TOWARDS FUTURE EDUCATION: HOW DO TEACHERS AND STUDENTS PERCEIVE BLENDED EDUCATION?

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Abstract

Amidst the Covid-19 pandemic, online education has demonstrated significant potential in providing flexible and easily accessible learning opportunities on a global scale. As a result of its numerous advantages, the landscape of education in the post-Covid era is anticipated to be a combination of online and face-to-face (F2F) instruction, with F2F education retaining its predominant role. Achieving such a blended model necessitates prompt attention towards blended education and a comprehensive exploration of how educators and students perceive it. Hence, the objective of this research is to delve into and examine the perceptions and emotions of teachers and students regarding blended education. To accomplish this, a total of 327 teachers and 547 students from a Dutch university participated and completed a survey. The collected data were analyzed by using SPSS. In terms of the findings concerning teachers, it was generally observed that a majority of them experienced a significant workload and stress levels in blended education. A considerable proportion of teachers did not indicate a strong sense of well-being within the blended education context. On the other hand, in terms of motivation, teachers displayed a relatively positive level of motivation. As for the outcomes related to students, a substantial number of students expressed perceiving a high workload in blended education. However, the majority reported low levels of stress. In regard to well-being, a significant proportion of students displayed neutral well-being. Nevertheless, students demonstrated motivation towards blended education. These results can guide the future design of education for the post-Covid time in higher education contexts.

Keywords: Blended education, future education, higher education, teachers, students.

1. Introduction

In the present day, technology assumes a vital role in education, particularly through its provision of online learning opportunities (Banihashem et al., 2022; Farrokhnia et al., 2023). Over the past three years, there has been a significant global increase in the utilization of online education, primarily due to the impact of the Covid-19 pandemic (Drachsler et al., 2021; Van der Spoel et al., 2020; Stevens et al., 2023). This transition from traditional F2F education to online education has had a profound impact on higher education, presenting both advantageous opportunities and potential risks (van Puffelen et al., 2022). The key benefits associated with online education include enhanced comfort, flexibility, and accessibility for learners (Mukhtar et al., 2020; Paudel et al., 2021). However, it is important to acknowledge the challenges that come with this shift, such as social isolation, decreased motivation, increased work pressure, difficulties in self-regulation, and delayed feedback (Aboagye et al., 2021; Rasheed et al., 2020).

Notwithstanding these obstacles, the benefits offered by online education during the pandemic cannot be easily dismissed. In other words, as online education has demonstrated its worth in the realm of higher education, there has been a noticeable increase in the number of institutions investing in online education (Shi, 2019; Zhao & Watterston, 2021), particularly in the post-Covid-19 era (Banihashem et al., 2023; Ratten et al., 2023). While it is predicted that F2F education will continue to be the primary mode of instruction in the post-pandemic era, there is a consensus that online education will remain an integral part of the educational landscape (Lockee, 2021). This argument calls for a reevaluation of higher education practices and the development of a carefully crafted new educational approach that combines flexibility with effectiveness in the post-pandemic era (Neuwirth et al., 2021). The importance of this need has gained increased attention, particularly following the successful implementation of vaccination programs in 2022 and the gradual return to normalcy in various aspects of life (e.g., Ratten et al., 2023).

According to the literature discussing the future of education in the post-pandemic era, blended education emerges as a promising approach that offers a balanced and flexible form of learning. It aims to address the difficulties posed by online education by combining F2F instruction with online components in the post-pandemic era (Banihashem et al., 2023; Sharma & Shree, 2023). Blended education is defined

as a design of learning where the elements of both F2F and online education are combined in a pedagogically thoughtful manner (Banihashem et al., 2014; Vo et al., 2020). There is a considerable pool of research that reported positive impacts of using blended education compared to F2F and online education such as improving engagement and performance (Deschacht & Goeman, 2015). Despite its benefits, challenges also are reported regarding the acceptance of blended education since its design and implementation seemingly is more complicated than fully F2F and fully online education and both teachers and students have fewer experiences with such education (Banihashem et al., 2023).

In the context of blended education in the post-pandemic era, our understanding of how teachers and students perceive this approach remains limited (Banihashem et al., 2023). Therefore, there is a crucial need to investigate teachers' and students' perspectives on blended education, as such research can provide valuable insights into the factors that contribute to its wider acceptance and effective implementation. The present study aims to explore teachers' and students' perceptions and emotions concerning blended education, specifically focusing on workload, stress, motivation, and well-being. To achieve this objective, the following research questions have been formulated.

- RQ1. How do teachers perceive their workload, stress, motivation, and well-being in blended education?
- RQ2. How do students perceive their workload, stress, motivation, and well-being in blended education?

2. Method

This exploratory study was conducted in a Dutch university specializing in life sciences in the academic year 2021-2022.

2.1. Participants

In this study, 327 teachers and 547 students participated. The distribution of participants in terms of gender was nearly equal, with male teachers comprising 46% (N=140) and female teachers making up 43% (N=133) of the total. A significant number of teachers held the position of course coordinator (N=191, 62%), and the majority of them were of Dutch nationality (N=214, 70%). Moving on to the student participants, the majority were female (N=328, 61%). However, there was a good balance between participants from both bachelor's level (N=253, 47%) and master's level (N=267, 50%). Similar to the teacher participants, the majority of students were of Dutch nationality (N=356, 67%). Considering the diversity of the participants in terms of gender and nationality, it can be inferred that the sample was representative of the university.

2.2. Measurements

Teachers' perceptions and emotions towards blended education were measured via four variables including workload, stress, well-being, and motivation, and it included 10 items for teachers. Teachers' workload was measured using three items (e.g., *teaching this course in a blended form increased the workload*). Teachers' stress included two items (e.g., *I experienced stress teaching this blended course*). Well-being was measured using two items (e.g., *I feel a sense of well-being when teaching in a blended form*). And the measurement of teachers' motivation consisted of three items (e.g., *I was motivated to teach this blended course*).

The same variables were used to measure students' perceptions and emotions towards blended education with 12 items. Three items for students' workload (e.g., *I experience a high workload in my current education*), three items for stress (e.g., *I feel stressed in the current blended courses*), four items for well-being (e.g., *I feel connected to my fellow students in my current education*), and two items for motivation (e.g., *I am motivated to follow blended courses*). All items for both teachers and students were designed based on a five-point Likert scale ranging from '*strongly disagree*' to '*strongly agree*'.

2.3. Data analysis

A descriptive analysis was conducted to provide an overview of teachers' and students' perceptions and emotions regarding blended education,

3. Results

3.1. Results for RQ1

The findings about teachers' perceptions and emotions towards blended education revealed that, overall, a majority of teachers reported experiencing a high workload (N=220, 71%) and stress (N=213, 70%) in the blended education setting. Furthermore, a significant number of teachers did not demonstrate a strong sense of well-being in blended education (N=84, 27%). However, in terms of motivation, teachers were relatively found to be motivated (N=184, 60%) (Table 1).

Table 1. Teachers' perceptions and emotions towards blended education.

Item	Mean	SD	Agreement no. (%)[b]	Disagreement no. (%)[c]	Neutral no. (%)
Workload					
Teaching this course in a blended form increased the workload	4.36	0.99	255 (83%)	22 (7%)	30 (10%)
It was difficult to combine personal life at home with blended teaching	3.16	1.12	181 (59%)	81 (26%)	45 (15%)
I feel high mental effort teaching in a blended form	3.77	1.08	220 (71%)	47 (16%)	40 (13%)
Total	3.76	0.86	220 (71%)	47 (16%)	40 (13%)
Stress					
I experienced stress teaching this blended course	3.96	1.06	238 (78%)	38 (12%)	31 (10%)
I feel worried about teaching my course in a blended form	3.25	1.14	188 (61%)	78 (26%)	41 (13%)
Total	3.60	0.91	213 (70%)	58 (19%)	36 (11%)
Well-being					
I feel comfortable about my blended teaching	3.43	0.97	188 (61%)	60 (20%)	59 (19%)
I feel a sense of well-being when teaching in a blended form	2.68	0.97	26 (9%)	107 (34%)	174 (57%)
Total	3.05	0.86	107 (35%)	84 (27%)	116 (38%)
Motivation					
I like blended teaching	2.86	1.08	157 (51%)	116 (38%)	34 (11%)
I was motivated to teach this blended course	3.62	1.09	214 (70%)	57 (18%)	36 (12%)
I feel satisfied with my blended teaching	3.25	1.00	181 (59%)	74 (24%)	52 (17%)
Total	3.24	0.88	184 (60%)	82 (27%)	41 (13%)

[a]Based on a 5-point Likert scale (Strongly disagree, disagree, neutral, agree, and strongly agree)
[b]Agreement = Agree, and strongly agree; [c] Disagreement = Strongly disagree, disagree

3.2. Results for RQ2

The outcomes concerning students' perceptions and emotions towards blended education indicated that a significant proportion of students perceived a high workload (N=164, 31%) in the blended education context. However, the majority of students reported low levels of stress (N=388, 73%). In terms of well-being, a considerable number of students displayed a neutral well-being state (N=224, 42%). Nevertheless, students demonstrated motivation towards blended education (N=284, 46%) (Table 2).

Table 2. Students' perceptions and emotions towards blended education.

Item	Mean	SD	Agreement no. (%)[b]	Disagreement no. (%)[c]	Neutral no. (%)
Workload					
I experience a high workload in my current education	3.35	0.91	180 (34%)	80 (15%)	274 (51%)
I experience difficulty in combining the current form of education with my personal life	2.87	1.11	125 (23%)	166 (31%)	243 (46%)
I feel a high mental effort in learning in my current education	3.34	1.05	187 (35%)	104 (20%)	243 (45%)
Total	3.18	0.85	164 (31%)	117 (22%)	253 (47%)
Stress					
I feel worried about not passing a blended course	2.44	1.08	94 (18%)	378 (71%)	62 (11%)
I feel worried about the current blended courses	2.17	0.95	53 (10%)	410 (77%)	71 (13%)
I feel stressed in the current blended courses	2.42	1.04	77 (14%)	377 (71%)	80 (15%)
Total	2.34	0.88	75 (14%)	388 (73%)	71 (13%)
Well-being					
I feel connected to my fellow students in my current education	2.41	0.94	70 (13%)	369 (69%)	95 (18%)
I feel a sense of well-being in my	2.84	0.90	104 (20%)	145 (27%)	285 (53%)

current education					
I feel a sense of belongingness in my current education	2.72	0.97	102 (19%)	165 (31%)	267 (50%)
I feel part of a community at WUR in my current education	2.66	1.00	106 (20%)	180 (34%)	248 (46%)
Total	2.65	0.83	96 (18%)	215 (40%)	224 (42%)
Motivation					
I like following blended courses	3.28	1.04	252 (47%)	108 (20%)	174 (33%)
I am motivated to follow blended courses	3.19	1.05	244 (46%)	119 (22%)	171 (32%)
Total	3.23	0.99	248 (46%)	113 (21%)	173 (33%)

[a]Based on a 5-point Likert scale (Strongly disagree, disagree, neutral, agree, and strongly agree)
[b]Agreement = Agree, and strongly agree; [c] Disagreement = Strongly disagree, disagree

4. Discussions

In this study, our findings indicate that both teachers and students perceived a high workload in blended education. However, their experiences with stress differed, as teachers reported high-stress levels while students reported low-stress levels. One plausible explanation for this disparity is that blended education is a relatively new instructional approach for many institutions, and teachers may lack sufficient experience in designing courses in this format (Sharma & Shree, 2023). Moreover, in blended education, online resources and tools play a crucial role in enhancing teaching and learning (Alammary et al., 2014). However, technical issues commonly associated with blended education can contribute to added stress and workload. Despite these challenges, both teachers and students did not demonstrate strong well-being in blended education. These findings align with previous studies reporting low well-being among teachers and students in online education during the Covid-19 pandemic (Panadero et al., 2022). One possible explanation for this is the novelty of the situation, which results in a higher workload for both teachers and students, negatively impacting their well-being. This argument finds support in previous studies that have reported a negative correlation between workload and well-being (Pace et al., 2021). Another possible explanation is that the transition from fully online education during the pandemic to a new form of education in the post-pandemic era posed challenges for teachers and students in striking a balance between personal and social interactions in online and remote teaching and learning. On the topic of motivation, both teachers and students demonstrated relatively high levels of motivation in blended education during the post-pandemic period. This can be attributed to the flexibility that blended education offers, as supported by previous studies (Wong et al., 2020).

5. Conclusion

By examining the perceptions and emotions of teachers and students in blended education, this study offers a comprehensive understanding of various aspects such as workload, stress, well-being, and motivation. Consequently, it fills a void in the literature concerning post-pandemic education by shedding light on how teachers and students perceive blended education. Furthermore, this study not only contributes to and expands the existing body of knowledge on post-pandemic education but also carries significant implications for future education policies and practices.

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