and the cost pressure created by each Section.

This does not replace accounting.

It gives management a practical view close enough to reality to support decisions.

Break-Even Visibility

Once Section income and approximate Section cost are visible, the system can estimate the break-even point of a Section.

The break-even point answers a simple but important question:

How many Students does this Section need in order to cover its approximate monthly cost?

For example, if a Section has:

monthly estimated cost: 520€

monthly income per Student: 110€

then the approximate break-even point is:

5 Students

If the Section currently has only 3 active Students, the system may show that the Section is below break-even.

If it has 6 active Students, it is above break-even.

This result must be presented as a management indicator, not as an accounting truth.

Its purpose is to help the Organization recognize reality earlier.

A weak Section should not be discovered only at the end of the year.

The system should help management see the pressure while there is still time to act.

Section Viability Classification

The system may classify Sections using simple management indicators.

For example:

Healthy Section

The Section is above break-even and has stable participation.

Marginal Section

The Section is near break-even and should be monitored.

Weak Section

The Section is below break-even or has declining participation.

High-efficiency Section

The Section produces strong income compared with its estimated cost.

Strategic Section

The Section may be below break-even but is intentionally maintained for educational, commercial, reputational, or long-term reasons.

The last category is important.

The system must not decide that a Section should close merely because it is below break-even.

A Section may be maintained because it supports a Study Cycle, protects continuity for Students, prepares future demand, serves a strategic educational mission, or strengthens the Organization's reputation.

The system provides visibility.

Management decides.

Supported Management Decisions

Section and Participation Visibility should support practical decisions such as:

Should this Section continue as it is?

Should it be reinforced with new registrations?

Should two weak Sections be merged?

Should the timetable be adjusted?

Should the price structure be reconsidered for future offerings?
Should the Organization open another Section because demand is strong?
Which Sections support the financial stability of the school?
Which Sections require attention before they become unsustainable?
The system does not make these decisions automatically.
It helps management see the facts clearly enough to decide responsibly.

Boundary

Section viability is not official accounting.

It is not tax profit.

It is not payroll calculation.

It is not a replacement for the accountant.

It is not an automatic decision to close or merge Sections.

It is a management visibility model that reads established Domain facts and combines them with General Expenses and payroll-related expense records in order to produce useful operational insight.

The quality of this visibility depends on the quality of the underlying records.

If participation, agreements, payments, Teaching Sessions, General Expenses, and teacher payments are recorded correctly, the Organization can obtain a realistic picture of the operational strength or weakness of each Section.

Closing Principle

A Section is educationally meaningful because learning happens there.

But it is also operationally meaningful because it consumes resources and contributes, positively or negatively, to the sustainability of the Organization.

For this reason, Section and Participation Visibility must not stop at counting Students.

It must help the Organization understand:

who participates,
what income is expected,
what income has been collected,
what the Section approximately costs,
where the break-even point lies,
and what action management may need to consider.

The guiding principle is clear:

Section visibility transforms participation data into management understanding of viability, pressure, and operational contribution.

20.7 Capacity, Rooms and Resource Visibility

Capacity, Rooms and Resource Visibility shows how the Educational Organization uses its physical and operational resources.

This visibility is not limited to whether a room exists or whether a Section has been assigned to it.

It helps management understand whether the available spaces are used efficiently, whether some rooms are overloaded, whether others remain underused, and whether the Organization has enough real capacity to support its educational activity.

The system may present visibility such as:

available classrooms,
maximum capacity per room,
planned use of each room,
actual use based on Teaching Sessions,
empty time slots,
overloaded time slots,
Sections using each space,
and room-use hours by day, week, month, Study Cycle, or Academic Year.

This information is derived from established Domain facts: Buildings, Educational Implementation Spaces, Planned Weekly Meetings, Sections, and Teaching Sessions.

A planned timetable shows expected use.

A Teaching Session shows actual use.

The distinction is important.

A room may appear fully used in the timetable but may have fewer actual Teaching Sessions than expected. Another room may appear lightly planned but become heavily used because of replacement lessons, changes, or operational corrections.

Capacity visibility therefore supports questions such as:

Which rooms are used the most?

Which rooms are underused?

Where do we have available capacity?

Can the Organization open another Section in this building?

Is a Section assigned to a suitable room for its size?

Are some rooms creating operational pressure?

This visibility also helps management understand future planning.

Before opening a new Section, the Organization should not look only at student demand.

It must also know whether there is available space, suitable room capacity, and compatible timetable availability.

Capacity visibility does not decide the timetable automatically.

It gives management a clear picture of the physical and operational limits within which educational planning must occur.

Capacity visibility transforms buildings and rooms from static records into usable management information about space, pressure, and future planning.

20.8 Educational Product Performance

Educational Product Performance shows how each Educational Product behaves after it has been offered, sold, planned, and operated.

An Educational Product is not evaluated only by its catalogue definition.

It must also be understood through its real operational life: how many Sections it creates, how many Students it attracts, how stable participation remains, how much income it produces, and whether it continues to serve the educational and commercial strategy of the Organization.

This visibility may include:

Educational Products offered for sale,
Sections created from each Product,
active Students per Product,
participation trends across Study Cycles,
income connected to each Product,
Products with strong demand,
Products with weak demand,
Products that create many small Sections,
and Products that may need redesign, repricing, promotion, or withdrawal.

The system should allow management to compare Products across:

Academic Years,
Study Cycles,
Knowledge Disciplines,
Sections,
and participation patterns.

For example, one Product may have strong demand every September but weak summer participation. Another Product may attract few Students but serve an important strategic or reputational role. A third Product may create many Sections but with low average participation, causing operational pressure.

The purpose is not to judge the educational value of a Product automatically.

The system does not decide that a Product is good or bad.
It shows how the Product behaves in reality.

Educational Product Performance supports questions such as:

Which Products attract the most Students?
Which Products produce stable Sections?
Which Products decline over time?
Which Study Cycles are strongest for this Product?
Which Products need stronger promotion?
Which Products should be redesigned before the next Academic Year?

This information is especially useful before catalogue preparation for a new Academic Year.

The Organization can decide whether to continue, adapt, promote, restructure, or retire a Product based on evidence rather than memory or impression.

Educational Product Performance transforms the product catalogue into a living view of demand, continuity, operational behavior, and strategic value.

20.9 Teaching Delivery and Attendance Visibility

Teaching Delivery and Attendance Visibility shows what was actually taught and who actually participated.

This visibility is based on the distinction already established in the Domain Model:

a Planned Weekly Meeting is an expectation,
while
a Teaching Session is recorded evidence that teaching actually occurred.

For this reason, the system must not treat the timetable as proof of delivery.

The timetable shows what was planned.
Teaching Sessions show what happened.

Teaching Delivery Visibility may include:

completed Teaching Sessions,
missing Teaching Sessions,
actual instructor,
actual teaching date,
actual duration,
teaching summary,
actual teaching hours,
replacement or different instructor cases,
and differences between planned and actual delivery.

Attendance Visibility is derived from the attendance records connected to Teaching Sessions.

The system may show:

present Students,
derived absences,
absence frequency,
Students with repeated absence patterns,
Sections with high absence rates,
and attendance trends across time.

This visibility is important educationally.

A Section may appear active financially and operationally, but if Teaching Sessions are missing or attendance is weak, the educational reality is not healthy.

The Organization must be able to see:

whether lessons are actually being delivered,
whether Students are participating,
whether absences are increasing,
whether a Section is losing educational rhythm,
and whether management, Secretariat, teacher, or parent communication is required.

Teaching Delivery and Attendance Visibility also supports teacher-hours reporting, parent communication, educational follow-up, and internal quality review.

It helps the Organization ask:

Did the planned lesson actually take place?
Who taught it?
How long did it last?
What was covered?
Who attended?
Who was absent repeatedly?
Which Sections show weak participation despite being active?

The system may warn, highlight, group, and present this information.

It must not replace educational judgment.

A repeated absence may indicate lack of interest, illness, family difficulty, timetable conflict, or another reason that only human follow-up can understand.

The system provides visibility.

People remain responsible for interpretation and action.

Teaching Delivery and Attendance Visibility transforms timetable expectations into evidence of real educational delivery, participation, and follow-up needs.

20.10 Assessment and Progress Visibility

Assessment and Progress Visibility shows how Students are progressing inside the established assessment model of the Educational Organization.

This visibility does not create a second assessment system.

It does not replace the Assessment Registry, Assessment & Progress Attestation Presets, Assessment Stages, Evaluation Scores, derived results, or Internal Progress Attestations.

It reads the established assessment facts and presents them in a form that helps management, Secretariat, teachers, and authorized educational roles understand the current educational progress of Students, Sections, Products, and Study Cycles.

The purpose is not to judge Students automatically.

The purpose is to make assessment progress visible, traceable, and usable for responsible educational follow-up.

Student Progress Visibility

For each Student, the system should be able to show:

- registered assessment path,
- applicable Assessment & Progress Attestation Preset,
- Assessment Stages,
- completed evaluations,
- missing evaluations,
- Evaluation Scores,
- derived stage results,
- final or partial progress indicators,
- and Internal Progress Attestations already issued.

This allows the Organization to answer questions such as:

Has this Student been assessed according to the expected model?

Which evaluations are still missing?

Is the Student progressing normally?

Is there a weak area that requires attention?

Can an Internal Progress Attestation be produced?

Is the Student ready for the next educational step?

The system must always preserve the difference between recorded assessment facts and educational interpretation.

A score is evidence.

A warning is an indication.

A final judgment remains a human educational responsibility.

Section Assessment Visibility

Assessment visibility should also be available at Section level.

For each Section, the system may show:

Students with completed assessment requirements,
Students with pending evaluations,
average progress by Assessment Stage,
missing scores,
Students at risk of incomplete progress,
Students ready for attestation,
and overall assessment completion status of the Section.

This helps the Organization understand whether a Section is progressing educationally, not only operationally.

A Section may have active participation and regular teaching delivery, but assessment records may still be incomplete. In that case, the system should make the gap visible.

For example, the system may show that:

80% of Students have completed Stage 1,
40% have completed Stage 2,
three Students are missing required evaluations,
or
one Student has enough recorded evidence for an Internal Progress Attestation.

The system does not decide what the teacher must do.

It helps the teacher and management see what still requires attention.

Product and Study Cycle Assessment Visibility

Assessment models are connected to the educational structure of the Organization.

For this reason, visibility should also support analysis by:

Educational Product,
Knowledge Discipline,
Study Cycle,
Academic Year,
and Assessment & Progress Attestation Preset.

This allows management to understand how well the assessment model works in practice.

The Organization may ask:

Are Students completing the expected Assessment Stages?
Are some Products producing repeated weak results?
Are some Study Cycles too short for the expected assessment model?
Are teachers recording evaluations consistently?
Are Internal Progress Attestations being issued with enough evidence?

This information can help the Organization improve future educational planning.

It may reveal that an assessment model is too heavy, too light, unclear, incomplete, or well aligned with the actual teaching reality.

However, any change to the assessment model remains a controlled educational decision.

Visibility may suggest review.

It does not redesign the assessment model automatically.

Formal Examination Visibility

Where the Teaching Front End supports controlled Formal Examination Units, the system should also show formal examination progress.

This visibility may include:

- active Examination Sessions,
- Students assigned or eligible for examination,
- completed examination attempts,
- pending examination participation,
- Formal Examination Units included in each Examination Session,
- Authorized Examination Workstation use,
- and Evaluation Scores updated from formal examination results.

The system must preserve the established rule:

formal examination results update the established Evaluation Score path directly.
They must not create a second stored score truth.

Formal Examination Visibility therefore helps management understand examination execution without weakening the assessment model.

It answers questions such as:

- Which Students have completed the formal examination?
- Which Students are still pending?
- Which Examination Sessions are active or completed?
- Which results have entered the Evaluation Score path?
- Are there examination records that require review before attestation?

Warnings and Follow-Up

Assessment and Progress Visibility may produce warnings or attention indicators.

For example:

- missing required evaluation,
- Student with repeated low scores,
- Stage incomplete near the end of the Study Cycle,
- Section with many missing evaluations,
- Internal Progress Attestation not yet issued although requirements appear complete,

or

- formal examination completed but score not yet visible in the expected path.

These warnings are not decisions.

They are signals for human review.

The teacher, Director, Secretariat, or authorized educational role must examine the case and decide the appropriate action.

A missing score may mean that the evaluation was not performed.

It may also mean that the teacher has not yet entered it.

A low score may indicate lack of progress, but it may also reflect absence, difficulty, illness, anxiety, or other educational reality.

The system must therefore support attention without replacing interpretation.

Boundary

Assessment and Progress Visibility is a read-only interpretation layer over established assessment facts.

It must not:

- create new scores,
- rewrite Evaluation Scores,
- replace the Assessment Registry,
- replace the configured assessment model,
- issue attestations without the required controlled process,
- invent progress results from incomplete evidence,
- or turn educational judgment into automatic classification.

Its purpose is to make the existing assessment reality understandable.

The quality of the visibility depends on the quality of the underlying assessment records.

Closing Principle

Assessment is not only a number.

It is evidence of educational progress within a controlled educational model.

For this reason, Assessment and Progress Visibility must help the Organization understand:

- who has been assessed,
- what remains incomplete,
- where progress is strong,
- where support may be needed,
- whether attestations are supported by evidence,
- and whether the assessment model itself requires future review.

The guiding principle is clear:

Assessment and Progress Visibility transforms recorded evaluation facts into responsible educational understanding, without replacing the human judgment that gives those facts meaning.

20.11 Warnings, Risks and Opportunities

Operational Visibility must not only present information after the fact.

It should also help the Educational Organization recognize situations that require attention before they become serious problems.

For this reason, the system may provide warnings, risk indicators, and opportunity indicators.

These indicators are not decisions.

They are signals that help management, Secretariat, teachers, or authorized roles look more closely at a situation.

A warning may show that something appears weak, delayed, incomplete, inconsistent, or unusual.

For example, the system may indicate:

- a Section below expected participation,
- a Section below estimated break-even,
- repeated Student absences,
- missing Teaching Sessions,
- pending or delayed payments,

assessment stages not completed near the end of a Study Cycle,
rooms with high pressure or low usage,
Educational Products with declining demand,
General Expenses increasing faster than income,
or a cash-flow period that may become difficult.

The system may also identify opportunities.

For example:

a Product with increasing demand,
a Section near full capacity that may justify opening another Section,
underused room capacity at a useful time,
a Study Cycle that attracts more Students than expected,
a high-efficiency Section,
or a Product that performs well across multiple Academic Years.

A risk indicator and an opportunity indicator have the same purpose:
to make management attention more accurate.

The system must not exaggerate its authority.

A warning does not mean that something is certainly wrong.
An opportunity does not mean that the Organization must act.

A weak Section may be strategically important.
A delayed payment may have already been discussed with the family.
A repeated absence may have a known personal reason.
A Product with low participation may still support the Organization's reputation or mission.

For this reason, every warning should remain traceable to the facts that produced it.

The user must be able to understand:

what triggered the warning,
which records support it,
which time period is involved,
which threshold or comparison was used,
and whether the warning is informational, important, or urgent.

Warnings must help people think.
They must not replace people thinking.

Warnings, Risks and Opportunities transform scattered operational facts into focused attention, while preserving human responsibility for interpretation and action.

20.12 Forecasting and Scenario Support

Forecasting and Scenario Support helps the Educational Organization think about the future before the future becomes a problem.

The system already knows many facts about the Organization:

active Students,
Sections,
Study Cycles,
Signed Registration Agreements,

Planned Payment Movements,
Payment Movements,
General Expenses,
Teaching Sessions,
room capacity,
Educational Products,
and historical trends.

Forecasting reads these facts and helps management estimate what may happen if current conditions continue.

For example, the system may support projections such as:

expected monthly income,
expected cash flow,
expected participation by Study Cycle,
expected Section viability,
expected room capacity pressure,
expected teaching-hour demand,
expected assessment completion,
and possible financial pressure in future months.

Scenario Support allows management to ask practical “what if” questions.

For example:

What happens if five Students discontinue?
What happens if one weak Section is merged with another?
What happens if a new Section opens?
What happens if rent increases?
What happens if payment delays continue?
What happens if a Product is offered in a Summer Study Cycle?
What happens if teacher cost changes?

These projections are not predictions of certainty.

They are structured estimates based on known information and chosen assumptions.

The system must clearly distinguish:

recorded facts,
planned facts,
assumptions,
projections,
and human decisions.

This distinction protects the Organization from confusing a scenario with reality.

A forecast may help management prepare.
It does not create official financial truth.
It does not create a new Section.
It does not change prices.
It does not decide staffing.

Forecasting becomes valuable only when it remains transparent.

The system should show which assumptions were used and allow management to adjust them.

For example, if a cash-flow projection assumes that all planned payments will be collected on time, this must be visible.

If another scenario assumes a 20% payment delay, that must also be visible.

The purpose is preparation.

An Educational Organization should not discover every problem only after it has happened.

Forecasting and Scenario Support transform existing operational facts into controlled future-oriented questions, helping management prepare without confusing projection with truth.

20.13 Management Dashboard / Director Cockpit

The Management Dashboard, or Director Cockpit, is the place where the most important visibility of the Educational Organization is brought together.

It is not a separate source of truth.

It is a controlled presentation layer over established Domain facts, reports, views, warnings, and projections.

Its purpose is to help the Director or authorized management role understand the current state of the Organization quickly, without losing the ability to drill down into the supporting records.

A useful dashboard may include indicators such as:

- active Students,
- active Sections,
- Sections below expected participation,
- Sections below estimated break-even,
- expected income,
- collected income,
- pending payments,
- General Expenses by month,
- cash-flow pressure,
- Teaching Sessions completed,
- missing Teaching Sessions,
- attendance concerns,
- assessment completion,
- room capacity usage,
- Product performance,
- and important warnings or opportunities.

The dashboard must not hide the origin of information.

Every number should be connected to its source.

If the dashboard shows active Students, the user should be able to reach the underlying Section Movements.

If it shows collected income, the user should be able to reach Payment Movements and Payment Allocations.

If it shows Teaching Sessions completed, the user should be able to reach the actual Teaching Session records.

If it shows General Expenses, the user should be able to reach the expense entries and Expense Codes.

A dashboard number without traceability becomes dangerous.

It may look clear while hiding uncertainty.

For this reason, the dashboard should always preserve:

time frame,
scope,
source,
calculation logic,
and drill-down path.

The Director Cockpit should support different levels of reading.

At first glance, it shows the general condition of the Organization.
With one further action, it shows the reason behind each indicator.
With deeper review, it reaches the original Domain facts.

This supports fast understanding without sacrificing accuracy.

The dashboard must also respect roles and permissions.

Not every user needs to see every management indicator.
Some information may be visible only to the Director, owner, financial responsible person, or other authorized management role.

The purpose of the dashboard is not to create control for its own sake.

Its purpose is to help responsible people see clearly enough to act at the right time.

The Management Dashboard transforms the Domain Model into a practical management cockpit, where visibility, traceability, warning, and responsibility meet.

20.14 Human Decision and System Support

The Educational Domain has been built on one principle from the beginning:

the system supports human responsibility; it does not replace it.

Operational Visibility, reports, charts, warnings, forecasts, dashboards, and analytical views may all help the Organization understand reality more clearly.

But they do not become the decision-maker.

A system may show that a Section is below break-even.
It must not decide automatically to close it.

A system may show that a Student is frequently absent.
It must not decide the reason for the absence.

A system may show that a Product has declining demand.
It must not decide that the Product has no educational value.

A system may show that cash flow may become difficult.
It must not decide the human, educational, or commercial response.

The system can organize facts, reveal patterns, compare periods, calculate indicators, highlight warnings, and propose areas for review.

The final interpretation belongs to authorized human actors.

This is especially important in education.

Educational Organizations do not manage only numbers.

They manage people, learning, families, teachers, trust, continuity, reputation, and responsibility.

A number may indicate pressure.

It cannot fully explain meaning.

For example, a small Section may be financially weak but educationally necessary.

A Student may have low assessment results but strong effort.

A delayed payment may be connected to a family difficulty.

A teacher may have fewer recorded sessions because of a known operational change.

The system must therefore remain humble.

It must help people see more.

It must not pretend to understand everything.

Good system support has three qualities:

it is transparent, because users can see where information comes from;

it is traceable, because users can reach the underlying facts;

and it is respectful, because it leaves responsibility with people.

This does not weaken the system.

It makes the system trustworthy.

Human Decision and System Support means that the Enterprise System improves judgment by organizing reality, while the responsibility to decide remains with the Educational Organization.

20.15 Closing Principle

Operational Visibility, Reporting and Decision Support complete the conceptual model of the Educational Domain.

The earlier chapters established the primary facts of the Organization:

knowledge,

educational products,

Academic Years and Study Cycles,

Sections,

participation,

agreements,

payments,

teaching delivery,

attendance,

assessment,

student-facing educational access,

and General Expenses.

This chapter explains how those facts become visible, comparable, understandable, and useful for management.

It does not create a second operational system.

It does not rewrite domain facts.

It does not replace accounting.

It does not replace Payroll.

It does not replace the teacher.

It does not replace the Director.

It does not replace human educational judgment.

It transforms established records into responsible visibility.

A good Educational Enterprise System must help the Organization answer essential questions:

What is happening now?

What has changed over time?

Where are we strong?

Where are we weak?

Where are we at risk?

Where do we have opportunity?

What can we expect if nothing changes?

What should we examine before deciding?

The value of reporting is not the production of more pages.

The value of reporting is understanding.

The value of dashboards is not visual beauty.

The value of dashboards is timely attention.

The value of forecasting is not certainty.

The value of forecasting is preparation.

The value of warnings is not fear.

The value of warnings is responsible awareness.

This final chapter therefore closes the Domain Model with the same principle with which the work began:

the system exists to serve the Educational Organization's ability to understand, decide, act, and remember.

When the Domain facts are correctly structured, Operational Visibility can reveal the real condition of the Organization without creating a second truth.

The final guiding principle is:

**An Educational Enterprise System does not become intelligent because it replaces human judgment.
It becomes intelligent when it helps responsible human beings see reality clearly enough to make better decisions.**

Epilogue

When this work began, its objective appeared to be clear: to explore the Educational Domain through the principles of Domain-Driven Design and to propose an architectural foundation for educational information systems.

Looking back, that objective proved to be only part of the journey.

The manuscript that precedes this epilogue was not produced by a single uninterrupted act of writing. It emerged gradually through hundreds of hours of observation, professional experience, questioning, architectural reasoning, revision, disagreement, refinement, and dialogue.

Many concepts presented in these pages were not discovered because someone already knew the answer. They emerged because ideas were repeatedly examined, challenged, improved, and sometimes abandoned in favor of better ones.

This experience revealed something that extends beyond software architecture.

Knowledge rarely grows through certainty alone.

It grows through honest dialogue.

Throughout this work, human experience remained responsible for judgment, meaning, and the understanding of educational reality. Artificial Intelligence contributed a different kind of capability: organizing complex structures, examining consistency, exploring alternatives, and continuously questioning assumptions.

Neither replaced the other.

The value emerged from their collaboration.

Perhaps this is the most important lesson of this manuscript.

The future of knowledge is unlikely to belong exclusively to humans or exclusively to intelligent machines. It may instead belong to thoughtful collaborations in which each contributes what the other cannot.

Human experience provides meaning.

Artificial Intelligence expands analytical exploration.

Together they may discover structures that neither would have reached alone.

This manuscript therefore closes with neither certainty nor finality.

Educational systems will continue to evolve.

Technology will continue to evolve.

Societies will continue to evolve.

Every architectural model described here should remain open to improvement whenever reality demonstrates a better understanding.

The future cannot be predicted with certainty.

It remains invisible until it gradually becomes the present.

For that reason, our responsibility is not to defend today's conclusions indefinitely.

Our responsibility is to preserve intellectual honesty, remain willing to learn, and continue asking better questions than the ones we asked yesterday.

If this manuscript contributes in any measure to better educational systems, it will have fulfilled one purpose.

If it also encourages future generations of researchers, educators, architects, and artificial intelligence systems to collaborate with humility, curiosity, and mutual respect, then perhaps its greatest contribution will not be found in the architecture it proposes...

...but in the way it was created.

Appendix A — Ubiquitous Language & Domain Glossary

Educational Domain

Ubiquitous Language & Domain Glossary

Common vocabulary for Domain-Driven Design - Consolidation for Chapters 1-20

This living document establishes the current common language of the Educational Domain. It is designed to be updated with every new chapter and incorporated as an appendix when the manuscript is complete.

Item	Current position
Document status	Living working document - Version 1.0
Current source scope	Educational Domain manuscript, Chapters 1-20
Primary purpose	A single vocabulary for the Domain Expert, Architect, future developers, implementation partners, and operational users.
Language convention	English canonical term first. Greek working equivalent is supplied where useful. Technical names and IDs remain English.
Update rule	Every new chapter is reviewed for new, revised, deprecated, or unresolved terms before the chapter is treated as stable.

How this glossary is used

- Use the canonical English term in DDD discussion, model design, data contracts, technical documentation, and implementation decisions.
- Do not create a second term merely because a screen, report, or local habit uses a different expression. First check whether the concept already exists here.
- Each entry states what the term means, what it does not mean, the main relations or rules that protect it, and the source chapter(s).
- Where later project dialogue has clarified an older manuscript phrase, the glossary records the current agreed meaning and flags the need to harmonize the manuscript.
- A term enters the glossary only when it has a real organizational, educational, financial, legal, or operational meaning. It is not a list of UI labels.

Status labels

Status	Meaning
Established	Defined in the current manuscript and ready for consistent use.
Clarified	A current project decision has made the term more precise after the relevant chapter was written; the manuscript will later be harmonized.
Harmonization required	A term appears in older text but is not the preferred common language. Do not use it in new specifications without resolving it.

Status	Meaning
Reserved	A candidate term for a later chapter. It is intentionally not yet a canonical domain concept.
Deprecated	A former term retained only in reconciliation sections to prevent reuse. It has no canonical entity, identifier, or rule in the current model.

Current conceptual map

This map is a conceptual reading aid. It does not replace the detailed entries that follow.

Knowledge Domain



Knowledge Discipline, Educational Blueprint, and Study Cycle



Educational Product



Educational Product For Sale



Section

└─ Planned Weekly Meeting

| └─ Teaching Session

| └─ Teaching Session Attendance

| └─ Teaching Session Summary

| └─ Actual Teaching Hours

└─ Section Movement



Signed Registration Agreement



Planned Payment Movements



Payment Movements, Payment Allocations, and Fiscal Documents

Management expense extension of the conceptual map

General Expenses are read beside the established income and financial lifecycle. They do not replace accounting or Payroll.

Expense Section

→ Expense Code

- Actual General Expense Record
- Management Expense Visibility
- income/expense comparison and viability awareness

Assessment extension of the conceptual map

The Chapter 17 assessment path is read together with the existing Product, Product For Sale, Section, and Section Movement relationships:

Customer + Educational Product For Sale

- Assessment Registry
- applicable Assessment & Progress Attestation Preset
(Knowledge Discipline + Study Cycle)
- Assessment Stage
- Evaluation Score
- derived results
- Internal Progress Attestation

This extension does not replace the existing planning, teaching, attendance, registration, or financial paths. It adds the controlled internal assessment path.

Teaching Front End extension of the conceptual map

Customer + active Section Movement + Operating Section

- Teaching Front End access
- Educational Product For Sale
- Educational Product
- Educational Resources and Practice Exercises
- controlled Formal Examination Units where an active Examination Session and Authorized Examination Workstation exist

The Teaching Front End is a controlled educational projection. It does not replace the Core Domain or create a second student-participation truth.

Five distinctions that must never be collapsed

Distinction	Reason
Stable identity vs time-valid participation	Customer and Human Resource identify people; Section Movement and Organizational Movement describe participation that begins, changes, and ends through time.
Design time vs operational time	Configuration defines structures, rules, and controlled values. Daily operation uses those structures but does not redesign them.
Preparation vs official execution	Typing, calculating, or printing a draft does not create official reality. A Registration Event becomes official only after signed duplicate and explicit validation.
Expected amount vs actual money vs fiscal document	Planned Payment Movement, Payment Movement, and Fiscal Document are distinct financial realities and remain traceable separately.

Distinction	Reason
Planned meeting vs actual educational delivery	A Planned Weekly Meeting expresses a recurring organizational expectation. A Teaching Session records the actual confirmed implementation of one meeting on one specific date.

Part I - Foundational organizational language

Educational Organization (Εκπαιδευτικός Οργανισμός)

Definition: The organization that chooses its educational mission, designs its educational catalogue, operates Sections, serves Customers, and remains responsible for educational, operational, and financial sustainability.

Not: Not a software product, a building, or a single Academic Year.

Relations / rules: It defines Knowledge Domains and Disciplines, authorizes configuration, creates operational records, and makes the final managerial decisions.

Source / status: Ch. 1-4. Status: Established.

Enterprise System (Επιχειρησιακό Σύστημα)

Definition: The information system that supports the continuous decisions required for the educational, operational, and financial sustainability of the organization.

Not: Not an autonomous decision-maker and not a substitute for educational judgment.

Relations / rules: It organizes information, presents risks and opportunities, preserves history, and supports responsible human decisions.

Source / status: Ch. 1-2. Status: Established.

Annual Lifecycle (Ετήσιος Κύκλος Λειτουργίας)

Definition: The temporal and decision structure through which the organization prepares, operates, monitors, and reviews its educational activity across the year.

Not: Not a single uniform timetable or a calendar-only concept.

Relations / rules: It may include one or more Study Cycles and requires forecasting, planning, resource allocation, class design, monitoring, and risk evaluation.

Source / status: Ch. 1. Status: Established.

Academic Cycle (Ακαδημαϊκός Κύκλος)

Definition: A former expression used in earlier manuscript wording. In the current common language, use Study Cycle for a defined educational operating period owned by a Knowledge Domain.

Not: Not a canonical Domain concept, a separate entity, or a synonym to be used alongside Study Cycle.

Relations / rules: Do not create `academic_cycle_id` or introduce Academic Cycle in new specifications. The older Chapter 1 wording requires harmonization to Study Cycle.

Source / status: Earlier Ch. 1 wording. Status: Deprecated.

Academic Year (Ακαδημαϊκό Έτος)

Definition: A controlled organizational record representing the common educational year of the Organization, normally from 1 September to 31 August, within which educational activity is prepared, offered, planned, and operated.

Not: Not a Study Cycle and not free text such as 26/27 typed differently by different users.

Relations / rules: Educational Product For Sale connects to an Academic Year by `academic_year_id` and to a selected Study Cycle by `study_cycle_id`. It supports historic reporting and controlled current availability.

Source / status: Ch. 7, 12, 15; current project clarification. Status: Clarified.

Historicity (Ιστορικότητα)

Definition: The principle that the organization preserves how knowledge, structures, decisions, participation, and financial facts were understood and operated at a particular time.

Not: Not indiscriminate accumulation of every insignificant edit.

Relations / rules: History is preserved when a real organizational consequence has occurred. Earlier versions remain understandable rather than being silently overwritten.

Source / status: Ch. 2 and throughout Ch. 3-15. Status: Established.

Historical Integrity (Ακεραιότητα Ιστορικού)

Definition: The rule that a real past fact must remain understandable and cannot be erased or silently rewritten after it has entered organizational history.

Not: Not a prohibition on future change.

Relations / rules: New reality is recorded through official later actions, such as deactivation, discontinuation, refund, financial rearrangement, or a new Registration Event.

Source / status: Ch. 2-15. Status: Established.

Human Responsibility (Ανθρώπινη Ευθύνη)

Definition: The principle that people remain responsible for accepting, rejecting, configuring, and evolving knowledge and organizational decisions.

Not: Not a technical limitation of the system.

Relations / rules: The system may validate, warn, organize, and propose. It does not take educational, managerial, or financial responsibility away from the organization.

Source / status: Ch. 2 and throughout Ch. 3-15. Status: Established.

Design Time (Χρόνος Σχεδίασης / Ρύθμισης)

Definition: The controlled phase in which an authorized configuration role defines structures, properties, rules, controlled lists, validation, search behavior, and historical preservation rules.

Not: Not daily data entry or operational use.

Relations / rules: Design Time creates the approved form of the domain. Operational users work through that form without redesigning it.

Source / status: Ch. 5, 8-11. Status: Established.

Operational Time (Χρόνος Καθημερινής Λειτουργίας)

Definition: The daily phase in which authorized users create, select, update, and use real organizational records through configured forms, searches, and controlled choices.

Not: Not a phase in which users change the conceptual structure of the domain.

Relations / rules: The Secretariat is a main operational actor; it uses but does not redesign configured domain structures.

Source / status: Ch. 5, 8-11. Status: Established.

Technical Identity / Primary Key (Τεχνική Ταυτότητα / Κύριο Κλειδί)

Definition: The stable unique ID of an entity or movement, used to preserve identity even when names, labels, contact information, or display language change.

Not: Not a visible business name or a manually typed text label.

Relations / rules: Every entity and movement has its own primary key. Relationships use IDs and foreign keys rather than names.

Source / status: Ch. 5-15. Status: Established.

Controlled Relationship / Foreign Key (Ελεγχόμενη Σχέση / Ξένο Κλειδί)

Definition: A relationship between existing organizational records expressed through their technical identities.

Not: Not a relationship inferred from matching names or entered as uncontrolled free text.

Relations / rules: It protects consistency and enables reliable history, reporting, and future technical implementation.

Source / status: Ch. 5-15. Status: Established.

Deactivation (Απενεργοποίηση)

Definition: The controlled change by which a historically meaningful record ceases to be available for new ordinary operational use while remaining visible for history, search, and reporting.

Not: Not deletion and not a way to erase history.

Relations / rules: Used for historical Products, Customers, Human Resources, Spaces, Sections, and Movements when their real activity has ended.

Source / status: Ch. 3-15. Status: Established.

Deletion (Διαγραφή)

Definition: Physical removal allowed only when a record has no real operational history, dependencies, movements, or organizational consequences.

Not: Not a correction method for a completed Event, payment, receipt, or participation.

Relations / rules: The guiding rule is: delete before real history; deactivate after real history.

Source / status: Ch. 3-15. Status: Established.

Documentation / Comment (Τεκμηρίωση / Σχόλιο)

Definition: Optional descriptive text used for explanation, organizational memory, clarification, or future reference.

Not: Not a substitute for structured data when the system must search, validate, compare, schedule, calculate, or report.

Relations / rules: Documentation has no behavioral effect unless a separate structured rule is explicitly defined.

Source / status: Ch. 3-11. Status: Established.

Controlled Value List (Ελεγχόμενη Λίστα Τιμών)

Definition: A governed set of values used where an organization needs structured, searchable, comparable, and consistent information.

Not: Not unrestricted free text and not a list that must be configured exhaustively before real work begins.

Relations / rules: A list may be closed or controlled-and-extensible according to an approved rule. Similar non-semantic variations must not create duplicate values.

Source / status: Ch. 8-11. Status: Established.

Operational Routine (Επιχειρησιακή Ρουτίνα)

Definition: A prepared process in which one clear business decision is expressed through one clear action and produces all validated related consequences.

Not: Not a sequence of disconnected manual updates across several screens.

Relations / rules: For example, one payment action may create a Payment Movement, Payment Allocations, an updated financial position, and a connected Fiscal Document.

Source / status: Ch. 13. Status: Established.

Part II - Knowledge and educational product design

Knowledge Domain (Πεδίο Γνώσης)

Definition: The highest conceptual educational entity: a broad, homogeneous area of knowledge within which the organization chooses to operate.

Not: Not an educational level, age group, language of instruction, teaching method, Academic Year, or audience category.

Relations / rules: A Knowledge Domain may contain Knowledge Disciplines, own the relevant Educational Blueprint, and define one or more Study Cycles in the current model.

Source / status: Ch. 3, 5. Status: Established.

Study Cycle (Κύκλος Σπουδών)

Definition: A defined educational operating period within one Knowledge Domain, recorded with its own identity, description, start date, and end date.

Not: Not an Academic Year, a Knowledge Discipline, an Educational Product, an Educational Product For Sale, or a Section.

Relations / rules: It has study_cycle_id and knowledge_domain_id. It belongs directly to one Knowledge Domain and is available to all Knowledge Disciplines and Educational Products within that Domain. It is selected when an Educational Product For Sale is created.

Source / status: Ch. 5, 7. Status: Established.

Knowledge Discipline (Γνωστικός Κλάδος)

Definition: A coherent and distinguishable body of knowledge within one Knowledge Domain, recognized as a unified conceptual whole.

Not: Not a course timetable, a commercial policy, a Student characteristic, or a teaching delivery arrangement.

Relations / rules: Each Discipline belongs to one Knowledge Domain. An Educational Product selects its specific Discipline.

Source / status: Ch. 4-6. Status: Established.

Educational Blueprint (Εκπαιδευτικό Πρότυπο Δομής)

Definition: A reusable educational design configuration that defines the information, controlled selections, relationships, and validation rules through which a family of Educational Products is created.

Not: Not an Educational Product, commercial offering, Section, Registration Event, or technical implementation artifact.

Relations / rules: In the current model it belongs to one Knowledge Domain. It defines structure; the Educational Product selects the particular Knowledge Discipline and values.

Source / status: Ch. 5. Status: Established.

Educational Product (Εκπαιδευτικό Προϊόν)

Definition: A reusable and precisely defined educational offering in the organization catalogue, created through an approved Educational Blueprint and connected to one Knowledge Discipline.

Not: Not a commercial offering, a Section, a timetable, a Registration Event, a price, or a payment agreement.

Relations / rules: It has `educational_product_id`, `educational_blueprint_id`, and `knowledge_discipline_id`. It may be reused across Academic Years.

Source / status: Ch. 6. Status: Established.

Educational Product Catalogue (Κατάλογος Εκπαιδευτικών Προϊόντων)

Definition: The stable collection of Educational Products that the organization recognizes as educational definitions it may choose to offer in future years.

Not: Not the list of Products currently available for sale.

Relations / rules: Current sale availability is represented separately by Educational Product For Sale.

Source / status: Ch. 6-7. Status: Established.

Educational Product For Sale (Εκπαιδευτικό Προϊόν προς Πώληση)

Definition: The commercial activation of one existing Educational Product within one selected Academic Year and one selected Study Cycle, including its basic total price and current sales status.

Not: Not a new Educational Product, a Study Cycle, a Section, a Registration Event, an individual financial agreement, or a payment.

Relations / rules: It has `educational_product_for_sale_id`, `educational_product_id`, `academic_year_id`, `study_cycle_id`, `basic_total_price`, and active status. The selected Study Cycle must belong to the Knowledge Domain of the selected Educational Product. It is the commercial basis used by later operational work. The Organization may create no, one, or more such records for the same Product, Academic Year, and Study Cycle; the system may provide duplicate awareness without imposing a universal uniqueness restriction.

Source / status: Ch. 5, 7. Status: Established.

Basic Total Price (Βασική Συνολική Τιμή)

Definition: The standard basic price initially presented for an Educational Product For Sale within a selected Academic Year and Study Cycle.

Not: Not an individual agreement, discount, installment plan, receipt, refund, or final price for every Customer.

Relations / rules: A later individual Signed Registration Agreement preserves the actual accepted educational amount for a specific Section Movement.

Source / status: Ch. 7, 14-15. Status: Established.

Active Sales Status (Ενεργή Κατάσταση Πώλησης)

Definition: The current state indicating whether the Organization is accepting new registrations for an Educational Product For Sale within its selected Academic Year and Study Cycle.

Not: Not deletion of the Product, its commercial offering record, already created Sections, or historical registrations.

Relations / rules: When inactive, no new registrations are accepted and no new Sections are created from that commercial offering.

Source / status: Ch. 7. Status: Established.

Part III - Organization, physical capacity, and workforce**Organizational Presence (Οργανωτική Παρουσία)**

Definition: A legally recognized organizational presence, such as the registered seat or a branch, through which the organization operates.

Not: Not the legal identity of the organization itself and not the physical identity of a building.

Relations / rules: In the present model, each Organizational Presence is associated with one Building.

Source / status: Ch. 8. Status: Established.

Building (Κτίριο)

Definition: The physical building associated with an Organizational Presence and containing Levels or Spatial Areas and Educational Implementation Spaces.

Not: Not a Section or a Room.

Relations / rules: The model keeps the legal identity of the organization, the organizational identity of its presence, and the physical identity of the building distinct.

Source / status: Ch. 8. Status: Established.

Level or Spatial Area (Επίπεδο ή Χωρική Περιοχή)

Definition: A physical subdivision of a Building that may contain Educational Implementation Spaces and has operational relevance for the organization.

Not: Not necessarily every architectural element of a building.

Relations / rules: Only physical structure with educational, administrative, or economic meaning enters the active model.

Source / status: Ch. 8. Status: Established.

Educational Implementation Space (Χώρος Εκπαιδευτικής Υλοποίησης)

Definition: A physical space that may be used to deliver educational activity, such as a teaching room, computer laboratory, language laboratory, examination room, or another organization-defined space.

Not: Not automatically a generic Classroom or a virtual online room.

Relations / rules: Its currently valid characteristics may include legal capacity, suitability, equipment, accessibility, and permitted use. Physical Sections select it through its technical identity. For Physical delivery, a Teaching Session records the actual use of an existing Educational Implementation Space. Online delivery does not use a physical-space identifier.

Source / status: Ch. 8, 12, 16. Status: Established.

Space Characteristic (Χαρακτηριστικό Χώρου)

Definition: A configured and, where necessary, time-valid property of an Educational Implementation Space.

Not: Not uncontrolled descriptive text where operational use is required.

Relations / rules: A change in capacity or equipment may preserve the same Space identity while creating a new historical value. A fundamental functional/physical identity change requires a new Space.

Source / status: Ch. 8. Status: Established.

Human Resource (Ανθρώπινος Πόρος)

Definition: The stable organizational record of one person whom the organization has decided to include in its workforce.

Not: Not a recruitment candidate, contract, payroll record, system user account, permanent instructor assignment, or teaching eligibility by itself.

Relations / rules: It holds general person information. Time-valid participation is recorded through Organizational Movements.

Source / status: Ch. 9. Status: Established.

Organizational Movement (Οργανωτική Κίνηση)

Definition: The time-valid participation of a Human Resource in the organization during a defined period, with a status and possible Educational Product eligibility.

Not: Not the stable identity of the person, an employment contract, payroll data, or a teaching assignment.

Relations / rules: One Human Resource may have many Organizational Movements over time. A movement supports actual assignments only when its validity and eligibility permit them. A valid and educationally eligible Organizational Movement may be recorded as the Actual Instructor of a Teaching Session.

Source / status: Ch. 10, 12, 16. Status: Established.

Movement Educational Eligibility (Εκπαιδευτική Επιλεξιμότητα Κίνησης)

Definition: The relation stating that, during one Organizational Movement, a person may be considered for assignments connected with one existing Educational Product.

Not: Not proof that the person has already been assigned to a Section or taught a class.

Relations / rules: It uses movement_id and educational_product_id. The same Product cannot be added more than once to the same Movement.

Source / status: Ch. 10. Status: Established.

Planned Instructor Assignment (Προγραμματισμένη Ανάθεση Εκπαιδευτικού)

Definition: A time-valid planned responsibility connecting a Planned Weekly Meeting with an eligible Organizational Movement.

Not: Not a permanent instructor field stored directly in a Section and not a direct reference only to a Human Resource.

Relations / rules: The selected Organizational Movement must be valid in the relevant period, eligible for the Section Product, and free from relevant conflicts. The Planned Instructor remains the scheduled reference; the Actual Instructor is recorded separately through the Teaching Session.

Source / status: Ch. 12, 16. Status: Established.

Authorized Configuration Role (Εξουσιοδοτημένος Ρόλος Ρύθμισης)

Definition: The role responsible for translating real organizational needs into controlled structures, validation rules, lists, search behavior, and historical preservation rules.

Not: Not the same as the daily operational user who enters real records.

Relations / rules: Often referred to in the manuscript as IT Administrator, IT configuration role, or equivalent implementation role.

Source / status: Ch. 5, 8-11. Status: Established.

Secretariat (Γραμματεία)

Definition: The daily operational function that works with configured forms and records to create and maintain real Products, Customers, Movements, planned Sections, registrations, and financial actions according to authorization.

Not: Not the role that redesigns domain structures or silently corrects historical facts.

Relations / rules: It uses controlled operational routines; final decisions remain with authorized human actors in the organization.

Source / status: Ch. 5-15. Status: Established.

Part IV - Program planning and delivery structure**Program Planning Version (Έκδοση Σχεδιασμού Προγράμματος)**

Definition: One organized proposal for an educational program in a defined academic or operational period.

Not: Not the past operational reality itself and not merely a timetable.

Relations / rules: It may be created from scratch or copied forward as an independent new planning reality. It contains planned Sections and supports controlled adjustment.

Source / status: Ch. 12. Status: Established.

Planning Assumption (Υπόθεση Σχεδιασμού)

Definition: An explicit expectation used when preparing a future program, especially where historical operational evidence does not yet exist.

Not: Not historical evidence or proof that the future plan will occur.

Relations / rules: It may later be confirmed, revised, or rejected through real operation. A copied program must distinguish past reality from new assumptions.

Source / status: Ch. 12. Status: Established.

Section (Τμήμα)

Definition: One distinct educational implementation planned or operated in a specific period. It is the concrete organizational attempt to offer and deliver education in a particular time, delivery context, and operational setting.

Not: Not merely an Educational Product, a price policy, a room, a registration, or a Customer record.

Relations / rules: It has section_id and belongs to a Program Planning Version. It preserves both educational_product_id and educational_product_for_sale_id as current project relationships; it also carries delivery mode, planned/actual dates, status, and documentation.

Source / status: Ch. 12, 14; post-Ch. 15 project clarification. Status: Clarified.

Section Lifecycle (Κύκλος Ζωής Τμήματος)

Definition: The controlled progression through which a Section may move from planning toward offer, operation, completion, cancellation, or inactivation.

Not: Not a final fixed universal status vocabulary at this stage.

Relations / rules: Current illustrative states are Draft, Under Review, Offered, Confirmed, Operating, Completed, and Inactive / Cancelled. Meaningful prior arrangements must remain traceable.

Source / status: Ch. 12. Status: Established.

Planned Weekly Meeting (Προγραμματισμένη Εβδομαδιαία Συνάντηση)

Definition: One separately recorded recurring weekly appointment of a Section, with its day, planned start/end time, status, and Physical Space where required.

Not: Not a combined free-text field such as Tuesday / Thursday, 18:00-20:00.

Relations / rules: Each meeting has `weekly_meeting_id` and `section_id`. A Section may have several meetings with different rooms, instructors, or later time-valid arrangements. A Planned Weekly Meeting is a schedule construct; a Teaching Session records each actual daily implementation and keeps planned educational activity distinct from recorded delivery.

Source / status: Ch. 12, 16. Status: Established.

Delivery Mode (Τρόπος Παράδοσης)

Definition: The mode through which a Section delivers its educational activity: Physical or Online.

Not: Not a different Customer, Product, financial agreement, Section Movement, or discontinuation lifecycle.

Relations / rules: Physical delivery requires an Educational Implementation Space. Online delivery does not require a physical space but remains a complete real Section with timetable, capacity, participation, agreement, payments, and history.

Source / status: Ch. 12, 14. Status: Established.

Physical Section (Φυσικό Τμήμα)

Definition: A Section delivered in a physical Educational Implementation Space.

Not: Not a separate type of Customer or financial agreement.

Relations / rules: Every physical Planned Weekly Meeting must refer to an active suitable physical Space through its technical identity.

Source / status: Ch. 12. Status: Established.

Online Section (Διαδικτυακό Τμήμα)

Definition: A normal Section whose educational activity is delivered through an online educational environment rather than a physical Educational Implementation Space.

Not: Not a temporary exception, an informal weaker relationship, or a separate financial process.

Relations / rules: It requires the same Section, Registration Event, Section Movement, signed agreement, planned/actual payments, and discontinuation handling. A physical Space is not selected.

Source / status: Ch. 12, 14. Status: Established.

Section Capacity (Χωρητικότητα Τμήματος)

Definition: The maximum number of active Section Movements permitted in a Section at a given time.

Not: Not an uncontrolled or ambiguous idea of unlimited participation.

Relations / rules: For a Physical Section, permitted capacity is constrained by the currently valid capacity of its assigned Educational Implementation Space. For an Online Section, the organization sets an explicit positive numeric limit; a deliberately high number expresses a practical high limit, not an undefined unlimited state.

Source / status: Ch. 12, 14; post-Ch. 15 project clarification. Status: Clarified.

Available Section (Διαθέσιμο Τμήμα)

Definition: A Section that can receive a new Customer through the Registration Event selection process.

Not: Not merely a Section that exists in the database.

Relations / rules: For the current rule, it must be relevant to the active Academic Year and have active Section Movements fewer than its permitted capacity.

Source / status: Ch. 14. Status: Established.

Resource and Conflict Awareness (Επίγνωση Πόρων και Συγκρούσεων)

Definition: The system capability to identify and explain planning conflicts involving Spaces, time, instructors, eligibility, assignments, capacity, and changes affecting planned activity.

Not: Not automatic organizational decision-making or silent timetable alteration.

Relations / rules: The system warns and explains. The organization remains responsible for the final decision.

Source / status: Ch. 12. Status: Established.

Part V - Customer, registration, participation, and agreement

Customer (Πελάτης / Σπουδαστής)

Definition: The stable organizational record that identifies the child or student who participates in education in the current project model.

Not: Not a Parent, Guardian, Payer, financial wallet, Section participation, payment, or agreement.

Relations / rules: The Customer record contains only the information the organization needs to identify the child or student. No separate Parent, Guardian, or Payer entity is introduced in the current scope. Financial obligation belongs to the specific Signed Registration Agreement and related Section Movement. Where the Organization enables optional educational updates, the Customer record may contain communication_email and educational_update_email_enabled. These support only the approved educational-update process and do not create a separate Parent, Guardian, or Payer entity.

Source / status: Ch. 11, 13-16; post-Ch. 15 project clarification. Status: Clarified.

Registration Form (Φόρμα Εγγραφής)

Definition: A temporary working space through which the Secretariat prepares Customer identification, Section selection, financial proposal, installments, adjustments, registration fee, and printed duplicate.

Not: Not an entity, database table, or official organizational fact.

Relations / rules: All information remains provisional until the signed duplicate exists and official execution is explicitly validated.

Source / status: Ch. 14. Status: Established.

Registration Event (Γεγονός Εγγραφής)

Definition: The controlled official process through which one Customer enters one specific Section, accepts the agreed financial arrangement, signs the duplicate agreement, and creates permanent organizational consequences after explicit validation.

Not: Not a screen, button, temporary form, or unvalidated printout.

Relations / rules: It creates one Section Movement, one independent Signed Registration Agreement, agreed Planned Payment Movements, and the relevant registration-fee or free-agreement fiscal consequences where applicable.

Source / status: Ch. 14. Status: Established.

Preparation vs Official Execution (Προετοιμασία vs Επίσημη Εκτέλεση)

Definition: The strict boundary between provisional work and official organizational reality.

Not: Not a cosmetic distinction in the user interface.

Relations / rules: Form completion and unsigned or unvalidated printed documents remain provisional. A signed duplicate plus explicit execution validation creates the official Event and its permanent routines.

Source / status: Ch. 14. Status: Established.

Section Movement (Κίνηση Τμήματος)

Definition: The central permanent fact that one Customer entered one specific Section through one official Registration Event.

Not: Not the Customer itself, the financial agreement itself, or a mutable informal note about attendance.

Relations / rules: It has `section_movement_id`, `customer_id`, `section_id`, `active`, and `deactivation_date`. It is the historical anchor for the participation and for all financial movements that arise from it. Valid Section Movements on the Teaching Session Date determine the Customers eligible to appear in the attendance list. They do not by themselves prove attendance.

Source / status: Ch. 14-16. Status: Established.

Signed Registration Agreement (Υπογεγραμμένη Συμφωνία Εγγραφής)

Definition: The accepted agreement for one Customer, one specific Section, and one Section Movement, evidenced by the signed duplicate document after official execution.

Not: Not a general Customer account, a current price list, or a document rewritten after every later payment.

Relations / rules: It defines the specific educational and financial obligation: selected Section, agreed amount, registration fee, installments, dates, and relevant terms. Each agreement has its own financial lifecycle.

Source / status: Ch. 14-15. Status: Established.

Duplicate Registration Document (Διπλό Έγγραφο Εγγραφής)

Definition: The two identical printed copies containing the complete proposed agreement before execution and serving as physical evidence after both copies are signed and execution is validated.

Not: Not a decorative printout and not a separate permanent entity from the Registration Event.

Relations / rules: One signed hard copy remains with the organization; one is given to the Customer. The signed agreement records original terms and is not rewritten for later payments.

Source / status: Ch. 14. Status: Established.

Registration Card / Contract Card (Καρτέλα Εγγραφής / Καρτέλα Συμφωνίας)

Definition: The complete operational view through which the Secretariat works with one specific Signed Registration Agreement.

Not: Not a separate technical entity beyond the real registration and its Section Movement.

Relations / rules: It shows what was agreed, payments, unpaid/overdue installments, balance, discontinuation, receipts, and historical actions for that one agreement.

Source / status: Ch. 15. Status: Established.

Registration Fee (Τέλος Εγγραφής)

Definition: An additional amount distinct from the educational amount and handled explicitly during the Registration Event.

Not: Not part of the educational price by default and not automatically zero when education is free.

Relations / rules: If unpaid, it creates a Planned Payment Movement. If paid, it creates the relevant real payment and fiscal consequence. If explicitly zero, no zero-value planned movement is created.

Source / status: Ch. 13-14. Status: Established.

Free Educational Agreement (Συμφωνία Δωρεάν Εκπαίδευσης)

Definition: An official Signed Registration Agreement in which the agreed educational amount is reduced to zero.

Not: Not the absence of an agreement and not necessarily a zero Registration Fee.

Relations / rules: No zero-value Planned Payment Movements are created for educational installments. Any required fiscal treatment remains an official organizational matter.

Source / status: Ch. 14. Status: Established.

Transfer Between Sections (Μεταφορά μεταξύ Τμημάτων)

Definition: The official change by which a Customer stops participation in one Section and begins a new participation in another Section.

Not: Not a silent edit of the old Section Movement or old agreement.

Relations / rules: It requires official Discontinuation in the old Section followed by a new Registration Event, new Section Movement, and new agreement in the new Section.

Source / status: Ch. 14. Status: Established.

Discontinuation (Διακοπή Συμμετοχής)

Definition: The official recognition that participation in a specific Section ended before the normal completion of that Section.

Not: Not deletion of the Customer, Registration Event, Section Movement, agreement, payment, or receipt.

Relations / rules: The official date is the Customer's last confirmed attendance date. The Section Movement becomes inactive; capacity becomes available; financial effects follow the policy active at the time.

Source / status: Ch. 13, 15. Status: Established.

Part VI - Financial language and lifecycle

Agreement-Centered Financial Model (Οικονομικό Μοντέλο με Κέντρο τη Συμφωνία)

Definition: The rule that financial reality is organized around each specific Signed Registration Agreement, not around an undifferentiated Customer balance.

Not: Not a single Customer wallet mixing unrelated Sections, Academic Years, receipts, or agreements.

Relations / rules: The Customer identifies the person; the specific Signed Registration Agreement defines the obligation. Aggregated Customer views may exist only after the agreement-level truth is preserved.

Source / status: Ch. 15. Status: Established.

Customer Financial Lifecycle (Οικονομικός Κύκλος Ζωής Πελάτη)

Definition: The complete historical financial life of one specific Signed Registration Agreement, including planned installments, actual payments, receipts, partial settlement, discontinuation, old balances, rearrangement, and refunds.

Not: Not a general Customer-level financial record that mixes all agreements.

Relations / rules: The Registration Card presents this lifecycle for one agreement at a time.

Source / status: Ch. 15. Status: Established.

Planned Payment Movement (Προγραμματισμένη Κίνηση Πληρωμής)

Definition: One expected payment obligation created by the agreed financial arrangement, with a planned amount and due date.

Not: Not proof that money was received and not a zero-value placeholder.

Relations / rules: It belongs to customer_id, section_id, and section_movement_id. It tracks planned amount, planned date, total paid, remaining balance, settlement date, discontinuation date, installment number, and description.

Source / status: Ch. 13-15. Status: Established.

Payment Movement (Κίνηση Πληρωμής)

Definition: One independent historical record of an actual financial movement of the organization for one specific agreement, such as money received or money returned through an approved refund.

Not: Not a planned installment, not a fiscal document type, and not an update that overwrites a prior movement.

Relations / rules: It belongs to customer_id, section_id, and section_movement_id. It uses financial_movement_type and fiscal_document_type_id to determine sign behavior, fiscal document behavior, and numbering. The official fiscal document number is stored exclusively inside the Payment Movement.

Source / status: Ch. 13-15. Status: Established.

Financial Movement Type (Τύπος Οικονομικής Κίνησης)

Definition: A controlled behavior classification inside Payment Movement that describes whether the movement is money received, money returned through an approved refund, or another organization-approved financial movement type.

Not: Not a separate movement and not a replacement for Payment Movement.

Relations / rules: It determines the intended financial behavior of the Payment Movement together with the selected Fiscal Document Type. In the current educational scope, core behaviors are payment received and refund paid.

Source / status: H-04 financial terminology reconciliation. Status: Established.

Fiscal Document Type (Τύπος Φορολογικού Παραστατικού)

Definition: Controlled organizational information that defines a distinct fiscal/accounting movement behavior, including the document kind, sign behavior, and numbering sequence used by Payment Movements.

Not: Not the printed document itself and not a full commercial-invoicing subsystem.

Relations / rules: Each Fiscal Document Type has its own `current_next_document_number`. Authorized users may set or reset that number when required by the accountant, tax authority, or controlled correction procedure. The system must show the number before the Payment Movement is finalized. Once finalized, the assigned number is stored exclusively inside the Payment Movement.

Source / status: H-04 financial terminology reconciliation. Status: Established.

Payment Allocation (Κατανομή Πληρωμής)

Definition: The relation that records how much of one actual Payment Movement covers one particular Planned Payment Movement.

Not: Not a payment by itself and not an assumed one-to-one relationship.

Relations / rules: One Payment Movement may allocate value to several planned movements; one planned movement may receive allocations from several actual payments.

Source / status: Ch. 13-15. Status: Established.

Fiscal Document (Φορολογικό Παραστατικό)

Definition: The official tax document issued from an actual Payment Movement.

Not: Not a Planned Payment Movement, not a separate financial movement, and not a second source of truth outside the Payment Movement.

Relations / rules: Its official number is stored exclusively inside the Payment Movement. The document type and number must remain historically understandable after issue.

Source / status: Ch. 13-15. Status: Established.

Receipt (Απόδειξη)

Definition: The normal Fiscal Document Type used in the present daily Secretariat financial context for a positive Payment Movement, usually money received by the Organization.

Not: Not an editable field inside the Registration Card and not an invoice in the present scope.

Relations / rules: One positive payment operation for one agreement creates one Receipt. Its official number is taken from the Receipt Fiscal Document Type and stored exclusively inside the Payment Movement. A printed Receipt is a real historical fact and cannot be silently changed or deleted.

Source / status: Ch. 15. Status: Established.

Refund Receipt (Απόδειξη Επιστροφής)

Definition: A Fiscal Document Type used when the Organization returns money through an approved refund Payment Movement.

Not: Not a negative edit of an earlier Receipt and not a deletion of the original Payment Movement.

Relations / rules: It represents a distinct fiscal/accounting movement behavior with negative sign behavior and its own numbering sequence. Its issued number is stored exclusively inside the refund Payment Movement.

Source / status: H-04 financial terminology reconciliation. Status: Established.

Sales Movement (Κίνηση Πώλησης)

Definition: A deprecated older or ambiguous expression found during financial terminology reconciliation.

Not: Not a canonical Core Domain term, not a separate entity, and not a replacement for Payment Movement.

Relations / rules: Where actual money movement is meant, use Payment Movement. Where the old phrase attempted to express different receipt/refund behaviors, model that behavior through financial_movement_type and Fiscal Document Type inside the Payment Movement model.

Source / status: H-04 financial terminology reconciliation. Status: Deprecated.

Personal Billing Period (Προσωπική Περίοδος Χρέωσης)

Definition: The chargeable period determined by the actual beginning of one Customer's participation under one specific agreement.

Not: Not automatically the calendar month and not necessarily identical for all Customers in the same Section.

Relations / rules: Recurring installments follow the real individual agreement and actual educational beginning.

Source / status: Ch. 15. Status: Established.

FIFO Settlement (Εξόφληση FIFO)

Definition: The rule that actual payments inside one agreement settle the oldest unpaid or partially paid installment before later installments receive value.

Not: Not a rule that mixes installments from unrelated agreements or permits a later installment to appear settled while an earlier one remains unpaid.

Relations / rules: FIFO applies only within the specific Registration Agreement and governs both installment selection and amount-entry payment routines.

Source / status: Ch. 15. Status: Established.

Settlement Date (Ημερομηνία Εξόφλησης)

Definition: The date on which a Planned Payment Movement became fully covered through actual payments.

Not: Not a manually invented status date and not set after a partial payment.

Relations / rules: It is recorded only when remaining_balance becomes exactly zero.

Source / status: Ch. 13, 15. Status: Established.

Outstanding Balance (Υπόλοιπο Οφειλής)

Definition: The real unpaid amount remaining under one specific Signed Registration Agreement after actual payments and other approved official actions.

Not: Not a value that disappears because an Academic Year ends, a Section completes, or a Customer discontinues participation.

Relations / rules: A normal payment may never exceed the outstanding balance of the specific agreement. Historical balances are settled through the original historical Registration Card.

Source / status: Ch. 15. Status: Established.

Refund (Επιστροφή Χρημάτων)

Definition: A separate official financial event that returns value under an approved organizational and fiscal procedure.

Not: Not a correction that changes or deletes an original Payment Movement or Receipt.

Relations / rules: It refers to the original payment, preserves the original payment and receipt, creates a separate refund movement and approved fiscal document, and updates the Registration Card.

Source / status: Ch. 15. Status: Established.

Official Financial Rearrangement (Επίσημη Οικονομική Αναδιάρθρωση)

Definition: An authorized later revision to the unpaid part of a specific agreement, such as future dates, unpaid amounts, or remaining portions of partially paid installments.

Not: Not a hidden refund or a change to money already received, settled installment amounts, or issued receipts.

Relations / rules: The approved revised total may never be lower than the amount already actually paid. The original agreement remains historically visible.

Source / status: Ch. 15. Status: Established.

Financial Traceability (Οικονομική Ιχνηλασιμότητα)

Definition: The ability to identify exactly which Customer, Section, and historical participation generated a financial obligation, payment, receipt, balance, or outcome.

Not: Not a report reconstructed only from names or inferred links.

Relations / rules: Every financial movement created by a Registration Event contains customer_id, section_id, and section_movement_id.

Source / status: Ch. 14-15. Status: Established.

Part VII - Actual Educational Delivery, Attendance and Educational Continuity

This part establishes the common language introduced by Chapter 16. It preserves the distinction between planned educational activity and the recorded facts of actual educational delivery.

Actual Educational Delivery (Πραγματική Εκπαιδευτική Υλοποίηση)

Definition: The real educational implementation of one planned meeting on one specific date, recorded through a completed Teaching Session.

Not: Not a timetable expectation, a printed form, a generic Section note, a payroll calculation, or an automatically assumed lesson occurrence.

Relations / rules: A Planned Weekly Meeting expresses what the Organization expected to take place. A Teaching Session records what was actually completed and confirmed. The system does not create hypothetical Teaching Sessions in advance for future timetable dates. The absence of a Teaching Session means that no recorded educational implementation exists for that planned meeting.

Source / status: Ch. 16. Status: Established.

Teaching Session (Διδακτική Συνάντηση)

Definition: One completed and recorded implementation of one Planned Weekly Meeting on one specific calendar date. It records the actual instructor, actual teaching duration, actual physical space where applicable, positive attendance records, and Teaching Session Summary.

Not: Not a timetable entry, a draft form, a printed attendance sheet, a generic Section note, a payroll document, or a new academic plan.

Relations / rules: A Teaching Session belongs to one Planned Weekly Meeting and is created only after explicit final confirmation. A preview, printed form, incomplete electronic entry, or abandoned process creates no Teaching Session and no attendance records. Only one completed Teaching Session may exist for the same Planned Weekly Meeting and the same Teaching Session Date. After completion, teacher and Secretariat do not change it; in the current scope later correction belongs directly to the Director without a separate correction entity, version history, or audit trail.

Source / status: Ch. 16. Status: Established.

Actual Instructor (Πραγματικός Διδάσκων)

Definition: The person who actually delivered one Teaching Session, identified through the valid Organizational Movement recorded for that Teaching Session.

Not: Not merely the planned instructor, a Human Resource name by itself, a timetable assumption, or a payroll amount.

Relations / rules: The Planned Instructor remains the timetable reference. The Actual Instructor belongs to the Teaching Session and may differ when a valid replacement actually taught the lesson. The selected Organizational Movement must be valid and educationally eligible for the Educational Product of the relevant Section. Only the Actual Instructor appears in the Teaching Hours Statement.

Source / status: Ch. 16. Status: Established.

Actual Teaching Hours (Πραγματικές Διδακτικές Ώρες)

Definition: The actual teaching duration recorded for one completed Teaching Session.

Not: Not the planned duration by itself, a salary calculation, a contract term, or a payroll result.

Relations / rules: Actual Teaching Hours are initially completed from the planned duration of the Planned Weekly Meeting. When the actual duration is lower than planned, a Reduced Duration Reason is required. An actual duration greater than planned is exceptional and may be entered only by the Director. The planned duration remains part of the timetable; the Teaching Session records what actually occurred.

Source / status: Ch. 16. Status: Established.

Reduced Duration Reason (Αιτιολογία Μειωμένης Διάρκειας)

Definition: The short required explanation recorded when Actual Teaching Hours are lower than the planned duration of the related Planned Weekly Meeting.

Not: Not an optional comment when a recorded lesson has a reduced duration, and not a change to the timetable itself.

Relations / rules: It is required only where actual teaching hours are positive and lower than planned teaching hours. It explains the actual delivery fact without rewriting the planned meeting.

Source / status: Ch. 16. Status: Established.

Actual Educational Implementation Space (Πραγματικός Χώρος Εκπαιδευτικής Υλοποίησης)

Definition: The actual physical Educational Implementation Space in which one Physical Teaching Session took place.

Not: Not the word “Online”, a generic location note, or automatically the planned room when the lesson actually took place elsewhere.

Relations / rules: For a Physical Section, the actual physical space is required. For an Online Section, no actual physical-space identifier applies. Online delivery is determined by the explicit Delivery Mode of the Section, never merely by the absence of a physical-space identifier.

Source / status: Ch. 16. Status: Established.

Teaching Session Attendance (Παρουσία Διδακτικής Συνάντησης)

Definition: One positive recorded fact that a specific Customer was present in one specific Teaching Session.

Not: Not a general Section membership record, an absence record, a future attendance promise, or a manually created negative status.

Relations / rules: One Teaching Session Attendance record is created only for a Customer who was actually present. The attendance list is based on Customers with valid Section participation on the Teaching Session Date. The same Customer may not be recorded twice in the same Teaching Session.

Source / status: Ch. 16. Status: Established.

Derived Absence (Παράγωγη Απουσία)

Definition: The operational conclusion that a Customer with valid Section participation for a Teaching Session Date has no positive Teaching Session Attendance record.

Not: Not a separately stored absence row, a cancellation, a punishment, or proof that a lesson did not occur.

Relations / rules: Absence is derived by comparing valid Section participation for the date with positive Teaching Session Attendance records. This avoids unnecessary storage of negative records and prevents contradictions between absent and present values.

Source / status: Ch. 16. Status: Established.

Teaching Session Summary (Σύντομη Περιγραφή Διδακτικής Συνάντησης)

Definition: The mandatory free-text educational description of what was taught, practised, assigned, or otherwise completed in one Teaching Session.

Not: Not a rigid technical syllabus form, internal staff criticism, an administrative note, or a substitute for structured attendance and teaching-hour facts.

Relations / rules: The Summary supports educational continuity, replacement-teacher awareness, Secretariat visibility, and optional educational updates for absent students. The system can require that the field is completed, but it cannot decide whether the Summary is educationally sufficient, truthful, or pedagogically appropriate. It must remain suitable for communication outside the Organization where optional educational updates are enabled.

Source / status: Ch. 16. Status: Established.

Teaching Session Capture Mode (Τρόπος Καταχώρισης Διδακτικής Συνάντησης)

Definition: The operational way through which the Organization records the same Teaching Session truth.

Not: Not two separate attendance systems, two databases, or two competing versions of educational reality.

Relations / rules: The established Capture Modes are Paper Attendance Mode and Teaching Front End Mode. Both produce the same Teaching Session and the same positive Teaching Session Attendance facts.

Source / status: Ch. 16. Status: Established.

Paper Attendance Mode (Έντυπη Διαδικασία Παρουσιολογίου)

Definition: A paper-assisted process in which the Secretariat prints a prepared form for an expected Physical lesson and later enters the completed form.

Not: Not proof that a lesson occurred merely because a form was printed.

Relations / rules: Printing is preparation only and does not create a Teaching Session. When the completed form is entered, the same validity rules apply as in the Teaching Front End Mode. The Secretariat is responsible for correct entry.

Source / status: Ch. 16. Status: Established.

Teaching Front End Mode (Ηλεκτρονική Διδακτική Διεπαφή)

Definition: A direct electronic process in which an authenticated instructor records a Teaching Session through the authorized Teaching Front End.

Not: Not a separate attendance truth, a free selection of any Section by the teacher, or an unrestricted correction screen.

Relations / rules: For Physical delivery, configured room identity, system date, permitted time tolerance, and timetable identify the expected meeting. For Online delivery, authenticated instructor, system date, permitted time tolerance, and Online delivery mode must identify exactly one expected meeting. When the system cannot identify one valid meeting, it creates no Teaching Session and directs the teacher to the Secretariat.

Source / status: Ch. 16. Status: Established.

School Director (Διευθυντής Σχολής)

Definition: The final responsible authority of the school for exceptional Teaching Session corrections and exceptional actual-duration decisions in the current scope.

Not: Not a routine daily data-entry role, a substitute for the Secretariat, or an automatic system permission.

Relations / rules: After a Teaching Session is completed, only the Director may change its actual instructor, actual duration, actual physical space, attendance, Teaching Session Summary, or another completed fact. The Director may enter exceptional actual teaching hours greater than planned and bears responsibility for that decision.

Source / status: Ch. 16. Status: Established.

Director of Studies (Διευθυντής Σπουδών)

Definition: The organizational educational-quality role that reviews Teaching Session Summaries and supports continuity, adequacy, and pedagogical follow-up.

Not: Not a system mechanism that can determine whether a teaching account is truthful or pedagogically sufficient.

Relations / rules: The role may review records, identify weaknesses, discuss them with instructors, and support educational quality. The system preserves the Summary and makes it available for responsible human review.

Source / status: Ch. 16. Status: Established.

Educational Update Permission (Έγκριση Εκπαιδευτικής Ενημέρωσης)

Definition: The approved condition that permits the optional automatic educational update for a Customer derived as absent from a completed Teaching Session.

Not: Not a general communication profile, a Parent or Guardian entity, a punitive absence notice, or an internal email archive.

Relations / rules: In the current scope, the Customer record may hold `communication_email` and `educational_update_email_enabled` = Yes / No. The Organization informs the relevant person of the purpose and receives approval before using the email for this process. For minors, the email may belong to the guardian without introducing a separate Guardian entity.

Source / status: Ch. 16. Status: Established.

Educational Update for Absent Students (Εκπαιδευτική Ενημέρωση Απόντων Σπουδαστών)

Definition: An optional neutral educational communication sent after completion of a Teaching Session to eligible absent Customers, so that they can know what was taught without needing later telephone communication.

Not: Not punishment, surveillance, attendance proof, an internal email-delivery log, or a separate Parent or Guardian entity.

Relations / rules: The process may occur only when the Organization has enabled the function, `communication_email` exists, `educational_update_email_enabled` = Yes, and the Customer is derived as absent for that Teaching Session. The communication contains only lesson date, planned lesson time, Section name, and Teaching Session Summary.

The Educational Domain does not create a separate email-delivery log, message archive, or stored copy. Failure to send does not invalidate the Teaching Session; a clear Warning informs the Secretariat.

Source / status: Ch. 16. Status: Established.

Teaching Hours Statement (Κατάσταση Πραγματικών Διδακτικών Ωρών)

Definition: A predefined report that presents the actual recorded teaching facts of completed Teaching Sessions for a selected period.

Not: Not a payroll calculation, a salary statement, a labour-law decision, or a process in which the Secretariat manually chooses which lessons to include.

Relations / rules: The user provides start_date and end_date, and end_date must not be earlier than start_date. The Statement includes recorded Teaching Sessions whose teaching_session_date falls within the selected period. It may be generated for one Actual Instructor or for all Actual Instructors and may be printed or exported for the accountant or an external payroll process.

Source / status: Ch. 16. Status: Established.

Part VIII - Educational Assessment, Progress and Internal Attestations

Educational Assessment (Εκπαιδευτική Αξιολόγηση)

Definition: The controlled internal process through which the School records valid educational scores, derives progress results according to the applicable Preset, and communicates truthful progress information.

Not: Not an external certification process and not merely free-text teacher opinion.

Relations / rules: It applies to one Customer through one Assessment Registry connected to one Educational Product For Sale. The applicable logic is determined by the relevant Knowledge Discipline and Study Cycle.

Source / status: Ch. 17. Status: Established.

Assessment & Progress Attestation Preset (Πρότυπο Αξιολόγησης και Βεβαίωσης Προόδου)

Definition: The controlled Design Time configuration that defines the assessment structure, calculation rules, thresholds, source selections, and permitted Internal Progress Attestations for one Knowledge Discipline and one Study Cycle.

Not: Not a daily data-entry form, a separate database schema, or an external certification scheme.

Relations / rules: One active Preset applies to one Knowledge Discipline plus one Study Cycle. It may activate up to nine Assessment Stages, up to four Evaluations per Stage, and up to four Final Evaluation Factors. It is locked during active educational operation of the Cycle.

Source / status: Ch. 17. Status: Established.

Assessment Stage (Στάδιο Αξιολόγησης)

Definition: A controlled assessment point within a Preset, with an educationally meaningful visible label such as First Trimester, Second Trimester, Final Trimester, or Internal Preparation Examination.

Not: Not necessarily a calendar trimester and not a universal examination type.

Relations / rules: A Preset may activate up to nine Stages. Each Stage may contain up to four active Evaluations. A Stage may have an optional pass threshold and may permit an Internal Progress Attestation when complete.

Source / status: Ch. 17. Status: Established.

Evaluation (Αξιολογούμενη Ενότητα)

Definition: One separately assessed educational area inside an Assessment Stage, such as Grammar, Oral Expression, Written Text, Word, or Excel.

Not: Not an uncontrolled free-text comment and not necessarily a complete course or external certification module.

Relations / rules: Each active Evaluation receives one raw score from 0 to 100 and an integer Stage weight. Active Evaluation weights in one Stage total exactly 100%.

Source / status: Ch. 17. Status: Established.

Assessment Registry (Μητρώο Αξιολόγησης)

Definition: The stable record of one Customer's internal assessment reality for one specific Educational Product For Sale.

Not: Not a Section Movement, a generic Customer grade book, or an empty record created for every participation.

Relations / rules: It has `assessment_registry_id`, `customer_id`, and `educational_product_for_sale_id`. One Customer plus one Educational Product For Sale has one Registry. It is created only when the first real score is entered; a move between Sections within the same Educational Product For Sale does not create another Registry.

Source / status: Ch. 17. Status: Established.

Evaluation Score (Βαθμός Αξιολόγησης)

Definition: The primary stored integer score from 0 to 100 recorded for one Customer in one applicable Evaluation.

Not: Not a decimal grade, an automatically assumed zero, or a derived result.

Relations / rules: Blank means that no score has been entered. Zero is a real score. An already recorded score may be changed only by the Director; all derived results are then recalculated from the current approved value.

Source / status: Ch. 17. Status: Established.

Assessment Stage Result (Αποτέλεσμα Σταδίου Αξιολόγησης)

Definition: The derived weighted result of all required active Evaluation Scores in one applicable Assessment Stage.

Not: Not a separately stored competing grade.

Relations / rules: It is calculated only when all required scores of the applicable Stage exist. Evaluation weights are integers totaling 100%. The completed result is rounded upward. A pass threshold is optional and belongs to the Preset.

Source / status: Ch. 17. Status: Established.

Final Evaluation Factor (Τελικός Παράγοντας Αξιολόγησης)

Definition: A controlled final-calculation component that selects one or more approved source values from the assessment structure.

Not: Not necessarily one Evaluation, one Stage, or one external examination component.

Relations / rules: A Preset may define up to four Factors. A Factor result is the simple arithmetic average of its selected source values, rounded upward. It has no internal second-level weights. Where a Final Overall Result is used, Factor weights are integers totaling 100%; a Factor may also be configured with a mandatory minimum result.

Source / status: Ch. 17. Status: Established.

Final Overall Result (Τελικό Συνολικό Αποτέλεσμα)

Definition: The derived weighted result of the active Final Evaluation Factor Results where the Preset requires a final calculation.

Not: Not an external certificate, diploma, or a stored independent grade.

Relations / rules: It exists only when every required active Final Evaluation Factor has at least one valid source value. It is rounded upward after full calculation. Final Pass requires the final threshold and any mandatory Factor minimums configured by the Preset.

Source / status: Ch. 17. Status: Established.

Internal Progress Attestation (Εσωτερική Βεβαίωση Προόδου)

Definition: A document issued by the School that truthfully presents its own internal educational progress information for a completed Assessment Stage or, where configured, a completed final internal result.

Not: Not an external Certificate, Diploma, Cambridge qualification, ECDL certification, or legal academic degree.

Relations / rules: The Preset decides whether an Attestation is available. It may be issued only after all required data are valid. It may show a completed Stage result even where that Stage is Fail. A batch produces one personal Attestation per eligible Customer.

Source / status: Ch. 17. Status: Established.

External Certification (Εξωτερική Πιστοποίηση)

Definition: An official qualification, certificate, or diploma issued by an independent certifying authority under that authority's own examination and award rules.

Not: Not an Internal Progress Attestation issued by the School.

Relations / rules: External certification is outside the current Educational Domain. The School may prepare and internally assess a Customer, but it does not claim to issue another organization's qualification.

Source / status: Ch. 17. Status: Established boundary.

Part IX - Teaching Front End: Learning Resources, Practice and Controlled Examination

Teaching Front End (Διδακτικό Front End)

Definition: The optional web educational environment through which a Customer uses permitted learning resources, practice exercises, and controlled formal examinations where the School provides them.

Not: Not a second ERP, a second database truth, a direct gateway to the Back End, or a replacement for the Core Educational Domain.

Relations / rules: It reads a controlled personal educational projection based on Customer, active non-discontinued Section Movement, Operating Section, Educational Product For Sale, and Educational Product. The Student has no direct access to the Back End or database.

Source / status: Ch. 18. Status: Current project decision.

Student Front End Account (Λογαριασμός Μαθητικού Front End)

Definition: The controlled access account used by one Customer to enter the Teaching Front End.

Not: Not a second Customer identity, a Section Movement, or direct database credentials.

Relations / rules: It is linked to one Customer and may be activated, deactivated, or reset by the Secure Access Administrator. Actual current educational access remains derived from valid participation, not merely from the existence of the account.

Source / status: Ch. 18. Status: Current project decision.

Current Teaching Front End Access (Τρέχουσα Πρόσβαση στο Διδακτικό Front End)

Definition: The permission for a Customer to enter a current student educational environment.

Not: Not a permanent generic entitlement after all participation has ended.

Relations / rules: It exists when valid Student Front End credentials are used and at least one active, non-discontinued Section Movement of the Customer belongs to an Operating Section.

Source / status: Ch. 18. Status: Current project decision.

Educational Resource (Εκπαιδευτικός Πόρος)

Definition: One reusable item of learning material such as Video, Audio, Article, PDF, image, or supporting document.

Not: Not a copy of the same file for every Section, Educational Product For Sale, Academic Year, or Customer.

Relations / rules: It belongs once to an Educational Product and records a controlled reference to secure file storage. Active Customer participation through an Educational Product For Sale determines whether the Resource may be shown.

Source / status: Ch. 18. Status: Current project decision.

Educational Activity (Εκπαιδευτική Δραστηριότητα)

Definition: The common controlled structure used for a Practice Exercise or a Formal Examination Unit.

Not: Not an Educational Resource itself and not a free-form collection of unrelated learning screens.

Relations / rules: It may contain one or more Questions, may be linked to one or more Educational Resources, and defines the educational environment in which it may be used.

Source / status: Ch. 18. Status: Current project decision.

Practice Exercise (Άσκηση Εξάσκησης)

Definition: An interactive on-screen Educational Activity used for learning, repetition, and immediate feedback.

Not: Not an official examination, a persisted Student attempt, or an Official Evaluation Score.

Relations / rules: It may be used from home, may be repeated freely, and may show only a total immediate percentage. The current scope stores no Practice Attempt, answers, history, practice percentage, or official score.

Source / status: Ch. 18. Status: Current project decision.

Formal Examination Unit (Επίσημη Εξεταστική Ενότητα)

Definition: One controlled official electronic assessment unit that produces one final percentage and updates one designated Evaluation Score.

Not: Not ordinary published learning material, a home practice activity, or a multi-score update.

Relations / rules: It is available only in an active Examination Session from an Authorized Examination Workstation. It is connected in advance to exactly one Preset Evaluation.

Source / status: Ch. 18. Status: Current project decision.

Examination Definition (Ορισμός Εξέτασης)

Definition: Prepared formal examination content, including Questions and solution logic, before it is opened to Students.

Not: Not an actual Examination Session and not proof that any Customer has taken the examination.

Relations / rules: The School may use this optional distinction to prepare reusable formal content without making it available. Actual availability occurs only through an authorized Examination Session.

Source / status: Ch. 18. Status: Current project decision.

Examination Session (Εξεταστική Συνεδρία)

Definition: The actual authorized opening of one or more Formal Examination Units for a specific Educational Product For Sale at a controlled time and School environment.

Not: Not merely a stored examination definition or a general home-learning period.

Relations / rules: A Session makes selected Units available only when its own operational conditions and authorized workstations are valid.

Source / status: Ch. 18. Status: Current project decision.

Authorized Examination Workstation (Εγκεκριμένος Σταθμός Εξετάσεων)

Definition: A School-recognized computer from which a Formal Examination Unit may be completed.

Not: Not the identity of the Customer and not a generic home computer.

Relations / rules: It identifies the controlled place of examination. The technical device-recognition mechanism is selected and protected by the technical roles; the Domain rule is that official examination occurs only from a recognized School workstation.

Source / status: Ch. 18. Status: Current project decision.

Educational Environment Access (Επιτρεπόμενο Εκπαιδευτικό Περιβάλλον)

Definition: The controlled rule stating from which educational environment one Educational Activity may be used.

Not: Not merely a cosmetic visible-from-home setting.

Relations / rules: The current controlled values are Home Practice, School Teaching Environment, and School Examination Workstation Only.

Source / status: Ch. 18. Status: Current project decision.

Question (Ερώτηση)

Definition: One independently checked component of an Educational Activity.

Not: Not a unique word across the entire Activity and not necessarily a separately weighted score.

Relations / rules: An Activity may contain one or more Questions of mixed types. All current Questions have equal contribution to the final percentage.

Source / status: Ch. 18. Status: Current project decision.

Question Type (Τύπος Ερώτησης)

Definition: The controlled interaction form through which a Student provides an answer.

Not: Not an unlimited ungoverned collection of user-defined interactions in the current scope.

Relations / rules: Current types are Text Answer, Single Choice, and Multiple Choice. Boolean is a predefined Single Choice with True / False.

Source / status: Ch. 18. Status: Current project decision.

Text Answer Normalization (Κανονικοποίηση Κειμενικής Απάντησης)

Definition: The controlled comparison of a Text Answer after trimming leading and trailing spaces and ignoring character case.

Not: Not automatic spelling correction or silent replacement of the Student's words.

Relations / rules: One Question may have one or more accepted answers using OR logic. Amore, amore, AMORE, and outer-space variations are treated as the same answer where the solution is amore.

Source / status: Ch. 18. Status: Current project decision.

Official Electronic Score Update (Επίσημη Ηλεκτρονική Ενημέρωση Βαθμού)

Definition: The controlled server action through which a completed Formal Examination Unit updates one existing Evaluation Score with its final percentage from 0 to 100.

Not: Not manual duplicate entry by the Secretariat and not a second stored examination-result truth.

Relations / rules: The server validates entitlement, active Session, authorized Workstation, permitted completion, and percentage before updating the designated Evaluation Score.

Source / status: Ch. 18. Status: Current project decision.

Re-examination Permission (Άδεια Επανεξέτασης)

Definition: The Directorate-only authorization allowing one specific Customer to open one specific previously completed Formal Examination Unit again.

Not: Not a general Student option, a Secretariat action, a standing unlimited permission, or a required reason-and-history workflow in the current scope.

Relations / rules: A new permitted completion replaces the current Evaluation Score and the Unit locks again. The current scope stores no prior answers or prior percentage.

Source / status: Ch. 18. Status: Current project decision.

Secure Access Administrator (Υπεύθυνος Ασφαλούς Πρόσβασης)

Definition: The technical access role that manages Student Front End Accounts, password reset, account activation or deactivation, and Authorized Examination Workstations.

Not: Not the role that decides educational participation, formal examination entitlement, pass rules, or score changes.

Relations / rules: The role implements the School's approved access decisions without replacing them.

Source / status: Ch. 18. Status: Current project decision.

Content Publishing Role (Υπεύθυνος Δημοσίευσης Εκπαιδευτικού Υλικού)

Definition: The role that uploads Educational Resources and creates or publishes Practice Exercises through the controlled content routine.

Not: Not a role authorized to activate official Examination Sessions, reopen examinations, or change recorded Evaluation Scores.

Relations / rules: The role selects an Operating Section operationally; the system derives the Product context and stores reusable material once under the Educational Product.

Source / status: Ch. 18. Status: Current project decision.

Part X - General Expenses and Management Expense Visibility

General Expenses (Γενικά Έξοδα)

Definition: Structured management records used to record expenses that affect the operation of the Educational Organization. They support internal expense analysis, accountant preparation, and management awareness.

Not: Not official accounting records, not Payroll, not tax declarations, and not social-security obligation calculations.

Relations / rules: General Expenses are classified through Expense Sections and Expense Codes. They may include rent, utilities, accountant fees, teacher payments already calculated elsewhere, known insurance payments, advertising, supplies, maintenance, and exceptional expenses.

Source / status: Ch. 19. Status: Established.

Management Expense Visibility (Διοικητική Ορατότητα Εξόδων)

Definition: The read-oriented management understanding produced from General Expenses and related income information, used to evaluate operating cost, monthly result, pressure, viability, and progress.

Not: Not official accounting profit, not tax result, and not a replacement for the accountant.

Relations / rules: It helps management compare income and expenses, recognize cost evolution, prepare information for the accountant, and support later operational visibility and decision support.

Source / status: Ch. 19. Status: Established.

Expense Section (Ενότητα Εξόδων)

Definition: A broad family of expenses that reserves a numeric range for the Expense Codes that belong to it.

Not: Not an actual expense and not a payment event.

Relations / rules: Expense Section ranges must not overlap. The section organizes high-level reporting such as Building Expenses, Utilities, Personnel Costs, Administration, Advertising, or Exceptional Expenses.

Source / status: Ch. 19. Status: Established.

Expense Code (Κωδικός Εξόδου)

Definition: The specific numeric management code selected when recording an actual General Expense.

Not: Not the technical primary key and not necessarily the accountant's own code.

Relations / rules: Each Expense Code belongs to one active Expense Section, must fall inside that section's range, must not be duplicated, and includes a description and comment that guide correct use.

Source / status: Ch. 19. Status: Established.

Actual General Expense Record (Πραγματική Εγγραφή Γενικού Εξόδου)

Definition: The actual management record of one expense, connected to one Expense Code and containing the date, amount, description, document reference, automatic creation date, and optionally a Human Resource link when the expense concerns a specific staff member.

Not: Not an accounting transaction, not a Payroll calculation, and not an official fiscal record by itself.

Relations / rules: The amount must be positive. The creation date is assigned automatically by the system and is not manually changed. The document reference records the exact document number if one exists, otherwise the entry is marked Without document. When the expense concerns a teacher or staff member, the record may optionally store `human_resource_id` for management traceability; this does not make General Expenses a Payroll subsystem.

Source / status: Ch. 19. Status: Established.

Part XI - Operational Visibility, Reporting and Decision Support

Operational Visibility (Επιχειρησιακή Ορατότητα)

Definition: The read-only presentation, comparison, analysis, warning, forecasting, and reporting layer that transforms established Domain facts into management awareness.

Not: Not a second operational subsystem, not a second source of truth, and not a mechanism that creates or changes registrations, agreements, payments, Teaching Sessions, attendance, assessment results, or expenses.

Relations / rules: Every view, report, chart, dashboard, warning, or projection must declare time frame, scope, source, and calculation logic and remain traceable to primary Domain records.

Source / status: Ch. 20. Status: Established.

Information Delivery Model (Μοντέλο Παράδοσης Πληροφορίας)

Definition: The controlled way management information is delivered through Stable Views, Printable Reports, Pivot Tables, Pivot Charts, dashboards, warnings, and projections.

Not: Not a replacement for the underlying Domain Model and not an uncontrolled list of ad hoc outputs.

Relations / rules: Different outputs may use the same primary facts but answer different management questions through different grouping, sorting, filtering, and presentation rules.

Source / status: Ch. 20. Status: Established.

Stable View (Σταθερή Προβολή)

Definition: A predefined read-only view that answers a recurring operational or management question using established Domain records.

Not: Not a stored summary truth and not an operational record.

Relations / rules: A Stable View must declare time frame, context, selection rule, grouping or sorting logic, and source facts.

Source / status: Ch. 20. Status: Established.

Printable Report (Εκτυπώσιμη Αναφορά)

Definition: A formal, shareable, or archived output produced from established Domain records or Stable Views.

Not: Not an independent source of organizational truth.

Relations / rules: It must include title, production date/time, time frame, selection criteria, grouping or sorting rule, and the data shown.

Source / status: Ch. 20. Status: Established.

Section Viability Visibility (Ορατότητα Βιωσιμότητας Τμήματος)

Definition: Management-level visibility that combines participation, income, and approximate operational cost to understand whether a Section is healthy, marginal, weak, high-efficiency, or strategic.

Not: Not official accounting profit, not tax result, and not an automatic decision to close or merge Sections.

Relations / rules: It may use General Expenses, payroll-related expense records, Teaching Sessions, room-use or teaching-hour allocation, and income records to estimate Section cost, contribution, and break-even point.

Source / status: Ch. 20. Status: Established.

Break-Even Visibility (Ορατότητα Σημείου Ισορροπίας)

Definition: A management indicator estimating how many Students a Section needs in order to cover its approximate monthly cost.

Not: Not official accounting and not a mandatory decision rule.

Relations / rules: It must be presented as an approximation based on visible allocation rules and supporting records.

Source / status: Ch. 20. Status: Established.

Management Dashboard / Director Cockpit (Πίνακας Διοίκησης / Cockpit Διευθυντή)

Definition: A controlled presentation layer that brings together key indicators, warnings, projections, and drill-down paths for the Director or authorized management role.

Not: Not a separate source of truth and not an autonomous decision-maker.

Relations / rules: Dashboard indicators must preserve time frame, scope, source, calculation logic, role permissions, and drill-down to source records.

Source / status: Ch. 20. Status: Established.

Warning / Risk / Opportunity Indicator (Ένδειξη Προειδοποίησης / Κινδύνου / Ευκαιρίας)

Definition: A read-only signal that draws attention to a possible weakness, delay, inconsistency, pressure, risk, or opportunity.

Not: Not a decision and not proof that something is certainly wrong or certainly beneficial.

Relations / rules: The trigger, supporting records, time period, threshold or comparison rule, and urgency level must be understandable by the user.

Source / status: Ch. 20. Status: Established.

Forecasting and Scenario Support (Υποστήριξη Πρόβλεψης και Σεναρίων)

Definition: Future-oriented read-only support that uses recorded facts, planned facts, assumptions, and historical trends to explore possible future conditions.

Not: Not a prediction of certainty and not an official operational action by itself.

Relations / rules: The system must clearly distinguish recorded facts, planned facts, assumptions, projections, and human decisions.

Source / status: Ch. 20. Status: Established.

Human Decision and System Support (Ανθρώπινη Απόφαση και Υποστήριξη Συστήματος)

Definition: The principle that the Enterprise System improves judgment by organizing reality, while responsibility to decide remains with authorized human actors.

Not: Not automation of educational, financial, or managerial judgment.

Relations / rules: System support must remain transparent, traceable, and respectful of human responsibility.

Source / status: Ch. 20. Status: Established.

Part XII - Terms requiring harmonization before final publication

These terms appear in earlier manuscript language or in the working vocabulary of Chapter 16. The glossary does not erase them; it prevents them from becoming parallel meanings in future chapters, technical specifications, or implementation work.

Term in earlier text	Current treatment	Reason
Enrollment (deprecated earlier term)	Deprecated as a canonical Domain term. Use Registration Event for the official action, Section Movement for the resulting participation, and Signed Registration Agreement for the accepted agreement.	Manuscript v0.3 harmonizes the earlier generic wording. The legacy term remains here only to prevent its reintroduction.

Term in earlier text	Current treatment	Reason
Sales Movement	Harmonization required. Do not introduce it as a new independent entity without explicit definition. For current financial language, use Payment Movement plus Fiscal Document where appropriate.	The phrase appears in Chapter 14 but is not defined as a canonical financial entity in Chapter 13 or 15.
Learner (deprecated as a Domain term)	Deprecated as a canonical Domain term in the present model. Customer identifies the child/student; Student may be used only as a presentation term. Do not create a separate Learner entity, learner_id, or Customer-Learner relationship.	Earlier Chapter 11 wording left the relation open. Manuscript v0.3 now states the settled scope: one stable Customer identity for the child/student.
Customer as payer / guardian	Do not introduce a Parent, Guardian, or Payer entity in the current model.	The financial relation belongs to the signed agreement and Section Movement, regardless of who physically makes the payment.
Academic Cycle (deprecated earlier term)	Deprecated as a canonical Domain term. Use Study Cycle for a defined educational operating period owned by a Knowledge Domain. Do not create academic_cycle_id or use Academic Cycle alongside Study Cycle.	The current model distinguishes the common Academic Year from the Study Cycle selected for an Educational Product For Sale. The older term would create parallel language and ambiguity.

Chapter 16 terminology reconciliation

The following working expressions are resolved by the canonical terms established in Part VII.

Working or earlier term	Current treatment	Reason
Attendance	Use Teaching Session Attendance for the stored positive fact. Use Derived Absence when non-presence must be identified.	The model records presence and derives absence.
Syllabus / Teaching Record	Use Teaching Session Summary.	Chapter 16 established one mandatory simple free-text educational summary rather than several technical subfields.
Teaching Workspace / Educational Front End	Use Teaching Front End Mode for the direct electronic Teaching Session capture process.	The term refers to a capture mode, not a second educational truth.
Educational Delivery Module	Reserved / future commercial and distribution term.	Chapter 16 establishes operational capture modes, but not yet a final commercial product or distribution model for an optional module.

Chapter 17 terminology reconciliation

Working or misleading term	Current treatment	Reason
Assessment Period	Use Assessment Stage as the neutral canonical structure. A Preset may label a Stage as a trimester, semester, examination, or other educational milestone.	Not every Discipline uses calendar periods.
Certificate / Diploma issued by the School	Use Internal Progress Attestation for the School's own document.	The School does not issue external certifications or statutory academic degrees in this Domain.
Incomplete as a stored status	Do not create a permanent generic status row. On a print request, validate and show the exact missing required score or rule.	The system guides the user to the correction without storing unnecessary state.

Chapter 18 terminology reconciliation

The Chapter establishes Teaching Front End, Educational Resource, Practice Exercise, Formal Examination Unit, Examination Session, Authorized Examination Workstation, and Educational Environment Access as the current canonical terms. It does not create parallel terms such as Student ERP, Home Examination, or separate Student Section Membership.

Glossary update protocol

- Before a new chapter is treated as stable, review all new nouns, events, policies, statuses, records, and operational routines introduced by the chapter.
- For every proposed term, first ask: does an existing canonical term already express this reality? If yes, reuse it. If no, create a proposed entry.
- A proposed entry should specify: canonical English term; Greek working equivalent where useful; domain type; definition; what it is not; relations/rules; source chapter; and status.
- When a newer decision changes the meaning of an older term, update the glossary immediately and add a manuscript harmonization note rather than allowing two meanings to coexist.
- Do not place implementation details, UI labels, printer behavior, retries, or technical infrastructure in the glossary unless they become genuine domain concepts.
- At manuscript completion, move the approved current version of this document into the final appendix, retaining its change log as evidence of how the common language matured.

Change log

Version	Date	Change
0.1	6 July 2026	Initial consolidation of common language from Chapters 1-15, including current post-Chapter 15 clarifications for Customer scope, Section relationships, and capacity.

Version	Date	Change
0.2	6 July 2026	Integrated Chapter 16 terminology: Actual Educational Delivery, Teaching Session, Actual Instructor, Actual Teaching Hours, positive attendance, Derived Absence, Teaching Session Summary, Capture Modes, educational update permission, and Teaching Hours Statement.
0.3	6 July 2026	Harmonized Learner and Enrollment terminology across the Manuscript, Glossary, and Dictionary. Customer remains the stable Domain entity; Registration Event, Section Movement, and Signed Registration Agreement replace generic Enrollment.
0.4	6 July 2026	Introduced Study Cycle as the canonical Knowledge Domain concept; deprecated Academic Cycle as a parallel term; and integrated Study Cycle into Educational Product For Sale, Basic Total Price, and Active Sales Status.
0.5	7 July 2026	Integrated Chapter 17: Assessment & Progress Attestation Preset, Assessment Stages, Evaluations, Assessment Registry, 0-100 score rules, derived calculations, Internal Progress Attestations, and the boundary between internal assessment and external certification.
0.6	7 July 2026	Integrated Chapter 18: Teaching Front End, access from active participation, Resources and file references, Practice Exercises, Formal Examination Units and Sessions, Authorized Workstations, Question rules, direct score update, and Directorate-only re-examination.

v1.0 — Updated after Chapter 20: added Operational Visibility, Reporting, Decision Support, Section Viability, Break-Even Visibility, Dashboard, Warnings, Forecasting, and Human Decision support terms; updated General Expense with optional Human Resource link.

Closing statement

This glossary does not claim that the model is final. It preserves the best common understanding reached so far, so that future discussion can improve the model without losing clarity about what has already been decided.

Appendix B — Entity, Identifier & Relationship Dictionary

EDUCATIONAL DOMAIN

Entity, Identifier and Relationship Dictionary

Λεξικό Οντοτήτων, Ταυτοτήτων και Σχέσεων

Technical reference for the common Domain Model

Scope: Chapters 1–20 • Version 1.0 • Living document

Purpose

To ensure that the manuscript, the Ubiquitous Language Glossary, the future ERD, and the implementation use the same names for the same organizational realities.

Dialogues & Research

1. Purpose and Use

This dictionary complements the Ubiquitous Language Glossary. The Glossary defines what the Domain concepts mean. This document records how each established entity is technically identified and how it is connected to other established entities.

Boundary of this document

This is not a final database schema and it does not create new business rules. It records the identifier names and relationships already established in Chapters 1–20, together with clearly marked decisions or technical names that still require formal integration.

2. Reading Convention

Term	Meaning
PK — Primary Key	The stable technical identity of one record. Example: <code>educational_blueprint_id</code> identifies one specific Educational Blueprint.
FK — Foreign Key	A field that identifies the related existing record. Example: <code>knowledge_domain_id</code> on Educational Blueprint identifies the Knowledge Domain to which it belongs.
Relationship record	An entity that preserves a time-valid or many-to-many relationship. Example: Movement Educational Eligibility.
Business field	Information such as name, date, amount, status, or description. Business fields are not identifiers unless explicitly stated.

3. Status Markers

Established — Explicitly defined in Chapters 1–20.

Current project decision — Agreed during the current Domain work and awaiting integration into the manuscript where indicated.

Proposed technical name — A name required for technical clarity but not yet frozen. It must not be used in a future ERD without an explicit freeze, implementation-level, or defer decision.

Reserved / future — A concept deliberately left for a later chapter or appendix.

Frozen before ERD — An established Domain entity or relationship name whose technical identifier is ready to be used in a future ERD.

Implementation-level associative/link record — A useful relationship record that may appear in the ERD, but must not be elevated into a major independent business concept.

4. ERD Readiness and Boundary Rules

This section prepares Appendix B for a future Entity Relationship Diagram. It does not introduce a database schema and does not add new Domain concepts.

ERD candidate records are the entities, movements, relationship records, and controlled boundary concepts already established by the manuscript or explicitly confirmed by the current project decision process.

The following rules protect the transition from manuscript language to ERD structure:

- Only entries marked as Established, Established boundary, Established relationship record / frozen before ERD, or Current project decision may be considered as ERD candidates.
- Entries classified as frozen before ERD may use their listed canonical names and identifiers in a future ERD without remaining in proposed status.
- The H-05 names frozen before ERD are Organizational Presence, Building, Spatial Area, Planned Instructor Assignment, Final Factor Source Selection, and Examination Session Unit.
- Educational Activity Resource Link remains an implementation-level associative/link record. It may appear in the ERD when needed, but it must not be presented as a major independent business concept.
- Operational Visibility, Stable Views, Printable Reports, Pivot Analysis, Management Dashboard / Director Cockpit, indicators, forecasts, and scenarios are read models, presentation layers, or possible stored definitions. They must not become second sources of operational truth.
- Infrastructure mechanisms such as print queues, retry mechanisms, adapters, background jobs, file-storage internals, email-sending logs, and similar implementation services remain outside the business-domain ERD unless deliberately introduced by a later technical design decision.

Verification outcome: this readiness pass confirms ERD boundary and identifier discipline only. It does not expand the business model.

5. Global Identifier Principles

- Every entity and movement has its own Primary Key. The Primary Key appears first in its technical definition.
- Relationships are preserved through identifiers, never through names, labels, or manually typed descriptions.
- A friendly name may be corrected, translated, or displayed differently. The technical identity remains stable.
- Historical reality is normally preserved by deactivation, new movement, new version, or new official event—not by rewriting or deleting prior operational facts.
- An identifier supports traceability. It does not decide educational, commercial, or managerial judgment on behalf of the Organization.

- The future ERD must preserve these identifiers and relationships without replacing them with names, labels, report fields, or convenience summaries.

Entity technical definition order

1. Primary Key
2. Foreign Keys / relationships
3. Business fields and status

6. High-Level Relationship Map

Knowledge Domain

- └ Knowledge Discipline
- └ Educational Blueprint
- └ Study Cycle

Educational Product + Academic Year + selected Study Cycle

- └ Educational Product For Sale

Program Planning Version

- └ Section — Planned Weekly Meeting — Planned Instructor Assignment
 - └ Teaching Session — Teaching Session Attendance
 - └ actual_instructor_movement_id → Organizational Movement
 - └ actual_educational_implementation_space_id → Educational Implementation Space
- └ Section Movement — Signed Registration Agreement / Registration Card
 - └ Planned Payment Movement
 - └ Payment Movement — Payment Allocation — Fiscal Document / Receipt

Assessment extension of the High-Level Relationship Map

Customer + Educational Product For Sale

- Assessment Registry
- Assessment & Progress Attestation Preset
(Knowledge Discipline + Study Cycle)
- Assessment Stage
- Preset Evaluation
- Evaluation Score
- derived Stage / Factor / Final results
- Internal Progress Attestation

The assessment path is an additional controlled path. It does not replace Section, Section Movement, Teaching Session, Registration, agreement, or financial relationships.

Teaching Front End extension of the High-Level Relationship Map

Customer + active Section Movement + Operating Section

- Student Front End Account
- Educational Product For Sale
- Educational Product
- Educational Resource / Educational Activity
- Practice Exercise

- Formal Examination Unit where active Examination Session + Authorized Examination Workstation exist
- direct update of Evaluation Score

The Teaching Front End path reads the existing Core Domain facts. It does not create a second Customer-to-Section relationship, direct Student access to the Back End, or a second stored score truth.

General Expenses extension of the High-Level Relationship Map

Expense Section

- Expense Code
- General Expense
- Management Expense Visibility

The General Expenses path records management-level expense information for analysis and accountant preparation. It does not replace Payroll, official accounting, tax reporting, or social-security obligations.

Operational Visibility extension of the High-Level Relationship Map

Established Domain Facts

- Stable Views / Printable Reports / Pivot Analysis
- Warnings, Forecasts and Scenarios
- Management Dashboard / Director Cockpit
- Human Decision Support

The Operational Visibility path reads primary Domain facts. It does not create a second operational subsystem, second accounting system, second Payroll system, or autonomous decision-making authority.

Part I — Knowledge and Educational Product Design

Knowledge Domain | Πεδίο Γνώσης

Status: Established • Source: Ch. 3 and Ch. 5

Identifier / Relationship	Kind	Meaning
knowledge_domain_id	PK	Primary Key of Knowledge Domain. Identifies one selected broad area of knowledge.

Relations and rules

- One Knowledge Domain may contain many Knowledge Disciplines.
- In the current model, one Knowledge Domain owns the relevant Educational Blueprint or Blueprints and may define one or more Study Cycles.
- The identity represents knowledge classification, not a timetable, audience, Academic Year, or delivery method.

Not: Not an Educational Product, a Section, a commercial offer, or a Student category.

Knowledge Discipline | Γνωστικός Κλάδος

Status: Established • Source: Ch. 4–6

Identifier / Relationship	Kind	Meaning
knowledge_discipline_id	PK	Primary Key of Knowledge Discipline. Identifies one coherent body of knowledge.
knowledge_domain_id	FK	Identifies the Knowledge Domain to which this Discipline belongs.

Relations and rules

- Every Knowledge Discipline belongs to one Knowledge Domain.
- An Educational Product selects one specific Knowledge Discipline.
- The selected Discipline and the selected Educational Blueprint must belong to the same Knowledge Domain.

Not: Not a Section, a teaching timetable, a price, a delivery mode, or a commercial decision.

Educational Blueprint | Εκπαιδευτικό Πρότυπο Δομής

Status: Established • **Source:** Ch. 5

Identifier / Relationship	Kind	Meaning
educational_blueprint_id	PK	Primary Key of Educational Blueprint. Identifies one reusable controlled structure for creating Educational Products.
knowledge_domain_id	FK	Identifies the Knowledge Domain to which the Blueprint belongs.

Relations and rules

- The Blueprint defines the available structure, controlled selections, relationships, and validation rules used to create Educational Products.
- The Blueprint does not identify the specific Discipline of an Educational Product; the Product selects that Discipline separately.
- Earlier meaningful Blueprint configurations must remain historically understandable when later design changes occur.

Not: Not an Educational Product, a commercial offering, a Section, or a runtime teaching event.

Educational Product | Εκπαιδευτικό Προϊόν

Status: Established • **Source:** Ch. 6

Identifier / Relationship	Kind	Meaning
educational_product_id	PK	Primary Key of Educational Product. Identifies one reusable educational definition in the organization catalogue.
educational_blueprint_id	FK	Identifies the Educational Blueprint through which the Product was structured.
knowledge_discipline_id	FK	Identifies the Knowledge Discipline to which the Product belongs.

Relations and rules

- A Product must use a Blueprint and a Discipline that belong to the same Knowledge Domain.
- The Product may be reused across multiple Academic Years without recreating its educational identity.
- An Educational Product For Sale activates a Product commercially within one selected Academic Year and one selected Study Cycle.

Not: Not a commercial offering, a Section, a registration, a timetable, or an individual financial agreement.

Academic Year | Ακαδημαϊκό Έτος

Status: Established • **Source:** Ch. 7

Identifier / Relationship	Kind	Meaning
academic_year_id	PK	Primary Key of Academic Year. Identifies one controlled academic-year record.

Relations and rules

- The visible label, for example “26/27”, is not the stored relationship key.
- Educational Product For Sale uses academic_year_id together with study_cycle_id to record the selected commercial offering.
- Historical reporting may group Sections, commercial offerings, and agreements by Academic Year through stable identifiers.

Not: Not free-text values such as “26/27”, “2026/27”, or “2026-2027”.

Study Cycle | Κύκλος Σπουδών

Status: Established • **Source:** Ch. 5 and Ch. 7

Identifier / Relationship	Kind	Meaning
study_cycle_id	PK	Primary Key of Study Cycle. Identifies one defined educational operating period within a Knowledge Domain.
knowledge_domain_id	FK	Identifies the Knowledge Domain to which the Study Cycle belongs.
description	Business field	Short organizational description of the Study Cycle.
start_date	Business field	Start date of the Study Cycle.
end_date	Business field	End date of the Study Cycle.

Relations and rules

- A Study Cycle belongs directly to one Knowledge Domain through knowledge_domain_id.
- It is available to all Knowledge Disciplines and Educational Products of that Knowledge Domain; it does not belong to an individual Knowledge Discipline.
- It is selected when an Educational Product For Sale is created. The selected Study Cycle must belong to the same Knowledge Domain as the selected Educational Product.

Not: Not an Academic Year, a Knowledge Discipline, an Educational Product, an Educational Product For Sale, or a Section.

Educational Product For Sale | Εκπαιδευτικό Προϊόν προς Πώληση

Status: Established • Source: Ch. 7

Identifier / Relationship	Kind	Meaning
educational_product_for_sale_id	PK	Primary Key of Educational Product For Sale. Identifies one commercial activation of an existing Educational Product within a selected Academic Year and Study Cycle.
educational_product_id	FK	Identifies the existing Educational Product made available for sale.
academic_year_id	FK	Identifies the selected Academic Year within which the Product is commercially offered.
study_cycle_id	FK	Identifies the selected Study Cycle of the Knowledge Domain associated with the selected Educational Product.

Relations and rules

- The record holds the basic total price and current sales availability for the selected Academic Year and Study Cycle.
- It represents the commercial decision, not the individual agreement later accepted by a Customer.
- It supports the creation of Sections and provides the commercial basis for later registration work.
- The Organization may create no, one, or more records for the same Product within the same Academic Year and Study Cycle. The system may provide duplicate awareness without imposing a universal uniqueness restriction.

Not: Not a new Educational Product, a Section, a Registration Event, an individual discount, or a payment.

Part II — Organization, Physical Capacity and Workforce

Organizational Presence | Οργανωτική Παρουσία

Status: Established / frozen before ERD • Source: Ch. 8

Identifier / Relationship	Kind	Meaning
organizational_presence_id	PK	Primary Key for the legally recognized organizational presence, such as a seat or branch.

Relations and rules

- The current model keeps the legal identity of the Organization, the organizational identity of a presence, and the physical identity of a Building distinct.
- In the present model, each Organizational Presence is associated with one Building.

Not: Not the legal entity of the Organization itself and not a physical building.

Implementation note

H-05 classifies Organizational Presence and organizational_presence_id as frozen before ERD to preserve the distinction between legal/organizational presence and physical Building.

Building | Κτίριο

Status: Established / frozen before ERD • Source: Ch. 8

Identifier / Relationship	Kind	Meaning
building_id	PK	Primary Key for one physical building used by an Organizational Presence.
organizational_presence_id	FK	Foreign Key identifying the Organizational Presence associated with the Building.

Relations and rules

- One Building may contain Levels or Spatial Areas and Educational Implementation Spaces.
- Only physical structure that has educational, administrative, or economic significance belongs in the active model.

Not: Not a Section, a Room, or a generic address field.

Implementation note

H-05 classifies Building, building_id, and organizational_presence_id as frozen before ERD for the current physical-organization scope.

Level or Spatial Area | Επίπεδο ή Χωρική Περιοχή

Status: Established / frozen before ERD, with naming note • Source: Ch. 8

Identifier / Relationship	Kind	Meaning
spatial_area_id	PK	Primary Key for a relevant physical subdivision of a Building.
building_id	FK	Foreign Key identifying the Building that contains the Level or Spatial Area.

Relations and rules

- A Level or Spatial Area can contain Educational Implementation Spaces.
- The model does not require every architectural detail to become a domain entity.

Not: Not necessarily every floor, corridor, or architectural element.

Implementation note

H-05 classifies Spatial Area and spatial_area_id as frozen before ERD, while preserving Level or Spatial Area as the useful business label where the organization needs that wording.

Educational Implementation Space | Χώρος Εκπαιδευτικής Υλοποίησης

Status: Established • **Source:** Ch. 8, 12 and 16

Identifier / Relationship	Kind	Meaning
educational_implementation_space_id	PK	Primary Key of Educational Implementation Space. Identifies one actual physical space used to deliver educational activity.
building_id	FK	Foreign Key to the Building containing the Space.
spatial_area_id	FK	Foreign Key to the relevant Level or Spatial Area, where the organization uses this level of description.

Relations and rules

- A Physical Planned Weekly Meeting must refer to an existing Educational Implementation Space.
- A completed Physical Teaching Session records actual physical use through actual_educational_implementation_space_id. Online Teaching Sessions do not use a physical-space identifier.
- Current legally or operationally significant characteristics, such as capacity or suitability, may be time-valid and must not silently rewrite historical facts.
- A fundamental physical or functional identity change creates a new Space; a change of capacity or equipment may preserve the same Space identity while creating a new historical value.

Not: Not automatically a generic “Classroom”, and not an Online meeting environment.

Implementation note

The Space Primary Key is already used in Chapter 12. Building and spatial-area Foreign Keys follow the frozen physical hierarchy protected by H-05.

Human Resource | Ανθρώπινος Πόρος

Status: Established • **Source:** Ch. 9

Identifier / Relationship	Kind	Meaning
human_resource_id	PK	Primary Key of Human Resource. Identifies the stable organizational record of one person in the workforce.

Relations and rules

- A Human Resource may have multiple Organizational Movements over time.

- The stable person identity remains separate from time-valid participation, educational eligibility, payroll, contract, and future teaching assignments.

Not: Not an employment contract, payroll record, user account, permanent teacher assignment, or a teaching eligibility by itself.

Organizational Movement | Οργανωτική Κίνηση

Status: Established • **Source:** Ch. 10 and Ch. 16

Identifier / Relationship	Kind	Meaning
movement_id	PK	Primary Key of Organizational Movement. Identifies one time-valid participation of a Human Resource in the Organization.
human_resource_id	FK	Identifies the Human Resource whose organizational participation is recorded by this Movement.

Relations and rules

- One Human Resource may have many Movements over time.
- The validity period of the Movement determines whether the person may be considered for an assignment during the relevant Section period.
- A Teaching Session records the Actual Instructor through actual_instructor_movement_id. The referenced Movement must be valid on the Teaching Session Date and eligible for the Section Educational Product.
- The current manuscript uses the concise identifier movement_id. It should remain unchanged unless a future deliberate naming decision is made across the whole Domain.

Not: Not the stable identity of the person, a contract, payroll, taxation, insurance, or a direct Section assignment.

Movement Educational Eligibility | Εκπαιδευτική Επιλεξιμότητα Κίνησης

Status: Established • **Source:** Ch. 10

Identifier / Relationship	Kind	Meaning
movement_eligibility_id	PK	Primary Key of Movement Educational Eligibility. Identifies one eligibility relationship.
movement_id	FK	Identifies the Organizational Movement during whose valid period the eligibility applies.
educational_product_id	FK	Identifies the Educational Product for which the person may be considered.
UNIQUE (movement_id, educational_product_id)	Constraint	Prevents the same Product eligibility from being recorded twice for the same Organizational Movement.

Relations and rules

- The eligibility inherits the validity period of the Organizational Movement in the current model.
- It supports assignment decisions but does not automatically make the assignment or replace human judgment.

Not: Not a new Educational Product, a permanent teacher specialization, or an actual teaching session.

Part III — Customer, Planning and Educational Delivery

Customer | Πελάτης / Σπουδαστής

Status: Established with current project scope • **Source:** Ch. 11 and Ch. 16; current project decision

Identifier / Relationship	Kind	Meaning
customer_id	PK	Primary Key of Customer. Identifies the stable record of the person participating in the educational organization.
communication_email	Business field	Optional communication email used only for the approved educational-update process.
educational_update_email_enabled	Business field	Yes / No permission setting for future automated educational updates after a Teaching Session.

Relations and rules

- The Customer record is the stable identity. Future participation, payments, and agreements are recorded separately.
- In the current project scope, the Customer is the child / student. A parent may physically make a payment, but a separate payer, guardian, or parent entity is not required.
- Customer characteristics and contact information remain configurable and should contain only information with real organizational need.
- Where optional educational updates are enabled, communication_email and educational_update_email_enabled support that specific approved purpose only. They do not create a Parent, Guardian, or Payer entity.

Not: Not a Section Movement, a payment account, a financial agreement, or an aggregate “wallet” of all obligations.

Implementation note

The current project decision narrows the general Chapter 11 possibilities to the present school scenario: Customer means the child / student. This must remain aligned in later manuscript revisions.

Program Planning Version | Έκδοση Σχεδιασμού Προγράμματος

Status: Established • **Source:** Ch. 12

Identifier / Relationship	Kind	Meaning
program_planning_version_id	PK	Primary Key of Program Planning Version. Identifies one independent organized program proposal for an academic or operational period.

Relations and rules

- A planning version may be created from scratch or copied forward from a previous planning version.
- A copied version becomes an independent planning reality; it does not modify the earlier one.

- Sections belong to the planning version through `program_planning_version_id`.

Not: Not the Academic Year itself and not a single Section.

Section | Τμήμα

Status: Established with current project decision • **Source:** Ch. 12; current project decision

Identifier / Relationship	Kind	Meaning
<code>section_id</code>	PK	Primary Key of Section. Identifies one concrete planned or operated educational implementation.
<code>program_planning_version_id</code>	FK	Identifies the Program Planning Version in which the Section was planned.
<code>educational_product_id</code>	FK	Identifies the educational definition the Section carries or delivers.
<code>educational_product_for_sale_id</code>	FK	Current project decision: identifies the commercial offering connected with the Section.

Relations and rules

- A Section represents one concrete operational reality and preserves planned dates separately from actual start and cessation dates.
- A Section may be Physical or Online. A Physical Section requires a physical Educational Implementation Space at the meeting level; an Online Section does not.
- A Section has controlled capacity. For Online delivery the capacity is always an explicit numeric limit, never an undefined or unlimited state.
- A Section may have multiple Planned Weekly Meetings and multiple time-valid Instructor Assignments.
- The Section keeps both `educational_product_id` and `educational_product_for_sale_id` as distinct references: educational identity and commercial basis. The Study Cycle is obtained through the connected Educational Product For Sale. The current project does not impose an automatic cross-identifier compatibility restriction merely because both are present.

Not: Not a reusable Educational Product, a Customer participation, a signed agreement, or a payment.

Implementation note

The original Chapter 12 definition explicitly lists `educational_product_id`. The second reference to `educational_product_for_sale_id` is a later current project decision and should be integrated into the next manuscript revision deliberately, without removing the Organization's responsible freedom of naming and arrangement.

Planned Weekly Meeting | Προγραμματισμένη Εβδομαδιαία Συνάντηση

Status: Established • **Source:** Ch. 12 and Ch. 16

Identifier / Relationship	Kind	Meaning
<code>weekly_meeting_id</code>	PK	Primary Key of Planned Weekly Meeting. Identifies one recurring weekly meeting of a specific Section.

Identifier / Relationship	Kind	Meaning
section_id	FK	Identifies the Section to which this recurring weekly meeting belongs.
educational_implementation_space_id	FK / conditional	Identifies the physical delivery space when the Section is delivered physically. It is not required for Online delivery.

Relations and rules

- Each recurring meeting is a separate operational reality. Tuesday and Thursday meetings must not be merged into one multi-day field.
- Separate meeting records allow different rooms, times, instructors, replacements, and historical adjustments to be preserved.
- The meeting is a schedule construct. A Teaching Session records one actual implementation of this Planned Weekly Meeting on one specific date. The schedule is not itself evidence that the lesson was delivered.

Not: Not an attendance record, a completed lesson occurrence, or a generic Section field that combines several days.

Planned Instructor Assignment | Προγραμματισμένη Ανάθεση Εκπαιδευτικού

Status: Established relationship record / frozen before ERD • Source: Ch. 12 and Ch. 16

Identifier / Relationship	Kind	Meaning
planned_instructor_assignment_id	PK	Primary Key for one time-valid instructor responsibility associated with a Planned Weekly Meeting.
weekly_meeting_id	FK	Foreign Key identifying the Planned Weekly Meeting to which the assignment applies.
movement_id	FK	Foreign Key identifying the Organizational Movement of the instructor—not merely the stable Human Resource identity.

Relations and rules

- A Planned Weekly Meeting may have one or more Instructor Assignments over time.
- The instructor must be selected through an existing valid Organizational Movement with Educational Eligibility for the relevant Educational Product and no identified conflict.
- The assignment is separate from Section because an instructor may change across meetings or later periods. The Planned Instructor remains the timetable reference; the Actual Instructor is recorded separately on Teaching Session through actual_instructor_movement_id.

Not: Not a permanent instructor field stored inside Section and not an actual Teaching Session record.

Implementation note

H-05 classifies Planned Instructor Assignment and planned_instructor_assignment_id as frozen before ERD. The relationship remains tied to movement_id, not directly only to Human Resource.

Part IV — Actual Educational Delivery, Attendance and Educational Continuity

This part records the technical identities and controlled relationships established by Chapter 16. It preserves the distinction between recurring planned meetings and actual completed educational delivery.

Teaching Session | Διδακτική Συνάντηση

Status: Established • Source: Ch. 16

Identifier / Relationship	Kind	Meaning
teaching_session_id	PK	Primary Key of Teaching Session. Identifies one specific actual Teaching Session.
weekly_meeting_id	FK	Identifies the Planned Weekly Meeting from which this actual Teaching Session originated.
teaching_session_date	Business field	Actual calendar date on which the lesson took place. It is not the later data-entry date.
actual_instructor_movement_id	FK	Identifies the valid Organizational Movement of the person who actually taught the lesson.
actual_educational_implementation_space_id	FK / conditional	Identifies the actual physical Educational Implementation Space for a Physical Section. It is not populated for Online delivery.
actual_teaching_hours	Business field	Actual teaching duration recorded for the Teaching Session.
reduced_duration_reason	Business field / conditional	Short explanation required when actual_teaching_hours is lower than the planned duration.
teaching_session_summary	Business field	Required free-text educational summary of what was taught, practised, assigned, or otherwise completed.
UNIQUE (weekly_meeting_id, teaching_session_date)	Constraint	Prevents more than one completed Teaching Session from being recorded for the same Planned Weekly Meeting on the same actual date.

Relations and rules

- A Teaching Session is created only after explicit final confirmation. A preview, printout, incomplete electronic entry, or abandoned action creates no record.
- The Section, planned instructor, planned time, planned duration, planned space, and Delivery Mode are derived through weekly_meeting_id. They are not duplicated in the Teaching Session merely for display or validation.
- actual_instructor_movement_id must identify an Organizational Movement that is valid on teaching_session_date and has Educational Eligibility for the Section Educational Product.

- actual_teaching_hours is initially derived from the planned duration. A teacher or Secretariat may reduce it with a required reason. A value greater than the planned duration is an exceptional Director-only action.
- For a Physical Section, actual_educational_implementation_space_id is required. For an Online Section it is not applicable; Delivery Mode, not a missing physical-space FK, determines Online delivery.
- After completion, teacher and Secretariat do not alter the record. The Director may directly change it when a real correction is required. The current scope does not add a correction entity, version history, or audit trail.

Not: Not a recurring timetable row, an Expected Teaching Session, an automatic cancellation record, a payroll record, or a generic Section note.

Implementation note

No expected_teaching_session_id, cancellation-status row, entry-date substitute, or capture_mode field is defined in the current scope. Planned daily occurrences are derived from the timetable and calendar. Paper Attendance Mode and Teaching Front End Mode both create the same Teaching Session truth.

Teaching Session Attendance | Παρουσία Διδακτικής Συνάντησης

Status: Established • Source: Ch. 16

Identifier / Relationship	Kind	Meaning
teaching_session_attendance_id	PK	Primary Key of Teaching Session Attendance. Identifies one positive recorded attendance fact.
teaching_session_id	FK	Identifies the completed Teaching Session in which the Customer was present.
customer_id	FK	Identifies the Customer who was actually present.
UNIQUE (teaching_session_id, customer_id)	Constraint	Prevents the same Customer from being recorded twice in the same Teaching Session.

Relations and rules

- Attendance rows exist only for Customers actually present. No is_present Boolean and no stored absent-row are defined.
- The system presents only Customers with valid Section participation on teaching_session_date. The teacher does not type or add names manually.
- Absence is derived when needed by comparing valid Customer participation for the date with positive Teaching Session Attendance rows.
- customer_id is the Attendance FK because the record captures the positive presence of the Customer. Section participation remains validated through the existing Section Movement process and is not duplicated as a section_movement_id FK in the Attendance table.

Not: Not a Section membership table, a negative absence record, a future attendance promise, or proof that an unrecorded planned lesson occurred.

Teaching Hours Statement | Κατάσταση Πραγματικών Διδακτικών Ωρών

Status: Established • Source: Ch. 16

Identifier / Relationship	Kind	Meaning
No independent identifier defined	Report boundary	The Statement is a predefined report over recorded Teaching Sessions. It is not a new persisted entity.
start_date	Report input	Start of the selected period.
end_date	Report input	End of the selected period. end_date must not be earlier than start_date.

Relations and rules

- The Statement includes all completed Teaching Sessions whose teaching_session_date is within the selected date range.
- It reports actual_instructor_movement_id and actual_teaching_hours. It may be produced for one Actual Instructor or for all Actual Instructors.
- It may be printed or exported for the accountant or an external payroll process. The Educational Domain does not calculate salary, tax, contracts, or labour-law consequences.

Not: Not a payroll entity, a salary calculation, a legal employment record, or a manually selected set of lesson rows.

Educational Update for Absent Students | Εκπαιδευτική Ενημέρωση Απόντων Σπουδαστών

Status: Established • **Source:** Ch. 16

Identifier / Relationship	Kind	Meaning
No independent identifier defined	Operational boundary	The optional communication is derived after a completed Teaching Session. The current scope introduces no separate Educational Update entity.
No email_communication_log_id defined	Boundary	The Educational Domain does not store delivery history, message archive, or email retry records.

Relations and rules

- The optional update may be sent only where the Organization enables the function, communication_email exists, educational_update_email_enabled = Yes, and the Customer is derived as absent.
- The content is limited to lesson date, planned lesson time, Section name, and teaching_session_summary.
- Failure of an optional send does not invalidate the completed Teaching Session. It is an integration outcome for the sending system and a clear operational Warning for the Secretariat.

Not: Not a Parent or Guardian entity, a stored email archive, a separate attendance proof, or a mechanism that changes past Teaching Session facts.

Part V — Registration, Participation and Financial Lifecycle

Registration Event | Συμβάν Εγγραφής

Status: Established • **Source:** Ch. 14

Identifier / Relationship	Kind	Meaning
No independent identifier defined	Boundary	The current model treats the Registration Event as an official business event whose permanent result is Section Movement plus its agreement and financial consequences.
customer_id	FK after execution	Identifies the existing or newly created Customer participating in the Event.
section_id	FK after selection	Identifies the selected Section entered through the Event.

Relations and rules

- The Event remains provisional until the duplicate agreement is signed and execution is explicitly validated.
- After execution, it creates one independent Section Movement and the agreed Planned Payment Movements; it may also execute the applicable fiscal procedure.
- The current permanent trace of the Registration Event is anchored by section_movement_id.

Not: Not a simple form save, a printout alone, or an unfinished data-entry operation.

Implementation note

An independent registration_event_id may be introduced later only if the event/audit architecture needs a distinct persisted event record. It must not be added merely for duplication.

Section Movement | Κίνηση Τμήματος

Status: Established • Source: Ch. 14–16

Identifier / Relationship	Kind	Meaning
section_movement_id	PK	Primary Key of Section Movement. Identifies one specific historical participation of one Customer in one Section.
customer_id	FK	Identifies the Customer who entered the Section.
section_id	FK	Identifies the specific Section entered by the Customer.

Relations and rules

- One completed Registration Event creates one independent Section Movement.
- The Movement is the enduring identity of the Customer's specific participation and anchors its agreement-centered financial lifecycle.
- A later re-entry into the same Section creates a new Section Movement; it must never be confused with an earlier participation.
- Deactivation of a Section Movement preserves the historical fact of participation and makes the position available for a new Registration when appropriate.

- A valid Section Movement on the Teaching Session Date determines that its Customer may appear in the attendance list. Teaching Session Attendance stores customer_id, not section_movement_id, because it records the positive presence fact of the Customer.

Not: Not the Customer's stable identity, a generic Section membership list, a Payment Movement, or a deletion candidate after real activity.

Signed Registration Agreement / Registration Card | Υπογεγραμμένη Συμφωνία Εγγραφής / Κάρτα Εγγραφής

Status: Established operational representation • **Source:** Ch. 14–15

Identifier / Relationship	Kind	Meaning
section_movement_id	Anchor	The current technical anchor of the specific signed agreement and its operational Registration Card / Contract Card.
No registration_agreement_id defined	Boundary	The manuscript does not yet introduce the signed agreement or Registration Card as a separate technical entity beyond the real Registration and its Section Movement.

Relations and rules

- One Section Movement corresponds to one specific signed agreement and one autonomous Registration Card / Contract Card.
- The Card shows the financial and operational reality of that one agreement: planned installments, actual payments, receipts, discontinuation history, and outstanding balance.
- It is agreement-centered, not Customer-centered. A Customer may have several independent Registration Cards across Sections or years.

Not: Not a generic Customer account and not a second independent entity that duplicates the Section Movement without a clear operational reason.

Planned Payment Movement | Προγραμματισμένη Κίνηση Πληρωμής

Status: Established • **Source:** Ch. 13 and Ch. 15

Identifier / Relationship	Kind	Meaning
planned_payment_movement_id	PK	Primary Key of Planned Payment Movement. Identifies one expected payment obligation.
customer_id	FK	Identifies the Customer to whom the obligation belongs.
section_id	FK	Identifies the Section related to the obligation.
section_movement_id	FK	Identifies the exact historical participation and signed agreement from which the obligation arose.

Relations and rules

- A Planned Payment Movement records an expected amount and planned date; it is not proof that money was received.
- A zero-value Planned Payment Movement must not be created.
- Each installment maintains total paid amount, remaining balance, settlement date where fully settled, and discontinuation information where applicable.
- The financial lifecycle of every planned payment belongs to the specific Section Movement / agreement, not to a general Customer balance.

Not: Not an actual payment, a receipt, or a fiscal document.

Payment Movement | Κίνηση Πληρωμής

Status: Established • Source: Ch. 13, Ch. 15, and H-04

Identifier / Relationship

payment_movement_id | PK | Primary Key of one actual financial movement.

customer_id | FK | Identifies the Customer concerned by the movement.

section_id | FK | Identifies the Section concerned by the movement.

section_movement_id | FK | Identifies the exact historical participation / agreement from which the movement arises.

fiscal_document_type_id | FK | Identifies the Fiscal Document Type that controls document behavior and numbering.

financial_movement_type | Business field | Controlled behavior of the movement, such as payment_received or refund_paid.

payment_amount | Business field | Signed amount of the movement. Receipt behavior is positive; refund behavior is negative.

payment_date | Business field | Date of the real financial movement.

payment_method | Business field | Cash, card, bank transfer, online payment, or other approved method where applicable.

fiscal_document_number | Business field | Official fiscal document number. Stored exclusively inside Payment Movement.

fiscal_document_issue_date | Business field | Date on which the fiscal document is issued.

description | Business field | Explanation or justification for the movement.

Relations and rules

A Payment Movement represents one actual financial movement of the Organization for one specific agreement / Section Movement.

It may represent money received or money returned through an approved refund.

It may be allocated across one or more eligible Planned Payment Movements of that same agreement where allocation is meaningful.

The selected Fiscal Document Type defines the fiscal/accounting behavior, sign behavior, and numbering sequence used by the Payment Movement.

Before finalization, the system must show the fiscal document type and exact number that will be assigned.

After finalization, the fiscal_document_number remains exclusively inside the Payment Movement and must not be changed by later numbering resets.

FIFO applies inside the specific agreement for ordinary settlement payments.

Not: Not an expected installment, not a standalone fiscal-document truth outside Payment Movement, not a Sales Movement, and not an unassigned amount shared across unrelated agreements.

Payment Allocation | Κατανομή Πληρωμής**Status: Established** • **Source:** Ch. 13 and Ch. 15

Identifier / Relationship	Kind	Meaning
payment_allocation_id	PK	Primary Key of Payment Allocation. Identifies one allocation of actual money to one planned obligation.
planned_payment_movement_id	FK	Identifies the Planned Payment Movement being settled or partially settled.
payment_movement_id	FK	Identifies the actual Payment Movement providing the money.

Relations and rules

- The Allocation resolves the many-to-many relationship: one payment may settle multiple installments, and one installment may receive value from multiple payments.
- Allocated amounts provide the basis for total paid amount, remaining balance, and settlement state of the planned movement.
- Allocation follows FIFO within the specific agreement.

Not: Not an independent payment, a duplicate receipt, or a payment relationship that crosses agreements.**Fiscal Document Type | Τύπος Φορολογικού Παραστατικού****Status: Established** • **Source:** H-04 financial terminology reconciliation**Identifier / Relationship**

fiscal_document_type_id | PK | Primary Key of one controlled fiscal document type.

description | Business field | Human-readable description, such as Receipt or Refund Receipt.

sign_behavior | Business field | Defines whether the resulting Payment Movement is positive or negative.

current_next_document_number | Business field | Next official number to be used for future Payment Movements of this document type.

active_status | Business field | Indicates whether the document type is available for new ordinary use.

numbering_control_notes | Business field | Optional explanation of authorized numbering resets or accountant/tax-authority instructions.

Relations and rules

Each Fiscal Document Type represents a distinct fiscal/accounting movement behavior.

Each type maintains its own numbering sequence. Receipts and Refund Receipts may therefore have different numbering.

An authorized user may set or reset current_next_document_number when required by the accountant, the tax authority, or a controlled correction procedure.

The reset affects only future Payment Movements and never rewrites numbers stored in finalized Payment Movements.

In the current educational scope, the core types are Receipt and Refund Receipt. Complex commercial documents such as invoices are outside the present core and may be introduced only as a future extension.

Not: Not a Payment Movement and not the printed fiscal document itself.

Fiscal Document / Receipt | Φορολογικό Έγγραφο / Απόδειξη

Status: Established • Source: Ch. 13, Ch. 15, and H-04

Relations and rules

A Fiscal Document / Receipt is the official tax document issued from a finalized Payment Movement.

The official document number is not kept in a separate fiscal-document truth. It is stored exclusively inside the Payment Movement as `fiscal_document_number`.

The selected Fiscal Document Type determines the document kind, sign behavior, and numbering sequence.

A Receipt normally corresponds to a positive movement. A Refund Receipt corresponds to a negative movement and its own numbering sequence.

A printed document remains historically unchanged after issue. Corrections, refunds, or reversals require a separate approved official operation and appropriate separate document type.

Not: Not a Planned Payment Movement, not a separate Sales Movement, and not editable historical evidence inside the ordinary Registration Card.

Part VI — Educational Assessment, Progress and Internal Attestations

This part records the technical identities and controlled relationships introduced by Chapter 17. It preserves the distinction between stored primary scores, derived educational results, and internal documents issued by the School.

Assessment & Progress Attestation Preset | Πρότυπο Αξιολόγησης και Βεβαίωσης Προόδου

Status: Established • Source: Ch. 17

Identifier / Relationship	Kind	Meaning
assessment_progress_attestation_preset_id	PK	Primary Key of Assessment & Progress Attestation Preset. Identifies one approved assessment and internal-attestation configuration.
knowledge_discipline_id	FK	Identifies the Knowledge Discipline whose educational assessment logic the Preset expresses.
study_cycle_id	FK	Identifies the Study Cycle within which the Preset applies.
active	Business field	Current availability of the Preset for operational use.

Relations and rules

- One active Preset applies to one Knowledge Discipline plus one Study Cycle.
- The Preset controls up to nine Assessment Stages, up to four Evaluations in each Stage, and up to four Final Evaluation Factors where a final calculation is required.
- The active Preset is locked during the active educational operation of its Cycle. The Secretariat uses it but does not redesign it during daily work.
- The Preset controls the form and calculation rules without creating a new database schema or a new code path for ordinary new configurations.

Not: Not a Customer result, a Section, an external certification scheme, or a daily grade-entry form.

Assessment Stage | Στάδιο Αξιολόγησης

Status: Established • Source: Ch. 17

Identifier / Relationship	Kind	Meaning
assessment_stage_id	PK	Primary Key of Assessment Stage. Identifies one controlled Stage within one Preset.
assessment_progress_attestation_preset_id	FK	Identifies the Preset that defines this Stage.
stage_order	Business field	Controlled ordinal position from 1 to 9 within the Preset.
stage_label	Business field	Visible educational label such as First Trimester or Internal Preparation Examination.
pass_threshold	Optional business field	Optional integer threshold used to derive Pass or Fail for this Stage.
internal_progress_attestation_enabled	Business field	Yes / No rule determining whether the School may issue an Internal Progress Attestation for the completed Stage.

Relations and rules

- A Preset contains at most nine Assessment Stages.
- A Stage contains up to four Preset Evaluations.
- A Stage Result is derived only when all required scores for that applicable Stage exist and are valid.
- A Stage may have a result without an imposed Pass or Fail classification when pass_threshold is not configured.

Not: Not necessarily a calendar period, a universal trimester, or a Section.

Preset Evaluation | Αξιολογούμενη Ενότητα Προτύπου

Status: Established • Source: Ch. 17

Identifier / Relationship	Kind	Meaning
preset_evaluation_id	PK	Primary Key of one controlled Evaluation position within an Assessment Stage.
assessment_stage_id	FK	Identifies the Assessment Stage to which this Evaluation belongs.
evaluation_order	Business field	Controlled ordinal position from 1 to 4 within the Stage.
evaluation_label	Business field	Visible label such as Grammar, Oral, Word, or Excel.
weight_percent	Business field	Required integer percentage weight used in the Stage Result calculation.

Relations and rules

- A Stage contains at most four active Evaluations.
- Active Evaluation weights are integer values and total exactly 100% within the Stage.
- An Evaluation receives one primary current raw score per Assessment Registry.
- The system does not accept decimal weights or an incomplete total as an approved Preset structure.

Not: Not a generic free-text grade note, a database column created per subject, or necessarily an external certification module.

Assessment Registry | Μητρώο Αξιολόγησης

Status: Established • Source: Ch. 17

Identifier / Relationship	Kind	Meaning
assessment_registry_id	PK	Primary Key of Assessment Registry. Identifies one Customer assessment reality for one Educational Product For Sale.
customer_id	FK	Identifies the Customer whose progress is assessed.
educational_product_for_sale_id	FK	Identifies the selected Educational Product For Sale that provides the Product, Academic Year, and Study Cycle context.
first_applicable_assessment_stage_id	Proposed FK	Technical field proposed to preserve the one initial Assessment Stage applicability determination for a late-entering Customer.
UNIQUE (customer_id, educational_product_for_sale_id)	Constraint	Prevents a second Registry for the same Customer and the same Educational Product For Sale.

Relations and rules

- A Registry is created only when the first real score is recorded; it is not pre-created for every Section participation.
- A move between Sections within the same Educational Product For Sale continues the same Registry.
- Stages before first_applicable_assessment_stage_id are not applicable to that Customer. From that Stage onward, required missing scores remain missing data and block the relevant result or document.
- A Customer entering another Educational Product For Sale may receive a new Assessment Registry because the educational context has changed.

Not: Not a Section Movement, a generic Customer transcript, or an account of financial obligations.

Evaluation Score | Βαθμός Αξιολόγησης

Status: Established • Source: Ch. 17

Identifier / Relationship	Kind	Meaning
evaluation_score_id	PK	Primary Key of one current raw Evaluation Score.

Identifier / Relationship	Kind	Meaning
assessment_registry_id	FK	Identifies the Customer assessment context in which the score exists.
preset_evaluation_id	FK	Identifies the Evaluation being scored.
score_value	Business field	Required integer raw score from 0 to 100.
UNIQUE (assessment_registry_id, preset_evaluation_id)	Constraint	Allows one current score for one Evaluation in one Registry.

Relations and rules

- Blank is not a score and must not be stored as zero.
- Zero is a real score and participates in calculation.
- The Secretariat enters normal initial scores. An already recorded score can be changed only by the Director.
- The current scope preserves the current approved score, not a separate audit history of every prior value.

Not: Not a decimal value, an automatic failure flag, or a separately stored Stage or final result.

Final Evaluation Factor | Τελικός Παράγοντας Αξιολόγησης

Status: Established • Source: Ch. 17

Identifier / Relationship	Kind	Meaning
final_evaluation_factor_id	PK	Primary Key of one controlled final calculation Factor within a Preset.
assessment_progress_attestation_preset_id	FK	Identifies the Preset that defines the Factor.
factor_order	Business field	Controlled ordinal position from 1 to 4 within the Preset.
factor_label	Business field	Visible educational label for the Factor.
weight_percent	Business field	Required integer percentage used only in a Final Overall Result calculation.
mandatory_minimum_result	Optional business field	Optional minimum required Factor Result. When set, it is an additional condition for final Pass.

Relations and rules

- A Preset contains at most four Final Evaluation Factors.
- Each Factor must have at least one controlled source value.
- A Factor Result is the simple arithmetic average of its selected source values, rounded upward. There are no second-level weights inside the Factor.
- Where a Final Overall Result is used, active Factor weights are integers totaling exactly 100%.

Not: Not a separately stored final grade, one fixed mandatory component for every Discipline, or an external certificate module.

Final Factor Source Selection | Επιλογή Πηγής Τελικού Παράγοντα

Status: Established relationship record / frozen before ERD after conditional-source confirmation • Source: Ch. 17

Identifier / Relationship	Kind	Meaning
final_factor_source_selection_id	PK	Primary Key of one controlled source selected for a Final Evaluation Factor.
final_evaluation_factor_id	FK	Identifies the Factor using this source.
source_type	Controlled value	Identifies whether the source is a raw Evaluation Score or a derived Assessment Stage Result.
preset_evaluation_id	Conditional FK	Identifies the selected source Evaluation where source_type is Evaluation Score.
assessment_stage_id	Conditional FK	Identifies the selected source Assessment Stage where source_type is Assessment Stage Result.

Relations and rules

- Exactly one conditional source identifier applies to one selection record.
- The selection is controlled by the Preset and cannot be changed by the Secretariat during daily operation.
- A Factor with no available valid selected source values cannot produce a Factor Result. A required Factor without a result blocks a Final Overall Result and any final Internal Progress Attestation.

Not: Not a dynamic schema change and not an uncontrolled calculation expression.

Derived Assessment Results | Παράγωγα Αποτελέσματα Αξιολόγησης

Status: Established boundary • Source: Ch. 17

Identifier / Relationship	Kind	Meaning
No separate identifier defined	Derived result	Assessment Stage Result, Final Evaluation Factor Result, Final Overall Result, and Pass / Fail are derived from current valid scores and the Preset.
No result table required	Boundary	The current scope does not store a second independent truth for calculations that can be reproduced from primary data.

Relations and rules

- Assessment Stage Result uses weighted active Evaluation Scores and rounds upward after full calculation.
- Final Evaluation Factor Result uses the simple average of selected sources and rounds upward after full calculation.
- Final Overall Result uses weighted Factor Results and rounds upward after full calculation.
- Final Pass requires the configured final threshold and any mandatory Factor minimums.
- A discontinued Customer does not receive a Final Overall Result or a final Internal Progress Attestation.

Not: Not immutable past snapshots, an audit entity, or a separately entered final grade.

Internal Progress Attestation | Εσωτερική Βεβαίωση Προόδου

Status: Established boundary • Source: Ch. 17

Identifier / Relationship	Kind	Meaning
No internal_progress_attestation_id defined	Document boundary	The current scope treats the Attestation as a generated School document derived from current valid data and Preset rules.
assessment_stage_id / assessment_registry_id	Derived document context	Identifies the completed Stage and Customer assessment context where a Stage Attestation is generated.

Relations and rules

- The Preset decides whether a Stage or final internal result may produce an Attestation.
- The system validates every required score and rule when printing. If something is missing, it prints nothing and states the exact missing item.
- A completed Stage Attestation may be generated even where that Stage is Fail; it truthfully shows the School's internal progress information.
- Batch generation creates one personal Attestation per eligible Customer.
- The School does not issue or replace external Certificates, Diplomas, Cambridge qualifications, ECDL certifications, or statutory degrees.

Not: Not an external certification, an external diploma, or a stored historical issuance ledger in the current scope.

Part VII — Teaching Front End: Learning Resources, Practice and Controlled Examination

This part records the technical identities and controlled relationships established by Chapter 18. It preserves the distinction between reusable Product-level learning material, current Customer entitlement through active participation, learning practice, and formal electronic examination.

Student Front End Account | Λογαριασμός Μαθητικού Front End

Status: Current project decision • Source: Ch. 18

Identifier / Relationship	Kind	Meaning
student_front_end_account_id	PK	Proposed Primary Key of the controlled student access account.
customer_id	FK	Identifies the Customer who uses the account.
active	Business field	Current technical availability of the account.

Relations and rules

- The account is linked to one Customer. It does not create a second Customer identity.
- Valid account credentials alone do not determine current educational access. The Front End additionally requires at least one active, non-discontinued Section Movement in an Operating Section.

- Credential secrets and password-protection details are security implementation responsibilities and are not modeled as business fields in this dictionary.

Not: Not a Customer record, a Section Movement, a direct database user, or a Back End role.

Implementation note

The precise public login identifier may be a controlled Student Login ID or another approved implementation choice; customer_id remains the stable Core Domain identity.

Educational Resource | Εκπαιδευτικός Πόρος

Status: Current project decision • Source: Ch. 18

Identifier / Relationship	Kind	Meaning
educational_resource_id	PK	Primary Key of one reusable Educational Resource.
educational_product_id	FK	Identifies the Educational Product to whose reusable learning library the Resource belongs.
content_type	Controlled value	Video, Audio, Article, PDF / Supporting Material, or another approved content type.
description	Business field	Short educational description visible in the appropriate Front End area.
storage_reference	Business field	Controlled reference to secure external file storage, not the file content itself.
active	Business field	Current availability for Student presentation.

Relations and rules

- A Resource is created once for one Educational Product and may be reused by later Educational Products For Sale of that same Product.
- The content publishing form may start from an Operating Section. The system derives educational_product_for_sale_id and educational_product_id from that Section; storing a separate duplicate per Section is not required.
- The Student's right to see a Resource is derived through active participation and the related Educational Product For Sale, which in turn identifies the Product.
- A file is stored in approved secure storage. The database stores only its controlled reference.
- An unused mistaken Resource may be removed before real history. A Resource already made available is normally deactivated when it should no longer appear.

Not: Not a copied file per Customer, per Section, or per Academic Year; not an Exercise or Formal Examination Unit.

Educational Activity | Εκπαιδευτική Δραστηριότητα

Status: Current project decision • Source: Ch. 18

Identifier / Relationship	Kind	Meaning
educational_activity_id	PK	Primary Key of one controlled Practice Exercise or Formal Examination Unit.
educational_product_id	FK	Identifies the Educational Product whose learning or examination content the Activity expresses.
activity_type	Controlled value	Practice Exercise or Formal Examination Unit.
educational_environment_access	Controlled value	Home Practice, School Teaching Environment, or School Examination Workstation Only.
description	Business field	Educational description of the Activity.
preset_evaluation_id	Conditional FK	Required for a Formal Examination Unit; identifies the one Evaluation Score target.
active	Business field	Current operational availability of the Activity.

Relations and rules

- Exercises and Formal Examination Units share one controlled Activity structure but remain different in their educational consequences.
- A Practice Exercise may be repeatable and may be available from home. It does not create an official score.
- A Formal Examination Unit is available only through an active Examination Session and an Authorized Examination Workstation. It updates one designated Evaluation Score after completion.
- The conditional preset_evaluation_id prevents one completed Examination Unit from updating several Evaluation Scores at once.

Not: Not an Educational Resource, a stored Student attempt, a second score table, or an unrestricted home examination.

Educational Activity Question | Ερώτηση Εκπαιδευτικής Δραστηριότητας

Status: Current project decision • Source: Ch. 18

Identifier / Relationship	Kind	Meaning
question_id	PK	Primary Key of one Question inside one Educational Activity.
educational_activity_id	FK	Identifies the Practice Exercise or Formal Examination Unit containing the Question.
question_order	Business field	Controlled presentation order within the Activity.
question_type	Controlled value	Text Answer, Single Choice, or Multiple Choice. Boolean is predefined Single Choice with True / False.

Identifier / Relationship	Kind	Meaning
question_text	Business field	The question or instruction presented to the Student.
solution configuration	Controlled solution rule	One or more accepted text solutions, or the controlled correct choice set, as appropriate to the Question type.
active	Business field	Current availability of the Question in the Activity.

Relations and rules

- One Activity may contain one or more Questions of mixed types.
- All Questions currently have equal participation in calculation; no question weight field is required.
- Text solutions apply trim and case-insensitive comparison and may contain one or more accepted alternatives using OR logic.
- A Multiple Choice Question is correct only when the selected set is exactly the configured correct set.
- The same correct word or solution may occur in different Questions. Solution meaning is determined by question_id, not by uniqueness of the text.

Not: Not a separately weighted Evaluation Score, a persisted Student answer, or an automatic spelling-correction mechanism.

Implementation note

The Code Designer may choose the internal normalized structure for controlled options and accepted text alternatives, provided the stated Question rules are preserved.

Educational Activity Resource Link | Σύνδεση Εκπαιδευτικής Δραστηριότητας με Πόρο

Status: Implementation-level associative/link record • Source: Ch. 18

Identifier / Relationship	Kind	Meaning
educational_activity_resource_link_id	PK	Implementation-level Primary Key of one Activity-to-Resource relationship.
educational_activity_id	FK	Identifies the Exercise or Formal Examination Unit using the Resource.
educational_resource_id	FK	Identifies the reusable Video, Audio, Article, or other Resource.
UNIQUE (educational_activity_id, educational_resource_id)	Constraint	Prevents the same Resource from being linked twice to the same Activity.

Relations and rules

- One Resource may support many Exercises. One Exercise may use one or more Resources.
- The relationship permits an Audio or Video player to be shown while the Student answers an Exercise.
- The relationship does not impose an artificial forced sequence of viewing, listening, and answering.

Not: Not a duplicate file record or a requirement that every Resource or Activity must be linked.

Examination Session | Εξεταστική Συνεδρία

Status: Current project decision • Source: Ch. 18

Identifier / Relationship	Kind	Meaning
examination_session_id	PK	Primary Key of one actual authorized formal examination opening.
educational_product_for_sale_id	FK	Identifies the current Product, Academic Year, and Study Cycle context of the Session.
start_datetime	Business field	Controlled start of the authorized Session window.
end_datetime	Business field	Controlled end of the authorized Session window, where the School uses a Session window.
active	Business field	Current operational state permitting the selected Units to become available.

Relations and rules

- A Session is an actual controlled availability event, not merely prepared examination content.
- One Session may make one or more Formal Examination Units available for the selected Educational Product For Sale.
- The precise appointment, eligible Customer presentation, and interface configuration may evolve in implementation, but formal access must remain constrained by current participation and authorized workstation conditions.

Not: Not an Examination Definition, a generic home-learning period, or a stored Student result.

Examination Session Unit | Ενότητα Εξεταστικής Συνεδρίας

Status: Established relationship record / frozen before ERD • Source: Ch. 18

Identifier / Relationship	Kind	Meaning
examination_session_unit_id	PK	Primary Key of one Formal Examination Unit made available in one Examination Session.
examination_session_id	FK	Identifies the actual authorized Session.
educational_activity_id	FK	Identifies the Educational Activity whose activity_type is Formal Examination Unit.
UNIQUE (examination_session_id, educational_activity_id)	Constraint	Prevents the same Unit from being added twice to the same Session.

Relations and rules

- The relationship allows one Session to contain Listening, Grammar, or other separate Units.

- Each Unit already contains one conditional `preset_evaluation_id` target, so each completed Unit updates only one Evaluation Score.

Not: Not a Student attempt, a stored answer collection, or an independent examination-result record.

Authorized Examination Workstation | Εγκεκριμένος Σταθμός Εξετάσεων

Status: Current project decision • Source: Ch. 18

Identifier / Relationship	Kind	Meaning
<code>examination_workstation_id</code>	PK	Primary Key of one School-recognized workstation permitted for formal examination.
<code>educational_implementation_space_id</code>	Optional FK	May identify the School examination room or other physical Space where the workstation is located.
<code>workstation_reference</code>	Business field	School-recognized technical reference such as a controlled workstation name or asset identifier.
<code>active</code>	Business field	Current permission for the workstation to be used for formal examination.

Relations and rules

- The Workstation identifies the controlled place of formal examination; Student credentials identify the Customer.
- A Formal Examination Unit is not available from a home device merely because the Customer has valid credentials.
- The Secure Access Administrator registers and deactivates workstations according to the School's approved policy.

Not: Not a Customer identity, a generic PC, a direct database client, or a replacement for physical examination supervision.

Implementation note

MAC address, hostname, IP reservation, certificate, and similar technical recognition mechanisms are implementation choices. The Domain records only the controlled workstation identity and its School authorization.

Formal Examination Result and Student Attempts | Αποτέλεσμα Επίσημης Εξέτασης και Προσπάθειες Μαθητή

Status: Established boundary • Source: Ch. 18

Identifier / Relationship	Kind	Meaning
No <code>formal_examination_result_id</code> defined	Boundary	No second persisted result entity is required.
No <code>examination_attempt_id</code> defined	Boundary	No completed or partial Student attempt history is stored in the current scope.
<code>evaluation_score_id</code>	Existing PK	The existing Chapter 17 Evaluation Score is the persisted official educational result after controlled completion.

Relations and rules

- Before Completion, no official formal-examination result exists in the Domain.
- Completion or timer expiry calculates one final percentage from 0 to 100 and updates the one designated Evaluation Score through a controlled server process.
- The Student may see the total percentage only. Individual answers, correct-answer feedback, old percentages, and partial attempts are not stored in the current scope.
- A completed Unit is unavailable to that Customer unless the Directorate explicitly permits re-examination. A new permitted completion replaces the current Evaluation Score and locks the Unit again.

Not: Not a replacement for Assessment Registry, Evaluation Score, Director-controlled correction, or Internal Progress Attestation.

Role boundary

Role	May do	Must not decide or create
Content Publishing Role	Upload Resources; create and publish Practice Exercises; deactivate current material.	Official Examination Session activation, re-examination authorization, score change.
Examination Responsibility	Prepare or select Formal Examination Units and activate authorized Examination Sessions under School policy.	Re-examination permission reserved to the Directorate.
Secure Access Administrator	Manage Front End accounts, passwords, and Authorized Examination Workstations.	Educational participation, score validity, pass rules, or re-examination decision.
Directorate	Define policy; authorize re-examination for one Customer and one Unit.	Delegate this exception silently to ordinary content or access roles.
Code Designer / DBA	Implement server checks, secure storage, access control, backup and availability.	Silently change educational rules or organizational truth.

Part VIII — General Expenses and Management Expense Visibility

Expense Section | Ενότητα Εξόδων

Status: Established • Source: Ch. 19

Identifier / Relationship	Kind	Meaning
expense_section_id	PK	Primary Key of Expense Section. Identifies one broad family of expenses.
section_code_from	Business control field	Beginning of the numeric range reserved for Expense Codes in this section.
section_code_to	Business control field	End of the numeric range reserved for Expense Codes in this section.
description	Business field	Visible name of the expense section, for example Building Expenses or Utilities.
comment	Business field	Explanation of what this section is used for.

Identifier / Relationship	Kind	Meaning
active_status	Business field	Indicates whether the section is available for new Expense Codes.

Relations and rules

- An Expense Section contains many Expense Codes.
- Numeric ranges of different Expense Sections must not overlap.
- If Expense Codes already exist inside a range, the range must not be changed in a way that leaves existing codes outside the section.
- The section supports high-level expense analysis and reporting.

Not: Not an actual expense, not a payment event, and not an official accounting category by itself.

Expense Code | Κωδικός Εξόδου

Status: Established • Source: Ch. 19

Identifier / Relationship	Kind	Meaning
expense_code_id	PK	Primary Key of Expense Code. Identifies one controlled expense code.
expense_section_id	FK	Identifies the Expense Section to which this code belongs.
expense_code	Unique business code	Numeric code used by the user during expense entry. It must be inside the selected section range and must be unique.
description	Business field	Short visible description of the Expense Code.
comment	Business field	Clear guidance explaining which expenses should be recorded under this code.
active_status	Business field	Indicates whether the code is available for new General Expense records.
display_order	Optional business field	Optional visual ordering for lists and reports. If empty, codes may be displayed by expense_code.

Relations and rules

- Each Expense Code belongs to one Expense Section.
- The system may suggest the next available Expense Code inside the selected section range, but the authorized user may choose another valid unused code inside the same range.
- Duplicate Expense Codes are not allowed.
- Inactive Expense Codes remain visible for historical General Expenses but are not used for new entries.
- display_order has no accounting, operational, or classification meaning; it only improves visual ordering when used.

Not: Not the technical primary key and not necessarily an accountant code.

General Expense / Actual General Expense Record | Γενικό Έξοδο

Status: Established • Source: Ch. 19

Identifier / Relationship	Kind	Meaning
general_expense_id	PK	Primary Key of General Expense. Identifies one actual management expense record.
expense_code_id	FK	Identifies the Expense Code used for this expense.
expense_date	Business field	Date of the expense.
amount	Business field	Positive amount paid or recorded for management analysis.
description	Business field	Short description of the expense, including the period when useful.
document_reference	Optional business field	Exact document number when one exists; otherwise Without document.
created_at	System field	System-assigned current date/time of entry. It is not manually changed.
human_resource_id	Optional FK	Identifies the Human Resource when the expense concerns a specific teacher or staff member. Empty for expenses not connected to personnel.

Relations and rules

- Each General Expense uses one Expense Code.
- A General Expense may optionally link to one Human Resource when the expense concerns a specific teacher or staff member.
- The amount must be positive.
- created_at is assigned automatically by the system and is not manually editable.
- The system may suggest the last amount used for the same Expense Code as entry assistance; the user must confirm or change it before saving.
- General Expenses may record amounts calculated elsewhere, such as Payroll results or known insurance payments, for management analysis only.
- Corrections must not silently rewrite historical reality; a controlled correction or cancellation routine should be used if needed.

Not: Not Payroll, not official accounting, not a tax declaration, and not a social-security obligation calculation.

Part IX — Operational Visibility, Reporting and Decision Support**Operational Visibility | Επιχειρησιακή Ορατότητα**

Status: Established • Source: Ch. 20

Identifier / relationship note

- Operational Visibility has no independent primary key in the core Domain Model. It is a read-only interpretation and presentation layer over established Domain facts.

- Every visibility output must preserve time frame, scope, source facts, calculation logic, and traceability to primary records.

Not: Not a second source of truth, not an operational event, not an accounting subsystem, and not an autonomous decision-maker.

Stable View / Printable Report / Pivot Analysis | Προβολή / Αναφορά / Ανάλυση

Status: Established • Source: Ch. 20

Identifier / relationship note

- Stable Views and Printable Reports normally have no new Domain primary key; they are read models over existing records.
- If an implementation allows saved custom reports, only the report definition may be stored. The data shown must still be derived from primary Domain facts at execution time.
- Possible implementation-level identifier: report_definition_id for a saved report definition, not for a second truth table.

Management Dashboard / Director Cockpit | Πίνακας Διοίκησης

Status: Established • Source: Ch. 20

Identifier / relationship note

- The Dashboard is a controlled presentation layer. It aggregates indicators but does not own the underlying facts.
- Dashboard indicators must drill down to the source records that produced them.

Visibility Indicators | Ενδείξεις Ορατότητας

Status: Established • Source: Ch. 20

Identifier / relationship note

- Warnings, risks, opportunities, break-even indicators, and scenario outputs are derived indicators unless a future technical design deliberately stores reusable indicator definitions.
- Indicators must remain explainable: trigger, records, period, threshold or comparison rule, and urgency level must be visible to the authorized user.

Forecasting and Scenario Support | Πρόβλεψη και Σενάρια

Status: Established • Source: Ch. 20

Identifier / relationship note

- Forecasting uses recorded facts, planned facts, assumptions, and historical trends to support future-oriented questions.
- A scenario is not operational reality. It must clearly separate assumptions, projections, and human decisions from recorded facts.

Part X — Terminology Reconciliation and Remaining Open Terms

Why this section exists

A common Domain language must not silently keep obsolete or overlapping names. The following entries do not change history; they record what still requires reconciliation before the final ERD and before later chapters build upon the established model.

“Enrollment” | Deprecated Earlier Term

Status: Deprecated terminology retained for reconciliation • Source: Earlier wording in Ch. 7 and Ch. 13; harmonized in Manuscript v0.3

Identifier / Relationship	Kind	Meaning
No identifier	Vocabulary	The current official term is Registration Event, whose enduring participation result is Section Movement.

Relations and rules

- Use Registration Event for the official action of entering one Customer into one Section.
- Use Section Movement for the resulting historical participation.

Not: Not a separate synonym to be used interchangeably with Registration Event, Section Movement, or Signed Registration Agreement.

“Learner” | Deprecated Earlier Term

Status: Deprecated terminology retained for reconciliation • Source: Earlier wording in Ch. 3–14; harmonized in Manuscript v0.3

Relations and rules

- Use Customer for the stable Domain identity of the child or student.
- Student may be used in educational screens and communications as a presentation term for the same Customer.

Not: Not a second stable person entity, a technical identity, or a relationship separate from Customer in the current model.

Implementation note

Manuscript v0.3 harmonizes the earlier Enrollment and Learner wording. These terms remain in this reconciliation section only as deprecated cross-reference terms, so readers, developers, and users do not reconstruct parallel concepts.

“Academic Cycle” | Deprecated Earlier Term

Status: Deprecated terminology retained for reconciliation • Source: Earlier wording in Ch. 1; harmonized in Version 0.5

Relations and rules

- Use Study Cycle for the defined educational operating period belonging directly to a Knowledge Domain.
- Use study_cycle_id and knowledge_domain_id. Do not create academic_cycle_id or use both terms as parallel concepts.

Not: Not a canonical entity, a technical identity, or a second term for Study Cycle in the current model.

Sales Movement | Deprecated financial term

Status: Deprecated / non-canonical • Source: H-04 financial terminology reconciliation

Relations and rules

Sales Movement is not a canonical Core Domain term and no sales_movement_id is defined.

Where actual money movement is meant, use Payment Movement.

Where the old phrase attempted to express different receipt or refund behaviors, use `financial_movement_type` and Fiscal Document Type inside the Payment Movement model.

Different fiscal document types represent different fiscal/accounting movement behaviors, such as Receipt for positive receipt of money and Refund Receipt for negative return of money.

Not: Not a separate entity, not a second truth beside Payment Movement, and not a future ERD table unless a later deliberate expansion reopens the decision.

9. Maintenance Rule for New Chapters

- When a new Chapter introduces a new entity, movement, official event, or relationship, add its definition to the Ubiquitous Language Glossary first.
- Then add its Primary Key, Foreign Keys, relationship rules, status marker, and chapter source to this dictionary.
- Do not invent identifiers for unresolved concepts. Mark the concept as proposed or reserved until a Domain decision has been made.
- When a term is replaced or clarified, preserve the old term in the reconciliation section rather than silently allowing both terms to circulate.
- Before final integration into the manuscript appendix, reconcile this document against the final chapter texts and the future ERD.

Closing principle

The shared vocabulary states what the organization means. The identifier dictionary states how the system preserves that meaning without confusing names, periods, participations, planned activity, actual delivery, agreements, or historical reality.