

ConnectLearning - an answer for the new challenges?

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Summary

The latest reports seem to announce a new world of learning, in which students are connected through technology and internet. The increasing influence of the world wide web has led to fast-paced knowledge cycles and to New Millennium Learners, who are supposed to have different learning styles. However, in this article we don't approach today's youth as some kind of alien who learn in a totally different mode: they just incorporate new ways to access information and to socialize, and hence to the learning process.

While we agree that learning scenarios are changing their form and inner organisation through technologies, it is questionable if a new concept of learning is emerging. This article is thus an attempt to analyse whether the undoubtedly new social challenges are stimulating the demand for a new form of learning and if the existing theories are still applicable to today's learning realities. Therefore, we overview social changes, analyse the concept of eLearning 2.0 and outline how existing theoretical approaches capture the reality of learning. A special emphasis has been put on analysing the nature of new scenarios, such as a special type of networked learning (ConnectLearning), based on Connectivism and Constructivism and situated learning approaches.

We conclude that change has to take place in the learning scenarios, as the required theoretical foundation has been in place and under discussion for the last two decades. Networked learning is not about a new paradigm or a fundamentally new model of learning, it rather describes how a consolidated concept (based on innovative ideas and building blocks of existing learning theories) can help to satisfy the demand for "new" learning scenarios which are self-organised, learner-oriented, situational, emotional, social and communicative.

Keywords: networked learning, learning scenarios, eLearning 2.0, connectivism, constructivism, ConnectLearning

1 Introduction

In this article we point out that the often used term "new learning" refers to large extents to what can be described as "networked learning", and that this kind of learning can be anchored in elements of already elaborated and exiting learning theories. Latest reports emphasise the increasing influence of the internet and the accompanying connectedness of people and their implications for learning (OECD, 2007; Smith et al., 2007; Rainie et al., 2006; Dutton/Helsper, 2007). In phases of such technological and conceptual change it is important to consolidate concepts, and validate their innovative nature, as well as to differentiate how the new relates to the existing and if existing theory frames are suitable to grasp and analyse the emerging.

One underlying factor of what is called "new learning" is the notion of networked learning which enables learner to be in contact to each other through technology. Newly established learning

environments can be characterized (among others) through a more and more connected, global and faster world, which is shaped by the internet. Furthermore, what is referred to as new learning can be understood as a reinforced demand for competences as result of learning rather than knowledge acquisition. While this demand is not new, it seems that the opportunities of connected learning hold promises to finally give the existing demand new relevance. However, it is questionable whether really a new learning mode exists or in fact it is rather a change of awareness and relevance of these aspects.

In order to ground these suggestions in the existing educational theory frames we will first describe new challenges and learning forms and then analyse these against existing learning theories.

Therefore, the article deals initially with an analysis of the actual challenges (section 2). Based on this, the development to learning 2.0 and the intertwined learning cultures are considered (section 3). Subsequently, the basic intention of a learning model is presented, which can be characterized as networked learning. Cooperative learning¹ concepts are highlighted as theoretical reference points, whereas situated learning approaches and the theoretical design of Connectivism (e.g.) are looked at closer since cooperative learning and networks are assumed to have an increasing relevance.

Consequently, we want to contribute to the concept's definition of networked learning, which aims to serve the new objectives and learning contexts, as well as to clarify it.

2 Characteristics of a “New Society”

In this section some of the new challenges and their relevance for the learning process will be looked at closer - like the rapid information increase, the growing claim for competences (i.e. employability) as well as new access to information.

2.1 Rapid Information Increase

Since the Internet's raising importance, the documented and available knowledge is growing faster than before; resulting in increasingly rapid knowledge cycles, which lead to a voiding of knowledge after five years (Giarini/ Liedtke, 1998), in the computing segment already after two years (Braner/ Lackmann, 1993). Thus, it appears that a technological leap is no longer a process over several generations, but rather a change, which has to be performed several times within one's work-life. Those changes are not limited to a special field; in fact the whole working environment makes great demands on employees due to increasing internationalization, the use of virtual tools for real collaborations, rapid increase in the amount of available and relevant information, reduction of product life cycles as well as the resulting technological development (Mohr/Otto, 2005).

Consequently, it is not enough any more, to acquire a qualification at the beginning of one's work life; instead one has to renew one's knowledge steadily throughout the whole work life. (Prague Communiqué, 2001) Thus, those are better-off, who have learned to learn and do not only possess expert knowledge. The ability to make new knowledge accessible and to update expert knowledge gains an increasing importance. Analogue, the ability to synthesize and recognize connections becomes a crucial skill in the information age.

¹ “Collaborative” learning is often differentiated from “cooperative” learning in English (e.g. Dillenbourg, 1999). However, in German the terms are mostly used synonymously as a dichotomous differentiation is in reality often artificial. (Hinze, 2004) In this sense, the differentiation is more seen as an indicator for the particular emphasis of the learning process. Consequently, “cooperative” and “collaborative” learning will as well be used synonymously in the following text.

Two important skills for learning in the modern society are highlighted through learning theory, especially connectivism²: The ability to pick out current information and the ability to select the relevant information. Siemens explains it as follows: “The capacity to know more is more critical than what is currently known. Knowing where to find information is more important than knowing information.” (Siemens 2008).

2.2 Employability and the move to competences

Beside the challenge of rapid information increase, competences - rather than knowledge - are more and more demanded. Possessing knowledge is no longer enough to be “employable” (Prague Communiqué, 2001; The official Bologna Process website 2007-2010). Competences are intertwined with the idea of making learners “fit” for the labour market to deal productively with the existing competition and shape ones own biography (i.e. “be employable”) as well as with the context of lifelong learning (e.g. The official Bologna Process website 2007-2010).

However, the concept of “employability” is not a new one. As a goal of higher education, it is discussed since the 90s and subsequently is given importance in the context of the Bologna Process (e.g. The official Bologna Process website 2007-2010). Most of the time “employability” has been defined quite vaguely, as for example by McKenzie and Wurzburg (1998, p.13) as „the capacity to be productive and to hold rewarding jobs“. We believe that for today’s world a more comprehensive definition is suitable, as it is expressed by Blancke, Roth and Schmid (2000): “Employability means the skill of a person to offer his/her labour on the basis of her/his expert as well as decision making and responsibility competence, value creation and productivity skill to enter respectively maintain in the labour market.” (ibid: p. 9). By means of the definition it becomes clear that there is no general “education plan for “employability”” or a “public employability exam”, which regulate the aims and contents. Instead the criterion for employability is set through the demands on the labour market. Hence, employability ranges over three aspects:

1. Offering: The existence and ability to offer ones individual qualifications and competences.
2. To enter employment: Search for, find, realize and manage employment.
3. To update: The ongoing willingness for adaptation of the own competences to the labour market’s demands.

Employability comprises furthermore subject matter, methodological, social and personal competences as well as individual attitudes, motivations and values. Moreover, flexibility, mobility and “to think the own life business-like” are also relevant. Hans-Jürgen Pongratz highlights hereby an economic perspective and proposes hence the term “labour entrepreneur” (Voß/ Pongratz 1998).

From a more emancipated perspective, then, the concept of “employability” focuses more on the ability of an individual to make independent decisions, and therefore strengthen his/her responsible actions, whereby it is referred to concepts like “citizenship” and “civil society” (ibid). Nevertheless, there are also critical voices like Ulrich Teichler (2007), who criticizes that the term “employability” would be misleading for an academy-debate since it refers too much to dimensions of the labour market and employment. He suggests instead establishing “professional relevance” of education processes as term (Teichler 2008). Following all these aspects a clear move towards competences becomes visible, which is also emphasised by recent regulations like the Bologna Process and the European Qualification Framework. (Reichert/ Tauch, 2003) Learners need therefore self-learning and self-organizing skills to keep up with the new challenges.

² This can amongst others be concluded from the Prague Communiqué (2001), and is also emphasized in Siemens’ Theory of Conectivism to which we made reference earlier.

2.3 New Millennium Learners

The term “New Millennium Learners (NML)” relates to students and their “new” way of accessing information and to socialize. Accordingly, latest reports and national surveys demand new education methods respectively tools to achieve greater student engagement. (Canadian Council on Learning, 2006; National Survey of Student Engagement, 2007) Various other studies (OECD, 2007; Smith et al., 2007; Rainie et al., 2006; Dutton/ Helsper, 2007) report on an increasing adoption of computers, Internet usage, social bookmarking etc. for learning as well as for teaching. Especially, the learners use a wide array of digital tools in their day-to-day life: To play, socialize/collaborate, gather information, etc. (New Media Consortium, 2007).

However, the question remains, whether this leads to “new learners” with new learning modes or whether it is not rather only about new communicative devices (e.g.). Regarding the actual education system reform (e.g. the Bologna Process) the postulation for new concepts itself is not surprising - but it seems anyhow to be questionable whether the justification (new learners) is the right one (Schulmeister, 2008) as in many aspects the “Net-students” are not different to the ones before. This can be underlined by the role of peers respectively friendships, which have not lost their relevance for the process of individuation (Krappmann, 1993) and moral development (Keller, 2005) through the new media. The new media are hence mere communicative devices to communicate effectively with peers and are no substitutes for the communication act itself, which is also supported by a report of the Canadian Media Awareness Network (2005): “[t]he majority of young people have integrated the Net into mainstream activities that strengthen their connections to their real-world communities and enrich their social interactions with peers.” (Trends & Recommendations, p. 4)

Thus, today’s youth does not learn in a totally different mode; they just incorporate modern tools respectively methods during daily life for accessing information/socializing and hence for the learning process. Bennett et al. (2008) explain on this further: “While technology is embedded in their lives, young people’s use and skills are not uniform. There is no evidence of widespread and universal disaffection, or of a distinctly different learning style the like of which has never been seen before. We may live in a highly technological world, but it is conceivable that it has become so through evolution, rather than revolution. Young people may do things differently, but there are no grounds to consider them alien to us. Education may be under challenge to change, but it is not clear that it is being rejected.”

During the analysis of the actual challenges, we made visible that the increasing influence of the internet led to increasingly rapid knowledge cycles, which necessitate life-long learning. Life-long learning is also emphasised by the Bologna Process, which points out a further trend - “employability” and the move to competences. However, the increasing influence of the internet led also to another aspect: New Millennium Learners, who are supposed to have different learning styles. Anyhow, we highlighted that today’s youth is not alien; rather they use new ways of accessing information and to socialize. A change is rather required for education / learning scenarios, which will be examined in the next section.

3 Moving to Learning 2.0 - New Learning Cultures

After having discussed the developments, which drive the demand for educational innovation, the following section will discuss the required learning mode’s change from teaching to learning.

3.1 A new mode of learning?

E-Learning is often discussed as a methodology for meeting the challenges of new learning demands outlined above. While the first generation of e-learning has been primarily a means for distributing information and learning materials, we currently observe the adoption of web 2.0 technologies in e-learning scenarios. This adoption facilitates participation and interaction between students rather than to focus on receptive modes of communication. However, we

think that this change of technological possibilities is less important than its potential to enable new educational approaches, which result in a better fit of graduate profiles to market needs.

The demand for educational innovation is driven by the described developments. While students in 'e-learning 1.0' environments have been largely concerned with mastering the acquisition of knowledge, 'e-learning 2.0' approaches need to step up and encourage reflection and competence development.³ Like for e-learning itself, we can offer no concise definition of the term e-learning 2.0. It is not about further development, a new paradigm, or a replacement in the sense of a new release. Strictly speaking, it is not even a new technology, a new model of learning, or a new, separate, innovative variety of e-learning. E-learning 2.0 rather describes a number of developments, trends, and points of view, which require a change from teaching to learning. This changed point of view essentially connects e-learning with five characteristics:

1. Learning has become ubiquitous; it is no longer restricted to the classroom, but evolves in many different contexts;
2. Learners increasingly take on the role of organisers;
3. Learning is a life-long process; it has many episodes, and is not (only) linked to educational institutions;
4. Learning takes place in communities of learning: Learners participate in both open and restricted communities;
5. Learning is informal and non-formal; it takes place at home, at the work place and during leisure time, and it is no longer centred around teachers or institutions.

However, while new technologies arrive at a neck-breaking pace, the underlying educational scenarios are slow to respond. In order to reap the benefits of these new possibilities and to step up the ladder, we suggest that e-learning 2.0 has to turn to competence oriented pedagogical models. While e-learning 1.0 follows a broadcasting logic, which is based on the idea of teaching as a transmissive process. E-learning 2.0 comprises the creation of a new kind of learning platform, which is enhanced by Social Software: this new platform design moves beyond closed Learning Management Systems (LMS) in which the presented learning material remains disconnected from the open content in the Internet; in the new 2.0 perspective LMS serve as gates, which offer students informed entries into the web. Teachers function as signposts in the way that they make micro-content available in portals, which open the door to self-directed learning. The teachers negotiate together with students their learning objectives; these objectives are noted at the beginning of the course - for instance via blog entries or podcasts. Reconfigured with the potential of web 2.0 technologies to enhance communication, collaboration, and peer-interaction, the current e-learning practice is gradually moving closer to the constructivist learning rhetoric, which is a long-term subject in pedagogical literature.

3.2 New Learning Cultures: Lifelong, informal, self-directed

The outlined changes also evoke new learning cultures. Rather, new forms of learning are emerging, which are self-directed, quick, flexible and aimed at problem solving. Informal learning "which is developed in oblique life and experience contexts outside of the formal educational institutions" (Dohmen, 2001), is becoming the focus of the discussion once more.⁴

E-Learning 2.0 is about learners learning in a self-directed way in social networks. From a (constructivist) *learning-theoretical* perspective, advocates of e-learning 2.0 fundamentally question the "possibility of indoctrination". This is argued for by saying that a self-directed system (learner) cannot be determined by its environment but only perturbed and stimulated by it. Moreover, it is argued that learning does not function solely by putting forth *external* requirements - learning, as it is understood - cannot be planned without the learner (cf. Holzkamp, 1993: 184). The concept of self-directed learning comes to be of enormous

³ For a more elaborated definition of e-learning 1.0 and e-learning 2.0 see Ehlers 2008.

⁴ It comprises, as is known today, 70 - 80% of all learning activities. In his latest book, Jay Cross talks of only 10-20% of all learning being acquired in formal learning scenarios while 80% happens through informal learning. He demands a formalizing of informal learning and an informalizing of formal learning. Nevertheless, formal education has a much larger meaning today than the informal one (Cross, 2003).

importance to e-learning 2.0 - from an *educational-theoretical* point of view. Self-directed learning is often understood to be a *generic term* for all forms of learning, in which the learners can determine and be responsible for their learning processes respectively tasks, methods and amount of time invested by themselves (and/ or take part in the decision) (Deitering, 1995: 45).

The shift from a distributive mode of e-learning to a collaborative mode of e-learning, from a knowledge transfer model to a competence development approach, opens not only the opportunity to make the difference but also poses great challenges to the planning, organisation and provision of e-learning.

Table 1: Characteristics of the Distributive and Collaborative E-Learning Model (Ehlers 2007)

e-learning model	Distribution Model	Collaboration Model
Characteristics		
Goal of teaching/ learning	Knowledge, Qualification	Competence
Knowledge is	Stored, Processed	Constructed
Paradigm	Reproduction, Problem solving, Understanding Remember	Reflection ⁵ , to invent new experience active social practice
Technology use	Presentation, Distribution, Information	Collaboration, Communication
Learners mode of involvement	Acquisition Metaphor	Participation Metaphor
Teacher is	Authority or Tutor	Coach, Player
Teacher activity	Teaching Helping Demonstrating	Collaboration, interaction oriented practical experiences
Interaction type	Transfer model	Communication, Exchange (Interaction) model
Assessment Type	Knowledge Reproduction Test, Multiple Choice	Performance, Skill application, Evidence based assessment, e-portfolio

In addition to that, the constructivism opens a second perspective on knowledge: „to acquire knowledge“, „to share knowledge“ or „to solve problems self-guided“ (Arnold/ Schüßler 1998, 78). In this sense it is important for competence development that learning situations are created, in which self-organised, learner oriented, situative, emotional, social and communicative learning is supported (Mandl/Krause 2001; Zawacki-Richter 2004, 262). To change the e-learning mode from a distributive mode of “learning material supply logistics” to a mode of CSCL, creates greater opportunities for learners to develop competencies in authentic learning situations and social interaction (Zawacki-Richter 2004, 263).

Hence, within e-learning the required change has already partially occurred due to the potential of web 2.0 technologies, which already led to a change in learning culture: To self-directed learning, which takes often place in social networks.

4 The Networked Learner - A New Model and New (Research) Challenge

After having discussed both the developments, which drive the demand for educational innovation, and the required learning scenario’s change, we will strive to analyse building blocks from existing learning theories and pull together elements, which allow us to describe the networked nature of learning in a suitable way. It is our aim to establish a first set of descriptive elements taken from existing theories to capture characteristics of “new learning” under a network perspective.

⁵ Reflection on learning is a common thread going through most learning perspectives or theories to some degree. Dewey recognised it as far back as 1916, while Cowan (1998) sees reflection as a necessary pedagogical method and Kolb (1984) includes it in his experiential learning cycle (in Mayes T. 2004).

4.1 Connecting learners into a network - the perspective of Connectivism

According to Connectivism learning occurs, when a learner connects to a learning community and feeds information into it (Kop/Hill, 2008). A community is itself “a rich learning network of individuals who in themselves are completed learning networks.” (Siemens, 2005) These individuals can be understood as nodes, which are connective elements “through which new information is routed, or may instead simply permit connections between ideas and concepts that previously did not have connections with each other.” (Siemens, 2005) Consequently, a community consists of nodes and is (mostly) at the same time a node itself, which is part of a larger network.

For this reason, connections can be seen as key to networked learning since through the formation of connections knowledge is constituted and learning occurs. Here, understanding arises through applying meta-cognition by selecting and evaluating the network’s elements to maintain the useful ones and eliminate the rest. In this sense learning respectively understanding is seen as equivalent to the “process of creating connections”. Learning is an active “knowledge creation process” instead of a passive “knowledge consumption process”.

Networks enable learners furthermore to work and learn interdisciplinary as the Internet offers not only restricted expert networks but also multiple knowledge domains. Here, learners are confronted with an environment, which enables them easily to access new knowledge and update expert knowledge efficiently. Moreover, this complexity supports the learner in his/her competence development as both comprehensive thinking and the ability to select respectively evaluate (i.e. active and constructive processes) are always demanded. As Siemens (2008) states: “... the ability to see connections between fields, ideas, and concepts is a core skill,” which becomes more and more important under the assumption of lifelong learning. But not only cognition contributes to the learning process, also the affective domains i.e. the emotions are essential for a holistic learning process according to Connectivism.

Summing up, the Connectivism approach helps to master the developments, which drive the demand for educational innovation, by enforcing more active and constructive learning situations as well as social interaction, whereby it leads to the required change of learning scenarios off a distributive mode to a collaborative/connected mode. Connectivism has indeed not the warrant to be handled as a fundamental new learning theory but it nevertheless contributes to social and communicative learning by pointing out the relevance of networks for learning.

4.2 Analysing networked learning - a social network analysis perspective

Networked learning deals with similar ideas as Connectivism (4.1) and constructivist learning (4.3) but is also based on social network analysis.

In a simplified definition a network can be described as connections between entities. Hereby, a network can refer to a variety of formats: computer networks, power grids, or social networks, etc. But they all function on the basis of the same simple principle: People, groups, systems, nodes, entities, which/who are connected to create an integrated whole. (Kop / Hill, 2008)

According to Erpenbeck (2002) and Hanft (1997) any network relation has though a potential for learning as both an exchange of knowledge and learning (through the interaction process) occurs. Through the interaction process personal and social learning processes are also encouraged. (Miller, 1996)

A simple working definition of networked learning can hence be: Connections between entities lead to an exchange of knowledge with involvement of social interactions. This basic definition will be improved in the following with particular drawings on Granovetter’s theory of strength and weak ties (1973).

Although social networks and learning communities are often used synonymously, there is a slight difference, which becomes evident if referring to learning processes under consideration of Granovetter's theory. Basically, Granovetter addresses the closeness of relationships. Close friends and relatives fall in the category of "strong ties", on the contrary "weak ties" are e.g. acquaintances or colleagues. The relationship's strength depends on the time spend together, the emotional intensity, the intimacy as well as on the reciprocity. Mostly, weak ties are not exclusively connected to a network, instead they serve as "bridges" between different networks. Through this characteristic they are more adequate for networking aims as they both possess more information and are able to share this information more easily through their further contacts. Without these weak connections the information basis of a network is strongly restricted, since new information can hardly get into the network. Moreover, weak ties are less "invention-intensive", so one is able to sustain more of these connections (than of strong ones), which enables more access opportunities to further resources. (Seibert et al., 2001)

This differentiation can be transferred to communities and networks. Communities consist mostly of close relationships and networks mostly of loose ones. Consequently, communities are entities, which have a high degree of overlap in interests, close connections and steady continuity. Networks, on the contrary, are more distinct, have a more sporadic respectively episodic nature and enable (more often) new ideas and findings. (Ehlers, 2009) The concept of networked learning builds on this idea as it allows learners to integrate informal network elements into their more formal learning communities to achieve more authentic learning situations and social interaction process.

Burt (1992) however set the focus on holistic relationship patterns - instead of observing relationships between single actors like Granovetter did. Burt (1992,1997) depicted that not the strength of a relationship is the essential part, but rather the amount of connections to other networks respectively stakeholders. Hereby, he does not only take into account strong or weak ties, but also mainly "indirect ties", which are connections through one's own connections. Burt named his approach "structural holes". A structural hole exists if two stakeholders in one network are not directly connected, which has the same advantage as weak ties have in Granovetter's theory: It enables stakeholders to access new resources. Thus, information can be reached faster and more effective. Both approaches are not mutually exclusive. Seibert et. al (2001) revealed that both the closeness of relations and the amount of structural holes influence the social resources of an individual.

Translated to learning scenarios especially weak ties/structural holes are essential as they facilitate the process of bringing peripheral influences respectively new information and ideas into the interaction and learning of closer social networks i.e. communities. Consequently, weak ties can serve as transversal bridges between individuals of different contexts, whereby they help to transmit innovative ideas and knowledge into communities. (Ehlers, 2009)

In order to benefit from these aspects, learners need to configure their own learning landscape. This configuration refers less to technical aspects but rather to the development of a portfolio of weak connections with a preferably high potential for structural holes. Through this approach learners access new knowledge and update export knowledge easily. Moreover, through these informal aspects learners are more engaged in self-organized, social and communicative learning.

Overall, networked learning leads to self-directed learning in social networks through the integration of the Net in learning processes. An improved definition can accordingly be: Networked learning occurs through both an active exchange of knowledge between entities, which are preferably connected through weak ties with many structural holes, and a self-guided social interacting process and leads consequently to an informalizing of formal structures.

4.3 Networked Learning from a perspective of Collaborative Learning

Although, networked learning incorporates therewith new aspects, it can be anchored in elements of collaborative learning concepts, which in turn are based on constructivism and situated learning approaches (which pick up the constructivism point of view).

There are basically four main approaches, which highlight learning as a constructive process:

- Jean Piaget's Constructivism has changed the understanding of learning processes radically and became path breaking for the constructivism. Assimilation and accommodation are essential for his approach to conceive the structure of human reality creation.
- Lew S. Vygotsky achieved similar points of view as Piaget but emphasized more the cultural learning environment and came to the conclusion that learning, which is based mainly on imitation, inhibits a constructive and creative learning process.
- John Dewey's work is elementary for the pedagogical constructivism as it tries to anchor learning processes in concrete actions as well as in learning environments. With his pragmatic learning theory he highlighted the comprehensive relevance of independence and self-determination. Dewey supported learning through doing, which is guided through interest and comprehensible motives instead of a solely theoretic and cognitive learning.
- Jerome S. Bruner forced Vygotsky's approach to highlight the aspect of social learning as a frame for individual learning. He broadened Piaget's Constructivism through the dimension of social interactions.

From these four main approaches six basic assumptions for constructivist learning can be reasoned (Reinmann-Rothmeier/ Mandl, 2001): Learning is accordingly

1. an active process
2. a constructive process
3. an emotional process
4. a self-guided process
5. a social process and
6. a situative process.

In other words: Learning develops from action, action takes place in social situations, and hence thinking and cognition are situative. (Schulmeister, 2002) These very aspects are yet the ones, which are supported and demanded by networked learning.

Looking closer at situated learning approaches, the reasoning for network learning becomes even more evident:

- Jean Lave (*Cognition in Practice*) states that every kind of activity happens both in a situational context and special culture. As an implication for learning he focuses on the cooperation of learners in a community of practice. Especially the cooperative sharing and converting of information are the postulate for effective learning. (Lave / Wenger, 1991)
- Barbara Rogoff (1990) (*Guided Participation*) emphasizes that communication and collective problem solving (with guidance) express integration in a social environment and are at the same time fundamental for learning. A transfer of learning takes here place, if a learner recognizes similarities between an old and a new situation.
- James Greeno (1991) (*Situated Cognition as Perceiving Affordances*) basic assumption is that learning depicts an active construction of knowledge. Thus, it is essential that learning occurs in cooperative settings, in which the lecturer is more a partner or trainer instead of an instructor.
- Lauren Resnick (1991) (*Situated Cognition as Socially Shared Cognition*) main supposition is that cognition is a socially shared activity, which interacts with motivational, emotional and social aspects. Through the composition of the learning environment (e.g. through social interaction) a connection between theory and praxis shall be established. (Gruber et al., 1996)

Summed up, networked learning (Fig. 1) is not about a new paradigm or a fundamentally new model of learning, it rather describes a concept, which consists of different elements: New concepts (Connectivism) and building blocks from existing theories (like social network analysis (e.g. Granovetter) or collaborative learning concepts) under consideration of the opportunities of new media respectively tools. New is rather the relevance of the demand for “new” learning scenarios and competences, which can be satisfied to a consolidated concept: Networked (Connected) learning.

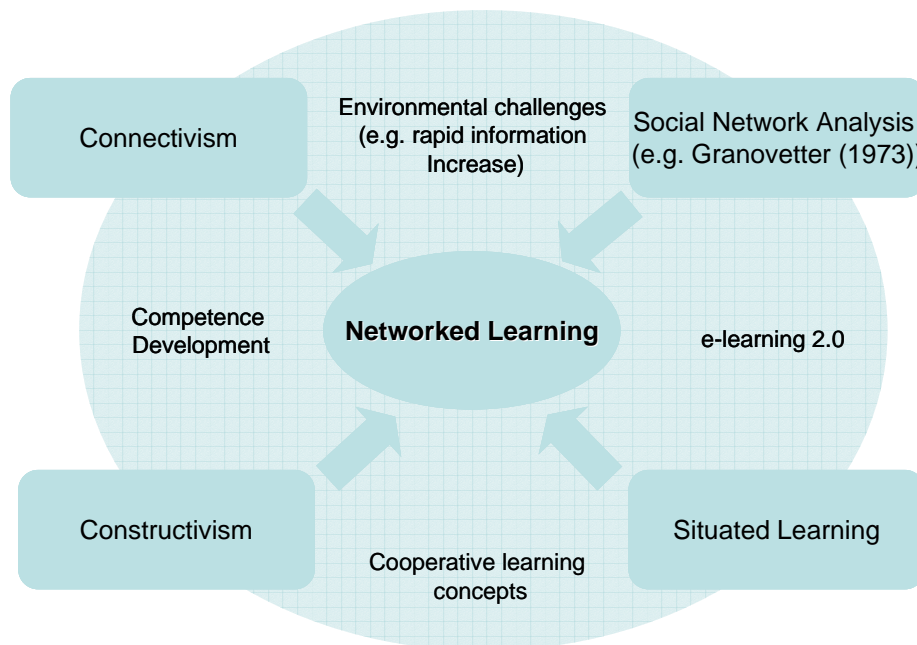


Figure 1. Networked Learning Concept

5 Conclusion

In the article we have shown that it is in phases of technological and conceptual changes especially important to consolidate concepts and validate their innovative nature. Through this, we were able to point out that the demand, or rather relevance, for new educational concepts can be satisfied through the consolidated concept of networked learning.

We would like to conclude the article accordingly in five points:

- The demand is not new, rather it is its relevance as most of it has been existent and discussed for the last ten to twenty years.
- New learning can be understood as a reinforced demand for competences as well as the notion of networked learning which enables learner to be in contact to each other through technology.
- Networked learning shows that existing theories, under consideration of innovative concepts, are suitable to grasp and analyse the emerging trends.
- Network learning helps to shift the learning mode from a mere distributive one to a collaborative one, which enhances self-organised, learner oriented, situational, emotional, social and communicative learning situations.

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