

# How Does a Hybrid Device of Training Reinforce the Extrinsic Motivation of Learning Adults?

Jean-Pierre Noblet, ESSCA, Researcher Laboratory of Knowledge Transfer, Université de Sherbrooke, Quebec, Canada; E-mail: Jean-Pierre.NOBLET@essca.fr

## 1. INTRODUCTION

The literature attached to the “blended learning” has become plethoric over the last few years, and a great number of comparative analyses of the benefits of the two systems (face to face vs. distance education) (Wegner, and *al.*, 1999; Aycock and *al.*, 2002; Ward and LaBranche, 2003). But the motivation of learning was only seldom studied, and in particular the extrinsic motivation (Wlodkowski, 1999). Recent works concerning more specifically adult learning tend to show the crucial role of the hybrid devices on training, placing the emphasis on the redesign of formation, collaborative device, and the redefinition of the tutorial system (Garrison and Kanuka, 2004; Aycock and *al.*, 2002). Based on Wlodkowski’s motivational dynamics model (1999), we show how a hybrid device can contribute to the motivation of learning, and how capital it is capital to the redesigning of courses. The experiment undertaken by Group ESSCA (Graduate School of Management in France) for an adult public aiming for the ESSCA Continued Education diploma, accounts for the significant impact of the hybrid device on the extrinsic motivation of learning.

## 2. WHAT IS “BLENDED LEARNING”

In higher education, the emerging tendency to blend Internet technology with the face to face training generated great hopes, but also great doubts. What is the definition of a hybrid education? It is a combination of face-to-face and online media, with “seat time” significantly reduced (Voos, 2003). Smith (2001) describes it as a method which combines technology and traditional education. Garrison and Kanuka (2004) define it as the thinking integration of experiments of face to face training in class, with experiments of training on line. But we have to distinguish the blended learning from the other forms of trainings, i.e. improved classroom on one side, and completely on line experiments on the other side. The real test of hybrid formation is the effective integration of the two major components beyond the simple addition of one to the other. In fact, it is necessary to significantly separate these two approaches (Garrison and Kanuka, 2004). If the use of the term “blended learning” is often associated with the simple link between traditional face-to-face education and asynchronous on line activities, researchers and experts argue today that a hybrid training scheme must combine other dimensions to be able to seem to support the training (Singh, 2003; Ward and LaBranche, 2003; Garrison and Kanuka, 2004; Bielawski, and Metcalf, 2002; Wlodkowski, 1999): for example, to study the articulation between face to face and distance education in course redesign, to benefit from the experiments of others to give value with human capital, to support practices of collaboration and creation, and to give direction via coaching. How can these dimensions be combined to better the motivation of adult learner, and, in particular, their extrinsic motivation?

## 3. HOW TO COMBINE DIMENSIONS SUPPORTING THE TRAINING

We took as a starting point Wlodkowski’s motivational dynamics model on adult learning (1985, 1999); this model differs from the other motivational models applicable to normal educational system (Viau, 2003), not only because the adult learner starts the formation with a specific social status, but also because the divergences are more important with regard to age, marital situation, professional needs, and experience. This model integrates components of intrinsic motivation (which concerns the learner) and those of extrinsic motivation (the organization

of the environment of training), on a temporal continuum from the beginning of training to the end.

### 3.1. To Redesign the Formation

The first track to be explored is the redesign of the formation, the redefinition of the articulation between face to face and distance education. Hybrid formation is not a substitute for face-to-face training (Garrison and Kanika, 2004), but the effective integration of the two components (face to face and Internet technology). We need to redesign and to reorganize the dynamics of teaching and training by starting from needs and specific contingencies of the context: disciplines, level of development, resources (*Ibid*, p. 97). Aycock and *al.* (2002) confirm this trend: “in order to create effective interactivity, full course redesign is essential for successful hybrid courses”. Ward and LaBranche (2003) estimate that, in a redesigned hybrid formation, adult learners must profit from more options, from more time, and more freedom to explore their learning; hybrid education must help to overcome one of the limits of face to face: classroom and teacher availability.

### 3.2. Valuing the Development of Human Capital

What will make the difference “is the conjunction of a multidisciplinary approach and the development of human capital” recognize Bielawski and Metcalf (2002). The hybridization of the formation highlights the active adult learning, with experiment of strategies, better practices, tools, and approaches validated in the professional context. Hybrid formation uses these talents to help the learner to be more creative, more responsible, more effective, and more “team” thinking (Honold, 2001).

### 3.3. To Develop Collaborative Work

The most recent reforms in education encourage training by the peers, and thus encourage the development of competences linked to the ICT (Deaudelin and Nault, 2003). Collaborative work will allow learners to combine their own interest with the training (Johnson and *al.*, 2000). The interaction is characterized by a positive interdependence between the sought for objective and individual responsibility; learners will accept a common objective on which the group will be evaluated, by integrating the individual responsibility for each one (*ibid*, 2000). When adults learn in a collaborative way, they develop relations of support through groups of kind, and different origins. Thus collaborative groups of training create a base (Wlodkowski, 1999, p. 105) on which the training can build and increase comprehension of what is taught through explanations and discussions of multiple prospects.

### 3.4. To Redefine the Role of the Tutors

The continuous increase in distance and on-line education requires two fundamental types of resources: an adapted design of courses, and a relevant tutorial system (Barker, 2002; Morgado and *al.*, 2002; Beyth-Marom and *al.*, 2005); on the second point, Barker (2002) recognizes the need to diversify the roles usually allocated to tutors, and to retain varied aptitudes according to the problems: teaching, technical or organisational. In ESSCA Continued Education diploma, the tutorial system will cover different sorts of problems: an administrator-tutor regulates technical problems inherent to the hybrid device; a organizer-tutor high-

lights absences, and establishes the link with the teacher; the motivator-tutor is in charge of the formation, and can manage the interpersonal relations; finally, the facilitator-tutor is the expert (the teacher), present in face to face and a motivating element through the forum.

#### 4. AN EXPERIENCE OF BLENDED LEARNING: ESSCA CONTINUED EDUCATION DIPLOMA

ESSCA delivers a Master after five years of higher education, however, this is also possible through continued education. To answer the requests from companies, more flexibility was introduced into the formation thanks to a hybrid device. Indeed, we offer a 950 hours formation spread out over 18 to 24 months, and including two thirds of time in face-to-face and one third (350 hours remote) as distance learning via a digital campus. The formation has being completely reworked in order to link distance part and presence part dynamically. So, the courses were “redesigned”, and divided into competences. Learners are together in periods of face to face two or three days every two or three weeks, after a phase of personal and collective work via the e-campus. The first three groups (2003, 2004, 2005) having completely tried out this device were agreed to carry out a complete assessment of the impact of such a diagram on their process of training.

##### 4.1. Characteristics of the Sample

We identified learners by group, sex, group of age, qualification level at entry, and number of years run out since their initial formation. The 67 learners were divided into 21 from promotion 2003 (graduates 2005), 25 from promotion 2004 (graduates 2006), and 21 from promotion 2005. 74% were men, 61% were between 34 and 49 years old, and 37% less than 34 years; 67% had a higher formation “bac+2” level and 24% “bac+3” level or higher; finally 83% have been out of the state education system for more than 5 years. Learners had to fill out at the end of the formation a questionnaire comprising 21 items, in classroom or by email. The returns of the questionnaires were quasi exhaustive (90%). The questionnaire was divided into 7 groups of items: Identification of promotion, use of ICT, collaboration, management of time and distance, the quality of tasks, the hybrid device, and an assessment of the training.

##### 4.2. First Results and Discussion

From Wlodkowski’s model, and during the training, we validate the items:

- Stimulations. The device proposes solutions to support a reinforced training:

- A studied design: 93% of adults recognized that the design of hybrid formation helped them,
  - Tools of communication and collaboration ensured a strong link between members, especially during the distance phases: Strong use of forums, emails and chats, but also use of collaborative spaces.
  - A comforting tutorial system: 83% of the learners regarded the assistance as effective in the case of technical or teaching difficulties.
- Affectivity:
    - Tools of communication and collaboration support the sharing of individual values, and personal objectives (67%); the forum constitutes the primary instrument, were especially for a temporary support in case of difficulties (83%).

From Wlodkowski’s model, at the end of the training,

- Competences. What evaluation a trainee has of his capacity to succeed when uncertainty is considered to be strong? The hybrid device is recognized as being comforting, reducing the fears of the trainees toward the task; thus, on a scale from 1 to 10, the trainees positioned their perception of their capacity to meet this challenge with 6 at the beginning of their formation, and 9 at the end if they were to face a similar challenge in the same way.
- Reinforcement: the trainees recognized the importance of post-course and post-evaluation feedbacks: it was frequent, fast, and precise, and contributed in helping learning (82%). We also asked the trainees to note each assertion suggested on a scale from 1 to 5, where 5 corresponds to an appreciation “Completely agreed” and 1 to an appreciation “not at all agreed”. All the values of T are higher than 2.01 with regard to a sample of size 67 and one alpha 0.05, and consequently, each answer is regarded as statistically significant.

We asked trainees to note each suggested assertion on a scale from 1 to 5, where 5 corresponds to “strongly or very strongly” and 1 to “no change”

#### 5. CONCLUSION

These results have a limited impact due to the sample size and the context, and cannot expect any external validity. The study is currently continuing with promotion 2006, and the first results entirely corroborate the previous study: the redesigned device supports the formation, especially on distance; the tutorial system is omnipresent and effective; the sharing of the different experiences is an enrichment for the group; collaborative work is integrated in daily work, and fully contributes

Table 1. Assertions about the hybrid device

	<i>Average (5 completely agreed ; 1 not at all)</i>	<i>T-value Significant answer for p=0.05</i>
The hybrid device, overall, facilitated my training	4.2	6.78
The hybrid device facilitated my comprehension of the main concepts	4.1	7.42
The device helped to develop my interest and my curiosity for other resources outside the system	4.1	5.31
The device allowed a better access to private and professional resources	3.9	3.86
The device supported a better planning of absences, and a better preparation of the courses	3.8	3.73
The device supported an evaluation focused on comprehension, resolution of problems, and synthesis	3.8	4.64
The hybrid device enabled me to better plan my work	3.7	3.45
The hybrid device facilitated my commitment, in particular in collaboration	3.7	3.59
The hybrid device allowed a better adaptation of the workload to my personal constraints	3.7	3.27
The articulation was clear between objectives, methods and evaluations	3.5	4.2
The device encouraged an in-depth approach of the topics	3.4	3.5

Table 2. The hybrid device helped me to reinforce the following capacities

	<i>Average(5 Strongly or very strongly – 1 no change)</i>	<i>T-value Significant answer for p=0.05</i>
Ability to manage a project	3.9	4.7
Dialogue and coopération	3.9	5.58
Ability to work in a group	3.9	3.0
Awareness to my Abilities	3.7	2.62
Motivation	3.5	2.74
Perception of my ability to achieve difficult things	3.4	2.61
Ability to resolve a conflict	3.4	2.79
Sense of effort	3.2	2.72
Sense of decision making	3.2	2.72

to supporting motivation over a long period of time, and difficult training. The learner becomes an actor of his formation and not a consumer.

## REFERENCES

- Aycock, A., Garnham, C., & Katela, R. (2002). Lessons Learned from the Hybrid Course Project. *Teaching with Technology Today*, 8(6).
- Barker, P. (2002). Skill sets for online teaching. In *Proceedings of World Conference on Educational Multimedia Hypermedia & Telecommunications*, Denver, 24-29 June 2002.
- Beyth-Marom, R., Saporta, K. & Caspi, A. (2005). Synchronous vs. Asynchronous tutorials: Factors affecting students' preference and choice. *Journal of Research on Technology in Education*, 37(3), 245-262.
- Bielawski, L. & Metcalf, D. (2002). *Blended eLearning*. HRD Press.
- Deaudelin, C. & Nault, T. (2003). *Collaborer pour apprendre et faire comprendre*. Québec : Presses de l'Université du Québec.
- Garrison, D.R. & Kanuka, H. (2004). Blended Learning: Uncovering its transformative potential in higher education. *Internet and Higher Education*, 7, 95-105.
- Honold, L. (2001). *Developing Employers who love to Learn*. Davies-Black Publishing.
- Johnson, D. W., Johnson, R. T. & Stanne, M.B. (2000). *Cooperative Learning Methods: A Meta-Analysis*. Minneapolis: Cooperative Learning Center, University de Minnesota.
- Morgado, E.M., Yonezawa, W. & Nicolau, R. (2002). Exploring distance learning environments: A proposal for model categorization. In *proceedings of International Academy for Information Management Conference (IAIM)*, Barcelone, Espagne, 13-15 décembre 2003.
- Singh, H. (2003). Building Effective Blended Learning Programs. *Educational Technology*, 43(6), 51-54.
- Smith, J.M. (2001). *Blended learning: An old friend gets a new name*. GWSAE Network. At <http://www.gwsae.org/Executiveupdate/2001/March/blended.htm>, accessed 2 july 2005.
- Voos, R. (2003). Blended Learning – What is it and where might it take us? *Sloan-C View*, 2(1), 3-5.
- Ward, J. & LaBranche, G. (2003). Blended Learning: The Convergence of E-Learning and meetings. *Franchising World*, 35(4), 22-23.
- Wegner, S.B., Holloway, K.C., & Garton, E.M. (1999). The Effects of Internet-Based Instruction on Student Learning. *Journal of Asynchronous Learning Networks*, 3(2), 98-106.
- Włodkowski, R. J. (1999). *Enhancing Adult Motivation To Learn*. San Francisco: Jossey-Bass.

0 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/proceeding-paper/does-hybrid-device-training-reinforce/33310](http://www.igi-global.com/proceeding-paper/does-hybrid-device-training-reinforce/33310)

## Related Content

---

### Acoustic Presence Detection in a Smart Home Environment

Andrej Zgankand Damjan Vlaj (2021). *Encyclopedia of Information Science and Technology, Fifth Edition* (pp. 138-153).

[www.irma-international.org/chapter/acoustic-presence-detection-in-a-smart-home-environment/260181](http://www.irma-international.org/chapter/acoustic-presence-detection-in-a-smart-home-environment/260181)

### Intelligent System of Internet of Things-Oriented BIM in Project Management

Jingjing Chen (2023). *International Journal of Information Technologies and Systems Approach* (pp. 1-14).

[www.irma-international.org/article/intelligent-system-of-internet-of-things-oriented-bim-in-project-management/323803](http://www.irma-international.org/article/intelligent-system-of-internet-of-things-oriented-bim-in-project-management/323803)

### Electronic Training Methods: Relative Effectiveness and Frequency of Use in the Malaysian Context

Veeriah Sinniah and Sharan Kaur (2012). *Knowledge and Technology Adoption, Diffusion, and Transfer: International Perspectives* (pp. 140-153).

[www.irma-international.org/chapter/electronic-training-methods/66941](http://www.irma-international.org/chapter/electronic-training-methods/66941)

### Machine Dreaming

James Frederic Pagel (2018). *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 202-211).

[www.irma-international.org/chapter/machine-dreaming/183734](http://www.irma-international.org/chapter/machine-dreaming/183734)

### Analyzing the Use of Information Systems in Logistics Industry

Shaligram Pokharel (2009). *Information Systems Research Methods, Epistemology, and Applications* (pp. 225-246).

[www.irma-international.org/chapter/analyzing-use-information-systems-logistics/23478](http://www.irma-international.org/chapter/analyzing-use-information-systems-logistics/23478)