



The Art of Teaching in Fusion Classroom Learning Situations

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Fusion classroom learning situation and/or fusion courses evolved from blended learning and open education movements. The development of online movement or e-learning has gained in popularity in the last two decades as an effective approach for accommodating an increasingly diverse student population and enriching the learning environment with the incorporation of online teaching resources (Serrano et al., 2019). Fusion classroom is an effective approach to learning situations that combines features of traditional learning situations and computer assisted instruction. Additionally, this article aims to increase awareness of teachers and instructors about how to engage traditional methodology that can be transformed into a fusion courses so as to increase and develop learner interaction with both face-to-face and online courses, whilst being time effective for the educators.

Key words: *Fusion classroom; computer mediated communication (CMC); learning strategies and situations*

Introduction

Fusion classroom can be defined as a blend of different methods, approaches and/or techniques used in classroom learning situations “combining between online courses and face-to-face learning situations”; which is a relatively new educational innovation that has swept the nation in recent years. In other words, a variety of equivalent terms were used in the literature to define “hybrid learning” such as: mix-mode, multi-method, integrated, blended, flexible, eLearning, etc. (Aleksander J. et al., 2015). However, the multitude of labels for a notion indicate that “no dominant model has yet been accepted as a definition of practice” (Dziuban, Hartman, & Moskal, 2010). The asynchronous approach, on the other hand, hybrid learning can be characterised by only two stages other than traditional face-to-face situations since it only a demand for the accomplishment of online components extending learning beyond classroom hours (Watson, n.d.).

The traditional way of teaching can be integrated into two forms: synchronous and asynchronous online approaches (Figure 1). According to the first form, it is based on flexible self-paced learning where learners complete their studies anytime, anywhere they decide with no time limits (Hrastinki, 2008a). On one hand, many of the teaching constituents would be involved as educational internet applications such as multimedia, podcast, blogs ...etc. It has a great value on the impact of instructional courses' outcomes for self-motivated learners, as they can spend more time clarifying their participation which will increase their quality of learning (Harstinski, 2008b). On other hand, there is an important disadvantage point in this approach, which is a weaker involvement as a consequence of feeling disconnected from the group (Serrano et al., 2019). Hence, synchronous and online modern learning technologies such as Zoom application and some social websites applications can be a more powerful tool in several situations. First of all, it is flexible, allowing for greater accessibility than traditional courses, as learners decide where to study; secondly, it is more cost-effective and overcomes physical barriers, as questions can be asked and answered in a direct way, allowing online students to feel like real participants and obtain immediate feedback while participating and interacting with the instructor and their colleagues (Hastie, Hung, Chen, & Kinshuk, 2010).

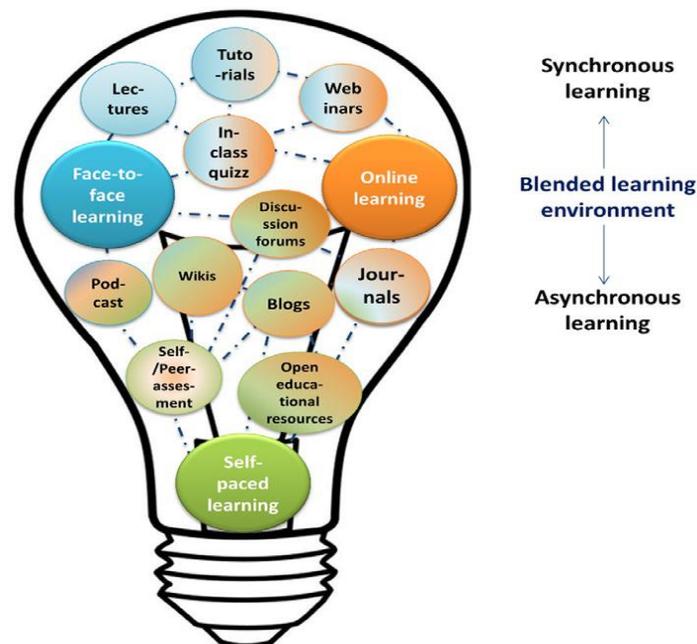


Figure 1: The Blended learning environment (Adapted from Serrano et al., 2019)

Concept of Fusion Classroom in Literature

The concept of fusion classroom learning is derived from hybrid learning, which integrated the use of the traditional way of teaching and/or face-to-face learning instruction and online learning



situations. The term fusion classroom would be used almost interchangeably with most hybrid learning terms. Vinke and de Prez (2015) claimed that there is a precise difference: “In hybrid learning, a significant portion of the course takes place online. In contrast with blended learning, a hybrid learning scenario and criteria replaces much of the student-teacher “face time” in a brick-and-mortar location with online interaction”. In their article “Blended: Using Disruptive Innovation to Improve Schools” Horn and Staker (2015) stated that: “Blended learning is not just about adding more tech tools to a classroom. Rather, it consists of three separate ideas:

- It’s part of a formal learning program using online learning that gives students some control over the time, place, path and/or pace of the learning.
- At least part of the learning happens in a supervised, brick-and-mortar location.
- The learning experience integrates online and face-to-face learning”.

This indicates that instructors should implement internet technologies into their classes and develop their techniques, while wisely maintaining timeless pedagogical values; which “retains the basic structure of the traditional course and use technology resources to supplement traditional lectures and textbooks” (Westminster College, 2011).

A typical blended learning course would include a substantial proportion (30%-79%) of course content delivered with online learning technologies, combined with a reduced number of in-class meetings (Allen & Seaman, 2016), and specific learning actions for traditional learning and an online portion of the course. As a result, a course with this mixed mode (Huang, Lin, & Huang, 2012), would involve a synchronous different type of content, and in-class activities at varying proportion, and sometimes in specific order of presentation for instance inverted or flipped order (Enoch et al., 2019).

As the main purpose of the blended learning strategy is to capture the values of both traditional and online learning (He, Gajski, Farkas, & Warschauer, 2015) so as to help learners to learn more effectively (Horn & Staker, 2011); as a result for the hybrid approach in facilitating student learning is high, and a growing number of educational institutions are implementing blended learning and/or fusion classroom strategy; since that this strategy of learning usually goes in line with pedagogical innovation, such as the development of reflective practice in social work undergraduates (Cooner & Hickmann, 2008) and also for aiding and supporting international collaboration amongst students (Hastie, Hung, Chen, & Kinshuk, 2010). A review of the current body of literature continues examining the results of hybrid learning, and report students’ academic performance, as well as their persistence. According to Lopez-Perez, Perez-Lopez, and Rodriguez-Ariza (2011), they claimed that students in a blended learning course had increased in their final



grades and reduced dropout rates, as well as Al-Qahtani and Higgins (2013) noted that there was increased participation rate among students' performance in hybrid courses when it was compared to students in face-to-face learning situations and online courses. According to Deschacht & Goeman, (2015), they reported that students in hybrid learning courses also had improved exam passing rates. In contrast, other researchers concluded that students achieved lower grades (Drysdale, Graham, Spring, & Halverson, 2013; Xu & Jaggars, 2011); also some researchers add that there was an increased attrition rate (Ashby, Sadera, & McNary, 2011) in blended learning courses.

Advantages of Fusion Classroom Learning Strategies

Strategies of hybrid learning situations have been cited in the literature in different educational contexts as teaching modalities with more frequency of students' participation and engagement in post-secondary education beyond levels what could be achieved either by traditional learning situation or an online learning situation (Garrison, 2011; Means, Toyama, Murphy, Bakia, & Jones, 2009; Orhan, 2008). An important literature of hybrid learning strategies is used to overcome and/or reduce the perceived weakness of purely online courses (Harris, Connolly, & Feeney, 2009; Rose & Ray, 2011), since the traditional application of e-learning follows a "one-size-fits-all" teaching approach (Graf, 2007). In the literature, the most well-known hybrid experiment models found as "Flipped Classroom", where learners view pre-recorded situations prior to face-to-face or traditional classroom participation (Flipped Learning Network, 2014). The implementation of the flipped classroom learning situation is more successful in scientific classroom situations prior to field and laboratory practice or usage than in face-to-face learning situation where theoretical materials are delivered (Serrano et al., 2019). Yet, more research studies and practice are to be implemented on methods for achieving a suitable balance for synchronous or online elements and more traditional components (Garrison, 2011).

Another advantage of the hybrid learning situation is that instructors can shift the control of learning to their students, whom they can implement their own teaching criteria for mastering the material rather than depending totally on instructor's methodology (Rose & Ray, 2011). In their point of view, Holly & Dobson (2008), customising the instruction experience, which could be done through the development of differentiated online content, assists in decreasing disengagement and instrumentalism between learners. In a research which was conducted by Ayala (2009) he claimed that hybrid learning facilitates self-directed instruction, while still providing many chances for instructors' involvement and trackback face-to-face as needed. Moreover, hybrid learning is to expand the community and learners' belief and their satisfaction between students by expanding the objectives of the course through discussion forum, blogs and other social networking media where discussion and dialogue need not end, since the learning and teaching



time has ended (Lim & Yoon, 2008; Rose & Ray, 2011; Rovai & Jordan, 2004). Fusion classroom learning situations can be built to permit teachers to individualise learning issues rather than presenting general content or material (Orhan, 2008). In other words, hybrid learning has the prospective to provide just-in-time help to learners, while reducing the possibilities of their shyness of acknowledging the need or a help in the “transition class”, since learners are able to shape their learning needs and stay unidentified or faceless. Some researcher studies support the idea of success with correlation of completion and academic achievement which demonstrated that fusion/hybrid methodologies offer better success rates (Donnelly, 2010; Woltering, Herrier, Spitzer, & Spreckelsen, 2009). While Bogost (2013) claimed that it is pedagogy which made the changes and support the success, not enhancement of technology. Finally, according to a famous pedagogic, Dewey (1916), he worked on the following concept at the beginning of the last century:

“... students should be given something to achieve, not just something to study; doing requires ‘thought and reflection’ and an attention to ‘interconnections’; for this reason learning is naturally generated by doing”.

However, computer mediated communication (CMC) and web applications provide a solid framework for it to be fully applied, particularly as regards the development of the ‘fusion classroom’.

Pedagogical Aspects

Many reports and research studies indicated that course design was the most remarkable new role identified (Garrison & Vaughan, 2008; Littlejohn & Pegler, 2007), which is now demonstrated in instructors’ views. In the traditional way of teaching, with delivery and online approaches offering different values, educational institutions usually concentrate on choosing the best approaches which are suitable for their students’ needs, therefore establishing such an atmosphere which enlarges the advantages of the pedagogical aspects that ensure the optimum conditions for learning. When looking for similar and appropriate learning conditions, higher educational institutions have concentrated on investigating the beneficial aspects of blended learning programs (Garrison 2011; Merriam & Bierema 2014; Vaughan 2007). In their book *Blended Learning in Higher Education*, Garrison and Vaughan (2008) described blended learning as “the organic integration of thoughtfully selected and complementary face-to-face and online approaches and technologies” (p.148).

It is obvious that the asynchronous characteristics of online usage afford many values (Merriam & Bierema, 2014). Gallani & Barron (2002), in their research study “first time implementation of a blended program”, questioned 10 instructors and found that while they used an extensive range of



resource and communication tools, and felt more involved with their courses, their online usage was auxiliary rather than blended. More recently, Kaleta et al., (2006) check out task changes with teachers who were new to blended learning. They questioned 10 teachers and identified the difficulty of designing for two learning spaces, which involved establishing what was best for each space and connecting them pedagogically to achieve a unified whole, rather than having disparate traditional learning and internet technologies. Another result for teachers was avoiding the “course and a half syndrome” (p.127) where teachers had to balance the supplement of online activities with equivalent decreasing in face-to-face or traditional activities to avoid extra burden. An important pedagogical reaction on his blended practice, Brunner (2007) highlighted the significance of involved rethinking courses. He declared that students have expectations of connection between the two environments so intentional integration was required in order to provide a sense of class cohesion and community.

Beneath this subject of course redesign and educational strategies are the ways that instructors formulate their role. The supreme constructivist theory of learning within CMC is that of constructivism and its different forms. This can be displayed in hybrid learning literature and indicate the hybrid teaching includes switching to a content transmission model, where instruction is largely teacher-centred and guided, that is, objectives, goals, activities, and classroom participation are mostly ruled by the teacher. While in hybrid learning model it is introduced as learner-centred and has CMC learning aspects which concentrate on knowledge construction, authentic activities, and social interaction (Gallini & Barron, 2002). This converts the teachers’ role to one which is more facilitative (Brunner, 2007). Kaleta et al., (2006) suggested that “teachers need to be prepared to leave their previous constructs of what a teacher is behind, and to anticipate how the new model redefines them, their course and their students” (p.137). On other hand, McShane’s (2004) strongly supports the traditional way of teaching or face-to-face lecture. She claimed that instructors’ emphasis on the “centrality of the lecture” was symbolic of the traditional role or “chalk and talk” and authority of the university instructor and that this was not necessarily characteristic of a transmission civilization; this may not always be so.

Social Aspects

Many previous studies in eLearning literature declare that instructors’ social roles have been changed mainly for those whom they were concentrated on, about losing physical connection with their student, just like what is happening nowadays because of the coronavirus pandemic. Because of that, instructors have indicated the value of building communications, direct activities and discussion through CMC and internet technologies. Nowadays, CMC and internet technologies or web applications provide extensive opportunities for accessing and publishing knowledge and emphasise more than ever not only remarkable, but distinguished roles for instructors in relation



to working with learners to develop their abilities and skills when implementing this technique and methodology. It is approved that learning with technology is a complex issue (Pilgrim et al., 2017); according to Vygotsky, the social constructivist perspective is facilitated when people communicate with each other. Therefore, these are circumstances which permit students to enrol in learning groups before promoting effective learning and development (Lave and Wenger 1991; Liu, Carr, and Strobel 2009; Merriam and Bierema 2014). An outstanding advantage issue which is offered by eLearning application programs is the concentration on opportunities for participation and interaction within online learning groups and classes (Pilgrim et al., 2017). Another significant advantage raised by Dixon that one of the dominant characteristics in fruitful online learning and teaching is learner engagement (2010).

Garrison (2011) utilises a prospective benefit of online elements of the hybrid learning module; it is important to acknowledge and to be aware of the benefits of its face-to-face component. Pilgrim et al., (2017) provided an example, that communication between students is necessary in aiding to support group cohesion and sustain learning communities or classes; it might be easier organised in face-to-face learning situations; they add a critical issue that face-to-face learning situations may be favourable for deliberation, whereas online interaction may better promote and encourage the expansion and maintained deliration of initial ideas.

In order to develop the teaching process in higher education and getting the ultimate cohesion benefit of blended learning, Vaughan, Cleveland-Innes, and Garrison (2013) implicated with the desire of online learning communities in higher education, would play a crucial role in the rise of nations and the formulation of the present and future trends. In such a deep vision, personal learning, advantageous participation can be promoted and aid flourishing outcomes (Pilgrim et al., 2017).

Self and peer Assessment Aspects

Several pedagogical studies have emphasised both the quality and quantity of direct involvement between students and teachers (Ballantyne, Hughes, & Mylonas, 2002), and the negative influence on the teachers' aptitude to provide complete feedback on the learner's task. Because of this obstacle, promoting learner pedagogy can be applied, motivating learners to participate in their learning and the learning of others and value the contribution of others (Hamer et al., 2008). By implementing self and peer assessment tools, several advantages can be achieved for both teachers, as their workloads is decreased, and for the learners, as they can acquire a great deal of individualised feedback (Luxton-Reilly, 2009). Also, these instruments can aid learners to flourish their common skills like communication, lifelong learning and autonomy and a sense of community and thus forge a culture collaborative learning (Serrano et al., 2019).



The advantage of using self and peer assessment to develop learning consequences by offering enough time to go through, assess and furnish feedback on the learners' attribute development has been indicated in many research studies (Duers, 2017; Fete, Haight, Clapp, & McCollum, 2017; Ihm, Choi, & Roh, 2017; Khan, Payne, & Chahine, 2017; Luxton-Reilly, 2009; Moore, Westwater-Wood, & Kerry, 2016; Willeya & Gardner, 2010). However, some researchers like Monroe, 2016; Roberts, Jorm, Gentilcore, & Crossley, 2017, have underlined consequences relating to self and peer assessment in respect of perfection of the evaluation. In their book *Peer Learning in Higher Education*, Bound et al., wrote that peer learning assists specific varieties of learning outcomes which involve learning with others, self and peer assessment, communication, articulation of knowledge, understanding and skills (2014).

Conclusions and Reflections

Higher educational institutions are regularly converting with up-to-date and new technologies which are continually added to the arsenal of pedagogues (Bath & Bourke, 2010). Higher educational institutions should make a significant effort to develop their institutions, methodologies and supporting their effective and efficient systems so as to stimulate superiority and employability for expected or graduates to come. Computer technology applications play an important role in the teaching and learning process as it correlates with innovation; consequently the traditional way of teaching methodology should be modified to ensure learner involvement and better learning grounding. Fusion classrooms are one of the most time effective methodologies and is easy to implement within blended learning applications. Excluding enhancing learners' participation in class, they can carry out as a track record of learners' instruction, assisting moulding and summative evaluation. They are dominant in assessing learners' fulfilment and affording a flexible tool for responding to learner needs.

By revising the blended learning literature, it shows that instructors will not be replaced with computer technologies in the learning process, and s/he will continue to play an important role in the learning process, especially in course design issue (P. Gerbic, 2011). This is a time for both instructors and instructional designers, with new challenges regarding identity and instructor role, considering and compromising how to implement a computerised technological platform which creates new learning relationships which might be more required and correlative and based on acknowledgement of the different skills of the instructor. Based on the previous challenges in hybrid learning platforms, there may therefore be a catalyst for converting practice.



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