

THE S2P LEARNING MODEL: FOR THE COMBINATION OF THE FORMAL AND THE PERSONAL DIMENSIONS OF LEARNING

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The S2P Learning Model was originally designed to try to understand the Game-based Learning. It was subsequently developed in order to translate a conceptual framework for understanding any initiative of formal learning. Therefore, this model is essentially based on three complementary layers namely: the Formal Learning Strategy, the Learning Platform, and the Learning Process.

Currently big changes occur constantly in our society at all levels. A society in which the individual is becoming more and more independent through ease of access to knowledge, due to the wide facilities offered by information technologies. Thus, knowing that the S2P Learning Model has focused previously on the formal dimension of learning, and knowing also that the process of appropriation of knowledge includes a dominant individual dimension, it would be crucial to integrate it (the personal dimension of learning) in this model of understanding, in order to consider both formal and personal dimensions in any educational initiative.

Especially since the individual dimension is strongly present in academia, where students are becoming more independent, autonomous and demanding, this paper focuses mainly on the incorporation of the individual dimension into the S2P Learning Model, aiming to exploit optimally the two dimensions, formal and personal, in a way to catalyse and foster optimally the learning process.

Key words: Learning model, S2P learning model, Dimensions of learning, Personal dimension of learning, Formal dimension of learning.

1 Introduction

For the seek of a better design and understanding of formal learning initiatives, a modeling effort has been made through the definition of a conceptual framework to explain any formal learning initiative called S2P Learning Model [3]. This model was designed around three interrelated and complementary layers namely: *Learning Strategy - Learning Platform - Learning Process*.

In addition, front of the rise of information and communication technologies, it is noted an evolution and a significant change of modes of learning at the individual level, because the learner can no longer be satisfied only with formal modes administered by the learning (instructional) institutions, but he could himself, according to the need, the context, the maturity and the capacity, adopt his own strategy and make his own learning platforms.

This situation is increasingly consecrated owing to the extension and the accessibility to information and communication technologies; things that have manifestly caused the reinforcement of the learner's autonomy, leading to new approaches towards learning.

Therefore, it would be appropriate to ask the question of ownership of personal level (informal) by the S2P Learning Model. So, what about the learner himself? Can he adopt the components of the S2P Learning Model to map himself the outlines of his Learning Strategy, and shape his own Learning Platform and therefore support his own Learning Process that he wants intentionally develop and catalyze?

At the other side, until what level can teacher/instructor get the relevant approaches adopted by learners (personal dimension) and integrate them into the Formal dimension of learning? In a way to catch sight of the personal best practices and to share them with the community of learners (valorization process).

2 Personal dimension of learning

The new technologies have transformed and expanded the boundaries of conventional education. So, information technology in teaching and learning has created a need to transform how [learners] learn by using more modern, efficient, and effective alternative such as e-learning [16] and other technological tools; thus, enhancing new modes of developing their own strategies and platforms of learning.

Before treating the Personal Learning Environments, we must have a look on the characteristics of the learner of our time.

2.1 Characteristics of the new learner

Information technology has a powerful impact on learning, especially in Higher education, and the central idea of the current learning technologies is to provide users the ability to use and reuse learning objects [17]. This approach, which places the learner at the center of concern, has worked for the emergence of a new learner, characterized today by three key elements:

- the learner is more autonomous
- the learner develops a stronger sense of criticism
- the learner is increasingly demanding

The existence of educational palliatives and the emergence of learning materials carried by the Internet and other media (CD/DVD, TV, Radio, etc.), boost significantly these attitudes within the new generation of learners.

In fact, students nowadays are not only satisfied with institutional systems, but with the proliferation of parallel mediums, the factors of autonomy, criticism and exigency are increasing with time, since the learner gains self-confidence and maturity, being face to a variety of informational resources which he may enjoy.

To illustrate the requirement of learners, I.E. Allen and J. Seaman (2010) have demonstrated for example that the academic leaders at all types of institutions (in USA) report increased demand (from learners) for face-to-face and online courses. In all cases the demand for online offerings is greater than that for the corresponding face-to-face offerings [7].

Therefore, we are facing the factors that lead us to treat first the concept of “*Personal Knowledge Development – PKD*”.

2.2 Personal knowledge development

In knowledge society the innovation process is decisive. This is explained by the fact that this society is based on the knowledge management, new technological knowledge production and dissemination of knowledge through more efficient electronic means, including e-learning [17].

In the field of Knowledge Management, knowledge development can be realized both in the Organizational / Institutional level that the Personnel / Individual level.

Initially, I. Nonaka and R. Toyama (2003) have established the SECI Model based on four dimensions of knowledge transfer, namely: *Socialization*, *Externalization*, *Combination*, and *Internalization*. Each dimension represents a mode of interaction between tacit/explicit types of knowledge [12].

With the development of information and communication technologies, the concept of Personal knowledge development (PKD) is becoming increasingly important.

M. Haag and Y. Duan (2012) have proposed a model of Personal Knowledge Development, although dealing only with eLearning, remains relevant and illustrative.

This model includes only three of the SECI modes: Externalization/Combination – Internalization (EC-I model). While omitting the dimension relating to Socialization, stating that this mode of knowledge transfer is not highly supported in the eLearning [10].

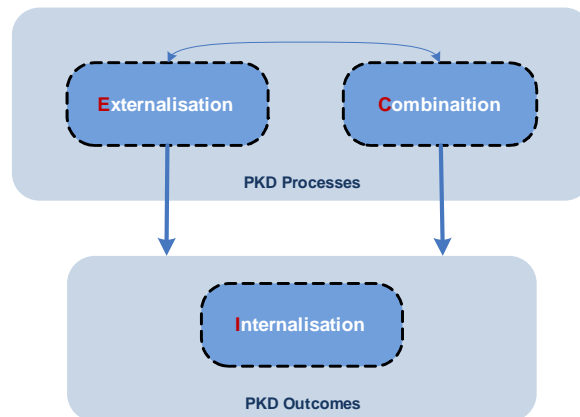


Figure 1 The EC-I model: A model of PKD in online learning. [10]

The value of this approach lies in the distinction made between the processes and the outcomes related to the components of the EC-I model.

Then, the PKD Processes are animated by the dimensions of the Combination and Externalization, while PKD Outcomes are represented at the Internalization dimension of knowledge.

The learner remains master of his course by adopting a selective way. Therefore, the learner does not just follow, but he is quite active in the selection, sorting and making according to criteria specific to his learning style.

2.3 Personal Learning Environment

The technological factor has fostered the emergence of new learning approaches. Thus, in order to enhance knowledge acquisition, the learner would need to develop his learning environment according to his concerns and priorities, such as “Personal Learning Environments (PLE)”.

The PLE helps learners manage their own learning. This includes providing support for learners to set their own learning goals; to manage their learning content; to communicate and share with others in the process of learning. Then, the PLE is seen as a portfolio system allowing the user to maintain his repository of content and selectively share that content as needed.

According to G. Attwell (2007), the development of PLE was catalysed after two essential elements: the *Ubiquitous Computing* and the development of *Social Softwares* [2]. Also, the PLE has emerged as a label associated with the application of the technologies of Web 2.0 [5]. But in our perspective, we give to this concept a large dimension incorporating various components and aspects (technological, traditional and even social).

Particularly in the academic world and essentially universities, the personal dimension of learning is increasingly predominant in view of the learner maturity and the development of personal skills. Thus, education must adapt itself to the demands of society and every person must be able to learn throughout his life. The principle of permanent education offers the possibility of reaching an individualized education, in relation with the rhythm, the needs and aspirations of each person [12].

2.4 How the personal dimension of learning is growing significantly?

With the proliferation of learning platforms driven by the Internet, learners are face to a variety of choses supported by the Open Access Initiatives (OAI), namely:

- Open Educational Resources (OER)
- Open Distance Learning (ODL)
- Massive Open Online Courses (MOOCs)

a. Open Educational Resources (OER)

The term “*Open Educational Resources*” or OER designates teaching, learning and research materials in any medium, digital or otherwise, which exist in the public domain or have been released under an open license that permits no-cost access or use [8].

These educational materials and resources, offered freely and openly for anyone to use, include:

- *Learning content*: full courses, course material, content modules, learning objects, etc.
- *Tools*: software to support the creation, delivery, use and improvement of open learning content including searching and organization of content, content and learning management systems, content development tools, and online learning communities.
- *Implementation resources*: Intellectual property licenses to promote open publishing of materials, design-principles, and localization of content.

Then, a series of initiatives focused on the potential of the exchange, sharing, adaptation, and modification of content. What lead us to new ways of thinking about how educational content is created and used in formal, non-formal and even personal educational settings [1].

b. Open Distance Learning (ODL)

Distance learning (DL) was a teaching modality which utilized technology to deliver teaching to students who were not physically present such as in a traditional classroom setting. DL was not constrained by geographic considerations and therefore offered unique opportunities to expand educational access [6].

By the expansion of the use of Internet and the growth of the “Open” initiatives, Open and Distance Learning (ODL) offers new perspectives for learning development.

c. Massive Open Online Courses (MOOCs)

MOOCs, as an explicit example of ODL, have emerged in the 21st century as a response to the Internet potential for distributing knowledge without the close-end basis of a single professor and a limited group of learners in a physical class [13].

Whilst MOOCs don’t always lead to formal qualifications, they allow students to gain invaluable knowledge to support their careers, or their own personal learning goals. Then students can take part in the courses regardless of where they live in the world or their financial circumstances.

MOOCs aim to facilitate the sharing of materials and knowledge among greater groups of learners, being open to anyone, from anywhere.

Open education is moving rapidly into the global spotlight. Regarding the evolution and the growing extent of this “Open” sphere, what balance can we make between formal and personal dimensions of learning?

3 Balance between formal and personal dimensions of learning

Faced with this proliferation of educational platforms, the strength of presence of each dimension (formal and personal) may differ from one person to another. It may be due to several factors, endogenous and exogenous to the same person. Therefore, four situations can occur in relation to the variation of dimensions: an equilibrium; a formal dominance; a personal/informal dominance; a situation at unique dimension.

3.1 Case where the two dimensions are more or less balanced

This can be the ideal situation desired in an academic environment, ensuring a balance between the formal dimension and the informal dimension of learning.

This situation, although difficult to demonstrate, allows the learner to get the best part of each dimension for an effective and efficient learning. This requires a level of autonomy, and a maturity of the learner to keep the formal curriculum as a reference, and to complete it by personal effort.

This situation may arise from the desire of the learner to deepen his knowledge and his mastery of specific aspects of the curriculum.

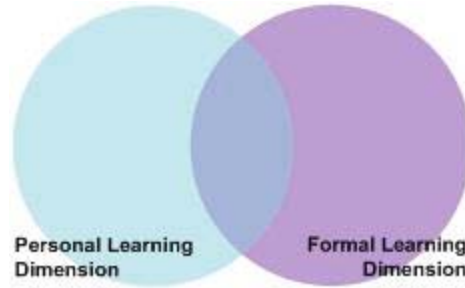


Figure 2 Personal and formal dimensions of Learning: Equilibrium.

3.2 Case where the formal dimension occupies a larger place

This is a situation that is quite prevalent among young learners, who have not yet developed their own learning strategies, and are still essentially tied to formal curriculum, having as a perception that is the teacher who "knows everything" and he is the holder of knowledge and truth.

Therefore, the learner begins to further research, gather information and content outside the formal system, even if the formal dimension remains the main medium of learning.

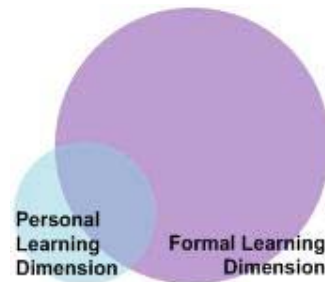


Figure 3 Personal and formal dimensions of Learning: Formal dominance.

3.3 Case where the personal dimension occupies a larger place

Several factors can cause this situation: increased rate of independence, frustration from the formal curriculum (content, container, modes used for the transmission of knowledge, etc.). Then, the mastery of the topic addressed at formal dimension pushes the learner to look forward and go more in depth by varying the sources of learning.

This situation is developed with age, and the gain of self-confidence. Therefore, the learner develops during his experience, a critical view to the formal curriculum. Consequently, he is more able to develop his own approach of learning to bridge the gap and overcome the limitations.

Also, this situation can happen due to a lack of confidence or a lack of interest to the formal dimension of learning. Then the learner tries to develop parallels.

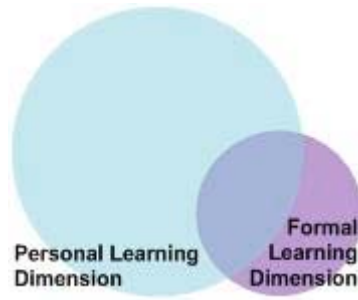


Figure 4 Personal and formal dimensions of Learning: Personal dominance.

3.4 Situation with a unique dimension

In our view, two situations may arise when the learner engages in one dimension of learning. Thus, two contexts can explain this.

The first one, mobilizing only the formal dimension, can be observed among young learners. Because they are still dependent largely on teachers from whom they receive the knowledge and skills within an institutional framework which is naturally the School.

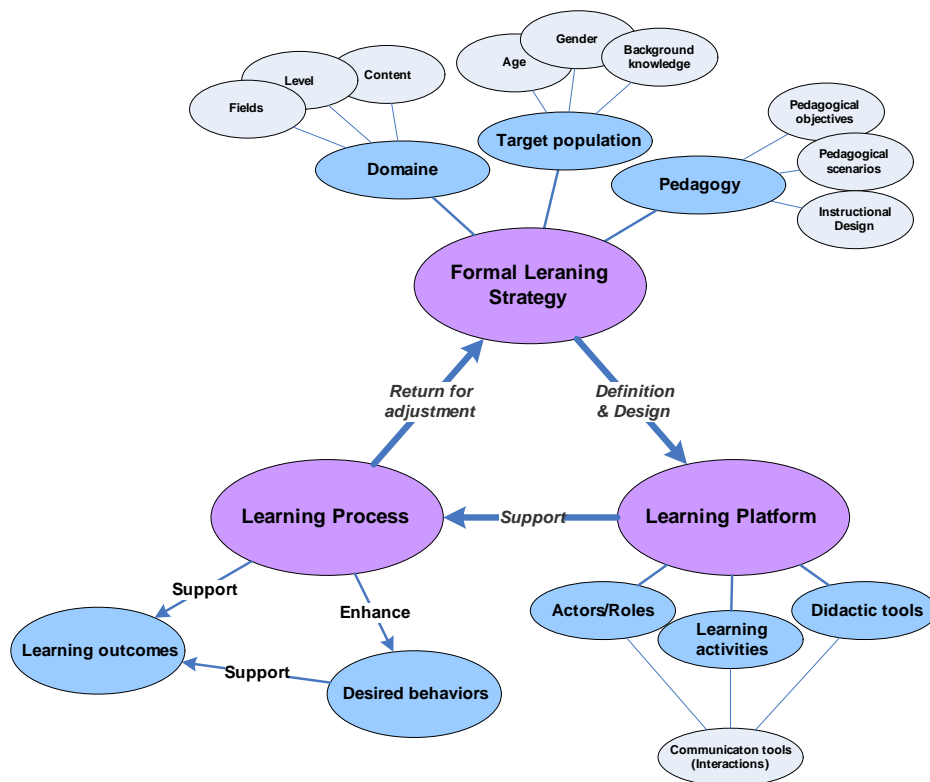


Figure 5 Components of the S2P Learning Model

The second, mobilizing only the personal or informal dimension, in which the learner is enrolled voluntarily in a continuous training curriculum, that can conduct us to the “Long-life Learning”.

4 S2P Learning Model: Two complementary dimensions

The S2P Learning Model was initially designed for understanding the Game-based Learning, seen as a learning approach. It was developed later to reflect a conceptual framework for understanding formal learning initiatives.

Now, it would be appropriate to incorporate the personal dimension in the perspective of an effective understanding learning initiatives.

4.1 Review of the characteristics of S2P Learning Model

In its design, the S2P Learning Model takes into consideration three essential components, namely: Strategy, Platform, and Processes [3].

These three essential layers coexist within a framework of relationships and dynamic interdependence: Definition-Support-Adjustment

4.2 Both formal and informal dimensions of the S2P Learning Model

The S2P Learning Model can describe two dimensions of learning through a continuous interaction between formal and personal layers.

Therefore, the learner could implicitly or explicitly develop his Personal Learning Environment by adopting the S2P Learning Model:

- to develop his own Learning Strategy;
- to make or compose his Learning Platform
- according to his own Learning Processes that he wish support and mobilize.

Therefore, we face a combination of formal and personal dimensions of learning as illustrated in the following figure:

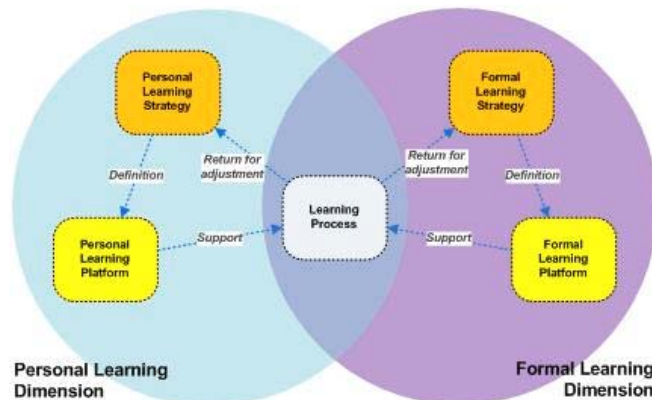


Figure 6 Two dimensions of the S2P Learning Model: Formal and Personal (Informal).

a. Learning Strategy

The Learning Strategy at the formal level is a formalized strategy, defined and declared according to several components. Then it's a shared strategy [3].

At the other side, the Learning Strategy at the personal level is an undeclared strategy (implicit), with individual goals that are activated on demand and according to the need and the context.

So, the main components of the Personal Learning Strategy are:

- the definition of the self-learning goals according to the motivations of the learner: fill gaps; provide enhancements; developments; etc.
- the choice of learning tools and their sequence.

This strategy depends significantly on several individual ingredients:

- the maturity
- the intelligence
- the level of education and cognitive background
- the level of independence and autonomy
- the personal learning objectives
- the individual learning needs
- the availability of information sources or educational sources
- the rate of satisfaction of the curriculum followed and teaching tools available

b. Learning platform

At the formal level, the Learning Platform is defined according to the Formal Learning Strategy [3]. But at the personal level, the approach can vary from one context to another, from one learner to another. Therefore, the learner may, according to the field, adopt or develop search mechanisms. Then, the coincidence, the intuition, the unexpectedness can also be determining factors.

This personal platform can be a combination of several tools that can be sometimes complementary, sometimes redundant in content. Then the choice of educational tools is done on the criteria of potential satisfaction, relevance and completeness of the content according to the objectives and requirements previously defined (implicitly or explicitly) at the Personal Strategy.

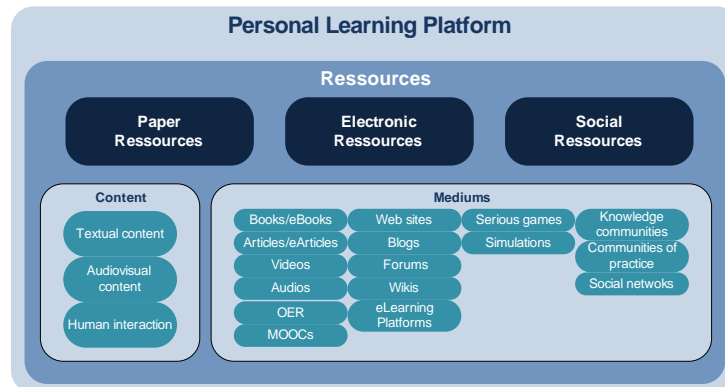


Figure 7 Components of the Personal Learning Platform.

Sometimes, the cost is also involved as a criterion, because some tools require personal financial investments.

The focal point lies then in the flexibility that has the learner to design his own learning platform. This refers to the combination of existing platforms: textual content according to online research or in libraries, online tutorials, videos, social exchange, integration of communities of practice, etc.

While at the formal level, the learner generally follows a curriculum previously defined from a formal learning strategy. Then, The Personal Learning Platform can be defined by the explicit combination of different resources such as paper (traditional) resources, electronic resources, and social resources. So, the learner can combine different type of content and different mediums in his learning platform as shown in the following figure.

c. Learning Process

In the formal S2P, all aspects are working to support and catalyze learning process for better acquisition of knowledge. At this level, we follow a curriculum previously defined where the scope of customization is restricted. It is a shared curriculum as the result of a strategy in order to train a group.

At the personal level, we mobilize individually and voluntarily processes for acquiring knowledge. A voluntary mobilization motivated and catalyzed by interest in learning as shown previously. Then, the singular character is present in the first place.

Different processes can occur within the Personal Learning Process such as: *filtering*; *validating*; *synthesizing*; *presenting* and making information understandable through visualization or logical presentation; *customization* by describing information in context according to the comprehension of the learner; etc.

5 Conclusion

During a Learning Experience, the main issue lies in the possibility to strike a balance between formal and informal dimensions of learning. In the sense that the learner should get the most from the formal dimension because it is cost, investment and commitment that must be profitable. At the same time we must encourage individual initiative to build on the autonomy and "self-care" instead of developing a total dependency.

How can we achieve an optimal combination between formal and personal dimensions of learning, to ensure the most optimal and most beneficial Learning Process to the learner? This question still remains.

The personal dimension can feed the formal dimension by analyzing the behavior of the learner outside the formal system and to try to integrate the meaningful individual elements within the formal curriculum. In this sense, the teacher's role would be to watch over the individual practice of learning to try to pick up the significant signals of personal and individual dimensions, to capitalize them in the formal dimension shared between learners, without burdening the curriculum and instructional schema traced on the formal level.

In this case, we have to go further more in depth, taking into account behavioural and cognitive studies to enrich and extend the model.

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