DIGITAL TRANSFORMATION – CHALLENGES AND PERSPECTIVES

Diana DĂNIȘOR[1]; Gheorghe DĂNIȘOR[2]

Abstract: Digital transformation is the process by which new digital technologies are integrated into the whole of activities to strengthen performance. A successful transformation is considered to guarantee a coherent and intelligent organization capable of anticipating expectations. Digitization and globalization are transforming businesses, everything being called into question: strategies, management, organizations, ways of designing, manufacturing and selling products and services, information and communication systems. The digital revolution is an upheaval for the individual, for businesses and for the whole society. Digital is revolutionizing technical activities, but also management and work methods. In this way, deterministic models must be reconciled with the practices resulting from more agile methods (test and learn, minimum viable product, short iterations) to deal with an environment that has become volatile, uncertain, complex and ambiguous.

In Greek antiquity, in the V-IV BC, a heated dispute arose, with reverberations to this day, between the Sophists, who argued that virtue could be taught and learned, and Socrates and, of course, Plato, who argued that virtue could not be taught and, as a result, not learned. What was the significance of this dispute? First, it was of a practical nature, targeting the Sophists, the first teachers in history to teach for material gain, some of them amassing fabulous fortunes for those times. Also in the field of practice, the substrate of the dispute was of a political nature. Could young people be taught to practice virtue in order to gain access to important positions in the state? The significance of this dispute was also of a theoretical nature: can virtue be taught and, implicitly, learned, if the one who is going to learn does not have that "something" in him that makes him fit to receive the teaching? From posing the problem in this way, only two possibilities result: either the man has in himself that "something" that makes him fit to receive the teaching, or he does not have it and, in this case, learning is not possible. Plato focuses on the first variant, namely that there is that "something" in human

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[1] Prof.univ.dr.habil. University of Craiova, Faculty of Law. Associate member of the Academy of Romanian Scientists.
[2] Full member of the Academy of Romanian Scientists.

interiority which, if stimulated by well-asked questions, emerges and makes man know what he knows. In this situation, however, it is not about learning in the sense that I receive knowledge from an external source, but about bringing out what I already know, but which is incommunicable: it is in myself, but I have lost sight of it. Knowledge, in this sense, is recognition. I myself recognize my own interiority and then I know what I know. The Pascalian maxim is valid in this case, according to which "you would not be looking for me if you had not found me". In the Meno dialogue, Plato argues that we remember (anamnesis), we do not know. Here is the conversation between Socrates and Meno: "you say that we learn nothing new and that what we call science is actually recollection." Socrates: "I say there is no teaching, only recollection." And earlier, Socrates also claimed that "it is not surprising that he (the soul) can remember about virtue and about the others, those that he knew before... For all that we seek to know and all that we know is only reminder." The search, however, is triggered by an external stimulus that sets in motion an internal mechanism. Both are so well connected that one cannot exist without the other. In Menon's dialogue, the illiterate slave comes to recall what he knew through successive questions from an interlocutor. If there were not in him that knowledge left "asleep", the interlocutor's intervention would have no effect, just as his knowledge, deeply covered and thus kept hidden, gives substance to the interlocutor's intervention as an external factor. Remembrance can be triggered by the transcendent in which man thus finds his place as a living space, just as in the soul of man the transcendent finds his privileged place. Man must be thought of in this way, not only through the phenomenological prism in which the limit becomes his essence, making it impossible to go out into the limitless that persists in what is marked by the limit. Dialectical thinking, so beloved by Plato, does not allow us to remain in the phenomenological, disconnected from what transcends us. Man's thought must fly towards the delimiting limit, remaining to itself. The human soul must take wings to traverse the infinite spheres of the world beyond science and to discover itself as an infinite being in its own finitude. This is the real man, i.e. that being who continuously delimits himself leaving behind what limits him for the moment. Through delimitation, man remains on his own, but he is a being interconnected to the whole that transcends him and which, in fact, constitutes his true immanence. The tendency towards the transcendent is in balance with its tendency towards immanence. No tendency towards the transcendent is possible unless man is grounded in his immanence, just as, conversely, his immanence remains "asleep" unless transcendence awakens it from its deep slumber.

The role of education (paideia)

As we have seen, the city, for Plato, is a community of language (logos). The role of language is not mainly that of communication, but of learning, i.e. the

transmission of teachings that support communication. We can communicate, but if language does not have a specific load of knowledge, communication turns into chatter, which ultimately leads to a lack of understanding, and the fortress collapses. It is communication for the sake of communication, a cacophony, unable to connect a meaningful dialogue, as happens in very many cases these days even in academia.

An important role in supporting a meaningful communication is played by education, the only one capable of discovering the humanity in man. Education is a political act, because man without reflecting in another man is not able to reach self-knowledge, to rise to the light of the intelligible. The purpose of education, in Plato's philosophy, is not to accumulate knowledge, but to detach from discursive knowledge and to remain thinking with itself, beyond objects, to have direct access to its inner light in which thinking and existence are one and the same thing. This road is only that of reaching what is simple in us. To touch what is simple means to intuit directly (immediately) the absolute. In the Greeks, the simple and the absolute are called by the same term, namely aplos.

If we analyze the meaning of paideia, we will see that it is part of the same family of words as paideia, which means play, amusement. This leads us to think that education (paideia) has similarities with play, that is, education must be done in play, and not by coercion. From the same family also belongs paideios which has the meaning of naive, simple or innocence, sincerity, candor. Paideia leads to pais, which means child, youth. If I know what I already know (reminiscence), it means that the way is from the complex to the simple. Knowledge, in other words, is purification. The moral aspect of the word is not yet at stake here, but the action of ridding knowledge of the complexity of demonstration, which presupposes the object, in order to reach what is simple, i.e. the absolute (aplos).

The main purpose of education is not to accumulate knowledge, but to discover what is given in us as simplicity. Simplicity, however, is in childhood and it must be rediscovered through play, that is, willingly, free from any constraint. Through education as play we discover ourselves as free beings. Education leads to what is simple in us as an absolute given. Education, in the last resort, has a political purpose: the liberation of the individual from all kinds of constraints.

This happens through dialogue: I discover myself through reflection in the other. Dialogue, however, is not simple communication, but has the gift of learning through the exchange of lessons. Dialogue as a teaching of knowledge tends towards self-knowledge as a social, political act. Therefore, learning (in the sense of imparting knowledge to the other) tends through dialogue to capture the essence of the polis. Dialogue thus becomes a political necessity. "One understands then, in Plato, the meaning of the myth in the Republic: the whole

self-consciousness is political. In order to know itself, thought must pass through the reflexive meditation of dialogue."[3]

Those who deal with education must understand that a certain moral way of being is not done by coercion, but by play, because only in this way are the precepts fixed without being conditioned by coercion or reward, so by freedom as a result of justice.

Education does not attempt to define virtue, but only to make it "seen." Once brought to light, it can be followed by individual and group discovery, so that it becomes the task of the politician to make it "seen" and thus stimulate the appetite for self- and group rediscovery.

In matters of education, one must start from the concept of the immanent-transcendence of the logos. This is an area that puts us in a position to think that man is more than himself, thus being the depository of a logos that transcends him, at the same time forming what is deeper in his inner being. Man can only be thought correctly from this perspective. If we limit ourselves only to the phenomenality of human existence, we deprive man of his metaphysical dimension, that is, we lose sight of the fact that man is more than he appears in his phenomenality, that he is perhaps a whole above himself, but which is at the same time in himself himself. The metaphysical perspective structures its interiority inaccessible to science that has lost its soul and drags it into the immediate everyday, broken from the relationship with the transcendent that can be found by appealing to its immanence that can only be made visible by appealing to what it transcends and characterizes it in its profound immanence. Science and philosophy that has become philosophical have lost both dimensions, both transcendence, depriving man of the sense of salvation, as salvation from phenomenal dominance, and immanence, depriving man of his moral foundations. Morality has always been based on the transcendent, the latter giving substance to moral immanence, but without this immanence, the transcendent is inaccessible to us. Both dimensions escape the scientific, so that nowadays we speak of a science without a soul. Man's lack of his metaphysical dimension testifies to all the disasters of modernity, and if humanity does not put its soul into the discoveries of science, it will encounter insurmountable difficulties.

Precisely the inadvertence between a politics anchored in the immediate concrete and the immanent-transcendent aspiration of man has led to the failure of politics of all times. The immanent-transcendent aspiration also led to the same result, if it was not lowered into the concrete finitude of the historical fact.

Enlightening the soul through education is not achieved by the accumulation of limitless knowledge that covers rather than illuminates, but by purifying the soul and making it shine. Without this way of asking the question, science pushes

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[3]   Jacques   Darriulat,   *Platon.   La   République*,   Livre   VII, http://www.jdarriulat.net/Auteurs/Platon/Republique/Rep7.html

us into eternal darkness. Enlightening the soul through education highlights the fact that man's connection with all that is is based on the fundamental relationship he has maintained for millennia with immanent-transcendence. In other words, it is the relationship that takes man out of the limiting limit and turns him to face the delimiting limit. And as the relational whole is logos, through the relation man brings with him what establishes him as a being that participates in the realization of the existential Good, thus contributing to its action of bringing together and preserving social relations. Only in this way can man consider himself a political being, i.e. a being who asserts himself through the collective self.

The purpose of education is to make people recognize that by nature they are righteous beings, that the true nature of man is to do selfless good as the ultimate way of free expression. The recognition (as the revelation of what is given a priori) of this way of being is achieved through the free play of education. Through play, education succeeds in straightening man and making him appreciate what is most valuable to him, namely the fact of being together with others. Education, in other words, does not involve, first of all, the accumulation of knowledge, but the purity of the soul and openness to others, that is, the doing of justice. And, as we have seen, if justice is the basis of freedom, it follows that all theories that appeal to an education based on coercion are an attack on the idea of justice and they, as discovered in history, have not succeeded in awakening the desire in man to find oneself as a being for oneself, but also for another, in a constant balance. Through education we do not know, but recognize ourselves in the purity of the beginning. Only a pure soul can meet others to honor them properly.

There is an essential difference between knowing and understanding. Knowledge has birth in it, which means that it gives birth to something, brings something into being of itself. That which is born is subject to becoming, developing and perishing. Knowledge, from a logical point of view, is demonstration, sermo, the one who produces something according to the rule. In other words, knowledge belongs to the relative and is anchored in the phenomenological diversity that it artificially produces. Knowledge tends to elude the real and produce a fiction of its own. It is therefore characterized by the separation from the real. Comprehension, on the other hand, having its root in lego, means gathering, gathering together, collecting. It is superior to knowledge, because it admits that something is and preserves it by holding it together. It is a hermeneutic of the real and, at the same time, it is the real itself. By understanding, the real is left to be. So it does not give birth, but only deciphers what is, making that existential appear that holds together and preserves all that is, that is, Good. Understanding is Good itself.

The goal of the politician is to reach understanding through education, as a hermeneutic of the social and as a source of morality. Where knowledge

separates, understanding binds and holds together. The essence of politics is justice, on which all other virtues are then founded. Knowledge challenges individualism, understanding, on the other hand, sustains community as free agreement between individuals. "For communitarians, the state is not just a guardian, it must promote the virtues of its citizens: patriotism, solidarity, loyalty, civic spirit, etc."[4] The virtue of justice is constitutive of the human being and it is given a priori, that is, it is given before any possible experience. Through education, it must be rediscovered (a kind of Platonic anamnesis), because only in this way can it be argued that man is a zoon politikon. He is, in other words, a citizen in relation to all others and with them in relation to nature. This highlights that only in this way, based on the virtue of justice, space becomes the habitable place, being human habitation, in the authentic sense of the word, in which man finds his purpose.

Education does not consist, as I said, in the accumulation of knowledge, first of all, but must be focused on the "comprehension" in man of the virtue of justice which, many times, for various reasons, has remained "dormant", but which exists and therefore must be brought to light through education. How should education be done? Through play, that is, through free participation in the performance of an act that aims to illuminate the most hidden springs of the human soul. What does it mean to be enlightened? It means leaving the sphere of "sleeping" and entering the sphere of "awakening" in which the affective-sentimental and the intuitive-noetic, hand in hand with the rational, equally contribute to the realization of the political through collaboration in logos. In this case, the social logos is understanding in all its complexity.

The new paradigm of teaching and learning – ICT and NTIC and education technologies

Information and communication technologies (ICT) are the ones that can promote learning within the new constructivist pedagogical paradigm.

We have all noticed that new information and communication technologies, through the Internet, occupy a large part of our daily concerns. Thus, more and more people spend a lot of time on the computer, young people being generally the ones who use the Internet the most, Romania occupying a leading place in the world in this sense. The school environment, lately, has been equipped, as a result of the crises that humanity has gone through for several years now, with computer equipment that allows schools access to the Internet for educational purposes.[5] In

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[4] D.C. Dănişor, *Drept constituţional şi instituţii politice*, vol. I, *modernitate, liberalism şi drepturile omului*, Tratat, Editura Simbol, Craiova, 2018, p. 60.

[5] Ungerleider, C. & T. Burns. 2002. « Les TIC dans l'enseignement primaire et secondaire : une étude approfondie ». Colloque du programme pancanadien de recherche en éducation : La technologie de l'information et l'apprentissage. *International Journal of Educational Policy,*

recent years, there has been a radical change of perspective in the field of education: the classical approach, in which the student receives instructions from the teacher, who manages the learning process, is succeeded by the constructivist approach, for which the same learning process is seen as exchange interactive in which the learner actively participates, building his own learning schemes. According to Legendre, constructivism designates "the set of internal activities and processes inherent in the acquisition of knowledge, information, memory, thinking, creativity, perception, as well as understanding and problem solving"[6]. Cognitivism appears at about the same time as the computer. From a cognitivist perspective, the emphasis is placed on the action of the learner who, throughout the learning period, is led to ask himself questions about what he does/learns, what he does to retain the information, what helps him best to understand, in fact what -puts him in dialogue with his environment, by privileging the learner's experience, intentions and cognitive strategies.

Information and communication technologies have a very strong attractive potential that can be used profitably in the school environment to increase the motivation of pupils and students in order to promote learning within the new pedagogical paradigm focused on the learner who learns under the guidance of the teacher.

Being a central construct of learning theories, motivation, along with other factors that can justify success, is one of its predictors if not the key factor of success[7]. Motivation is defined as a vector of forces of internal and external origin, directed or not by a goal, that influence the individual cognitively, affectively or behaviorally[8], being therefore a concept that represents physiological and psychological processes[9]. The motivation to succeed, in cognitive psychology, depends on the individual's desire, his expectations, his sense of personal efficacy, but also the support and reinforcement he will find in his social environment[10], being in this sense an individual characteristic of the learner, which goes from amotivation, to the intrinsic motivation that comes from

Research, & Practice, vol. 3, n 4 http://www.cmec.ca/stats/pcera/RSEvents02/CUngerleider_TFR.pdf. Consultation 25/03/05.

[6] Legendre, R. 1993. *Dictionnaire actuel de l'éducation*. Montréal : Guérin., p. 205.

[7] Laferrière, T. 1997. *Rechercher l'équilibre au sein des environnements d'apprentissage intégrant les technologies de l'information : préparer les futurs choix*. CMEC, septembre 1997.

[8] Pintrich, P.R. & D.H. Schunk. 1996. *Motivation in Education*. Englewood Cliffs, NJ : Prentice-Hall; Karsenti, T. 1998. *Étude de l'interaction entre les pratiques pédagogiques d'enseignants du primaire et la motivation de leurs élèves*. Thèse de doctorat présentée à l'Université du Québec à Montréal.

[9] Vallerand, R.J. & E.E. Thill. (Eds.). 1993. *Introduction à la psychologie de la motivation*. Montréal : Éditions Études Vivantes.

[10] Pintrich, P.R. & D.H. Schunk. 1996. *Motivation in Education*. Englewood Cliffs, NJ : Prentice-Hall.

the individual himself, to the extrinsic motivation stimulated by factors external to the individual[11].

The change in the teaching paradigm makes the teacher a consultant whose essential role is to mediate between the students and the object of learning, being a mediator between knowledge and those to whom he addresses the learning, facilitating it, training the pupils/students, making them collaborators of success. The teacher is also a challenger of the students' development, being a creator of pedagogical environments[12] to help them identify their specific individual needs and set rational learning objectives that take into account individual specificities, starting from the content of the study programs. Also, the teacher must provide the students with the means of self-evaluation, so that they are able to make a qualitative assessment of the progress made, following them in this sense, throughout the learning period.

According to the new pedagogical currents, the emphasis is on high-level, authentic and autonomous learning. Students use their knowledge to analyse, understand and solve problems, rather than simply remembering facts, being able to apply their knowledge and skills to different subjects as needed. Learning is therefore no longer based on memorizing and ad literam reproduction of information, but on making and presenting projects, on collaboration with other people (students, teachers) and other sources of information.[13]

The differences between classical and ICT learning are not significant. There are studies that show that the integration of ICT favors learning more than classic courses[14], but also studies that emphasize that there are no significant differences in the level of learning through the two methods.[15] To be successful,

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[11] Deci, E.L. & R.M. Ryan. 1985. *Intrinsic motivation and self-determination in human behavior.* New York : Plenum Publishing Co. DOI : 10.1007/978-1-4899-2271-7

[12] Tardif, J. 1998. « La construction des connaissances : les pratiques pédagogiques ». *Pédagogie collégiale, 11 (3)* : 4-10.

[13] Brown, A.L. & J.C. Campione. 1996. « Guided Discovery in a Community of Learners. » *In* McGilly, K. (Dir.). *Classroom Lessons : Integrating Cognitive Theory and Classroom Practice.* Cambridge, MA : MIT Press, 229-270.

[14] Haughey, M. & T. Anderson. 1999. *Networked learning : The pedagogy of the Internet.* Toronto : McGraw-Hill.

[15] Clarke, D. 1999. « Getting Results with Distance Education. University of California @ Santa Cruz ». *The American Journal of Distance Education, vol. 12 (1)* : 38-51; Wisher, R.A. & A.N. Priest. 1998. « Cost-effectiveness of audio teletraining for the US Army National Guard ». *The American Journal of Distance Education, vol. 12, n° 1* : 38-51; McAlpin, V.F. 1998. « On-line and face to face students : Is there really any difference ? » *Actes du "2nd UNC Workshop on Technology for Distance Education."* North Carolina State University : 6-7; Goldberg, M.W.C. 1997. « First results from an experiment in computer-aided learning ». *Proceedings of the ACM's 28th SIGCSE Technical Symposium on Computer Science Education*; Clark, R.E. 1994a. « Media Will Never Influence Learning ». *Educational Technology, Research and Development, vol. 42 (2)* : 21-29. DOI : 10.1007/BF02299088

the traditional pedagogy, of vertical and unilateral orientation, in which the teacher teaches and the student learns, must be replaced by an integrated perspective within an active constructivist pedagogy, conducive to the positive role of ICT, which involves learning by solving problems with clarification teaching tasks and situations, cooperative learning with an emphasis on collaborative forms of learning and teaching, and last but not least project pedagogy, for the complete development of the learner's personality.

Grégoire, Bracewell & Laferrière[16] Grégoire, Bracewell & Laferrière note the positive role that ICT can play in the new conception of learning and teaching. In this sense, new technologies have the power to stimulate the development of intellectual skills (the ability to reason, solve problems, learn to learn and create), they can contribute to improving the acquisition of knowledge in various subjects and the development of skills and skills related to this knowledge. Also, all these new technologies can stimulate the search for more complete information on a certain subject, the search for a more satisfactory solution to a problem, establishing a greater number of relationships between various knowledge or data. In the same vein, new technologies favor collaboration between students of the same class and between students or classes from different schools, far or near, with the aim of raising awareness of other realities, of accessing pertinent knowledge that is not strictly defined in advance and of achieving projects of real value to the learners themselves and possibly to others. New technologies enable stimulation, virtual dexterity, fast junction between very varied data, which relates the dimensions of the person and the knowledge to be mastered.

The positive impact of new technologies on motivation is attributed to the following elements: the fact of working with a new environment[17]; the more individualized nature of learning[18]; the possibilities of greater autonomy for the learner; the possibility of frequent and fast feedback[19]. By learning to learn

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[16] Grégoire, R., R. Bracewell & T. Laferrière. 1996. « L'apport des nouvelles technologies de l'information et de la communication à l'apprentissage des élèves du primaire et du secondaire ». *Revue documentaire. Rescol/ Schoolnet*. Ottawa.

[17] Fox, M. 1988. *A report on studies of motivation teaching and small group interaction with special reference to computers and to the teaching and learning of arithmetic*. Milton Keynes, UK : The Open University, Institute of Educational Technology; Karsenti, T. 1999. « Comment le recours aux TIC en pédagogie universitaire peut favoriser la motivation des étudiants : le cas d'un cours médiatisé sur le Web ». *Cahiers de la recherche en éducation, 4 (3)* : 455-484. DOI : 10.7202/1017306ar.

[18] Relan A., (1992)."Motivational Strategies in Computer-Based Instruction: Some Lessons from Theories and Models of Motivation."In proceedings of selected research and development presentations at the convention of the Association of Educational Comminications and Technology. ERIC Document Reproduction Service No.ED 348 017.

[19] Wu, Y.-C. 1992. « Computerized teachers' praise : Incorporating teachers' images and voices ». Paper presented at the annual meeting of the Mid-South Educational Research Association, Knoxville, TN. (ERIC Document Reproduction Service No. ED 354 873); Karsenti, T. 1999.

through the development and conscious use of appropriate learning strategies, new technologies have positive effects on the motivation to learn by developing various intellectual skills and increasing the time and attention given to learning activities: "technology proposes an environment and presents contents in -a manner that is more stimulating and requires student participation more directly than textbooks and more traditional teaching materials[20] do it possesses an interactive power[21] and allows students to engage "in activities that invite them to create and share with others"[22]. Factors that play a crucial role in increasing learners' intrinsic motivation are: challenge, curiosity, control and fantasy, games and stimulations introducing an element of pleasure and fantasy[23], and resorting to the metaphor of a real-life situation can help the learner to establish a playful and original connection with what they learn in the classroom.

The new pedagogical paradigm calls into question the very notion of "teacher", a model that conveys a personal and humanistic vision, in the conditions in which the student builds himself.

The main attraction of new technologies in the field of educational exploitation is the fact that their integration allows the release of creative forces that were dormant, both in the teacher and in the student, the teacher having the opportunity to create activities or contents that will make the students act and to create, in turn, with the multimedia tool. But this requires, first of all, computer literacy. Through new technologies, the teacher quickly obtains information on the availability and interest in a wide variety of teaching resources. Teachers must no longer see knowledge as a set of knowledge to be transmitted, but as a process and continuous research whose difficulties and results they share with students, acting alongside them as an animator, a mentor, a guide in the discovery and progressive mastery of knowledge, skills and abilities.

New technologies allow the teacher to reborn, rethink his course, discover new tools, update and enrich the content of his courses, experiment new tracks,

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« Comment le recours aux TIC en pédagogie universitaire peut favoriser la motivation des étudiants : le cas d'un cours médiatisé sur le Web ». *Cahiers de la recherche en éducation, 4 (3)* : 455-484.

DOI : 10.7202/1017306ar; Karsenti, T., T. Fortin, F. Larose & M. Clément. 2002. « Les TIC et le défi de la formation pratique dans le cadre de la Réforme de l'éducation ». *In* Larose, F. & T. Karsenti (Dir.). *La place des TIC en formation initiale et continue : Bilan et perspectives.* Sherbrooke/Paris : Éditions du CRP/L'Harmattan (sous presse).

[20] Rapport de l'Office of Technology Assessment, 1995, p. 65.

[21] Idem.

[22] Ibidem, p. 66.

[23] Lepper, M.R. & M. Hodell. 1989. « Intrinsic Motivation in the Classroom ». *In* R.E. Ames & C. Ames (Dir.). *Research on motivation in education, goals and cognition, vol. 3.* Toronto : Academic Press, 73-106.

compare his experiences with those of other teachers (discussion forums, activity banks).

The conclusion is that we cannot talk about the pedagogical integration of new technologies without a real change of the school and the pedagogy practiced here, the implantation of these new technologies in schools having a notable influence on the very conception of teaching and learning making possible different learning, molded on individuals, making the transition from an initially verbal thinking to one that integrates the visual and the verbal[24], replacing interactions in the classroom with interactions outside the classroom, those that escape the spatio-temporal limits of the classroom, constituting a true revolution: "New technologies can, for the first time in four centuries, blow up or at least strongly deconstruct the form institutionalized school pedagogy with all the controls that accompany it, delimiting and opening the spatio-temporality of the class."[25]

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[24] Collins, A. 1991. « The Role of Computer Technology in Restructuring Schools ». *Phi Delta Kappan, 73 (1)* : 28-36.

[25] Tardif, M. & J. Mukamurera. 1999. « La pédagogie scolaire et les TIC : l'enseignement comme interactions, communication et pouvoirs ». *Revue de l'ACELF, vol. XXVII, N° 2*. http://www.acelf.ca/c/revue/XXVII-2/articles/Tardif.html. Dernière consultation le 25/03/05.

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