Open Science Journal of Education
2014; 2(4): 44-49
Published online August 20, 2014 (http://www.openscienceonline.com/journal/edu)

Innovation for academic persistence at university

Anne Mai Walder

Graduate School of Education and Information Studies, University of California, Los Angeles, United States

Email address

anne@walderpublications.ch

To cite this article

Anne Mai Walder. Innovation for Academic Persistence at University. *Open Science Journal of Education.* Vol. 2, No. 4, 2014, pp. 44-49.

Abstract

Reconciling research and teaching activities, without differentiating their importance, remains the university professors' main challenge and requires that they recognise the complexity of their profession of teacher-researcher, which manifests as a double mandate where the programs offered by universities train researchers and simultaneously promote teaching excellence. In consideration of this singular context teaching practice support programs form part of the university landscape and advocate the valorisation of teaching, pedagogical support for professors and act as a springboard for pedagogical innovation. The aim of pedagogical innovation is often to improve student learning, particularly in an interactive context. The change that it drives should have a positive effect. Therefore, does research demonstrate a positive relationship between pedagogical innovation and academic persistence? Research specifically focusing on this issue is virtually non-existent. Nevertheless, certain studies do identify some positive relationships in their results. I have synthesized papers dealing with new student guidance schemes, collaborative learning, cooperative learning and New Information and Communication Technologies (NICTs).

Keywords

Academic Persistence, Pedagogical Innovation

1. Introduction

According to thirty two university professors of the University of Montreal, a pedagogical innovation "*is a new way of teaching, unlike those commonly used; it is bespoke and surprises students. Consequently, it heralds a change driven by a transitory adaption to pedagogical objectives and the new student profile. It stems from a reflection that is pedagogical, intellectual, creative, psychological and sustained, and that shapes itself progressively through a multi-level and multi-impact process linked both to the audience and the discipline or the technology and that aims to improve quality, like a desire to make the subject understood and foster success. Unlike technological innovation, the innovation is only pedagogical if it is constructed by pedagogical thinking, in particular in human relations at the will of the personality of the devoted professor*." (Walder, 2014)

Many types of pedagogical innovations coexist and can be classified as pedagogical innovation types related to the concept of teaching, pedagogical approaches, tools, support schemes, interdisciplinarity, interculturality and professionalisation (Walder, 2014). In other words, the pedagogical innovation types fall into seven pedagogical innovation categories. That said, professors employ two or more pedagogical innovation types simultaneously which means that pedagogical innovation mixing is the norm and is often applied in one class, within one and the same pedagogical activity, and sometimes in a curriculum (ibid.).

Today, pedagogical innovation hinge on two main aspects which interact. Firstly the social aspect and secondly the technical aspect. Briefly, the social aspect translates the professors' desire to impart in-depth learning to students and to promote academic persistence with the aim of preparing students for their future profession. At that point the professors mobilise everything possible to develop students' social skills, abilities, sense of initiative and creativity, and guide them towards discovery. Professors also like to confront students with the reality of the world of work so that they are exposed to the object of their studies as early as possible. The technical aspect is a palette of teaching

methods, and didactic and technological instruments at the service of professors seeking to achieve their pedagogical goals. We can now understand that pedagogical innovation in higher education is a fragile balance between social reality and technology (Ibid.).

Professors wish to prepare students, for their future profession and guide them in facing the outside world, often using pedagogical innovations. Today, teaching practice support programs form part of the university landscape and advocate the valorisation of teaching and pedagogical support for professors and innovators. The aim of pedagogical innovation is often to improve student learning, particularly in an interactive context. The change that it drives should have a positive effect. However, does research demonstrate a positive relationship between pedagogical innovation and academic persistence? Before attempting to answer this question, I explore the university context to better understand the situation in which teachers implement pedagogical innovations.

2. Understanding the University Context: between Research and Teaching

The university presents significant challenges to the professor in executing their role (Ramsden, 1998). I note the world academic rankings which facilitate comparison between universities and incite performance and competition using the criteria and coefficients defined by the international academic rankings for universities, in particular the Academic Ranking of World Universities (ARWU), which only bases ten per cent of its assessment on teaching quality. In this context teaching is relegated to the back seat. For the purposes of social and academic recognition, the pressures engendered by this economic factor compel university professors to invest massively in their research and publication activities, whilst it is also expected that they invest in their teaching activities. Professors who commit themselves significantly to their teaching activities obtain little in the way of recognition in return for their investment.

Rice and Austin (1990) confirm that a teacher's attitude, perception and commitment are established in accordance with the institutional environment, which proves to be key in creating a favourable climate for learning and teaching, and furthermore determines the degree of teachers' investment in their teaching.

The literature contains several studies and meta-analyses dealing with the relationship between teaching and research. Two dichotomous theories arose from the lively debates of the 1990s; these are simply expressed by compatibility or the opposite, incompatibility (Clark, 1997). I note that the theory that teaching and research together form the core of university activities is now strongly contested (Henkel, 2004). In effect, from the literature I can see that this questioning stems from actors in higher education and science policy, as well as sociologists analysing the internal and external forces separating these activities.

A study conducted in Australian universities demonstrated that statistically there is no significant correlation between a university's performance in terms of research and its performance in terms of teaching (Ramsden and Moses, 1992).

A meta-analysis bringing together the multiple explanatory models of the relationship between teaching and research from fifty-eight empirical studies adds that no statistically significant correlation between the qualities of a teacher and those of a researcher was revealed (Hattie and March, 1996).

The authors concluded that: "… the common belief that teaching and research were inextricably intertwined is an enduring myth. At best, research and teaching are very loosely coupled." (Ibid, p. 529). This conclusion is confirmed by other empirical research, for example that of Lindsay et al. (2002).

I acknowledge the nuance added by a qualitative study highlighting that university professors believe that their research influences their teaching and that their teaching activities have a positive effect on their research (Smeby, 1998). Furthermore, they find research more important for teaching than vice versa. Finally, I note Barnett's (2003) relevant opinion, who questions the strategy of linking together two activities that have so many ideological differences.

Whilst controversies and tensions between teaching and research paint a bleak picture of the research-focussed university, some authors are proclaiming a 'profound civilizational mutation' (Baillargeon, 2011, p. 10) or even a 'second academic revolution' (Etzkowitz, 2001) transforming the university's role in society. The themes of the preparatory meetings for the Higher Education Summit held in Montreal in February 2013 at the Department of Higher Education's initiative echoed the authors in their civilizational and academic recommendations, which today corroborate yesterday's concerns.

This entrepreneurial revolution has led to a new understanding of both research and teaching in the face of unprecedented demands justified by market imperatives. Moreover, it is becoming tough to define what is meant by the word 'research'. According to Jonghe (2005, p. 70), this term: "often covers various types of study". The author also notes that: "priority is now given to knowledge acquisition rather than the teaching of knowledge," and confides that research is the object of criticism as society's training needs are neglected.

From this literature review I have understood that reconciling research and teaching activities, without differentiating their importance, remains the university professors' main challenge and requires that they recognise the complexity of their profession of teacher-researcher, which manifests as a double mandate where the programs offered by universities train researchers and simultaneously promote teaching excellence.

In consideration of this singular context, I can now approach the question of the introduction: does research demonstrate a positive relationship between pedagogical innovation and academic persistence?

3. Does Pedagogical Innovation Influence Academic Persistence

Research specifically focusing on the positive relationship between pedagogical innovation and academic persistence[1] is virtually non-existent. Nevertheless, certain studies do identify some positive relationships in their results. The literature allows us to draw up a framework on which to base our choice as regards the types of pedagogical innovation to consider when trying to respond to this question. The educational context proves to be important and the actors on the ground can play a major role in supporting student perseverance and success (Schmitz et al., 2010). Adopting teaching arrangements that use peer relations, cooperative learning and useful and interesting activities is advocated. An approach aimed at students, that consolidates their feeling of personal efficiency and the construction of their study plan is desirable. Transforming pedagogical practices to involve students in more tailor-made teaching/learning activities, such as group work, is recommended, as this allows students to develop different and complex skills (Noel and Frenay, 2011). Consequently, I have synthesized papers dealing with new student guidance schemes, collaborative learning, cooperative learning and New Information and Communication Technologies (NICTs).

In the light of low persistence rates amongst first-year university students (Nils and Lambert, 2001), guidance and support programs for new students have been implemented to promote academic persistence (Sauvé et al, 2007). Let's recall that the intention to persevere from the first weeks at university - a key factor in actual persistence and one that is positively associated with a student's ultimate success - not only encompasses the student's commitment vis-à-vis their aim and that of the institution, but also their assessment of their ability to successfully complete their studies (Schmitz et al. 2010). Adding that integration in, and belonging to the university community lead to persistence or non-persistence, whilst nevertheless clarifying that academic integration exerts a greater influence than social integration (Tinto, 1975; Fox, 1986, and Torres and Solberg, 2001).

Fidler and Moore (1996), Huff, Cook and Price (1996), and Levitz and Noel (1989) report the positive impact of programs aimed at the social and academic integration of new students and preventive measures against first-year failure on academic persistence (Salmon et al., 2011). Schmitz et al. (2006), like Tinto (1997), highlight the importance of academic support from professors, and the quality of peer interaction and competitiveness in class in the intention to persist. Whilst it has become apparent during our reading that student guidance by teachers has a positive effect on academic persistence through academic support from teachers promoting positive student commitment to their studies (Newman, 2002) and confidence in their own abilities (Ryan and al., 1998), the results show that participation in academic guidance schemes and commitment to study do not appear to significantly influence decisions to persevere in the first year, except for economic and political science faculty students. Conversely, the quality of peer relations is of key importance in the persistence process.

Teachers' in-class pedagogical practices influence social relations development (Tinto, 1997, and Ryan and Patrick, 2001). In a collaborative learning context, task fulfilment strategies develop gradually and are negotiated between each of the members of a group, making student autonomy a sine qua non condition of collaborative learning and necessitating understanding of others' viewpoints in order to progress (Baudrit, 2007). Tinto (2000) advocates the relevance of collaborative pedagogy in which the student remains active in their learning process. Group learning by project or instructorship, to promote student social and academic integration, is recommended (Prevatt and Kelly, 2003; Tinto, 1997). Tinto (1977) notes the positive effect of group learning on academic persistence as he connects institutional academic requirements with students' own social and support needs that are as much from friends as they are education-related.

Computer-assisted communication complicates the influence of the interpersonal process during collaborative learning (Tu, 2000; Wilson 2003; Wagner 2002; and Tidwell and Walther, 2002). The reduction of contextual and social-emotional indicators circumvents exchange and eliminates the information needed to build a meaningful relationship (Chou, 2001; and Kreijns and al., 2003), which then develops using alternative methods (Tidwell and Walther, 2002; Ramirez et al., 2002).

A qualitative study (Horman, 2005) of 72 students enrolled in a compulsory baccalaureate class reported that, when carrying out collaborative learning tasks online, perception of the impact on the quality of the work proved to be contradictory. Whilst the students asserted that the quality of their work was not different, the public circulation of their written work seemed to be conducive to producing higher quality.

Within the framework of cooperative learning, task fulfilment strategies are planned in advance by the teacher. While inter-peer relations is a major source of support for students (Tinto,1997) and simple student participation in class also proves to be an indicator of academic commitment, which is important for academic persistence (Nota and al., 2004), group/class management promotes a feeling of self-efficiency (Bandura, 1977) and exerts a positive influence on persistence.

The reports of Johnson and Johnson (1989a) and Slavin (1983) agree on the fact that cooperative learning has a

[1] Understood as the opposite of academic abandonment due to a failure marked by an institutional decision, a voluntary departure, declared or otherwise, a non-reenrolment or a change of establishment (Grayson, 2003).

positive impact on student productivity and performance as compared to traditional, competitive and individualistic structures. Cooperative learning contexts have a significant impact on student attitudes towards the subject and learning, on their relationships (attraction and affection) with classmates, on social support and on improving self-image and self-esteem (Johnson and Johnson, 1989a). This confirms that cooperative learning promotes students' verbal and social skill development and moreover restores their self-esteem. Here I can see factors that are positive for academic persistence.

Johnson and al. (1979), Sharan (1980), and Springer and al. (1999) demonstrate that students who work in small groups attain better academic results than those who study in a traditional manner and they develop behavior that is conducive to learning, which allows them to pursue their study program. Thus, small group learning can substantially reduce course and program abandonment.

Whilst an important relationship exists between student motivation, student success and even academic persistence (Abel, 1966; Astin, 1964), ICT harbours potential for motivating learning (Viau, 2009). The intensive use of a virtual teaching platform improves teaching quality and promotes better learning in greater volumes (Pedro, 2005). Pedro clarifies that: "it is not technology that exerts an influence, it is the way in which it is used" (p. 23). Individual mentoring programs have a significant and important effect on class perseverance (Poellhuber, 2007). Thus, it seems possible to establish a link between individual mentoring programs and student perseverance in open and distance training supported by ICT.

4. Conclusion

The effects of new student guidance schemes on student persistence are mixed. Nevertheless, academic support from professors promotes positive student engagement and consolidates confidence in one's own abilities. The quality of peer relationships is an essential component in the persistence process.

Collaborative learning promotes a student's social and academic integration through the development of quality interaction between peers. Cooperative learning promotes the development of the student's verbal and social skills and restores their self-esteem. NICTs provide positive support during individual mentoring, better accessibility and they contribute to student retention. New student guidance schemes, collaborative learning, cooperative learning and NICTs allow students to integrate into the university community, and also to develop various skills and define themselves socially, through and with others, through these learning experiences. The aim is to create an environment that preserves a student's wellbeing and promotes their learning.

In conclusion, it emerges that I can put forward inputs for this positive relationship in different ways, but we must question the teaching methods and styles a teacher uses to manage the student's knowledge acquisition process as a whole. The studies listed focus primarily on students and often disregard teacher participation and involvement.

As a final remark, I formulate the hypothesis that the positive relationship between pedagogical innovation and student perseverance could arise from the simple fact that the teacher is motivated and supported in this process of conveying knowledge differently. The factor common to all these pedagogical innovations is then that they are fundamentally strategic, as are so many tools for improving learning and ensuring academic persistence.

References

[1] Abel, W. (1966). Attrition and the Student who is certain. *Personnel and Guidance Journal 44*, 1042-45.

[2] Astin, A.W. (1964). Personal and environmental factors associated with college dropout among high aptitude students. *Journal of educ. Psychol, 55*, 219-227.

[3] Baillargeon, N. (2011). *Je ne suis pas une PME, Plaidoyer pour une université publique*. Montreal: Poètes de Brousse.

[4] Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.

[5] Baudrit, A. (2007). *L'apprentissage collaboratif : Plus qu'une méthode collective ?* Bruxelles : Éditions De Boeck Université.

[6] Barnett, R. (2003). Beyond All Reason: Living With Ideology in the University. In *Higher Education and the Open University Press*. Buckingham, UK: Society for Research.

[7] Clark, B. R. (1997). The modern integration of research activities with teaching and learning. *Journal of Higher Education, 68 (3),* 242-55.

[8] Chou, C-T.C. (2001). *Student interaction in a collaborative distance-learning environment : A model of learner-centred computer-mediated interaction*. University of Hawaii.

[9] Etzkowitz, H. (2001). The second academic revolution and the rise of entrepreneurial state. *IEEE Technology and Society, 22(2),* 18-29.

[10] Fidler, P.P. and Moore, P.S. (1996). A Comparison of Effects of Campus Residence and Freshman Seminar Attendance on Freshman Dropout Rates. *Journal of the Freshman Year Experience & Students in Transition, vol. 8, n°2*, 7-16.

[11] Fox, R.N. (1986). Application of a conceptual model of college withdrawal to disadvantaged students. *American Educational Research Journal, 23(3)*, 415-424.

[12] Grayson, P. (2003). *Les recherches sur le maintien et la diminution des effectifs étudiants*. Montréal: Fondation canadienne des bourses d'études du millénaire.

[13] Hattie, J. and Marsh, W. (1996). The Relationship between Research and Teaching: A Meta-Analysis. *Review of Educational Research. 66 (4),* 507-542.

[14] Henkel, M. (2004). La relation enseignement-recherche. In Policies and management of higher education. *Revue du programme sur la gestion des établissements d'enseignement supérieur , OCDE, 16 (2)*, 21-36.

[15] Horman, J. (2005). *Une exploration de l'interaction sociale en ligne lors de réalisation d'activités d'apprentissage collaboratif dans deux espaces interactifs : un site internet et des wikis*. Mémoire, Université de Laval.

[16] Huff, M., Cook, D. and Price, C. (1996). The first five years of freshman seminars at Dalton College: Student success and retention. *Journal of the Freshman Year Experience 8*, 17-33.

[17] Jonghe, A-M. (2005). Gérer les tensions entre recherche et enseignement. *Politiques et gestion de l'enseignement supérieur. 17(2).*

[18] Johnson, D. W. and Johnson R. (1989a). *Cooperation and competition: Theory and research.* Interaction Book Company.

[19] Johnson, D.W., Johnson, R.T. and Skon, L. (1979). Student achievement on different types of tasks under cooperative, competitive and individualistic conditions. Contemporary *Educational Psychology, 4*, 99-106.

[20] Kreijns, K., Kirschner, P. A., and Jochems, W. (2003). Identifying the pitfalls for social interaction in computer-supported collaborative learning environments: A review of the research. *Computers in Human Behavior, 19(3)*, 335353.

[21] Levitz, R. and Noel, L. (1989). Connecting students to institutions: Keys to rentention and sucess. In Upcraft, M. et Gardner, J. (Eds.), *The Freshman Year Experience*. San Francisco : Jossy-Bass.

[22] Lindsay, R., Breen, R and Jenkins, A (2002) Academic Research and Teaching Quality: the Views of Undergraduate and Postgraduate Students. *Studies in Higher Education. 27 (3),* 309-27.

[23] Newman, R.S. (2002). How self-regulated learners cope with academic difficulty: the role of adaptive help seeking. Theory into Practice, spring-Autumn.

[24] Noel, B. and Frenay, M. (2011). Comment soutenir la persévérance dans les études ? In Ph. Parmentier (Dir.). *Recherches et actions en faveur de la réussite en première année universitaire. Vingt ans de collaboration dans la Commission « Réussite » du Conseil interuniversitaire de la Communauté française de Belgique*. Bruxelles : CIUF.

[25] Nils, F. and Lambert, J.P. (2011). Quelle est l'ampleur de l'échec en première année à l'université ? Tout est-il joué d'avance ? In Ph. Parmentier (Dir.). *Recherche et actions en faveur de la réussite en première année universitaire*. Bruxelles : CIUF.

[26] Nota, L., Soresi, S., and Zimmerman, B. J. (2004). Self-regulation and academic achievement and resilience. *International Journal of Educational Research*, 41(3H), 198-215.

[27] Pedro, F. (2005). Une comparaison des méthodes d'enseignement universitaire traditionnelles et enrichies par les TIC : exemples tires de deux études empiriques. *UNESCO, L'enseignement Supérieur en Europe, vol. XXX, n° 3-4*, 162-175.

[28] Piot, T. (2008). La construction des compétences pour enseigner. *McGill Journal of Education / Revue des sciences de l'éducation de McGill, 43 (2)*, 95-110.

[29] Poellhuber, B. (2007). *Les effets de l'encadrement et de la collaboration sur la motivation et la persévérance dans les formations ouvertes et à distance soutenues par les TIC*. Thèse, Montréal : Université de Montréal.

[30] Prevatt, F. and Kelly, D. (2003). Dropping out of school : A review of intervention programs. *Journal of school psychology, 41*, 377-395.

[31] Ramirez, A. Jr., Walther, J.B., Burgoon, J.K. and Sunnafrank, M. (2002). Information-Seeking Strategies, Uncertainty, and Computer-Mediated Communication: Toward a Conceptual Model. *Human Communication Research, 28, 2*, 213-228.

[32] Ramsden, P. (1998). *Learning to lead in higher education*. London and New York: Routldge.

[33] Ramsden, P. and Moses, I. (1992). Association between research and teaching in Australian higher education. *Higher Education*. *23*, 273-295.

[34] Rice, R. E. and Austin, A. (1990). Organizational impacts on faculty morale and motivation to teach. In P. Seldin (Ed.), *How administrators can improve teaching*, San Francisco: Jossey-Bass.

[35] Ryan, A.M. and Patrick, H. (2001). The classroom social environment and changes in adolescents 'motivation and engagement during middle school. *American Educational Research Journal, 38*(2), 437-460.

[36] Ryan, A.M., Gheen, M.H. and Midgley, C. (1998). Why do some students avoid asking for help? An examination of the interplay among students' academic efficacy, teachers' social emotional role, and the classroom goal structure. *Journal of Educational Psychology*, 90, 528-535.

[37] Salmon, D., Houart, M. and Slosse, P. (2011). Pourquoi mettre en place des dispositifs d'accompagnement et de remédiation, et comment en évaluer l'efficacité ? In Parmentier, Ph. (Dir.) *Recherches et actions en faveur de la réussite en première année universitaire*. Bruxelles : CIUF.

[38] Sauvé, L., Debeurme, G, Martel V, Wright, A. and Hanca, G. (2007). Soutenir la persévérance des étudiants (sur campus à distance) dans leur première session d'études universitaires : constats de recherche et recommandations. *Revue internationale des technologies en pédagogie universitaire 4(3)*, 59-72.

[39] Schmitz, J., Frenay, M., Neuville, S., Boudrenghien, G., Wertz, V., Noël B. and Eccles, J. (2010). Étude de trois facteurs clés pour comprendre la réussite et la persévérance à l'université. *Revue Française de Pédagogie*, 172.

[40] Schmitz, J., Frenay, M., Wouters, P., Galand, B., and Boudrenghien, G. (2006b). Rôle des dispositifs pédagogiques dans le soutien académique, l'intégration académique et sociale et la persistance des étudiants de premier Baccalauréat. *23ème Congrès de l'Association Internationale de Pédagogie Universitaire, Monastir*, 15-18/05/06.

[41] Sharan, S. (1980). Cooperative learning in small groups: recent methods and effects on achievement, attitudes and ethic relations. Review of *Educational* Research, 50(2), 241-271.

[42] Slavin, R.E. (1983). *Cooperative learning*. New York : Longman.

[43] Smeby, J.-C. (1998) Knowledge production and knowledge transmission. The interaction between research and teaching at universities. *Teaching in Higher Education*, 3 (1), 5-20.

[44] Springer, L., Stanne, M.E. and Donovan, S. (1999). Measuring the success of small-group learning in college lever SMET teaching: a meta-analysis.

[45] Tidwell, L.C. and Walther, J.B. (2002). Computer-Mediated Communication Effects on Disclosure, Impressions, and Interpersonal Evaluations. *Human Computer Research , vol. 28, n ° 3*, 317-348.

[46] Tinto, V. (2000). What we have learned about the impact of learning communities on students? *Assessment Update 12(2): 1-2*, 12.

[47] Tinto, V. (1997). Classrooms as Communities: exploring the educational character of student persistence. *Journal of Higher Education, 68(6)*, 599-622.

[48] Tinto, V. (1975). Dropout from Higher Education: A Theoretical Synthesis of Recent Research. *Review of Educational Research, vol.45*, 89-125.

[49] Torres, J. and Solberg, V. (2001). Role of self-efficacy, stress, social integration and family support in Latino college student persistence and health. *Journal of Vocational Behavior, 59*, 53-63.

[50] Tu, C. H. (2000). An examination of social presence to increase interaction in online classes. Arizona State University.

[51] Viau, R. (2009). *La motivation en contexte scolaire*. (Édition européenne). Bruxelles : Éditions De Boeck.

[52] Wagner, K.H. (2002). *An investigation of conflict management in global virtual teams*. University of California Los Angeles.

[53] Walder, A.M. (2014). The concept of pedagogical innovation in higher education. *Education Journal, vol. 3, n°3*, 195-202.

[54] Walder, A.M. (2014). Pedagogical innovation: between reality and technology. *British Journal of Arts and Social Sciences, vol. 18, n°2, 59-79.*

[55] Wilson, V.E. (2003). Perceived Effectiveness of Interpersonal Persuasion Strategies in Computer Communication. Computer in Human Behavior, vol. 19, Issue 5, 537-552.