

# Post COVID-19: Students' Expectations of HyFlex Learning Opportunities

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**Abstract:** Posterior to COVID-19, many universities have returned to ordinary classroom education. Recognizing the impact of the isolation in the form of psychological strain, one of the takes were to return to on campus education to secure follow up and the personal contact with lecturers and fellow students. However, in some studies, the COVID-19 paved the way for combinations of ways of studying that many students had been waiting for. Hence, returning to an on-campus solution is not an option. Each year after the COVID-19 we have done investigations into "if" and "why" the students prefer a HyFlex solution and many of the same answers keeps being repeated: home situation, work situation and travel costs. The last investigations have also included "sustainability" as a reason for not attending classes physically. Through our mixed methods approach to collecting data, we will present and discuss our findings and the trend in the longitudinal study.

**Keywords:** Hyflex learning, Online learning, Flipped classroom, Lifelong learning

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## 1. Introduction

Prior to the COVID-19 pandemic, most of the courses were offered either online or on campus. The Inland Norway University of Applied Sciences, Rena, Norway, serve several thousand students online from all over the country in a number of different studies.

Although we had Skype, Zoom and Teams, these tools were mostly for meetings, except for the dedicated conference tools used for the online education. From one day to the other, this all changed, and all education was conducted mostly using Zoom. The pandemic put us through a test, but we believe that we managed, and it was a true upgrade for some of the scholars. The COVID-19 pandemic also isolated students and students' mental health became an issue (Visser and Law-van Wyk, 2021, Dodd et al., 2021, Kohls et al., 2021, Defeyter et al., 2021). Hence, many universities urged students to come to campus when the pandemic ended. The exception was for the students that signed up for online education only.

However, there were also a number of people that now, due to going online during the pandemic, were able to sign up for and follow courses and study programs that were not available as online studies. These students had difficulties attending classes due to a number of different reasons. Some of the reasons were being located in various parts of the country with difficulties of travelling to a campus, children or parents that needs to be taken care of on a daily basis (which unables going away for several days at a time), and not wanting to produce a huge carbon footprint by travelling.

For a while, due to a risk of an escalating pandemic, we offered a HyFlex version of several courses on several study programs. This was a very welcomed solution for a lot of the students.

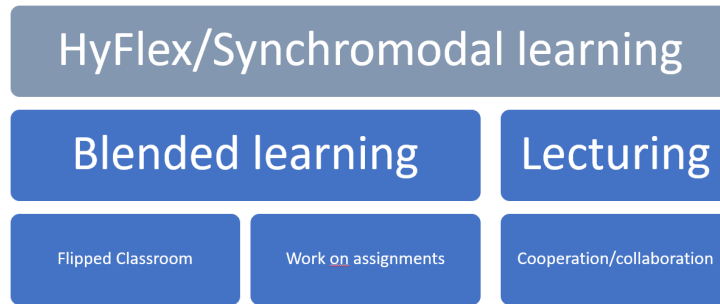
In the study program of Knowledge Management, all the courses were offered in a HyFlex mode. There are three two-day seminars per semester. Many students have chosen to attend one or two physical seminars, some choose to attend only one, some attend all three, and others have chosen to attend online only.

Every year since the pandemic, we have investigated by interviewing the students as well as doing a survey, to unveil their perceptions of this HyFlex way of providing education (Vold and Kiøgnig, 2023).

This paper presents the longitudinal and new findings and trends of the students' feedback on how they perceive the HyFlex learning opportunities.

## 2. Theoretical Foundations

In 2023 we developed this model for HyFlex learning based on the theory informing our study:



**Figure 1: Overview of HyFlex learning as an overarching learning method, with the different learning adaptations within this context (Vold & Kiørnig, 2023)**

This was based on the different definitions of HyFlex learning, Blended learning, Lecturing, Flipped Classroom, Work on assignments and Cooperation/collaboration and how this was executed in the study program of Knowledge Management at the Inland Norway University of Applied Sciences, Rena, Norway. As HyFlex is about doing a course online synchronous to having students in a physical classroom (Howell, 2022), and Blended learning is defined as not doing distance learning and face-to-face learning simultaneously (Cronje, 2020) it is placed alongside Lecturing as a synchronous classroom event.

New insights on HyFlex learning are provided by Eija et al. (2024) and although in a different study program (health science education). According to their investigations, hybrid learning can improve students' motivation for studying as well as improving their self-direction. It may also support the students self-management skills and increase their "responsibility for their learning" (Eija et al., 2024).

Another interesting finding from these investigations was about the "educator's competencies as a part of successful hybrid teaching". The data showed that the pedagogical competencies of the educators mattered regarding having a learning outcome. The effort the educator invested in planning and variety of teaching methods had an impact on the students' experiences from the hyflex learning.

However, in the classroom it seemed easier to have good discussions in which students online had problems taking part in, sometimes due to the teacher "forgetting about the online students" (Eija et al., 2024).

Technology is also pointed out as important for facilitating good hyflex learning. Problems with audio equipment and camera, internet disconnection and functionality regarding applications are listed as hampering the learning (Eija et al., 2024).

Interaction is highlighted as important for learning. The respondents in this study pointed out that the lack of interaction between the different student groups (online versus face-to-face) made the online group miss out on the community feeling.

However, the hybrid education supported the students' interaction and learning skills developed. Also, their motivation to learn increased as well as their sense of responsibility, self-direction and self-management skills developed (Eija et al., 2024).

They also found that hybrid education supported the students' well-being as the possibility of taking part online may save them money (in travel costs), save time (time that could be spent with family and/or at work) and this fit with work and family contributed to their total well-being. Also some of the students claimed that the distance learning eased the social pressure of being face-to-face with other students (Eija et al., 2024).

Wong et al. (2023) have looked into research and practices regarding HyFlex learning. This research does to a certain extent support the research of Eija et al. The students learning experiences and outcomes are supported, as well as their engagement in learning. However, the same struggles appear here, too, about the limited interaction between online students and teachers. Also, it is difficult for the teachers to provide attention to both the students online and the students in the classroom, and the teachers experience a high workload when preparing (Wong et al., 2023).

Other challenges have been technical problems, difficulties in adjusting teaching and learning approach, and a feeling amongst the online students of being ignored (Wong et al., 2023).

Amiruddin et al. (2024) provided a somewhat nuanced look on technological skills and students self-regulation abilities. Here they found that students that possessed good technological skills also had better self-regulation

abilities. They were more effective in managing their time, setting goals, monitoring their own process and adjusting their learning strategies (Amiruddin et al., 2024). Also, they were able to access and organize learning materials, seek collaboration with others and more independently look for other sources. This self-regulation supports the overall learning success and engagement. They claim that students with less or poorer technical skills will choose to attend physically (face-to-face).

The students that are positive towards blended learning and positive towards the possibilities of interaction online tend to do most of their education online. (Amiruddin et al., 2024).

### **3. Method of Inquiry**

For this study, we have done a mixed methods research (Creswell, 2022). The data are collected from evaluations as well as interviews. This mix of quantitative and qualitative research methods provides a comprehensive picture of the students' perspectives towards HyFlex learning.

The study is conducted of a period of three years. Hence, this paper also contains the results of the data for the study year of autumn 2023 and spring 2024.

The survey consists of the same questions as the two previous surveys, and the semi-structured interview guide used for the previous interviews, has also been used for the last interviews. Hence, we have sought to develop a longitudinal study so that we should be able to compare the results from each year.

Unfortunately, there is a very low number of students having replied to the survey for the last year (23/24), hence, most of the data are from interviews.

### **4. Results and Discussion**

Here we will present the longitudinal data with emphasis on the new data from the last year (autumn 23\_ spring 24).

The results from the data collection showed that the sound often is a problem regarding being online. If the teachers are not good at repeating questions in the physical classroom to the students online, they may miss out on what is going on. This is supported by statements like: "One of the teachers remembered most of the time to repeat questions from the face-to-face class. When it was forgotten, it was hard to pay attention as we only heard what the teacher said...." (Informant X). This refers to both the teachers' competence and ability to plan and prepare (Eija et al., 2024, Wong et al., 2023). Also, it may refer to the technological shortcomings regarding audio and video equipment (Wong et al., 2023, Eija et al., 2024).

They are only on average "ok" with following online and they find the material available in Canvas (our LMS) relatively supportive regarding being able to take part online. This, too, may refer to problems with access as well as teachers' ability to organize the Learning Management System (Eija et al., 2024, Wong et al., 2023).

They claim to enjoy breakout rooms online. However, it is only a small percentage that take part in these breakout rooms. Some of the informants claim that they like breakout rooms but it is not always easy to take part in them due to work-issues. Either they are at a work-place where they have little or no possibilities of occupying a separate room, hence, they have to sit with other colleagues and they are afraid to disturb them. Some of the informants that are working from home, may claim that they do not want to disturb other students as they have children at home making noise.

The students find it easy to address the teacher during class. Statements like: "I just unmuted myself and addressed the teacher and shortly after, I could say my comment." (informant Z), and "I raised my hand, but the teacher had in beforehand alerted us that it was impossible to see the "raised hand" symbol, so I just unmuted and asked my question and got good feedback on that." (Informant W). This at least show that the teacher wants to facilitate for the inclusion of the online students (Eija et al., 2024).

The students online claim they would like to see the other students that are present physically when online. Again, this is a technical issue. The tools that we so rapidly adopted during the COVID-19 pandemic are basically the same as the ones available today (Eija et al., 2024, Cronje, 2020, Amiruddin et al., 2024). As the research progresses and there seems to be a continuous need for the HyFlex learning, the tools should be developed as it is now almost viewed as a technological shortcoming (Eija et al., 2024).

## 5. Conclusion

We find that there is a steady or slightly growing number of students that choose HyFlex learning as they sometimes choose to be face-to-face (physically) at a campus, and sometimes on a home office or in a workplace. The reasons for not attending face-to-face always are the same as previously; economy, sustainability, not being able to have time off from work, home situation that does not allow travelling, etc.

When they are online, they would like to a much larger extent than now be a part of the class. This includes seeing the other students (not only the ones online), interacting more with teacher and other students and being able to hear (and take part in) the conversations in the classroom. Although some constraints are with the students being in an office with few opportunities of fully engaging or being afraid of disturbing other students from their home office, the technological equipment does not support the full-scale equal attendance – yet.

The theory points out that the teachers need to plan and be positive towards utilizing the technology for the purpose of HyFlex learning. The students seem to appreciate the efforts by the teachers, but again the shortcomings of the technological tools and applications are strenuous also for the teachers.

### 5.1 Further Research

As research on HyFlex learning progresses, we hope to be able to do more extensive research together with other scholars. As our university is more interested in getting the students to attend face-to-face classes at the campuses, it is limited funds for doing research on HyFlex learning. Hence, the willingness to invest in appropriate technological tools seem low. In spite of this, we, the teachers that are into HyFlex learning believe that this is only the start of how education will be in the future.

Hence, the next step for us will be to look in the literature for other supporting factors that will enable better HyFlex learning. Also, we will look at incorporating AI as a tool for learning, as well as mixed reality (MR) tools.

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