HyFlex Learning Research and Practice

Subjects: Education & Educational Research

Contributor: Billy T. M. Wong , Kam Cheong Li , Hon Tung Chan , Simon K. S. Cheung

Relevant work on HyFlex learning were primarily carried out at the tertiary level of education, with an emphasis on issues in respect of teachers' and students' perceptions, experiences, and behaviours. Most of the practices were mediated by technologies, which were primarily used for course delivery, course management, and in-class/off-class communication.

HyFlex learning hybrid learning

1. Introduction

Technological advances have facilitated the development of innovative forms of educational practices. Various modes of learning continue to emerge, and learners have been given the flexibility to engage in learning activities to address their individual needs with the aid of digital and mobile technologies ^[1]. HyFlex learning is one of these emerging modes of learning. It has been generally conceptualised as a hybrid and flexible mode of learning, which often involves face-to-face classroom and online environments ^{[2][3][4]}. Students' learning experience can be enhanced through flexible participation in online and/or face-to-face learning activities, as well as synchronous communication with peers and teachers at various locations ^{[5][6]}.

HyFlex learning has received increasing attention in both research and practice in the past decade ^{[Z][8][9][10][11]}. In particular, during the COVID-19 pandemic, most educational institutions worldwide had to suspend their face-faceclasses and substitute them with HyFlex modes of learning. There has also been a proliferation of research on HyFlex learning and the effective ways to optimise it. For example, Sukiman et al. ^[12] explored the effectiveness of HyFlex learning in undergraduate and postgraduate courses for the sake of developing learning patterns. Gnaur et al. ^[13] analysed students' views on how HyFlex learning could be best designed for learning environment, adaptability, and learning outcomes. Kawashaki et al. ^[14] developed and implemented a HyFlex learning platform for nursing students and evaluated whether the platform could address the limitations of remote learning. Sumandiyar et al. ^[15] investigated whether HyFlex learning was an effective instructional approach during the COVID-19 pandemic. Triyason et al. ^[16] created and implemented an online platform to facilitate HyFlex learning and examined the potential problems that might affect its implementation. The findings of these studies would be useful in informing the design and implementation of HyFlex learning.

However, despite the large body of related empirical work, very few review studies have been conducted to provide an overall picture of HyFlex learning as an emerging mode of learning. Relevant review studies have only dealt with HyFlex learning benefits and challenges ^[17], HyFlex learning practices in a specific subject discipline ^[18], and limitations of HyFlex learning research ^[19]. Furthermore, following the widespread practice of HyFlex learning during the COVID-19 pandemic ^{[20][21]} and the development of educational technologies over the years ^[22], the research issues and practices of HyFlex learning have been changing.

2. Features of HyFlex Learning

HyFlex learning shares certain similarities to blended learning and flipped learning ^[23]. While it is learner-centred with an emphasis on learners' knowledge acquisition, HyFlex learning also focuses on technology-mediated instruction and learner flexibility in terms of class time. It incorporates information technologies into teaching and learning through course assessments and materials. HyFlex learning also stresses the application of information technologies to conduct virtual classes as a substitution for conventional face-to-face instruction ^[6]. This offers more flexible class scheduling, thereby reducing the demand for physical environments for learning, and supporting students' personalisation of learning in terms of class participation such as attending a class face-to-face or online to cope with their own needs.

Creating a digital learning space is vital in HyFlex learning. This space, as pointed out by de Souza e Silva, represents a dynamic space "created by the constant movement of users who carry portable devices which are continuously connected to the Internet and other users" ^[24] (p. 262). The state of being constantly connected to the Internet highlights the importance of social interaction, which plays an important role in HyFlex learning. As Trentin ^[25] explains, social interaction in HyFlex learning facilitates teachers to train students to become responsible, proactive, and autonomous towards their own learning.

The development of learner flexibility and autonomy is also possible in HyFlex learning. Moreover, technology can be used to expand learning boundaries by providing learners with more freedom and choices in their learning process ^[26]. For example, they could personalise their own learning in terms of time, space, and learning pace. Such flexibility is helpful for learners in not only alleviating the pressure of needing a physical environment for learning, but also allowing for more learner-centred class scheduling and learning arrangements. Learners are then also given an opportunity to learn how to take responsibility and control of their own learning, which as a result contributes to developing their self-regulated and self-directed skills and learning autonomy.

Additionally, HyFlex learning has the potential to facilitate the development of learners' identity. Stommel ^[27] views it as not only a pedagogical strategy that transforms learning from a physical space into an online and dynamic environment, but also a learning process in relation to identity construction. Eyal and Gil ^[28] elaborate on this process by saying that "When learners become autonomous, they can make their own learning arrangements. Not only are they able to determine what and when to study and decide what learning resources are suitable for their own learning needs, but they are also able to help others with their learning and see themselves as experts in specific fields. This learning shapes a learner's identity which in turn creates further learning".

In summary, HyFlex learning is blended, social, and fluid in nature: blended because it focuses on using technology to conduct online classes in support of student learning as an addition to traditional learning, social

because it provides a digital learning space that promotes social interaction in intellectual discussion, and fluid because it offers learning choices that expand learners' boundaries of learning ^[28].

3. Reviews of HyFlex Learning

The past decade has seen an increasing proliferation of empirical research on HyFlex learning. However, reviews covering this topic are rather limited. Among the few related reviews, Detienne et al. ^[17] surveyed the nature of synchronous HyFlex learning. The authors identified various benefits and challenges ranging from increased flexibility and reduced dropout rates to a low level of technology literacy among teachers and little pedagogical support provided to teachers. Jimenez-Saiz and Rosace ^[18] examined whether problem-solving-based HyFlex learning could enhance biomedical instruction. They noted a wide range of benefits and drawbacks. For instance, while students showed better class performance when compared to traditional classroom learning, scarce pedagogical and human resources were provided to instructors. In their review of the benefits, challenges, and design principles of synchronous HyFlex learning efficiency, and teaching quality, as well as pedagogical and technical challenges for technological use and curriculum and material design. Wong et al. ^[29] also presented a preliminary review of the patterns of publications on HyFlex learning research.

The related reviews of HyFlex learning have primarily focused on its specific aspects, such as benefits and challenges, design principles, and disciplinary practices. There is, however, no comprehensive review that provides an overview of its longitudinal development and current status. Researchers address the literature gap through a longitudinal review of the publications on HyFlex learning to identify the features and patterns of relevant research and practices over the past decade.

References

- 1. Trede, F.; Markausaite, L.; McEwen, C.; Macfarlane, S. Education for Practice in a Hybrid Space: Enhancing Professional Learning with Mobile Technology; Springer: Singapore, 2019.
- Beatty, B.J. Hybrid Classes with Flexible Participation Options—If You Build It, How Will They Come. In Proceedings of the Association for Educational Communication and Technology International Conference, Anaheim, CA, USA, 24 October 2007.
- 3. Singarvelu, G. Hybrid Learning in Enhancing Communicative Skill in English. J. Educ. Technol. 2010, 7, 14–18.
- 4. Wilson, S. A Musical Lens on Spatial Representations of Form to Support Designers and Teachers Using Hybrid Learning Spaces. Postdigital Sci. Educ. 2021, 4, 177–200.
- 5. Garnham, C.; Kaleta, R. Introduction to Hybrid Courses. Teach. Technol. Today 2002, 8, 6.

- 6. Linder, K.E. Fundamentals of Hybrid Teaching and Learning. New Dir. Teach. Learn. 2017, 149, 11–18.
- 7. Bowen, W.G.; Chingos, M.M.; Lack, K.A.; Hygren, T.I. Online Learning in Higher Education: Randomized Trial Compares Hybrid Learning to Traditional Course. Educ. Next 2013, 13, 59–64.
- 8. Meydanlioglu, A.; Arikan, F. Effect of Hybrid Learning in Higher Education. Int. J. Inf. Commun. Eng. 2014, 8, 1292–1295.
- 9. Klimova, B.F.; Kacetl., J. Hybrid Learning and its Current Role in the Teaching of Foreign Languages. Procedia—Soc. Behav. Sci. 2015, 182, 477–481.
- Johnson, E.; Morwane, R.; Dada, S.; Pretorius, G.; Lotriet, M. Adult Learners' Perspectives on Their Engagement in a Hybrid Learning Postgraduate Programme. J. Contin. High. Educ. 2018, 66, 88–105.
- Rausch, D.W.; Crawford, E.K. Cohorts, Communities of Inquiry, and Course Delivery Methods: UTC Best Practices in Learning—They Hyland Learning Community Model. J. Contin. High. Educ. 2012, 60, 175–190.
- 12. Haningshih, S.S.; Rohmi, P. The Pattern of Hybrid Learning to Maintain Learning Effectiveness at the Higher Education Level Post-COVID-19 Pandemic. Eur. J. Educ. Res. 2022, 11, 243–257.
- Gnaur, D.; Hindhede, A.L.; Andersen, V.H. Towards Hybrid Learning in Higher Education in the Wake of the COVID-19 Crisis. In Proceedings of the European Conference on E-learning, Berlin, Germany, 28–30 October 2020; pp. 205–211.
- 14. Kawasaki, H.; Yamasaki, S.; Rahman, M.M. Developing a Hybrid Platform for Emergency Remote Education of Nursing Students in the Context of COVID-19. Int. J. Environ. Res. Public Health 2021, 18, 12908.
- Sumandiyar, A.; Husain, M.N.; Sumule, G.M.; Nade, I.; Fachruddin, S. The Effectiveness of Hybrid Learning as Instructional Media amid the COVID-19 Pandemic. J. Studi Komun. 2021, 5, 651–664.
- Triyason, T.; Tassanaviboon, A.; Kanthamanon, P. Hybrid Classroom: Designing for the New Normal after COVID-19 Pandemic. In Proceedings of the International Conference on Advances in Information Technology, Bangkok, Thailand, 1–3 July 2020; pp. 1–8.
- Detienne, L.; Raes, A.; Depaepe, F. Benefits, Challenges and Design Guidelines for Synchronous Hybrid Learning: A Systematic Literature Review. In Proceedings of the EdMedia: World Conference on Educational Media and Technology, Amsterdam, The Netherlands, 25 June 2018; pp. 2004–2009.
- Jimenez-Saiz, R.; Rosace, D. Is Hybrid-PBL Advancing Teaching in Biomedicine? A Systematic Review. BMC Med. Educ. 2019, 19, 226–234.

- 19. Raes, A.; Detienne, L.; Windey, I.; Depaepe, F.A. Systematic Literature Review on Synchronous Hybrid Learning: Gaps Identified. Learn. Environ. Res. 2020, 23, 269–290.
- 20. Li, K.C.; Wong, B.T.M.; Kwan, R.; Chan, H.T.; Wu, M.M.F.; Cheung, S.K.S. Evaluation of hybrid learning and teaching practices: The perspective of academics. Sustainability 2023, 15, 6780.
- 21. Wong, B.T.M.; Li, K.C.; Kwan, R.; Wu, M.M.F. Learning in a hybrid synchronous mode: Experiences and views of university students. Int. J. Innov. Learn. 2023, 34, 197–207.
- 22. Li, K.C.; Wong, B.T.M. How smart learning has been achieved: A review of literature (2011–2020). Int. J. Mob. Learn. Organ. 2022, 16, 310–322.
- 23. Saichaie, K. Blended, Flipped, and Hybrid Learning: Definitions, Developments, and Directions. New Dir. Teach. Learn. 2020, 164, 95–104.
- 24. de Souza e Silva, A. From Cyber to Hybrid: Mobile Technologies as Interfaces of Hybrid Spaces. Space Cult. 2006, 9, 261–278.
- 25. Trentin, G. Orientating Pedagogy towards Hybrid Spaces. In Progress in Education; Nata, R.V., Ed.; Nova Science Publishers: Hauppauge, NY, USA, 2015; Volume 35, pp. 105–124.
- 26. Murugan, A.; Sai, G.T.B. The Wonders of Mobile Phone Technology in Teaching and Learning English. Indones. EFL J. 2017, 3, 57–68.
- 27. Stommel, J. What is Hybrid Pedagogy? In An Urgency of Teachers: The Work of Critical Digital Pedagogy; Stommel, J., Morris, S.M., Eds.; Hybrid Pedagogy Inc.: Madison, WI, USA, 2018; pp. 174–178.
- Eyal, L.; Gil, E. Hybrid Learning Spaces—A Three-Fold Evolving Perspective. In Hybrid Learning Spaces; Gil, E., Mor, Y., Dimitriadis, Y., Koppe, C., Eds.; Springer: Cham, Switzerland, 2022; pp. 11–24.
- 29. Wong, B.T.M.; Li, K.C.; Chan, H.T.; Cheung, S.K.S. The Publication Patterns and Research Issues of Hybrid Learning: A Literature Review. In Proceedings of the 8th International Symposium on Educational Technology, Hong Kong, China, 19–22 July 2022; pp. 135–138.

Retrieved from https://encyclopedia.pub/entry/history/show/104544