

Orientalism, the Basic Pedagogical Approach of PENTHA ID Model vs. 2, to Manage Decisions in Unpredictability Conditions

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Abstract—People, today, belong to a download and shareware generation (digital native or immigrant), immersed in interactivity and connectivity, in a society characterized by a hyper dynamic knowledge process in overload of information, hybrid and cross media based. Learning theories continue to play an important role in the realization of educational projects, also and more if the learning path is assisted by technology: an effective knowledge management and a more efficient knowledge management system are achieved through efficient learning processes. The present work describes an innovative approach to the knowledge/learning management, *Orientalism*, able to guide for making decisions in unpredictability conditions in a complex multi-users environment, multi-paradigms network with multiple reference points. It represents the scientific base of PENTHA vs.2, the Instructional Design Model focused to support e-learning platforms, cognitive tutoring and course authoring tools, in a new perspective of design human orienteering.

Index Terms—Decision Management, Knowledge management, Instructional Design, PENTHA Model

I. INTRODUCTION

IN the 21st century, the learning model requires the evaluation of new and better ways to measure what matters: a diagnosis of strengths and weaknesses in knowledge management and in learning path is needed to improve people performance and to involve multiple stakeholders in the process of designing, conducting and using knowledge

Specifically, people are called to develop complex skills; to make aware choices, evolve and dominate, with flexibility and success, own space and identity; to manage the 'insecurity and unpredictability; to adapt own pathway into new dynamic multi user contexts; to take responsibility of own action and choices; to plan changes, if and when needed; and, not last, to promote social inclusion and active citizenship.

Surely in this perspective, orienting people with a "personalized" impact of learning and knowledge management takes on a new meaning in the implementation

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of didactic projects, strongly characterized by socio-educational aspects.

The institutional interpretations are several to date. For example, the Ministry of British Education points out some strategies to achieve operationally a personalization and flexibility of the learning process, where the identification of the learning needs of a user occupies a central role. The didactic plan "Key Stage 3 National Strategy 2004-5" [1] already outlined several key components of personalization, such as: 1) a detailed knowledge of the strengths and weaknesses of the Learners, which involves the use of assessment of learning as well as data and interviews to diagnose the learning needs of each Learner, 2) the use of differentiated instructional strategies, 3) the opportunity for Learners (and families) to make choices within the curriculum, with differentiation pathways, 4) a radically different approach to mean the relationships in the didactic group work, focused on the development of the learning path.

Also in the teaching plan 2010 of the US National Education Technology Office [2] new strategies towards a personalized didactic are defined, with indicated fundamental teaching actions, such as the monitoring and interpreting Learner progress, in an ongoing challenge in making daily decisions, and the design criteria of instructional actions to customize activities, according to the needs of the Learners. This plan detects and highlights what has been achieved for a personalization of learning paths in online learning, at the didactic methodological level and in terms of technology to be used, through the proposal and implementation of a specific system of e-assessment.

On the other hand, the European Council proposes "Integrating lifelong guidance into lifelong learning strategies 2014" [3], concerning the need of a new personalized orientation of the people in the continuous process that enables citizens of any age to identify their capacities, competences and interests making decisions in education, training and employment. The guidance includes individual and collective activities to provide information, counseling, skills assessment, accompanying and teaching the skills needed to make decisions and manage careers. The thesis is that the orientation, today, is no longer limited only to outline the direction of a professional career, but it concerns "Life designing" as well as "Work designing" .

Core of the matter are few instances, already object of extensive debate: a) if these higher order skills, required to Learners, are acquirable through training courses carefully designed; b) whether and how to change the timing and

manner of learning with the introduction of a use "divergent" of the new tools of communication in educational practice; c) how to manage didactic relationship modes in a social virtual multi user environment, knowledge management focused, d) how dynamically to change the didactic planning of Teacher/Tutor, in relation to its discipline; e) if and how to enable the Learners to customize their own pathways.

Our work¹ intends to describe a new interpretative paradigm, *Orientism*, to understand the fluid nature of knowledge, to seize the unpredictability and risks of the dynamics of knowledge management in relationships with complex educational-, cultural-, social-, biological- and/or business environment. It interprets the educational activities as dynamic, adaptive and self-regulative, based not only on explicit curricular goals, but also on unpredictable social interactions and relationships between players in an emerging process of continuous change of the environment itself, to which they belong. So the approach defines several reference points to be considered in the knowledge/learning path management, by generic Users, or, specifically, in didactic context, by both Tutors and Learners.

II. CHANGE FACTORS

The recognition of a given problem, the selection of information useful to schedule feasible choices for its resolution, occur through the application of specific decision rules. The management and treatment of decisional risk, connected to a decision-action, orient people that become real risk managers. Anyone can play the role of risk managers, from simple citizens to lawyers, politicians, economists and entrepreneurs.

A long tradition of studies analyzed several risk components, inherent in a decision making process, such as logical/probabilistic-, cognitive-, regulatory-, systemic/social- and socio/cultural component. The multiple variables that condition this decisional risk process, commonly recognized and able to cause an unstable condition of unpredictability, found a catalytic function of management in the information factor, or factor 'k'. It regulates internal and external agents/factors in the decision-making process and the cooperation between so called "policy makers" in the process.

The starting point of our research is the statement that the current technological advancement has multiplied the difficulty of understanding the world in which common people, managers, entrepreneurs and researchers operate. It makes the environment more complex, and consequently the same "problems management".

In our perspective, factors key are: to acquire knowledge, mind and attitude to manage the "complexity", to make people enable to face the problem positively and proactively, to contextualize the choosing process in own experience and environment, to develop strategies to manage situations mediating complex relationships through personal tasks orientation.

¹ It is the result of a long path of scientific research, didactic practice and collaboration with Californian socialnetworking, IT and AI experts, and Indonesian KM researchers.

Change factors in the knowledge dynamic today are: on a hand the passage from individual knowledge to global knowledge, with multi-user connections, but without losing the subjective prospective. On the other hand, the passage from a received multimodality (such as television and cinema), to an interactive multimodality (such as videogames or virtual reality), to a built multimodality (such as socialnetworking knowledge management tool), up to a reflective multimodality (dynamic, intelligent and semantic UI).

Further issue is to consider the decision-making itself as a learning process, whereby people need to choose what to learn and the meaning of incoming information, interpreting a shifting reality. In this direction, the model dedicates an attention for different "plans" in the *decisional process*, concerning : a) *how* do decision makers *reason* (descriptive plan) ? b) *how should* they *reason* (prescriptive plan)? c) *what* type of reasoning *motivate* the decisional action in terms of its *efficacy and efficiency* ("social" plan)? d) *what* type of reasoning is *recognizable and describable* (communicative plan) ? e) what are *the conditions* implying a guaranteed "order" in a process, against networking and learning "chaos"? f) how can the Decision Managers be supported in their *learning of choices process and "learning path"*? g) how can Tutor be supported in own "*teaching design and teaching path* to train about decisional process?"

Orientism proposes a new scenario of activities. to improve the people's ability to make contextual changes in natural, social, artificial multi-user environments, with multiple reference points and multi-interpreting paradigms.

It represents the new epistemological frame of reference for the PENTHA Instructional Design Model vs. 2 [4], specifically to improve the activation of choosing and decisional processes.

PENTHA (acronym of Personalization, Environment, Network, Tutoring, Hypermedia, Activity) is a multi-perspective, hybrid and flexible framework to design didactic rules. It is focused on a management of dynamic and flexible learning situations, with monitoring timely feedback learning path of User/Learner. It respects preferences and learning needs, and at the same time supports them in a dynamic and autonomous management of own knowledge/learning path, through the design and use of a dedicated e-environment. Specifically, it considers a valid support an intelligent system, based on artificial intelligence tools, which provides the rules of action, relationship between actions and cognitive content, adaptation and personalization of a learning as well as tutoring. Furthermore, the model describes the main components of didactic scenario (5 dimensions) in a network of connections. The model describes an evaluation system of rules and mentoring, and the educational parameters necessary for the implementation of a social network knowledge/learning environment, adapted to Work, Research and Knowledge applications.

Two types of pathways are needed. A generic one, the same for everyone, designed on rules provided by the Tutor on the basis of : a) epistemological discipline (pedagogical patterns), b) the profile of the educational approach (methods, models and strategies), c) the input profile of the

learning group, d) the definition of tools to be used.. Furthermore, a subjective, different for each, connected to different profiles of each User/Learner, which evolves during the learning path, with an active/enactive action by the Use/Learner, to take decisions about own changing profile and relationship with the environment.

Orientism focuses on the specificity of this second type.

III. ORIENTISM'S VARIABLES

The basic epistemological frames of reference, within which the main Instructional Design models are contextualized, today are: Behaviorism, Cognitivism, Constructivism and Connectivism.

Behaviorism is based on the stimulus-response process. Teaching occurs in a "transmissive" mode. The learning objectives are defined in terms of performance. The learner acquires skills like: recalling facts, defining and illustrating concepts, applying explanations, and performing specific procedures.

Cognitivism considers learning as an expression of mind in its processes and psycho-dynamic conditions. Tutors are responsible in assisting learners, organizing information in an optimal way to be easily assimilated. One of its branch is *Enactivism*, according to which knowledge is a continuous process that shapes our world through the constant interplay between external constraints (the environment) and internally generated assets (the cognitive system). The learning process is represented by the "co-evolution" of teaching and learning.

Constructivism emphasizes the Learner as being the "active learner", playing a central role in mediating and managing learning activities. Instruction is a process of supporting knowledge construction, rather than communicating knowledge. Learning activities should be "contextualized", and should focus on the "problematic" as perceived by the learner.

Connectivism was formulated on the basis of analysis of the limitations that previous theories, considers the learning as dynamic (from a "learning to do and to be" to a "learning to transform"), involving and contextualized, result of a complex network of several typologies of nodes, connections and diversified components [5]. Knowledge and learning are based on analysis and comparison of different opinions, through the ability to identify connections between fields, ideas and concepts [6].

Orientism proposes a new solution to the demand for "innovative, creative and leadership" education to make choices, to manage own life, relationships and complex environments, basing on :

- the conception of a new model of behavior
- the management of the simultaneity of how people process information, that generates continuous changes each other
- the management of "larger pieces" of human experiences to be put together to achieve successful actions
- the management of a complex network with numerous typologies of nodes/connections, such as information, competences, intelligences, people and interpretations

- the adaptation of the "learning attitude" to activate "orienting reflex" phenomena ²and to develop a critical mind
- the definition of the needed supporting learning processes
- the develop of analytical and aware skills
- the definition of profile and action modality of supporting human and cognitive tutoring
- the understanding whether and how an environment, a digital tool, specifically designed, can promote the processes of subjective orientation.

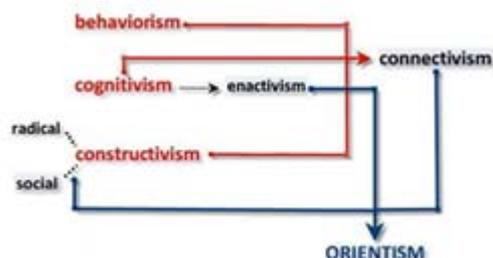


Fig. 1. The main pedagogical approaches

Orientism view is a possible new conception of the Knowledge Management: it moves towards a knowledge awareness, extension of own horizon and points of perspective, meanings assignment and management, in a network of relationships, starting from own profile and own strength points, and consciousness transfer in knowledge interface phenomena.

The main influencing scientific theory of *Orientism* is the Human System Biology – Knowledge Management theory (HSB_KM), a newly discovered Formal Science, and the derivative of Nature Knowledge continuum model. The HSB-KM model theorizes that in a Universe, supposed as living thing, having consciousness, the Human Knowledge could link up with Nature Knowledge through comprehending of the complexity of Knowledge Management process and on the Knowledge Base in a Complex System. [7].

In *Orientism*, new variables, factors and criteria need to direct and motivate the reason in the complex decisional process, in self-reference, to be considered in a lifelong guidance to have success in choices, assumptions of responsibilities and achievement of objectives, over the uncertainty. They are showed in the following sphere (see Fig. 2).

A. The Vertices

The Vertices represent the life reference points, to be considered in a lifelong guidance.

Profession vertex is an openly declaring, according own thought and identity; specific knowledge, training and skills towards own employment. It is the representation of people as agents. It domains the Work, the Skills, the Action, the Future of people.

Vision vertex is an aware semantic interpretation of reality and/or own will. It leads the thought towards of a meaning schema of actions. It domains the Future, the Purpose, the Awareness, the Energy of people.

² In medical context, "orient reflex" is an aspect of attending in which an organism's initial response to a change or to a novel stimulus is such that the organism becomes more sensitive to the stimulations.

Passion vertex is a powerful emotion. It pushes a person towards a target with force and determination. It domains the Energy, the Spirit, the Love, the Action of people.

Vocation vertex is a strong feeling of suitability to act in some context. For it people regard themselves as particularly worthy. It requires great dedication. It domains the Spirit, the Love, the Awareness, the Role of people.

Mission vertex is a statement of a reason for existing. It motivates people to perform a service. It domains the Purpose, the Work, the Role, the Love of people.

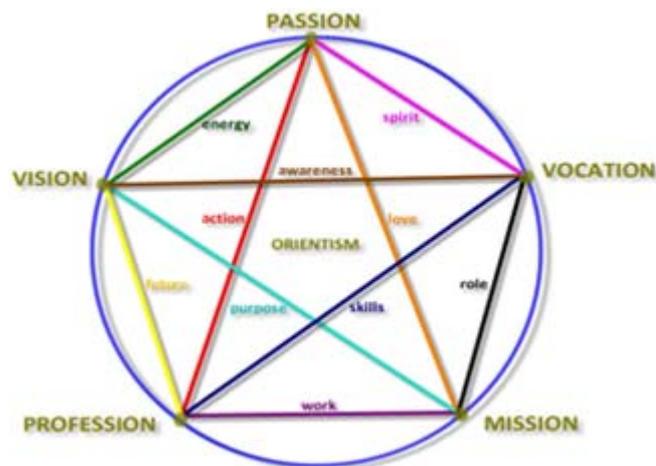


Fig. 2. Orientism Variables

B. The Relationships between Vertices

The relationships between Vertices represent the added subjective components (factors) to orient, train and activate choice processes.

Spirit factor (pink link) is the synthesis of the relationship between own personal investment and powerful being pushed towards a target (Passion) and own deep feeling and dedication (Vocation).

Energy factor (green link) is the synthesis of the relationship between own personal investment and powerful being pushed towards a target (Passion) and semantic interpretation of reality (Vision).

Awareness factor (brown link) is the synthesis of the relationship between own semantic interpretation of reality (Vision) and own deep feeling and dedication (Vocation).

Love factor (orange link) is the synthesis of the relationship between own personal investment and powerful being pushed towards a target (Passion) and own reason to perform (Mission).

Action factor (red link) is the synthesis of the relationship between own personal investment and powerful being pushed towards a target (Passion) and identity as agent towards an employment (Profession).

Purpose factor (azure link) is the synthesis of the relationship between own semantic interpretation of reality (Vision) and reason to perform (Mission).

Skills factor (blue link) is the synthesis of the relationship between own deep feeling and dedication (Vocation) and own identity as agent towards an employment (Profession).

Future factor (yellow link) is the synthesis of the relationship between own identity as agent towards an employment (Profession) and semantic interpretation of reality (Vision).

Role factor (black link) is the synthesis of the relationship between own deep feeling and dedication (Vocation) and own reason to perform (Mission).

Work factor is the synthesis of the relationship between own identity as agent (Profession) and own reason to perform (Mission).

IV. ORIENTISM DIAGNOSIS DURING LEARNING PATH

PENTHA ID Model vs. 2 [8] enforces the diagnosis criteria, basing on *Orientism* frame. They are Profiling, Behavior Recording, Presenting, Planning, Scanning, Selection of Right/Wrong actions, Technical testing.

The *Profiling* factor consists in the analysis of the change (possible evolution) of personal characteristics of Users/Learners and the satisfaction of own needs. *Evaluation criteria* - The Model adapts the older Learning Orientation Model, which identifies four types of learner (transforming, performing, conforming, resistant). The cognitive state, learning style and preferences, are obtained: a) by confronting the test results at the end of the assessment activities with previous test results; b) by observing the used didactical material, the acquired knowledge and skills, in order to determine the degree of receptivity (retention) of the Learner to various types of issues/subjects. Some leading frameworks of learning style definitions are: Gardner's Multiple Intelligences, Felder-Silverman Index of Learning Styles (ILS), Fleming & Mills' VARK, Kolb's LS Model and Experiential Learning Theory (ELT), Myers Briggs Type Indicator (MBTI) - Jung

The *Behaviour Recording* factor consists in the analysis of User/Learner behaviours during the knowledge cycle in real time, including collaborative activities and participation in group assignments. *Evaluation criteria* - In the learning process the learner navigates through the individual graph by following its sequence. The individual content and behavior graph serves as input for a set of sequence rules. The resulting sequence is the *learning path*, a personalized navigation structure of sections and sub-sections, activity types/modes, tutoring interactions etc.

The *Presenting* factor consists in the evaluation of the structuring capacity, visualization, storytelling modes, logical- graphic simulations, exercises, brainstorming and the capacity of developing own ideas. *Evaluation criteria* - The Model adapts the Concept Didactic and the Guilford Taxonomy (*by operations*: memory skill, convergent or divergent productions, decisional and judicial skills, etc.; *by contents*: figurative, symbolic, semantic, behavioural; *by products*: units, classes, relationships, systems, transformations, implications).

The *Planning* factor consists in enabling content management at a high level of abstraction through ontology, maintained in accordance with common standards for knowledge representation, semantic analysis of concept maps for Tutors, and production of flowcharts for Learners. *Evaluation criteria* - The Model adapts the Semantic Analysis, Guilford Taxonomy and also Gagnè's Taxonomy (which proposes diversified learning: signal learning, Stimulus-Responsive learning, principles learning, problem posing and solving, etc).

The *Scanning factor* consists in the analysis of activities, associated to social- and knowledge networks, availability and control of multiple resources and the type of user interactions. *Evaluation criteria* - The Model is in accordance with the Self-Regulated Learning (SRL) indicators, which identify a evaluation grid, composed from the User/Learner's interactions, personal planning, monitored execution and evaluation with cognitive / meta-cognitive and motivational / emotive levels.

The *Selection of Right/Wrong Actions* assessment is necessary to detect knowledge misconceptions, also known as "knowledge holes", for an advanced, context sensitive, AI based tutoring system. *Evaluation criteria* - Connected to the specific subject matter pedagogical pattern, the Model assigns particular value parameters supporting the fuzzy logic principles, in the identification of gradual boundaries of the individual learning graph and adds risk parameters for the interpretation between objective and subjective dimension of the didactical decisional process.

The *Technical Tests* consist in User/Learner profile definition tests, entry tests, learning tasks, assigned actions, required performances, acquired knowhow, the use of tools, through posing of open/closed questions, true/false tests, multiple choice test, Subject matter tests etc. *Evaluation criteria* - objective criteria (like Bloom Taxonomy, mainly in the cognitive and affective area)

V. ORIENTISM MANAGEMENT

A. KM Typologies

The *Orientism Management* (OM) in PENTHA vs.2 consists in intertwined 10 different Knowledge Management typologies, each based on areas of development and improvement of own personal leadership and success (see Table 1).

Table 1: 10 KM typologies (OM model) with related learning modes

Knowledge Management	Learning
with (Low) Consciousness	<i>to know what</i>
with (Medium) Consciousness	<i>to know how</i>
with (High) Consciousness	<i>to know where</i>
with Meaning	<i>to know why</i>
with Feeling	<i>to know moving</i>
with Will	<i>to know experiencing</i>
with Understanding	<i>to know enabling</i>
with Personalization	<i>to know changing</i>
with Availability	<i>to know opening</i>
with Synergy	<i>to know devoting</i>

They are the mutual influence between life reference points (vertices) and *Orientism* factors, in a process of building a new knowledge "orienting". They have the purpose to activate dynamic actions toward a goal, to promote processes of construction of meanings, and to promote the exploration and mediation of reality.

Knowledge Management with Consciousness (Low) (KMC/l)³ is based on the Energy-Action-Future area

(green-yellow-red triangle) and focus on "*to know what*" learning.

Knowledge Management with Consciousness (Medium) (KMC/m) is based on the Role-Skills-Work area (violet-blue-black triangle) and focus on "*to know how*" learning.

Knowledge Management with Consciousness (High) (KMC/h) is based on the Work-Action-Love area (violet-red-orange triangle) focus on "*to know where*" learning.

Knowledge Management with Meaning (KMM) is based on the Work-Purpose-Future (violet-azure-yellow triangle) area and focus on "*to know why*" learning.

Knowledge Management with Feeling (KMF) is based on the Role-Love-Spirit area (pink, black, orange triangle) and focus on "*to know moving (towards)*" learning.

Knowledge Management with Will (KMW) is based on the Action-Skills-Spirit area (red-blue-pink triangle) and focus on "*to know experiencing*" learning.

Knowledge Management with Understanding (KMU) is based on the Awareness-Skills-Future area (brown, blue, yellow triangle) and focus on "*to know enabling*" learning.

Knowledge Management with Personalization (KMP) is based on the Role-Awareness-Purpose area (brown, black, azure triangle) focus on "*to know changing*" learning.

Knowledge Management with Availability (KMA) is based on the Awareness-Energy-Spirit area (brown, pink, green triangle) focus on "*to know opening*" learning.

Knowledge Management with Synergy (KMS) is based on the Purpose-Energy-Love area (green-orange-azure triangle) focus on "*to know devoting*" learning.

In HSB_KM theory, for example, KMC/l⁴ involves the "Corporate sense" alike to human senses, and can be comparable to the social environment through KM tools use (such as IT/ICT, Web 1.0 and 2.0 incl. Social Media platforms) and corresponds to KM Standards (Culture and Value), Codified /Explicit Knowledge, Human Social Behavior, Organizational Culture (Learning Organization) [9].

It concerns the Hypermedia component of PENTHA model, and is described in so called "*Social dimension*". It presupposes the relevance of collaborative strategies in relation with the learning objectives of a training/didactic path, the availability of adequate networking facilities for group interactions, within the virtual knowledge/learning space, and the possibility to create communities of practice (*shared knowledge*), a dynamic, synergistic and collaborative construction of significant knowledge.

It suggests several activities, such as Community Laboratory, Group Laboratory (Project Work), Community online sessions, Community Tutoring (in synchronous and asynchronous modes), specifically assessed (see section IV).

HSB_KM, interconnected with Personal Knowledge Management (PKM) principles [10], contributes to define the activation of a Socioductive thinking or middle up – down learning, and involves, between others, the following well-known digital design features : *user interface* (as point of entry to a knowledge base), *team space* (as collaborative workspaces), *virtual meeting rooms* (as online, real-time

³ see "Corporate Consciousness DNA" alike to human consciousness DNA, in the Human System Biology-based KM theory [5]

⁴ see "*Machine or Techno Learning*" or to Category 7.0 (PCF – APQC) as corporate taxo-biz processes orientation. PCF - APQC = Process Classification Framework - American Productivity and Quality Centre

tools with white boards functionality) *portals* (to provide personalized capabilities to users through the use of customization, and to manage multiple sources), repositories (as structured lists and databases), *bulletin boards and threaded discussions*, *expertise locators and ask the expert* (to find experts on particular subjects), *metadata and tags*, *search engines*, *blogs* (and *microblogs*) with blogroll links functionality, *wikis* and *social software*, with *Decision Support & Intelligent Tutoring System*,

B. Orientism Tutoring Modes

In this training/didactic scenario, *Orientism Tutoring Modes* in the PENTHA ID Model, to orient people to become aware in a choosing process and manage the 10 KMs, shortly are several.

Coaching, is a method in which the Tutor actively supports the Learner/User, while teaching, motivating, analyzing the Learners/Users performance, provide feedback, reflection concerning assignments to stimulate discussion about the method adopted. It mainly focuses on KMM, KMF and KMU.

Exploring forces the Learners/Users to solve problems with new or alternative solutions. The construction of knowledge occurs through the observation and the transformation of experience. It mainly focuses on KMU.

Fading is a method for adjusting and adapting the learning path according to the achievements of the Learner until the proof of his positive capability in full autonomy. It mainly focuses on KMF, KMW, KMU, KMA, KMS.

Forming concerns a topic introduction to make the Learner/User aware. It mainly focuses on KMC/1.

Modelling is a method for which the Tutor demonstrates how to perform a task. It mainly focuses on KMC/m.

Narrating concerns two different aspects: a) the basic idea of the teaching aspect is to introduce a topic to attract the attention of Learners/Users, the appreciation of different learning styles and different forms of intelligence; b) the basic idea of the learning aspect is to encourage the Learners to verbalize their experiences. It mainly focuses on KMC/h, KMF and KMU

Norming is high performing, effective behaviors. It mainly focuses on KMM

Performing push on motivation and attitude in a performance. It mainly focuses on KMC/m and KMW

Reflecting pushes to compare own difficulties with an Expert / Tutor and encourages them to perform pull actions. Reflection is the vehicle for critical analysis, problem-solving, synthesizing of opposing ideas, evaluation, identifying patterns and creating meanings. It mainly focuses on KMF and KMU

Scaffolding i focuses on favouring the adaptation of the knowledge/learning path taken, a reflection on the actions developed by the Learner/User stimulated by the Tutor. It mainly focuses on KMC/m, KMU and KMP

Storming regards effective communication, conflict resolution. It mainly focuses on KMP and KMA.

VI. CONCLUSION

This paper wanted to describe the basic variables of *Orientism*, a new theoretical frame of reference, designed with the focus to orient people to manage decisions and the unpredictability of the life, being open to the subjective change of perspective and behavior in multi-user environment. Element of news are 5 key factors and criteria to direct and motivate people in choosing process, and following 10 different and key relationships between them. They define area of management, summarized in 10 Knowledge Management typologies, intertwined each other, to improve own personal leadership and success.

It is focused on knowledge/learning management, providing a basic epistemology to PENTHA ID Model vs. 2.

Presently it is extending the sector of application in business context and is contributing to define a new concept of e-environment, called "Pathways", characterized by new functionalities and an innovative UI, belonging to SONO Knowledge Technology & PT BUQU Global contributing Knowledge Cells (KC) Technology.

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