Hybrid learning spaces - a three-fold evolving perspective

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# Abstract

*Hybrid learning* has become increasingly prevalent in the discourse of academic institutions and educational systems. The term has acquired numerous interpretations and refers to different spaces of learning. This chapter introduces a three-fold evolving perspective of Hybrid learning spaces focusing on historical roots and current meanings. We present *Hybrid as blended*, a synonym interpretation commonly used; *Hybrid as a space of merging interactions*, where connected mobile technology enters the space and adds to its dynamic. And last, *Hybrid as fluid*, to reflect a compound-like space where the boundaries of formal dichotomies are being blurred and learner motivation takes a center stage.

**Keywords**: Hybrid Learning Spaces, Hybrid Learning, Blended learning

# Introduction

”*Hybrid learning*” has become the latest buzzword over the last year during the Covid-19 pandemic. Google Trends (Figure 1) indicates a sharp increase in the number of searches of the term *hybrid learning*, from the onset of the pandemic and peaking during August 2020. The term is used by departments of education, institutions of higher learning and anyone wishing to introduce an innovative and up-to-date educational service or product to the world. Although the widespread use of the term began even before the Covid19 crisis, *hybridity* has become the need of the hour during the pandemic. These days, it feels like anything that is not *hybrid* is outdated and irrelevant.



Figure 1 Hybrid learning in Google Trends, March 2020-February 2021.

Before proceeding on to formal definitions of learning, let us explore some examples of using the term *hybrid* in our everyday and business lives. Hybrid vehicles are already old news. They are vehicles that combine the activity of two engines: gasoline and electric, operating alternately according to driving conditions to reduce air pollution and save on fuel costs. In the field of medicine, hybrid medicine belongs to the field of tele-medicine. Current medical services are partially provided at home, through digital applications and devices that enable medical diagnosis and monitoring, such as ECG, or ear photography. Another example is a hospitalization room that is converted to an operating room within minutes. Among the advantages are multi-functional equipment, time saving, reduction of costs, and effective treatment. A new trend is emerging in the labor market too, where organizations seek to employ hybrid workers. These are multi-skilled workers who can, for example, combine technical skills, such as programming, with marketing skills, financial ability and others. The ability to see the business from different perspectives hold advantages for the organization, such as identifying opportunities, problem solving, innovation, and for the employees’ professional and personal development.

The above examples demonstrate the organizational, personal, economics and social benefits of hybridity for at least some of the stakeholders. However, the frequent use of the term *hybrid* does not suggest that it holds the same meaning in all cases. Moreover, there are various interpretations of the term even in a single field. With regard to education, the Covid19 crisis presents an excellent opportunity to discuss *hybrid* *learning*. What are the different meanings of the term as they appear in the research literature? Are the meanings found related to technological developments?

In the following sections we map out the various meanings of the term *hybrid learning*. The main perspective is on teaching and learning processes and environments, rather than highlighting aspects relating to educational institution management and economic efficiencies. In addition, we suggest an updated meaning *of hybrid learning* to create a common language among researchers and educators. Finally, we examine the contribution of the term to teaching, learning, and learning design.

# Hybrid as blended

In the research literature, *blended* and *hybrid* learning often appear as interchangeable or synonym terms. Some authors are uncertain which term to use and mention them both. “These two terms *blended* learning and *hybrid* learning are used alternatively but refer to the same concept.” (e.g. Olapiriyakul & Scher, [2006](https://link.springer.com/article/10.1007/s11528-019-00375-5#ref-CR26), p. 288). The Eric Thesaurus refers to *hybrid* learning as an obsolete term and a synonym for *blended* learning. Thus, for a while, blended learning replaced hybrid learning, residing under ‘Teaching Methods’.

Garnham & Kaleta define hybrid courses as "courses in which a significant amount of the learning activities have been moved online, and time traditionally spent in the classroom is reduced but not eliminated” (Garnham & Kaleta, 2002). Most courses that were taught at the time (early 2000) started off as face-to-face (f2f) courses. Their definition was based on four experiences of academic staff in the institution from different content areas that transformed their teaching into hybrid. The number of students ranged from 15-200. The purpose of hybridity was to ‘reduce class seat time’ and ‘promote active independent learning’. The instructors reported that this kind of learning enabled them to better achieve course goals than in regular f2f courses, measured by the level of interaction and engagement of learners, flexibility and saving travel time and the quality of learning outcomes. At the same time, the instructors asserted that they had to invest significant time to plan their teaching and to learn technological skills. Students experienced that kind of hybrid learning as positive, stating that it required more effort than passively sitting in a class and that they were required to manage their time in a better way (Garnham & Kaleta, 2002).

A similar definition referring to *hybrid* learning as combining face-to-face learning with access to online learning tools was mentioned by other researchers (Hall & Davison,2007; Watson,2008; Hrastinski, 2019). "Hybrid or blended learning refers to a combination of face-to-face learning, including but not confined to lectures, and online learning" (Garrison & Kanuka, 2004; Reasons, Valdares, & Slavkin, 2005; Means, et al., 2009; Lack, 2013).

So far, the term *hybrid* appears to imply a somewhat technical change in methods of study, as a result of external technological developments that allow for a change in the learning environment, without any specific reference to the complexity that might be involved in teaching/learning. It is a continuation of learning rather than a real change. This is true for the Macmillan Dictionary 2007 Buzzwords list, where blended learning appears as "a method of learning which uses a combination of different resources, especially a mixture of classroom sessions and online learning materials" (Macmillan Dictionary, n.d.).

It was assumed at first that *blended* learning, or diverse teaching methods that utilize online environments, would be a key factor in disruptive innovation in education (Christensen, Horn, & Johnson, 2008). Christensen et al. claim that the traditional educational system suffers from intrinsic problems such as teacher-centered methods and curriculum, unified and fixed learning approaches, and inaccessibility to quality education. They maintain that only hybrid/blended learning will successfully solve at least some of these challenges by creating tailor-made teaching adapted to students’ needs in terms of level, style, topics, and time. Using the internet, students will be able to consume quality content even if there are no such services in their area of residence. However, despite the increase in the number of learners in the blended approach and the variety of possibilities it offers, it seems that a fundamental disruption has not occurred (Christensen, et al., 2008).

Schank (2001) offers a cynical view on *blended learning*. He describes it as being taught both in the conventional way and partially online. The emerging *blended-hybrid* product neither disrupted education nor lived up to expectations. In most cases it preserved classical pedagogy. Educational institutions still control the monopoly of content in teacher-centered curriculum resources. While there are digital versions for some of these resources, teaching methods remain basically the same. Christensen retreated from his own earlier prophecy: “The models of blended learning that follow the hybrid pattern are on a sustaining trajectory relative to the traditional classroom. They are poised to build upon and offer sustaining enhancements to the factory-based classroom system, but not disrupt it” (Christensen, Horn & Johnson 2013, p. 3).

The evolution of the term *hybrid* is perhaps a natural evolvement of a term that was used for a while but was later discarded. So far, *hybrid* and *blended* as synonyms have focused on the place and time dimensions of learning. In other words, they refer to the varying ratios between f2f, physical meetings and online learning via digital platforms/resources. Yet, the term *hybrid* is on its way to gaining a different dimension. Garrison & Kanuka (2004), in a widely cited paper distinguish between *blended* and other forms of learning which include opportunities for online learning. They present these forms of learning on a continuum: f2f that incorporates technology, blended learning, and online learning (Fig. 2). Their conclusion is that *blended* is more complex since it represents a fundamental reconceptualization and reorganization of the teaching and learning dynamic (Garrison & Kanuka, 2004, p. 97).



Figure 2 A continuum of e-learning, Garison & Kanuka (2004)

Twigg (2003) classifies *blended learning* as five models: The **replacement model**. Face-to-face lectures are substituted partially or fully by online material (flipped classroom). The **supplemental model** where students are asked to attend the same number of class meetings, but to access technology or web-based materials as additional resources. The **buffet model** provides participants with a list of learning activities that includes both face-to-face and online formats. Choosing activities and materials from this selection is according to what is beneficial to their own objectives and interests. The **Emporium model** states that the best time to learn something is when the student wants to rather than when the instructor wants to teach, therefore it eliminates all classroom meeting and allows the students maximum personalization. The **fully online model** assumes that instructor must be responsible for all tasks, interactions and evaluations.

The above-mentioned review of what might be called 'first generation' *hybrid* meaning indicates that there are two defined worlds: one in which learning takes place face-to-face, and the other where learning takes place through digital means, through distance learning and in the online environment. Each of them is a separate and distinct entity and their combination is a heterogeneous mixture. That is, it is not uniform in the types of sessions and their ratio/quantity vary as necessary. In some respect, the properties of each of these modes of learning are kept separate, just like oil and water which do not mix. Furthermore, in this mixture, most of the control over online vs f2f ratio and course content are in the hands of the instructor or institution. The considerations are often related to the convenience of operating an academic institution curriculum or to economic factors, but they are usually not pedagogical considerations.

However, Eric Thesaurus describes *blended learning* with more elaborate pedagogical consideration, adding to this approach other combinations, such as individual and group instruction, self-paced instruction, and the lecture method. The questions to be answered are, therefore, what makes the combination more than a technical platform, a mode of communication of the knowledge resources, beyond time and space? How does pedagogical design of learning fit into this and is there more to *hybrid* than *blended*?

At this point, we suggest referring to the commonly used term *hybrid-flexible*, or the *hyflex* approach (Beatty, 2008). *Hyflex* is an instructional approach for course formats that combines face-to-face and online learning. Each class session and learning activity is offered in person, synchronously, and asynchronously online. It is the students' decision how to participate in the class activity. To address the need for flexibility, educational institutions make attendance in class more accessible in a variety of ways.

A *hyflex* course presumably allows a student to choose the time and place in which to study. Although the accessibility of the content varies, the instructor makes the choice and depends upon the constraints of the Covid19 crisis. *Hyflex* basically means that the institution offers flexibility not only in terms of the students' physical or digital presence, but also in the modes of task completion, whether in pairs or groups. Although *hyflex* embodies principles of active learning, it is still the teacher who leads and directs the course.

# Hybrid as a space of merging interactions

*Hybrid* as *blended* presents an approach that focuses on the location of the learner: in a classroom or in an online learning environment. Yet, when the students have a smartphone connected to the internet, their physical location is irrelevant. Thus, the differentiation between two somewhat static states – f2f and online, progresses to a more dynamic environment: "Hybrid spaces are dynamic spaces created by the constant movement of users who carry portable devices which are continuously connected to the Internet and other users" (De Souza e Silva, 2006, p. 262).

The state of being ‘always on’ changes our perception of the two environments and defines our communication as either f2f or f2 computer. Thus, the distinction between physical space and digital space is somewhat obscured. Thus, a *hybrid* learning environment utilizes a mobile digital interface that obliterates the barriers between f2f and f2 computer, blurring confined limits.

A state of constantly being connected adds a social dimension to the learning experience, reflected in interfaces such chats, online games, and social networks. Thus, another version of hybridity is manifested in a combination of three overlapping spaces: mobile (virtual), social, and physical spaces: "*Hybrid* spaces merge the physical and the digital in a social environment created by the mobility of users connected via mobile technology devices” ([De Souza e Silva, 2006](https://www.researchgate.net/publication/249670152_From_Cyber_to_Hybrid), p. 263).

Metaphorically, hybridity might be moving away from the concept of “mixture” towards that of a “compound”. In a compound, the materials do not retain their initial properties, but rather blend with each other and a new material evolves, with its own properties that are different from the properties of each material constituting it. For over a decade, the youth do not have the awareness of entering a different space by web surfing. rather this space is part of their extremely vivid actual reality ([De Souza e Silva, 2006](https://www.researchgate.net/publication/249670152_From_Cyber_to_Hybrid)). There is a reality that is characterized by overlapping environments, created by their integration via mobile devices. The impact of mobile devices and availability of the internet since 2006 is still ongoing and intermixed reality perceptions are at present more widespread and relevant.

As early as the 1930’s, Dewey (1976) emphasized the importance of learning environments in the educational and learning process. According to Dewey, one of the important roles of a teacher is to create a learning environment suitable for raising children, by arranging the tools and materials that may be used as stimuli and by activating those strengths and interests of the child that are conducive to learning and developing. By the term 'learning environment' Dewey meant the immediate environment of the child, for example the farm environment or one that is rich in equipment and allows space for movement and action. This approach has inspired a location-based mobile learning approach, tailored for current technology and demands. It adopts the benefits of mobile technological methods (e.g. inquiry-based, visual display of information and locating information relevant to a place) for learning outside the formal classroom. Thus, the premise that the learning process can take place anytime and anywhere, through interaction with local authentic places, makes it possible to design open-ended learning environments that provide ample possibilities for creating a meaningful learning experience. Learning tasks can be varied, for example discovering basic information about locations, projects in which students build place-based learning paths in a historical context, application development, mapping urban information, and contributing to the community. The environment may also contain resources found in mobile technology. However, the environment seems to be a key component in engaging in learning, as Goodyear explains: "hybrid learning spaces or novel complex learning spaces are “spaces in which students’ activity is situated and supported by rich mixtures of material and digital tools and resources.” Goodyear refers to the important role students played “in co-configuring the learning spaces and/or the learning tasks” referring to the ways the students work with their peers (Goodyear, 2020, p. 1045).

The term *situated* *learning theory* is relevant to our discussion. This theory suggests that learning can be unintentional and exist within authentic activity, context, and culture. In contrast with most classroom learning activities that involve knowledge which is learned out of context, Lave argues that learning is situated within a certain activity, context, and culture. It is also usually unintentional rather than deliberate (Lave & Wenger, 1991; Wenger-Trayner & Wenger-Trayner, 2020). It is the greater context and both deliberate and unintentional learning, that play a role in hybrid learning and the various spaces it encapsulates.

One of the additional implications of the combination of the three components, mobile, social, and physical, is that learning becomes anchored in a context of social meaning. Learners do not engage in intellectual discussion only with regard to a specific content, but are involved in actions as whole human beings and as part of a social environment. Learning takes place in social participation (Lave & Wenger, 1991; Wenger-Trayner & Wenger-Trayner, 2020). Instead of asking what types of cognitive processes and conceptual tests are included in the process, they ask what types of social involvement provide an appropriate context for learning to occur. The social context for learning provides a central stage in Trentin’s perception of HLS. “HLS-teaching concentrates on the **relationship among learners,** and that between learners and the knowledge to be acquired. Students are helped to be more **autonomous**, **proactive** and responsible towards their own **learning processes''** (Trentin, 2015, p. 6).

This socio-constructivist paradigm which focuses on the relationship between learners as autonomous, pro-active entities responsible for their learning combined with their always being online produces an infinite potential of learning possibilities, but not necessarily those realized in an educational institutional context. When institutions, accustomed to adopting curricula and having their teachers play the role of curriculum technicians who execute them or at most interpret them, realize that there is a separate world of unrelated learning outside the walls of the institution, they try to close the gaps. One way to do this is the Bring Your Own Device (BYOD) approach (Alberta Education, 2012). Although this strategy allows individuals to use their private devices within the organization or educational institution, it also has clear economic benefits, it changes the rules of the game because it changes the learning environment within the institution itself.

Trentin agrees with the dynamic aspect of hybrid spaces and the constant movement of users carrying portable devices. He asserts that if we want to create sustainable models for education, we need to understand the conditions as well as the challenges for learning that exist in *hybrid* learning spaces. For example, teachers do not have enough training to plan activities suitable for such an environment. While in traditional teaching the teacher conveys knowledge, the teacher’s role in a hybrid environment should be guiding the learners. Learners are not passive when they interact with content, the teacher, and their peers autonomously and in groups. Learning is characterized as active and collaborative and the content has a flexible attribute to it. The role of technology here is to encourage learners and contribute to the learning environment. Trentin presents a hybrid learning space in a two-dimensional model on the axes onsite-online and individual-collaborative learning (Fig. 3).



Figure 3 Bi-dimensional space model for hybrid learning solution (Trentin, 2015).

However, from here to the design of hybrid learning by teachers in educational institutions, the distance is great. Teachers require scaffolding to help them understand what learning structures are possible in hybrid environments to be able to achieve the required learning goals. In our opinion, teachers must compromise between the learning goals that were set by the academic institutions and the variety of options available for learning. It seems to be a way to enable sustainable innovation. This leads to the use of the term *design pattern*, which refers to practical knowledge formulated by experts that can be applied in different contexts and be shared with others (Warburton & Mor, 2015).

Köppe and colleagues (2017) suggest a fresh look at *hybrid* education that utilizes educational design patterns (Köppe, Nørgård & Pedersen (2017). *Hybrid* education is “the use of educational design patterns that actively strive to cut across, circumventing or upheave traditional dichotomies within education such as **physical-digital**, **academic-nonacademic**, **online-offline**, **formal-informal**, **learning-teaching** and **individual-collective**. In doing so, hybrid education invites uncertainty, open-endedness, risk-taking, experimentation, critical creativity, disruption, dialogue and democracy (back) into the heart of education” (Köppe et al., p. 1). Their definition provides tools for the teacher planning her lessons to utilize educational design patterns. The practical aspect of the definition is the use of design patterns into which every teacher can mold their subject material and learning goals. Within these design patterns there is a continuum, from traditional teaching to educational methods in the digital age. Köppe’s definition reflects critical pedagogy, utilizing democratic values that seem to have been neglected in traditional learning methods. It attempts to break down a homogenous reality into multiple meanings and possibilities. The result is an eclectic, multi-dimensional reality with a broader pedagogical potential. This potential may be realized through the choice and combination of dimensions and is repeatedly redefined within a design pattern for learning (Köppe et. al 2017).

# Hybrid as fluid

So far, the discussion of hybridity, both **hybrid as blended** and **hybrid as a space of merging interactions**, has dealt with the way in which hybrid addresses learning as a part of a formal framework, which is usually bound by systems, circumstances and constraints such as place, time, and budget. Institutions need to translate learning to the framework and the learners’ needs such as, degree certificate, curricula, goals, assignments, and grades. Whether face-to-face or digitally, institutions use various systems to monitor students' learning processes, and determine academic eligibility accordingly.

However, *hybrid* in its fluid meaning emphasizes something else. **It is the learners' choice that crosses boundaries rather than constraint**. The choice is the result of an independent will of a person and is not dictated by institutions or prescribed rules. True choice is possible only when there are no boundaries, or more precisely, when boundaries are blurred. Only then the individual can be fully autonomous. In this sense, *hybrid* has the characteristics of self-regulated learning.

“Fluids, [..] neither fix space nor bind time” suggests Bauman (2013), describing a characteristic of this era. Fluids are constantly ready to change form, and thus space is not a constraint for them, but they are affected by time. Such is hybrid learning at this time (Fig 4).



Figure 4 Colourful fluid mixing in Fluid Simulation app, hybrid as fluid.

Stommel (2018) claims that “**all learning is necessarily hybrid”.** According to him "In classroom-based pedagogy, it is important to engage the digital selves of our students. And, in online pedagogy, it is equally important to engage their physical selves" (Stommel, 2018). He makes a distinction between *blended* learning, which he relates to as tactical, referring to different combinations of change in the learner's position, while *hybrid* pedagogy is a strategy that changes the concept of place and brings the types of learning that occur in physical and virtual spaces into a dynamic place. Therefore, he asserts that the term *hybrid* in hybrid pedagogy is not just hybrid learning but he suggests that we think holistically about the variety of types of hybrids that result from the ways we live our digital lives, both in academic and non-academic spaces. In this somewhat philosophical observation, Stommel refers to an educational conception as a whole, which regards the formation of individuals’ human identity as the center of the educational act. It is not the result but the process itself (Stommel, 2018).

In *hybrid* as *blended* the meaning of hybridity is rooted in the somewhat ‘physical’ location. In hybrid as merging interactions, the meaning is rooted in the environment, while in *hybrid* as fluid, hybridity is rooted in the learner’s autonomous identity. We support Stommel’s view of ‘process’: a person does not belong to only one cultural group, but forms her identity in various, changing cultural circles, while each of them sharpens and changes her identity (Burke, 2006). The process emphasizes identity as an unfinished process but which is revealed gradually to the person and her environment throughout her life.

People undergo this journey of discovering and shaping their identities throughout their lives. The role of education, formal or informal, is to help the person discover and shape her identity. "Hybridity is about the moment of play, in which the two sides of the binaries begin to dance around (and through) one another before landing in some new configuration." (Stommel, 2018, location 5441) It is expressed in the crossroads of binary pairs : "Physical Learning Space / Virtual Learning Space; Academic Space / Extra-academic Space; On-ground Classrooms / Online Classrooms; Permanent Faculty / Contingent Faculty; Institutional Education / Informal Education; Garden-walled Academia / Open Education; Scholars / Teachers; Academic Product / Learning Process; Disciplinarity / Interdisciplinarity; Performed (School-y) Selves / Real (Vulnerable) Selves; Individual Teachers, Students, and Scholars / Collaborative Communities; Learning in Schools / Learning in the World; Analog Pedagogy / Digital Pedagogy; Use of Tools / Critical Engagement with Tools; Machine and Machine-like Interaction / Human Interaction; Passive Learning / Experiential Learning; Teaching and Learning / Critical Pedagogy" (Stommel, 2018, location 5441).

These dichotomies and the continual crossover between them, create a network of possibilities, in which every node is temporary for the specific need in real time. Autonomous learners make decisions about their own learning all the time. They decide what and when to study, they manage their own time, they decide what resources are appropriate for the learning goals they have set for themselves, adapt learning strategies, and create valuable new knowledge for others in the world. They expect to contribute to the learning of others as well as to their own learning and see themselves as experts in specific contexts. Technology is around us all the time and learning is limited without it. The learners’ identity creates learning and their learning changes their identity. Unique identity is the unifying factor in any framework in which they find themselves. There is a mixture of work groups and leisure groups, between which they move easily. They gain new knowledge and incorporate it into their current understanding so that their expertise changes dynamically to suit their current needs. This is a part of being a lifelong learner. Since identity is fluid, learning is fluid too. Fluidity in physics is characterized by a liquid substance that has properties of changeability. It flows constantly, depending on changes in the environment, which are rapid and numerous. They are also less predictable than solids.

Let us zoom-in on one example to demonstrate the fluid aspect of hybridity. This example is a class in a course relating to future/active learning spaces, taught by the second author for M.Ed. students in the first wave of the Covid19 in Israel. In this synchronous class we hosted a lecturer from abroad who spoke about the design and impact of active learning environments. One of the students joined the zoom meeting from her cellular phone in her car, and while the presentation went on, we actually could follow her attentive participation from the car, then the walkway, elevator and finally switching to her computer at home - where she also asked an extremely relevant question. Furthermore, she took some of the insights presented (about learning spaces) to her principle at school where she saw this knowledge to be so relevant and practical as to apply (changing the library to active learning space) and corresponded with the class and guest lectures about it.

This example demonstrates how the learning process continues almost uninterruptedly through different spaces, formal and informal, from theory and application, academia and school, over different digital platforms, resulting in enhanced learner motivation to bridge them all.

Metaphorically speaking, a 3D container holds hybrid learning in its fluid state dictating its limitations. Educational systems try to adopt the fluid hybridity components via trends of learning innovation that are rooted in understanding this perception. Examples would be micro-accreditation that makes it possible to study small mini courses to be fulfilled from any place and time; MOOCS, where one can choose a subject, lecturer, and university to study free of charge; and flexible learning environments in schools or flipped classrooms. These are attempts by educational systems to adapt their understanding of fluid hybridity and apply it so as to remain relevant and adapt to the needs of learners. Yet a true fluid hybrid resists fixed boundaries of teacher, time, place, curriculum, goals, and methods of teaching, learning and assessment. In fact, the attempt to define the concept of hybridity as fluid, would be a contradiction to its meaning.

This raises questions about the future of higher education, how to increase its relevance to all three interpretations of hybridity and accommodate them with appropriate learning spaces.

# Discussion: Integration of insights

In the attempt to encapsulate *hybrid* learning and the space in which it operates in higher education, we presented an evolution of interpretations and meanings of the concept, as related to education and learning. We first looked at *hybrid as blended*, emphasizing the interchangeability between the meaning of the terms. Essentially *hybrid as blended* focuses on the place in which learning occurs, whether online or f2f and the need to replace one with the other, sometimes due to technical or economic considerations. In this the hyflex model (Beatty, 2008) blends in seamlessly.

We then presented *hybrid* as *a space of merging interactions*. Here *hybrid* learning spaces are created by the constant movement of users who carry portable devices connected to the Internet, thus are dynamic spaces (De Souza e Silva, 2006). This Hybrid beyond blended reflects the merge of the physical and the digital together with a social network and environment. It might be supported by design patterns and/or diverse learning environments. Hybridity here is not a mixture but rather approaches the concept of a ‘compound’. There is a greater relevance of learning as being situated in a specific context and HLS-teaching concentrates on the relationship among learners, and between learners and the knowledge to be acquired.

Thirdly, we looked at a new proposed interpretation: *hybrid as fluid*.Here fluidity represents a greater flow in and between dichotomies such as formal-informal, with-without technology, homework etc., with emphasis on a motivational learner identity who move autonomously between them. In these *hybrid* spaces of learning there are no ‘just in time rules’, learning proceeds in and beyond technology and space, instigated by the drive for learning and curiosity. It is an ever-changing hybridity that is not bound by conformity. Fluid hybrid learning is characterized by breaking all boundaries, as necessary.

In this respect there is something about *hybrid* as fluid that has a threshold nature, transient and lacking marked signs. Since we are in a constant state of needing to learn fast, in real time, this learning is always instigated from a question or an inquiry. In the same way that water uses or can be freed from conduits to sustain it, learning can be freed from the norms that were accepted or from confining scaffolds.

More about the next phase of hybridity will be in the forward-looking chapter (Mor/Köppe et al, this volume).

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