



A Framework for a Seamless Transformation to Online Education

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Abstract

The shift towards online education has been accelerated by the COVID-19 pandemic, leading many institutions to rapidly transition from the old classroom-based teaching to remote learning. However, this sudden shift has highlighted the need for a more seamless and sustainable transformation to online education. This paper proposes a framework for a seamless transformation to online education, drawing on insights from the literature and best

practices from institutions that have successfully implemented online education. The framework consists of four key components: infrastructure and technology, faculty development, student support, and quality assurance. Each component is discussed in detail, along with strategies for implementation and potential challenges to overcome. The proposed framework aims to provide a holistic approach to online education that considers the needs of all stakeholders and ensures a high-quality and effective learning experience.

Keywords:

Introduction

A seamless transformation to online education has become a necessity in today's world, as the COVID-19 pandemic has demonstrated the required for flexible & adaptive learning models. While online education has been around for many years, the sudden shift towards it has highlighted the need for a more strategic and thoughtful approach to its implementation. A seamless transformation requires the consideration of many factors, such as infrastructure and technology, faculty development, student support, and quality assurance[1]. Institutions need to ensure that they have the necessary technology and infrastructure to support online education, as well as well-trained faculty who can effectively deliver instruction in an online environment. Additionally, students need adequate support to be successful in their online studies, and quality assurance measures must be put in place to ensure that the education provided meets high standards. A seamless transformation to online education requires a collaborative effort from all stakeholders, and this paper proposes a framework to guide institutions in their efforts to make this transition successfully[2].

Digital Transformation in Higher Education

Digital transformation has revolutionized many aspects of our lives, including education. In higher education, digital technologies have the potential to transform teaching, learning, and administration. However, to fully realize the benefits of digital transformation, institutions must embrace new technologies and adapt their practices to suit the digital age[3]. This paper explores the concept of digital transformation in higher education, examining its potential benefits and challenges. The paper discusses the effect of digital transformation on teaching and learning, the character of digital technique in administration and management, and the challenges associated with implementing digital transformation initiatives in higher education. The paper also examines some best practices for digital transformation in higher education and discusses the need for institutions to adopt a strategic approach to digital transformation. Overall, this paper aims to provide insights into the challenges and opportunities of digital transformation in the higher education and to encourage institutions to embrace the digital age to improve their operations and provide better education to their students.

Transformation to Online Education

While online education has been around for some time, the pandemic has highlighted both the challenges and advantages of this approach to education. The shortfall of real communication in-between students and teachers in online learning is one of its major drawbacks. Due to this, it may be challenging for pupils to stay motivated and engaged in

their studies, and for teachers to provide the necessary support and feedback. Furthermore, some students might not have access to the internet or the technology required to take online programmes, leading to inequalities in education. Despite these challenges, online education also offers many advantages. For one, it gives more prominent adaptability to understudies who might have different responsibilities like work or family obligations. Online education also allows for a wider range of courses to be offered, as location is no longer a limiting factor. Additionally, online education can be more cost-effective for institutions, as they can save on expenses such as building maintenance and utilities[4].

However, in order to fully realize the advantages of online education, institutions must overcome the challenges and ensure that the quality of education provided is not compromised. This requires careful planning and implementation, including the provision of support services for students, the training of faculty in online teaching methods, and the development of effective assessment and feedback mechanisms[5].

Literature Survey

Blended learning has been increasingly popularized in the higher education., since it combines the advantages of conventional face-to-face instruction with internet education to enhance student engagement, collaboration, and achievement. In their 2018 article, Dziuban et al. [6] provide an overview of blended learning, emphasizing its benefits and emerging technologies that can be used to support this teaching approach. The authors argue that blended learning has become the new rule in higher Study, & institutions must adapt to these changes to remain competitive.

Massive Open Online Courses (MOOCs) have tuned out as a disruptive innovation in higher study, offering access to quality education to millions of learners worldwide. Eynon et al. (2014)[7] reflect on the transformative power of MOOCs, highlighting the opportunities they provide for learners who may not have access to traditional higher education due to economic or geographic barriers. However, the authors also acknowledge the challenges and limitations of MOOCs, such as small completion rates, absence of communication, & limited ability to support deep learning.

A significant positive impact on student performance in science, engineering, and mathematics courses has been shown to be achieved through active learning, as demonstrated by Freeman et al. (2014) [8] report that active learning strategies, such as flipped classrooms and peer instruction, can improve student performance, reduce achievement gaps, and increase retention rates. The authors argue that traditional lecture-based teaching methods are not effective in promoting deep learning and understanding, and institutions must adopt active learning strategies to improve student outcomes.

Greenberg (2020) [9] emphasizes that remote learning has become a new norm of Study due to the COVID-19 pandemic, but the digital divide is still a significant challenge. The author argues that without proper infrastructure and technology access, millions of students worldwide have been left behind, unable to fully participate in online learning. In this article, Greenberg discusses how the digital divide impacts students' learning experiences and proposes solutions to address this issue, including public-private partnerships, innovative financing mechanisms, and community-based solutions.

Ho et al. (2014) [10] present a report on the 1st year of HarvardX and MITx's massive open online courses (MOOCs), which were designed to offer high-quality education to students worldwide. The authors examine the courses' design, the characteristics of the learners, and the outcomes of the courses. They also discuss the challenges faced by MOOCs, such as low completion rates and the lack of a clear revenue model. The study concludes that MOOCs have the potential to serve as a complement to traditional higher education, but they require continuous innovation and adaptation to meet the requirement of learners & institutions. The study provides insights into the merits and demerits of online education platforms and highlights the importance of evaluating their impact on student learning and success.

Model Framework

Integrating FTF and online seamlessly

Integrated seamlessly between face-to-face (FTF) and online instruction is becoming increasingly important in today's educational landscape. This approach, commonly known as blended or hybrid learning, combines the best of both worlds by integrating traditional classroom instruction with online learning experiences.

Blended learning has been shown to have several benefits for both students and instructors. For students, this approach can offer more flexibility and control over their learning experiences, as they can access course materials and complete assignments at their own pace when online. It also permits them to take advantage of the benefits of FTF instruction, such as engaging in discussions and receiving immediate feedback from their instructor and peers[11].

For instructors, blended learning can be a way to increase student engagement and participation while also reducing the amount of time spent on traditional lecture-style teaching. By leveraging online resources, instructors can create more interactive and engaging learning experiences that cater to the diverse learning styles of their students. It also allows for more personalized instruction, as instructors can use online tools to track student progress and tailor instruction to meet individual needs[12].

Online and FTF are seamlessly integrated at the level of course administration.

The way the course was administered and how it was delivered also highlighted the seamless integration. We created a seamless link between online and FTF events to include

Online (one credit hour)	FTF (four credit hours)	Scaffolding
Instructor-made Video tutorials: <ul style="list-style-type: none"> • Vocabulary and grammar • Text dialogues videos and culture videos(with textbook) • Culture Videos 	Speaking <ul style="list-style-type: none"> • Pronunciation • Individual drill sessions • Pair speaking activities • Pair speaking activities • Group speaking activities Writing <ul style="list-style-type: none"> • Writing Chinese characters • Essay writing (handwritten) 	One on one speaking conversation including revisiting Voice Thread and free expression with what they have learned

<ul style="list-style-type: none"> • Chapter review videos <p>Writing practice:</p> <ul style="list-style-type: none"> • Note-taking including words and sentences in character while watching videos <p>Language practice</p> <ul style="list-style-type: none"> • Grammar exercises • Reading activities • Listening activities speaking practice (via voice Thread) 	<p>Assessments</p> <ul style="list-style-type: none"> • Quizzes as accountability assessment • Note: checking and correction as accountability assessment and individualized/personalized feedback • Written and spoken Exams 	
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Taxable 1: Framework of f “4+1” flipped model

To make sure the smooth integration of the online and FTF content, Before-We-Start activities are conducted throughout FTF meetings. These activities came in a variety of forms:

- Learning registration with a test about the material on Mondays, in the recordings posted on the web;
- Learning registration with a test about the material in the web-based recordings (on Mondays);
- Learning registration with a modification of the reactions to the inquiries consolidated in the web-based recordings; and
- Learning check-in with notes about the online activities (Mondays).

To additional assurance that the on the web and FTF exercises were in line and furnished understudies with a feeling of association between the thing they were doing on the web and what they were doing in class, the talking and composing practices were based upon the substance conveyed on the web. These exercises in particular were developed in accordance with the language, vocabulary, and popular culture.

The elements of FTF and online depend on and support one another. The students went to FTF sessions after learning grammar and vocabulary online to discuss what they had learnt and get any questions answered. Also, they reviewed their language notes and took part in collaborative scaffolding with peers and instructors. This task reinforced factual and declarative language knowledge while establishing the groundwork for better procedural

knowledge in the performance tasks. It also functioned as a link between online and FTF learning.

Online Component

The online component comprised videos that the teacher created and developed based on the principles of multimedia learning to explain grammar, vocabulary, and cultural concepts [13]. The grammar and vocabulary movies are 12 minutes in length or less, and each one includes voice-over explanations, supplementary vocabulary material, graphics, animations, and examples of how the grammatical ideas are used in various circumstances. Also, there were inquiries that the students had to respond to by recording their thoughts in their notebooks.

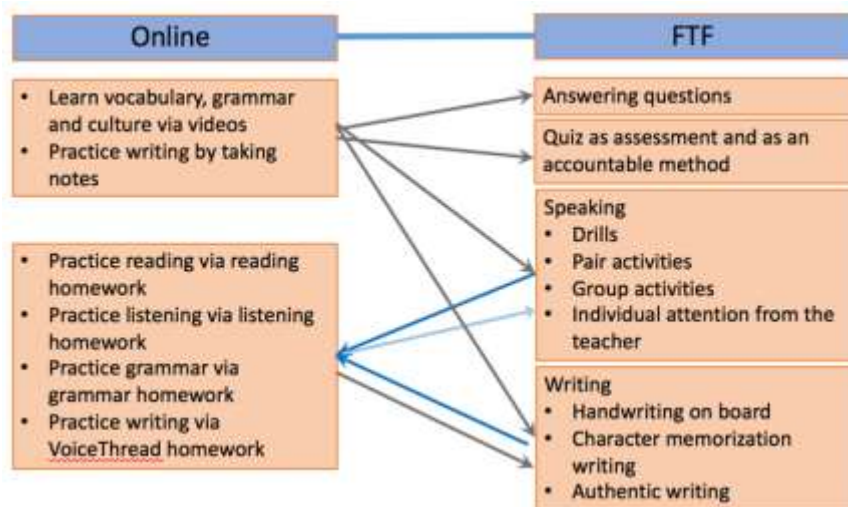


Figure 1: The combination of online and FTF elements

Data Collection

A total of 23 first-semester students from one class took part in the study. The participants were a median age of 21. Ten were women and thirteen were men. Students come from a variety of majors, including business, criminology, sociology, political science, psychology, animal science, computer science, and engineering.

a semi-formal focus group interview and a questionnaire (Appendix A) were used to gather the data. The questionnaire included questions regarding:

- 1) their online usage habits;
- 2) an summary of the one online credit and four FTF credits flipped-blended courses;
- 3) comments regarding the internet elements;
- 4) thoughts regarding the FTF parts; and
- 5) general knowledge of the Internet.

Table 2: Meeting layout of FTF

	Speaking(and listening)	Writing (and reading)
1 st meeting of FTF	Pair dialogues of Drill and simple	Recognition of (reading textbook and quizzes)
2 nd meeting of FTF	Activities of pair	Character writing on the board
3 rd meeting of FTF	Group activities	Dictation and Translation on board
4 th meeting of FTF	Comprehensive group activities	Short note writing on notebook

Results

The "4+1" flipped-blended course received positive feedback from participants for various reasons. Firstly, the one-credit online component allowed students to work with more flexibility, which suited their schedules better. As one student stated, "It's great because it fits my schedule." Secondly, students appreciated the independence that the online component provided, which encouraged them to develop the habit of being self-reliant. Additionally, students loved the media arrangement of the internet based part and how it was planned. A few students found it supportive for exploring their learning.

In summary, students preferred the flipped learning format for its flexibility and the opportunity it provided for them to regulate their own learning process. These findings are consistent with previous studies.

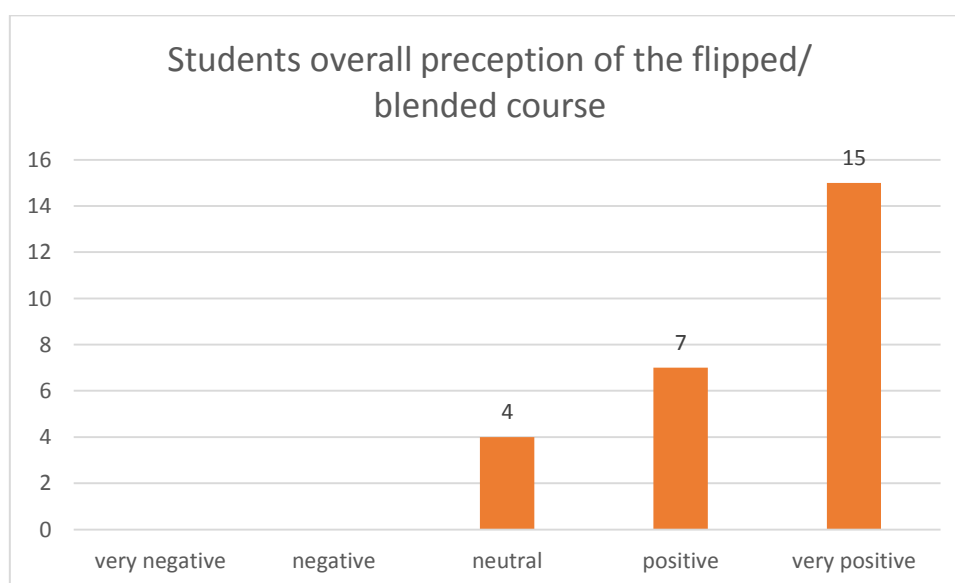


Figure 2: Experience with the flipped-blended course

The online component of a course can have a significant impact on students' overall perception of the course. In previous years, there has been a growing trend towards incorporating online components into traditional courses. Students' perception of the online component can be influenced by various factors, such as the level of flexibility, the quality of the course materials, and the interaction with the instructor and peers[14]. Students often appreciate the flexibility that online components provide, allowing them to study at their own pace and schedule. However, the quality of the course materials and the interaction with the instructor and peers can also have a significant impact on their perception. Instructors should consider incorporating interactive and engaging course materials, as well as providing amazing open doors for students to collaborate with one another and the educator[15]. Overall, students' perception of the online component can greatly impact their motivation and engagement in the course, highlighting the importance of carefully designing and implementing effective online components.

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