Pedagogical Debates on Educational Innovation

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ABSTRACT

Educative innovation is a constant dynamic in the process of improving the educational system. Responding to criteria of need, opportunity, coherence and replicability, the introduction of changes, modifications in the academic guidelines contributes to the progress of teaching and the quality of education. Initial and continuous teacher training is an essential part of the innovative initiatives. Throughout four pedagogical workshops related to teaching practice, 181 teachers of Secondary Education opened, a dynamic of debates to stimulate critical reflection and the exchange of information and ideas about innovation of pedagogical work. The teachers shared their interests and concerns about the tasks of innovating in the classroom and introducing improvements in the school organization itself. Results indicated that barriers to innovation are still embedded in school routines, and highlighted also the advantages of innovation for the participants. This study points out to the need to stimulate changes in the school organization and encourage teachers to facilitate the implementation of innovative proposals.

Keywords: *Educational innovation, Debate, Focus-group method, Teacher training, Didactic communication, School organization.*

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Highlights of this paper

- This research paper analyzes the advantages and difficulties of educational innovation from the perspective of teachers.
- Developed in continuous teacher training workshops, it is based on the focus group method through participatory debates.
- The research results show both the interest in improving teaching practices and the lack of institutional stimuli to innovate in the classroom.

1. INTRODUCTION

The concept of innovation refers to the introduction of changes, or improvements that represent a qualitative advance over the current situation, whatever it may be: Include a novelty that implies moving towards a better situation. When we think that things can be done better by changing or introducing some variation in the usual procedures, we will be devising an innovation (Serdyukov, 2017). When the idea is translated into a practical reality, the measure of achievement reached, the success of the change, will define specifically the characteristics of innovation (Brewer and Tierney, 2012). The reception of the improvement that is intended will depend on the context in which it is inserted and of the preexisting culture in that environment. Shared understanding of the innovation process grants meaning to innovation and gives prospects of being carried out (Fruehauf *et al*., 2017). In the case of educational scenarios, the ability to innovate is linked to the characteristics of the professional training of teachers. Here, innovation has a wide space of lace: as a novel teaching practice, as resources specifically designed to facilitate learning or as a reorganization of the institutional system. The objectives of educational innovation aim at increasing the productivity and efficiency of learning and in improving the effectiveness and quality of teaching.

When the innovation is unsuccessful or has difficulty to getting ahead, the concept of disruptive innovation is used (Yu and Hang, 2010). It is about pointing out the different elements that hinder implementation or the continuity of the improvements that are intended to be achieved. For these obstacles, innovation calls for the active and committed participation of teachers demanding transformations both in the ways of understanding education and in the ways of developing teaching-learning procedures. Innovation in education is not the product of a happy idea of a teacher. It is the result of the teamwork of an innovative group that adds adhesions as it advances in their innovative proposal. It is from this perspective that educational innovation is understood as a response to *need* criteria facing a problem detected, derived from the result of a previous needs analysis; *opportunity* for its application, related to the characteristics of the context, the moment and the agents involved; of *coherence* between the improvement it want to provide and the previous stage; and of *replicability*, that is, the possibility of transferring innovation with good results to different educational spaces.

Innovation requires raising ways to make things better. Encourages thought processes in the search for better answers to identified needs. Here come into play simultaneously, convergent reasoning strategies following a prescribed pattern that leads to expected results, and divergent reasoning strategies, establishing connections between different ideas and possibilities offering alternative options. Both thought patterns are subcomponents of creativity (Cortes *et al*., 2019). However, it is necessary to prioritize between creativity and innovation. While creativity is the thought process itself, innovation is the practical application of those ideas. That is, innovation occurs as a result of creative processes (Morin *et al*., 2016). Creativity works in classrooms developing competencies of critical thinking in the students (Bloom and Dole, 2018). Teachers encourage creativity through teaching strategies that involve inquiry and active participation in the classroom, incorporating in the curricula the need to improve the creative potential of students (Sawyer and Zag, 2013).

The innovation process develops through three sequential phases: the idea of innovating, the fact of carrying it out and checking results. Measure the degree of the effect of educational innovation allows to adequately sizing the

impact that an innovative initiative may have on the quality of educational processes. It is about checking whether the innovation meets the purpose for which it has been introduced. Quality improvement requires assessing the extent to which innovation, or the degree of innovation required, benefits the training processes (Rincon-Flores *et al.*, 2018). This cannot be done without the perspective of an appropriate time dimension that allows a good evaluation of innovation throughout the entire change process. Since the need to innovate arises until innovation settles on the educational center dynamics. Since it is internalized on a personal level until it is institutionalized on an organizational level. Maintaining the innovation-driven work team will facilitate weighing all the efforts involved in starting an innovation process and implementing it, and work together in the same direction until it becomes part of the school institution (Hastings and Breslow, 2016).

Coordinate an innovative work team, planning an experience of educational innovation, follow an effective and efficient application, assess its impact and even think about transferring it, it is not a simple process nor does it always run. Educational innovation must be integrated into an ecosystem that has barriers and enablers that are inherent in the educational system itself. The school is an organization that has serious difficulties in coping with changes (Baumann *et al.*, 2016). The management and administration styles of the school play a decisive role in promoting or hindering innovative processes. Teachers must face the existing barriers to initiate, develop and maintain innovation projects. Obstacles such as the profusion of regulations, curricular rigidity, available resources or deficiencies in teacher professional development (Voigt *et al.*, 2018) represent critical conditions for innovations. To this must be added the low tolerance of many teachers to the uncertainty caused by any important innovation. Something that does not affect students at all, always open to changes in the teaching models but paralyzes the teachers in some way and to the institutional administrators excessively cautious about any changes (Blouin *et al.*, 2009). Also the fact of facing the frustration of seeing how the majority of the proposals for improvement remain in simple punctual innovations, the implementation of innovations without changes or real improvements or slight improvements that are limited to the replacement of a stiff practice with a less static one (Nicholls, 2018). Overcoming these and other obstacles requires to address the need to share the different built realities that coexist in educational settings. The very idea of educational innovation alert about the need to strengthen horizontal school organizations, flexible, based on shared responsibility and cooperation, adaptable to the complex reality of today's world. The cohesive and articulated cultural processes around a consensual center project that represents a widely shared culture (Kunnari and Ilomäki, 2016) provide a favorable environment for work and coexistence, favor the sustainability of innovation in the centers and gives continuity.

Everything that happens in the educational environment is subject to innovation. From the teaching perspective it is always appropriate reviewing the learning contents offered to students, the methods used to present them in the classroom and the ways to assess the learning gains acquired (Simplico, 2000) with an efficient perspective and approach (Findikoglu and İlhan, 2016). Current schools need to improve the teaching of complex thinking, make the student the protagonist of their own learning and expand the digital skills of both students and teachers. From the learning perspective, educational innovation requires thinking about how students learn best (Sharples *et al.*, 2016) highlighting dynamic learning approaches incorporating learnings based on activities linked to the students daily life experience (Shapiro *et al.*, 2007). Educational innovation is based on a constant process of updating and adaptation (Pisanu and Menapace, 2014) product of a previous research on identified needs or from the analysis of outstanding innovative experiences (Organization for Economic Cooperation and Development (OECD), 2013). Thus, innovating in education encourages the permanent review of teaching-learning models and educational organization and management to move towards educational models based on collaboration and cooperation. Give wings for rethinking the school model so that both the social demands and the changing needs of

the students can be met (Laici and Orlandini, 2016). To understand what it means to try to innovate in education or stimulate innovative initiatives in schools, it is necessary to approach the way of thinking and working of teachers. Their way of understanding teaching and learning, their own role in the educational process or the one given to students, can incentivize or discard changes that improve their educational practice and increase student competences. Thus, placing innovation as a classroom practice, a group of teachers, participants in continuous training workshops, were asked to, through open debates, perform a critical analysis on advantages and disadvantages of innovation and its professional and organizational implications.

2. MATERIAL AND METHODS

The methodological dynamics of this research is based on the focus group method (Carey and Asbury, 2016). Developed during continuous training sessions, it was carried out throughout four pedagogical workshops related to teaching practice. Participating teachers were invited to value educational innovation from their own practical experience. The sample Table 1 was composed by 181 Compulsory Secondary and Upper Secondary Education teachers in active from the all areas of knowledge (114 women and 67 men). Jointly, they gathered an average teaching experience of 17.8 years. The study was carried out in Asturias, Spain.

Table-1. Sample of participating teachers.

	Academic Stage		Years of teaching experience	Total
Sample	**Secondary Education**	**Upper Secondary Education**		
Women	72	42	18.7	114
Men	39	28	16.9	67
Total	111	70	Average 17.8	181

To facilitate critical reflection among the peers-group didactic communication was used. It was about focusing teaching innovation as a center of interest and place all participants on the subject in question. Combining research methods (Mackenzie and Knipe, 2006) the debate performance stimulated critical reflection and facilitated the informal exchange of ideas on educational innovation (Kedraka and Kourkoutas, 2018).

Critical incident technique (Tomkins and Eatough, 2013) was used as a tool to collect information provided by teacher's interventions. The aim was to record the answers generated to the comments made between them during the debate sessions and the personal valuations expressed about their own educational practices. A descriptor divided into pros and cons was introduced.

Finally, educational innovation was subdued to a culturally responsive evaluation (Thomas and Parsons, 2017) to take into account, in addition to their opinions, the professional experiences of the teachers involved in the debates. The results were triangulated (Heesen *et al*., 2019) to control the biases that could occur when categorizing the reflections expressed and thus cover the feasible deficiencies that arise when information is being collected.

3. RESULTS

As a general result of the four debates promoted among participants in the continuous training workshops, most teachers pointed out two discouraging factors to innovation initiatives linked to the school organization:

1. *Demotivation by the institutional situation:* incongruent excess of bureaucracy; permanent changes in educational legislation; teaching assignment in different subjects / groups.
2. *Lack of continuity in time to establish innovation:* job insecurity; center transfers almost every course; embedded school routines; demotivating environment to change.

The pros and cons descriptor made it easier for teachers to assess the advantages and disadvantages of educational innovation. About the advantages Figure 1 innovating in education means to break routines (62%) that are traditionally rooted in the school centers affecting the ways of working and relating. During the debates, almost half of the teachers (46%) related educational innovation with professional development as it involves a stimulus to keep moving forward in their own professional qualification. Personal motivation, the teacher's commitment to h/her profession, is the most valued element when they consider themselves as referents of innovation (76%). In an environment such as education where teamwork is a competence that students are taught to develop, surprise the low rating given to the interdisciplinarity (34%); surely this reveals a lack of culture of collaboration among educational departments. Teachers conclude their list on the benefits of innovating, noting that the changes, the improvements that innovative proposals can introduce in school settings, contribute to the improvement of educational quality (59%).

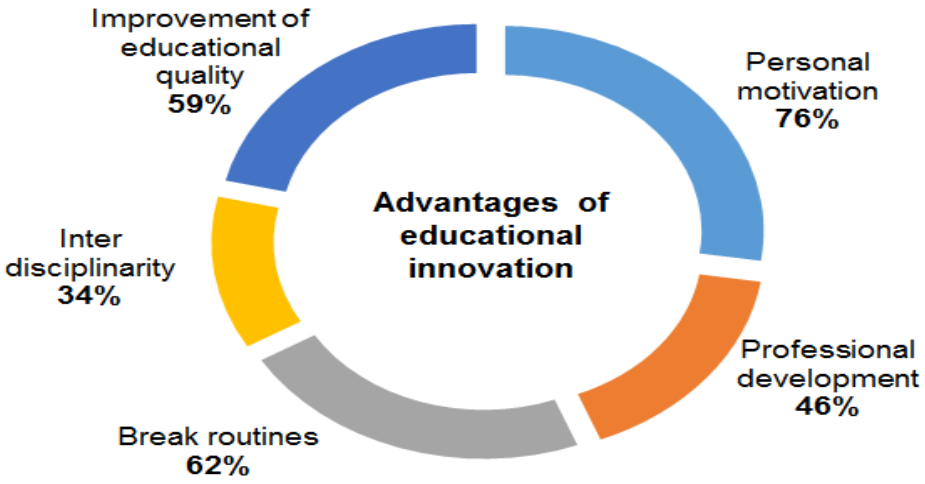

Figure-1. Advantages of innovating according to the participating teachers.

Regarding the difficulties to innovate Figure 2 teachers say it is difficult to carry out an innovative initiative in the center because: innovation takes time (97%) and objectively, there is no time to do so. The time available to teach the subject, attend tutorials with students and families and accomplish to bureaucratic requirements, monopolizes all the attention and dedication of teachers. In addition, the work dynamics established in the centers are very rigid: school routines make that drive an innovative group requires much time and effort.

Teachers do not receive stimuli that encourage them to propose innovations in their teaching practices (94%). Overworking that teachers already support in the centers, motivated in most cases for a configuration of the school organization that prioritizes teaching programs by objectives, it is the most demotivated element when it comes to raising an innovation. The few incentives that an innovative initiative can cause even become an increase in workload.

Again pointing to the school organization as a reference for demotivation to innovate in most of the assessments, it draws attention the value judgments expressed by teachers related to professional practice itself. They describe that resistance to change (91%) discourages the desire to innovate by refusing to lose the stillness of the comfort zone conquered through the automation of teaching processes. Teachers comment that the introduction of changes always needs resources (86%) that are not available and are not provided. In the debates, fear of failure at the prospect of undertaking innovation proposals (76%) also appeared as an element that reduces teachers motivation. As well as the low resistance to frustration (53%) when it becomes difficult to achieve innovative teams

or when collaboration levels among the staff are deficient and the perception of needing more training (56%) becomes more evident. In fact, only 23% of participating teachers said they were satisfied with their current training. Although it is possible that this low rate in training itself was conditioned by the fact that teachers were participating in continuing education courses.

Teachers pointed out at job instability (41%) related to the contractual figures of the teaching staff, and to increasing difficulties in maintaining continuity over time to assess the benefits or deficiencies of innovation proposals, 72%.

A worrying result is reflected in the limited experience of collaboration with other colleagues (61%) due to poor cooperation between the different teaching departments. Although in the four debates carried out, teachers believe that the development of interdepartmental projects favors quality education, they point out obstacles in the internal communication channels: they manifest complications to communicate professional aspects to the rest of the colleagues and find it difficult to open spaces for collaboration.

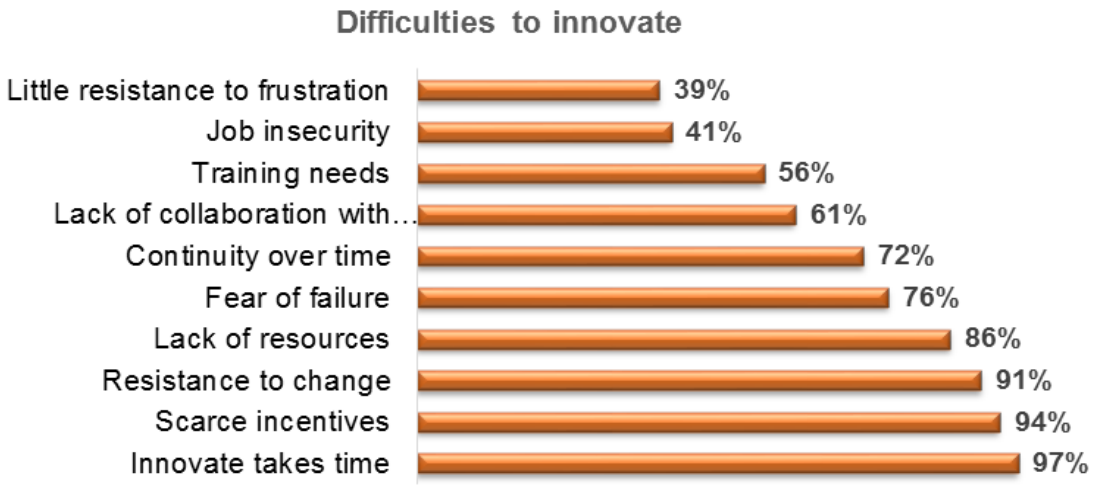

Figure-2. Disadvantages of innovating according to the participating teachers.

Among the pros and cons, 87% of the teachers involved in these debates believe that educational innovation is a basic element of the teaching-learning process. In the open debates the participants clearly express that they are convinced that changes in school organization can be promoted through teaching innovation: opening spaces for network collaboration and participatory management among teachers; introducing social progress both in classroom dynamics and in pedagogical practice; and updating the teaching methodology to adapt the didactic practice to the changing needs of the students.

4. CONCLUSIONS / DISCUSSION

The literature on innovation in education points out existing barriers to initiate, develop and maintain innovation proposals. Teacher training, the work environment at school and the education system (Seechaliao, 2017; Ferrari *et al.*, 2018; Cascón-Pereira *et al.*, 2019) are repeated as the main difficulties to carry out and consolidate changes in educational settings. In fact, it is reflected that most of the innovative initiatives undertaken in schools end up being mere punctual innovations. A good apparent action turned into an anecdotal fact that is remembered, but not consolidated as an element of real improvement. However, this does not discourage teachers. As can be seen in the results obtained with this sample of secondary school teachers, most of them want to project

and make innovation proposals in their classrooms and schools. Fighting against ignorance and overcoming difficulties is rooted in the very substance of the teaching profession.

The methodological strategy of open debate used as a research resource it has been interesting. From the point of view of the expression of new skills and knowledge (Fournier-Sylvester, 2013; Mumtaz and Latif, 2017) the participating teachers revealed pedagogical concerns that they had kept half-hidden on the subject of educational innovation.

Through the informal exchange of ideas and information about their own teaching practice and the scope of innovation in education, in the four continuous teacher training workshops held, teachers began answering closed questions that they themselves did.

That is, they posed the problem with the solution included. But gradually they opened the perspective, focusing the interest on the shared experience. Although they found it difficult to separate emotions when referring to educational innovation (Ellis, 2017) or develop a holistic view on it Halász (2018) covering the sequential steps of the innovative process (the idea of innovating), the product (the proposed innovation) and the result (the evaluation of the intended improvement).

A worrying result obtained from this sample is the evidence of job instability that teachers experience. This is related not only to public budgets for education, in a public education environment, but also to educational policy and school organization in Spain.

This last factor, the organization, is recurrent in teacher complaints as a cause for demotivation. Innovation in schools is not adequately stimulated from the school administration itself. Resources are not provided to undertake and too many times teachers say they feel inhibited to raise changes that may affect the inflexible preset structure (Hallgarten and Beresford, 2017).

There is a variable here that plays a somewhat confusing role. The importance of human relationships in educational settings is well known (Dennison and Shenton, 2018) for achieving results, and yet, the teachers participating in the workshops recognize having very limited experiences of collaboration with their peers.

This low cooperative quality among the teaching staff is one of the base problems that underlie the school organization. It is necessary to open the doors of the teaching departments. Incorporate interdisciplinarity as a shared framework. Develop interdepartmental projects made through the joint work of different teachers belonging to different subjects and areas of knowledge is to open a space for innovative school as a model of school organization.

The continuous teacher training, at all levels, enable teachers not only to meet the changing social demands, but also to carry out innovations that improve their own teaching practice (Pitsoe and Letseka, 2017). Innovate improves their professional qualification, as recognized by the teachers involved in this research.

Therefore, innovative proposals on teaching practices are necessary that provide teachers with methodological tools adaptable to the current needs of students and at the same time strengthen their own teaching skills. Making it happen requires analyze the efficiency and effectiveness of the teacher's available time.

The lack of curricular flexibility and the amount of paperwork that they must do make it difficult to meet their continuing training needs. Nor does it help them to undertake change initiatives. Stimulating motivation to innovate is a key factor in an environment where continuous teacher training is essential to offer a quality education to students practically attached to digital devices always on.

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REFERENCES

Baumann, T., K. Mantay, A. Swanger, G. Saganski and S. Stepke, 2016. Education and innovation management: Aa contradiction? How to manage educational projects if innovation is crucial for success and innovation management is mostly unknown. Procedia-Social and Behavioral Sciences, 226(3): 243-251.Available at: https://doi.org/10.1016/j.sbspro.2016.06.185.

Bloom, L.A. and S. Dole, 2018. Creativity in education: A global concern. Global Education Review, 5(1): 1-4.

Blouin, R.A., W.H. Riffee, E.T. Robinson, D.E. Beck, C. Green, P.U. Joyner, A.M. Persky and G.M. Pollack, 2009. Roles of innovation in education delivery. American Journal of Pharmaceutical Education, 73(8): 1-12.

Brewer, D. and W. Tierney, 2012. Barriers to innovation in the US education. In B. Wildavsky, A. Kelly & K. Carey (Eds.), Reinventing Higher Education: The Promise of Innovation . Cambridge, MA: Harvard Education Press. pp: 11-40.

Carey, M.A. and J.E. Asbury, 2016. Focus group research. New York: Routledge.

Cascón-Pereira, R., J.D. Moral Martín and I. Brunet Icart, 2019. An exploration of the meanings of innovation held by students, teachers and SMEs in Spain. Journal of Vocational Education & Training, 71(4): 623-644.Available at: https://doi.org/10.1080/13636820.2019.1575894.

Cortes, R.A., A.B. Weinberger, R.J. Daker and A.E. Green, 2019. Re-examining prominent measures of divergent and convergent creativity. Current Opinion in Behavioral Sciences, 27: 90-93.Available at: https://doi.org/10.1016/j.cobeha.2018.09.017.

Dennison, W.F. and K.K. Shenton, 2018. Challenges in educational management: Principles into practice. London: Routledge.

Ellis, A.K., 2017. The nature of educational innovation. In A. M. Sidorkin and M.K. Warford (Eds.), Reforms and Innovation in Education. Switzerland: Springer, Cham. pp: 37-51.

Ferrari, M., G. Mura and D. Diamantini, 2018. Digital innovation in education: Occupational stress and attitude toward change among schoolteachers. American Journal of Educational Research, 6(2): 142-148.Available at: https://doi.org/10.12691/education-6-2-9.

Findikoglu, F. and D. İlhan, 2016. Realization of a desired future: Innovation in education. Universal Journal of Educational Research, 4(11): 2574-2580.Available at: https://doi.org/10.13189/ujer.2016.041110.

Fournier-Sylvester, N., 2013. Daring to debate: Strategies for teaching controversial issues in the classroom. College Quarterly, 16(3): 1-9.

Fruehauf, J., F.G. Kohun, D. Lesjak, C. Solek-Borowska and J. Paliszkiewicz, 2017. Global definition of the term innovation: The social factors influencing individual understanding. In Management Challenges in a Network Economy. Proceedings of the Make Learn and TIIM International Conference. pp: 17-19.

Halász, G., 2018. Measuring innovation in education: The outcomes of a national education sector innovation survey. European Journal of Education, 53(4): 557-573.Available at: https://doi.org/10.1111/ejed.12299.

Hallgarten, J. and T.T. Beresford, 2017. Creating conditions for system-wide innovation: Humanising innovation in schools. In L. Rycroft-Smith & J. L. Dutaut (Eds.), Flip The System UK: A Teachers' Manifesto. London: Routledge. pp: 239-245.

Hastings, D. and L. Breslow, 2016. Key elements to create and sustain educational innovation at a research-intensive University. In G. C. Weaver, W. D. Burgess, A. L. Childress, & L. Slakey (Eds.), Transforming Institutions. Undergraduate STEM Education for the 21st Century. Indiana: Purdue University. pp: 199-207.

Heesen, R., L.K. Bright and A. Zucker, 2019. Vindicating methodological triangulation. Synthese, 196(8): 3067-3081.Available at: https://doi.org/10.1007/s11222-015-9574-5.

Kedraka, K. and Y. Kourkoutas, 2018. Debates in teaching bioethics. Journal of Curriculum and Teaching, 7(1): 32-41.Available at: https://doi.org/10.5430/jct.v7n1p32.

Kunnari, I. and L. Ilomäki, 2016. Reframing teachers' work for educational innovation. Innovations in Education and Teaching International, 53(2): 167-178.Available at: https://doi.org/10.1080/14703297.2014.978351.

Laici, C. and L. Orlandini, 2016. Avanguardie educative: Paths of innovation for schools. Research on Education and Media, 8(1): 53-61.Available at: https://doi.org/10.1515/rem-2016-0007.

Mackenzie, N. and S. Knipe, 2006. Research dilemmas: Paradigms, methods and methodology. Issues in Rducational Research, 16(2): 193-205.

Morin, S., R. J.M. and L. Gabora, 2016. Creativity training for future engineers: Preliminary results from an educative experience. Available from https://arxiv.org/abs/1602.02643.

Mumtaz, S. and R. Latif, 2017. Learning through debate during problem-based learning: An active learning strategy. Advances in Physiology Education, 41(3): 390-394.Available at: https://doi.org/10.1152/advan.00157.2016.

Nicholls, A., 2018. Managing educational innovations. New York: Routledge.

Organization for Economic Cooperation and Development (OECD), 2013. Innovative learning environments, educational research and innovation. Paris: OECD Publishing.

Pisanu, F. and P. Menapace, 2014. Creativity & innovation: Four key issues from a literature review. Creative Education, 5(03): 145-154.Available at: https://doi.org/10.4236/ce.2014.53023.

Pitsoe, V.J. and M.M. Letseka, 2017. Reflections on being and becoming in continuous teacher professional development (CTPD). In I. Hussein Amzat & N. Padilla-Valdez (Eds.), Teacher Professional Knowledge and Development for Reflective and Inclusive Practices. London: Routledge. pp: 14-24.

Rincon-Flores, E.G., K. Gallardo and J.M. de la Fuente, 2018. Strengthening an educational innovation strategy: Processes to improve gamification in calculus course through performance assessment and meta-evaluation. International Electronic Journal of Mathematics Education, 13(1): 1-11.Available at: https://doi.org/10.12973/iejme/2692.

Sawyer, R.K. and Z. Zag, 2013. The surprising path to greater creativity. 1st Edn., San Francisco, CA: Jossey-Bass.

Seechaliao, T., 2017. Instructional strategies to support creativity and innovation in education. Journal of Education and Learning, 6(4): 201-208.Available at: https://doi.org/10.5539/jel.v6n4p201.

Serdyukov, P., 2017. Innovation in education: What works, what doesn't, and what to do about it? Journal of Research in Innovative Teaching & Learning, 10(1): 4-33.Available at: https://doi.org/10.1108/JRIT-10-2016-0007.

Shapiro, H., J. Haahr, I. Bayer and P. Boekholt, 2007. Background paper on education, Danish technological Institute and Technopolis for the European Commission, DG Education and Culture in the Context of a Planned Green Paper on innovation.

Sharples, M., R. de Roock, R. Ferguson, M. Gaved, C. Herodotou, E. Koh, A. Kukulska-Hulme, C.K. Looi, P. McAndrew, B. Rienties, M. Weller and L.H. Wong, 2016. Innovating pedagogy 2016: Open university innovation report 5. Milton Keynes: The Open University.

Simplico, J., 2000. Teaching classroom educators how to be more effective and creative teachers. Education, 120(4): 675-680.

Thomas, V.G. and B.A. Parsons, 2017. Culturally responsive evaluation meets systems-oriented evaluation. American Journal of Evaluation, 38(1): 7-28.Available at: https://doi.org/10.1177/1098214016644069.

Tomkins, L. and V. Eatough, 2013. The feel of experience: Phenomenological ideas for organizational research. Qualitative Research in Organizations and Management: An International Journal, 8(3): 258-275.Available at: https://doi.org/10.1108/qrom-04-2012-1060.

Voigt, C., S. Schön and M. Hofer, 2018. Innovation management in schools: Barriers and enablers to making as educative practice. Multiconference Business Informatics. Available from https://www.researchgate.net/publication/323399105Innovation_management_in_schools_Barriers_and_enablers_to_making_as_educative_practice.

Yu, D. and C.C. Hang, 2010. A reflective review of disruptive innovation theory. International Journal of Management Reviews, 12(4): 435-452.Available at: https://doi.org/10.1111/j.1468-2370.2009.00272.x.