The Role of Social Relationships with Peers and Teachers for Undergraduate Students' Subjective Wellbeing in the Context of University Synchronous Online Learning

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Abstract
Social interactions with peers and teachers significantly impact students' subjective wellbeing (SWB) by influencing their achievements, mental health, and motivation. Students who study online often lack these interactions, leading to lower SWB. However, studies show that the experience of social relationships varies by context. Therefore, examining the specific context of an online programme integrated within the university with partially regulated social interactions and active students and teachers' engagement in the learning process provides a more comprehensive understanding of the online students' social experiences, distinct from other online learning formats. The aim of the present study was to find out what such students find important in social interactions for their SWB and whether they are satisfied with the quality of these interactions. To gather insights from the experiences of participants, data were collected from eight semi-structured interviews with second year undergraduate students of a synchronous online programme. Thematic analysis revealed the importance of communication for SWB in the university setting, noting the significance of relationships among teachers and peers. While participants recognised the lack of personal social interactions with online peers, they found that academic communication with them may decrease feelings of detachment. Teacher relationships played a pivotal role in students' SWB and positive learning experience, suggesting that strong teacher support can offset a potential decrease in student SWB in online programs with limited peer interactions.

Keywords: Subjective wellbeing in university; Higher education; Academic wellbeing; Online learning; Distance learning

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Introduction

Studies of online education reveal that remote learners experience significant challenges, including decreased motivation, engagement, and a sense of belonging (Foley & Marr, 2019). These difficulties contribute to a decline in subjective wellbeing (SWB) within the educational context (Tian et al., 2017). This is especially true socially, since online learning environments often hinder the development of deep connections with peers and teachers, leading to withdrawal from online programmes (Berry, 2019) and a further decline in subjective wellbeing (Foley & Marr, 2019).

Studies show that perceptions of the quality of relationships within education are highly context dependent (Hagenauer & Volet, 2014) and may vary significantly due to cultural, institutional, and personal factors. Building on this, we assume that not only the online format itself but also the type of online format may transform social relationships in a university context. Studies on various formats of social interactions in online education have shown that context impacts students' perceptions of the quality of these interactions. For instance, research on students' satisfaction with social relationships among university students who study asynchronously highlighted aspects of the institutional role of the university in such interactions (O'Shea et al., 2015). On the other hand, research on university students who studied synchronously during COVID-19 showed that the main reasons for students' dissatisfaction with social relationships lay in their involuntary inclusion in such study formats and their teachers' attitudes (Hopwood, 2022). Thus, we may observe the diversity of factors that impact online students' perceptions of social interactions based on the context of their studies.

This study investigated students in an online programme that is an integral part of the university, where general requirements and rules for teachers, students, and the organisation of educational processes apply. That may bring new insights about how the university environment and policies about online programmes can influence students' perceptions of their social interactions with teachers and peers compared to previous research. Therefore, we assume that by investigating a new context, we can broaden the body of existing research on relationships with teachers and peers in online university programmes and the role of these relationships in students' perceptions of SWB.

Literature Review

Social Relationships and Subjective Wellbeing Within the Educational Context

Subjective wellbeing (SWB) in the educational context, sometimes also referred to as academic wellbeing (Korhonen et al., 2014; Tuominen-Soini et al., 2012; Widlund et al., 2018), reflects ‘‘how students subjectively evaluate and emotionally experience their school lives" (Tian et al., 2017; p. 2). SWB in the educational context shows connections with such important aspects of the learning process as academic achievement (Bücker et al., 2018; Chattu et al., 2020), academic engagement (Datu & King, 2018), adaptability (Putwain et al., 2020), lower social-emotional loneliness (Özdoğan, 2021), and lower dropout rates (Korhonen et al., 2014). One approach to describing SWB in the educational context is presented in the model of Tian (2015), based on the widely used model of general SWB by Deiner (1994). Diener's model of

SWB includes a cognitive component presented as satisfaction with life and a component presented as positive and negative affect. A high level of subjective wellbeing denotes elevated life satisfaction and a harmonious balance of positive and negative affect in response to life events (Diener, 1994). Tian's model follows this structure and describes SWB in school through concepts of school satisfaction and affect towards school. School satisfaction refers to the cognitive evaluation of one's school experience, e.g., the learning process, and relationships with classmates. Affect towards school is the volume of experiencing positive or negative emotions directly during the school day. Tian's model became the foundation for the development of the tool for measuring SWB in school (Tian et al., 2015). The model is designed to capture the level of school satisfaction, including satisfaction with relationships with teachers and peers, satisfaction with the school environment, and satisfaction with one's own achievement. Besides that, the tool measures the level of positive and negative affect towards school. Moreover, Tian's model was used in search of connection of SWB in school with goal orientations (Tian et al., 2017), school belonging (Tian et al., 2016), and prosocial behaviour (Chen et al., 2020).

The primary strength of Tian's model lies in its explicit focus on the educational context. Both the model and its measurement instrument are designed to assess students' attitudes toward their school experience. This school-specific approach differs from studies on students' SWB that rely on general wellbeing scales (Bücker et al., 2018; Chattu et al., 2020; Datu & King, 2018; Putwain et al., 2020; Özdoğan, 2021). By concentrating on environmental factors within the school setting, it allows researchers to capture aspects of SWB that are directly related to the educational process. However, Tian's model presents limitations as a key model in our research. In particular, it focuses on relationships with teachers and students with only two questions on overall relationship satisfaction, which is clearly insufficient to understand the deeper patterns and reasons that affect the experience of relationships in an educational context and wellbeing.

Another approach, suggested by Konu and Rimpela (2002), is based on the Allardt (1993) concept of "welfare" and describes SWB in school through the categories of "loving," "having," and "being." These categories represent aspects of school experience that are included in SWB. "Loving" refers to social relationships, "having" to school conditions, and "being" to means of self-fulfilment. One can see that both approaches recognise social relationships as a part of SWB in the educational context. However, these models do not investigate in depth the relationships with teachers and peers, giving only a little information about the content of social relationships and their possible impact on SWB in the educational context.

As noted, social relationships in the educational context are highly context dependent (Hagenauer & Volet, 2014). The change in the learning environment after the transition from school to university may impact the nature of social relationships. As stated by sociocultural theory, the shift from school to university leads from an orientation on personal relationships to an orientation on professional relationships (El'Konin, 1999; Vygotsky, 2017). We assume that the content of social relationships in the university context regarding SWB can include not only the emotional component of these relationships, as presented in the existing models (Konu & Rimpelä, 2002; Tian et al., 2015), but also aspects connected to professional and academic growth.

These suggestions are partially supported by research on social relationships within universities. For instance, summarising research findings on teacher-student relationships in higher education, Hagenauer and Volet (2014) identified two dimensions of these relationships: the support dimension and the affective dimension. The affective dimension, represented by personal relationships, specifically between teachers and students, is widely acknowledged as crucial to students' positive perceptions of the learning environment, evaluation of teaching quality, and overall subjective wellbeing (Bağrıacık Yılmaz, 2022; Hagenauer & Volet, 2014; Tackie, 2022; Tormey, 2021). However, studies of social relationships in higher education also underlined the importance of relationships between students and teachers that focused on the learning process specifically (support dimension). Proper preparation of study materials, high-quality feedback, and expectations towards students' academic success may impact their learning experience (Bağrıacık Yılmaz, 2022; Hattie & Timperley, 2007). It is shown that, when perceived as satisfactory from the perspective of support, relationships with teachers impact students' academic achievement (Kiltz et al., 2020; Murray-Harvey, 2010) and students' satisfaction with courses and studies (Tormey, 2021).

On the other hand, studies on relationships among peers in higher education and school have shown quite similar results about connections between peer relationships and learning outcomes. Thus, relationships with peers contribute to university adjustment, a sense of belonging (Maunder, 2018), academic motivation, and satisfaction with their education (McCabe, 2022). However, though similar types of connections are seen between social relationships with peers in school and university contexts, the nature of these relationships may differ substantially. As with relationships with teachers, peer relationships at university are significant, not only in forming friendships but also take on a greater orientation towards networking for future careers and co-curricular activities (El'konin 1999).

The existing literature gives us an understanding of the role of social relationships in university students' learning experiences and outcomes, their mental health, and their general wellbeing. However, the studies do not delve into the direct educational context and its components (e.g., learning environment, curriculum, or learning achievements) that may be important in terms of SWB in university. On the other hand, as noted, the available SWB models do not adequately explore the issue of relationships within the educational context. In addition, since the models are built to study well-being in a school context, they do not include issues related to the professional focus of relationships that may be important for university students. Thus, there is some gap in understanding the contribution of direct relationships with teachers and peers to subjective well-being at university.

In order to describe the role of social relationships with faculty and peers in the context of online learning at the university, it is important, in addition to a general picture of the role of social relationships, to understand what research says about the dynamics of these relationships in the online environment in general.

Relationships with Peers and Teachers in Online Education

Research on social interactions in online university learning commonly examines how instructional design, technological tools, and specific teacher characteristics contribute to the quality of online education (Bağrıacık Yılmaz, 2022; Wallace, 2003). In addition, studies

investigate how students and teachers perceive these interactions and how such perceptions relate to their subjective wellbeing (Hopwood, 2022; O'Shea et al., 2015; Tackie, 2022; Tichavsky et al., 2015).

Research emphasises the key role of the teacher in shaping a positive online learning experience. For example, studies have shown that a lack of established online communication aligned with the teacher, a lack of a learning environment organised specifically for the online format, and perceived unfriendly attitudes of teachers played an important role in dissatisfaction with the online learning process and engagement in the process (Hopwood, 2022; O'Shea et al., 2015). It has been noted that the teacher's mastery of online tools and technology for lessons also plays an important role (Bağrıacık Yılmaz, 2022; Wallace, 2003). The teacher is the central figure who facilitates and engages students in the learning process, including communication (O'Shea et al., 2015; Wallace, 2003).

Overall, although the cited studies have shown that students in online learning often experience difficulties in building relationships with peers (Berry, 2019; Foley & Marr, 2019; Hopwood, 2022) and teachers (Hopwood, 2022; O'Shea et al., 2015; Tichavsky et al., 2015), it is important to consider that the findings of these studies can be significantly context-dependent (Hagenauer & Volet, 2014).

In addition to general cultural and age factors, these contexts of social relationships include the format of online learning and its place within the integral structure of the university itself. For instance, research on asynchronous university online programmes (O'Shea et al., 2015) showed that students felt excluded from the student community due to a lack of organisation of their studies by the university and faculty members. That contributed to their dissatisfaction with social interactions because of the disorganised process of communication with teachers and peers through e-mails and unmoderated forums. On the other hand, research on students who studied online synchronously during the pandemic revealed that relationships with teachers and peers were perceived as low-quality due to unorganised interactions during the classes, the unfriendly attitude of teachers, and the necessity, rather than choice, of studying in an online format (Hopwood, 2022). We can see that different formats (synchronous and asynchronous) bring different challenges to students' interactions with teachers and peers. Thus, the asynchronous format, on the one hand, can affect the sense of community and connection with teachers (O'Shea et al., 2015). And in synchronous learning, instructor involvement in the process and students' own motivation to learn in this format played a major role in relationship satisfaction (Hopwood, 2022).

Thus, we see that social relationships play a role in the experience of satisfaction with the learning process, but the data on how this satisfaction depends on the online learning format do not give a clear picture. The literature review revealed that the context in which these relationships are realised is especially important (Hagenauer & Volet, 2014; O'Shea et al., 2015; Hopwood, 2022). Therefore, to see how these relationships unfold and what role they play in the experience of well-being in students who are both fully distance learners and regular undergraduate students, we need to delve into the direct experience of these students.

Methods

To answer research questions and study personal students' experiences and their perceptions of social aspects of SWB in university, a qualitative methodology was chosen. Qualitative methodology was essential for gaining deeper insights into our research topic, given the limited existing research on SWB in university among students in online programs and the lack of suitable quantitative tools for measuring SWB in a specific university environment.

Current Study

The Aim and Research Questions

This study aimed to understand the role of social interactions for the SWB in university of undergraduate students in a synchronous online programme. Specifically, what aspects of social interactions these students value and whether they are satisfied with the quality of social interaction they experience within the learning environment.

As noted, the lack of a comprehensive model of SWB renders the content and place of social relationships in SWB unclear. Thus, before exploring the attitude of students towards the quality of social relationships while studying online, we investigated their experience of SWB in university and what aspects of social relationships are considered integral to it. Our first research question was: "What aspects of interactions with peers and teachers are considered a part of SWB by university students enrolled in synchronous online programmes?"

The second research question was specifically connected to the experience of online learning and its perceived impact on participants' SWB. The second research question was: "How do students perceive the impact of online format on their satisfaction with social relationships with teachers and peers?"

To better understand the context of our study, the following section provides a description of the specific educational context of study participants.

The Context

This study was conducted in 2022 at a highly selective Russian university, the nation's only institution offering a fully remote undergraduate programme when the study was conducted. This programme, equivalent to the structure and requirements of the university's on-campus programmes, adheres to national standards for undergraduate degrees, encompassing credit requirements, disciplines, contact hours, and learning objectives. Students enrolled in this programme study for four years and engage in synchronous online lectures and seminars according to the schedule established by the faculty. Students' assessments follow the same university-wide guidelines as other on-campus programmes. The key difference between this programme and traditional on-campus programmes lies in its fully remote format. While both formats use various online tools (such as online classrooms, forums, and boards), the remote programme exclusively relies on these tools for all classes and interactions. Students in traditional programmes, on the other hand, are physically present on campus, engaging in face-to-face interactions with faculty and staff. While the use of online tools is increasingly common

in traditional programmes, the reliance on these tools for all aspects of learning is unique to this fully remote programme. Upon graduation, students receive the same undergraduate degree and university diploma as their on-campus counterparts.

The context of our participants' study, a fully synchronous online programme with mandatory attendance requirements, may provide an additional perspective on the role of social relationships in SWB of students learning online. This format, which emphasises real-time engagement, may help reduce some challenges that were previously linked to passive lecturing (O'Shea et al., 2015) because teachers need to participate actively in classes synchronously. Moreover, participants' choice of this online format could influence their perceptions of social relationships. They may have entered the programme with particular expectations regarding interaction, potentially facilitating their adaptation to the specific constraints of online communication.

Therefore, this study provides an opportunity to examine the role of social relationships on the SWB of students within a fully synchronous online learning environment, considering the specific factors of mandatory attendance and the participants' choice of this format.

Participants

Participants were selected based on convenience sampling procedures and comprised eight second year undergraduate students (male = 5, female = 3, age range 18 - 29), enrolled in a synchronous online computer science programme. We decided to use eight respondents because at the 8th participant, themes became redundant and no new insights were found. In other words, data saturation began to be observed, which, in general, allows us to stop collecting data and start analysing (Bekele & Ago, 2022; Sargeant, 2012).

To cover the topic more broadly, we recruited participants with various educational backgrounds and experience with online education. Thus, there were three students who enrolled in the online programme straight out of high school and five participants who had already experienced campus learning at the university. We suggested that participants who had prior experience with traditional, on-campus university education might offer valuable insights into their perceptions of the differences between online and face-to-face communication with both teachers and peers.

During the interview, we asked participants for information about their previous online learning experiences to explore possible original expectations and prejudgments towards online learning that could influence their current perception of social aspects of SWB during the present online programme study. Seven participants had experience with asynchronous online courses and remote learning during COVID-19. A more detailed description of the sample is presented in Table 1.

Table 1

Characteristics of Participants

N	Age (gender)	Educational background (before enrolling the programme)	Experience of online-learning
P1*	20 (female)	1 year of UD**	online courses, remote learning during COVID-19
P2	19 (male)	High School	online courses, remote learning during COVID-19
P3	22 (female)	3 years of UD	remote learning during COVID-19
P4	18 (male)	High School	online courses, remote learning during COVID-19
P5	18 (male)	High School	online courses, remote learning during COVID-19
P6	20 (male)	1 year of UD	online courses, remote learning during COVID-19
P7	29 (male)	4 years of UD (not finished)	online courses
P8	23 (female)	2 years of UD	remote learning during COVID-19

*P - participant
**UD - undergraduate degree

Data Collection Procedure

Data for this study were collected at the beginning of students' second year of study through individual semi-structured interviews focused on participants' learning experiences in an online programme. The interview guide consisted of four sections, including informed consent and consent to record the interview, questions about participants' educational background and experience with online learning, core questions about SWB in university, and a final section for participant feedback and additional questions.

The core questions of the interview included topics about (1) overall participant experience of SWB in university, (2) perception of the value of the social aspect of subjective wellbeing in university and its content, and (3) perception and satisfaction with the quality of the social relationships in relation to their experience on an online programme. The examples of questions for each topic are presented in Table 2.

Table 2

Examples of the Interview Questions

Topic	Example
Overall participant experience of SWB in university	What, in your opinion, should be present in the university environment to make your studying process psychologically comfortable?
The value of the social aspect of SWB in university and its content	Is there something in communication with others (teachers or students) that is important for your wellbeing in the university environment?
Satisfaction with the quality of the social relationships during online learning	Do you feel that the online format of your study affects the quality of your relationships with teachers and other students?

For future analysis, the interviews were transcribed into text format, with all personal information about the participants removed for anonymity and confidentiality purposes.

Data Analysis

The obtained data were analysed using the thematic analysis method according to the guidelines provided by Braun and Clarke (2006). Our research aimed to uncover and analyse general trends in how participants perceive social relationships rather than conducting detailed examinations of specific phenomena or language usage. Therefore, thematic analysis was chosen over phenomenological or discourse analysis as the most optimal method, allowing us to uncover overarching themes within the data (Braun & Clarke, 2006).

The thematic analysis method included the following phases: (1) familiarisation with the data; (2) coding the main elements in the texts; (3) synthesising the codes into themes; (4) review of the themes; (5) identifying and naming themes; and (6) describing the findings.

To establish the main ideas and recurring keywords, interviews were read twice. First, the author read each interview to acquire an overall understanding of the text. Second, each interview was analysed more closely, with the main ideas and key repeated words highlighted. This initial coding process was conducted manually and assisted by Atlas.ti© software, which generated additional codes.

Next, codes produced by the author and the software were compared and assessed to acquire a broader perspective on the text's content. These codes were then renamed to be more comprehensive and clearer.

Subsequently, codes were combined into sub-themes and themes within each interview. The themes from all interviews were then examined and refined based on their relevance to the research questions and aim of the study.

In the final step, all themes and sub-themes were merged into a single table, providing a comprehensive overview of the findings across all interviews.

Results

Our results have shown that social relationships appeared as the primary topic in regard to students' SWB from the start of the interviews when participants were asked about the crucial components of their SWB. Two main themes emerged in the topic of relationships with teachers, and two main themes in relationships with peers. Table 3 summarises the themes and sub-themes derived from our analysis. The themes connected specifically with online learning were firmly intertwined with topics of social relationships in the participants' narratives. Therefore, we decided not to divide these themes into separate results of analysis but to describe them within the general context of social relationships.

Table 3

Results of Thematic Analysis

Theme	Subtheme	Codes
Relationships with teachers	Support dimension	additional study activities
		feedback
		availability outside class
	Affective dimension (respectful and understanding treatment)	absence of dismissive or aggressive attitude
		personalised approach to students
		consideration of students' subjective wellbeing
Relationships with peers	academic communication	collaborative academic activities outside class
		discussion of study materials outside class
	extracurricular communication	personal relationships
		university events

Relationships with Teachers

Six out of the eight participants highlighted the importance of their relationships with teachers in relation to their SWB in university. They expressed that a lack of substantial interaction with teachers, both within and outside of the curriculum, would significantly increase their stress levels and decrease their motivation to engage with specific courses.

Their responses revealed two main themes, which we decided to name in alignment with the Hagenauer and Volet (2014) model, emphasising the affective dimension and the support dimension, based on the content of the respondents' answers. The support dimension encapsulates the practices adopted by teachers to aid students in achieving academic success, such as the quality of feedback and the preparation of study materials. The affective dimension concerns the quality of the interpersonal relationship between teachers and students, encompassing emotional aspects. In our study, participants referred to it as "respectful and understanding treatment."

In our study, the support dimension was represented by teachers' additional activities outside of the classroom, the quality of teachers' feedback, and the availability of teachers outside of class.

Feedback was considered by all eight participants as a central part of their perception of the quality of relationships with teachers. Meaningful, personalised, and prompt feedback gave participants a sense of reassurance and reduced anxiety associated with the course collection. Students acknowledged that regular feedback showed them the teacher's readiness to assist them if they encountered any difficulties with the course material, giving them a sense of security. For instance, P1 noticed that untimely feedback makes a teacher look "unapproachable, and in the end, [she felt] like there is no sense in asking him/her something."

Additionally, participants highlighted other themes related to extracurricular activities (e.g., additional "Q&A" sessions) and the willingness of educators to engage with students beyond the classroom setting. These themes resonate with the concept of approachability, as described by Hagenauer and Volet (2014). When discussing the approachability of teachers, participants emphasised the importance of being able to connect with educators to seek clarification on the subject, discuss assignments, or address organisational queries. Participants acknowledged that "it is nice to know that he/she is ready to answer your questions and help you if you have any struggles before it's too late" (P1) and "when the professor tells you that you can reach him/her for extra study sessions [...] inspires me" (P2).

When discussing educators' willingness to engage outside of regular class hours, some participants highlighted the potential for networking "not only with other students but with professors as well, because a lot of them are working in actual companies" (P7). Also, it was suggested that it is important to "talk not only about our courses but also about other professional topics I'm interested in" (P6).

The support dimension, represented by teachers' approachability and engagement, had an impact on students' SWB by providing a sense of support and security about study. Each described component was perceived by students as a teacher's investment of time and effort,

indicating that students felt valued and recognised as active participants in their educational process. For instance, P2 recognised that he felt "really steady knowing that they [teachers] care and are interested in giving you knowledge."

The affective dimension in our results was specifically represented by positive and respectful behaviour, a personalised approach and attention to students' personal problems, and care for students' SWB. When discussing key elements contributing to their SWB, respondents highlighted the emotional component of their interactions with instructors. Specifically, participants were speaking about communication with teachers without "fear of being ridiculed" (P6) and "extra formalism" (P8). Participants who had prior university experience recalled unfavourable incidents such as public reprimands and humiliation, underscoring the significant impact of negative experiences on their subjective wellbeing and stress levels. "It's really psychologically hard when you realise that at any moment a teacher can raise their voice at you and somehow humiliate you in front of everyone for making a mistake or being late for a class" (P8).

In addition to highlighting the importance of a safe environment, three students emphasised the value of instructors recognising the potential for difficult personal circumstances in students' daily lives. The opportunity to complete additional assignments, which allowed students to catch up on the material, strengthened their motivation to continue studying and reduced their anxiety. This reflected their sense that the instructor was supportive and committed to providing the knowledge needed for their success.

Based on the existing research (Hopwood, 2022; O'Shea et al., 2015; Tichavsky et al., 2015), it was expected that students in an online programme would experience a lack of relationships with teachers or indicate its low quality. However, most students did not identify these deficiencies, attributing the quality of communication and available support to being superior in the online format, especially regarding prompt and detailed feedback and instructor availability outside class. Six participants highlighted that distance learning not only provided more options for engagement but also facilitated efficient and immediate communication with instructors, contributing to their overall satisfaction.

It can be inferred that the initial organisation of distance learning facilitated the selection of instructors capable of providing satisfactory support by leveraging digital literacy. Moreover, the online communication format, which is not reliant on physical presence, incentivises instructors to engage promptly and efficiently with students.

In terms of the affective dimension, respondents indicated that they felt comfortable and were satisfied in their current place of study, but they did not attribute this to the format of teaching but more to the specifics of the university and teachers' personal traits.

Relationships with Peers

When considering the social aspect of their SWB, students emphasised not only their relationships with teachers but also the importance of socialising with other students. Their responses centred on two primary themes: academic communication, which included mutual

assistance in studying outside of class and the discussion of academic material, and personal communication beyond the classroom.

In discussing peer relationships, participants focused more on the transformations of these connections in distance learning, unlike their discussions about relationships with instructors, where participants were referring to their SWB. While students found relationships with instructors to be a pivotal aspect of their SWB, irrespective of the learning format, they expressed concerns about deficits in their peer relationships in the context of distance learning.

Respondents explicitly identified in-person interactions with peers outside of school hours as the most significant contributors to their subjective wellbeing. This observation was pronounced among respondents with prior university experience, who noted a contrast in their sense of belonging within specific study groups and the broader student community when compared to their previous university life.

Six respondents expressed a sense of loneliness and isolation because of limited face-to-face communication, which in turn diminished their overall sense of SWB. Participants highlighted the challenge of lacking a unifying physical environment that hindered spontaneous communication and necessitated an initiative-taking approach.

> P2: It's easier to say something or to join a conversation when you are offline. For instance, when two people are talking, someone else can spontaneously join them. When two people are talking online, they use direct messages, where no one can join them.

Moreover, remote learning has diminished their feeling of "any university atmosphere" (P4) as it restricts their ability to participate in student events organised by the university or department. Consequently, students experience a sense of detachment from the student community. "There was no sense of connection in such [online] format. There was no sense of friendship, no feeling of another human. And sometimes there was nothing to say to someone just because I didn't feel a connection" (P4).

However, despite experiencing a lack of social interaction with their peers, most respondents (six out of eight) did not express overall dissatisfaction with the current programme. While describing their experience, participants mentioned that communication about academic topics is a way of coping with a sense of loneliness and detachment from peers in an online format. They indicated that engaging in online discussions about academic subjects contributed to their sense of lively interaction and served as a source of motivation for their studies.

> P8: For instance, I remember how someone dropped a Discord link and wrote: "Hey, we are going to do our homework together tonight." It was cool, to be honest. Because even if you planned to do your homework later or didn't plan to do it at all, this kind of thing could motivate you to join the team and get the work done.

Additionally, organising extracurricular learning activities diminished their apprehension about their academic progress, especially when they were unable to actively engage in real-time discussions during class.

> P3: Sometimes I just sit and look at some course materials and think, "Probably I'm too dumb and can't understand anything. Probably I should just quit." But then I write in the course chat and see that a lot of people don't understand something. And I start to feel better, realising that maybe it's about the course difficulty and not about my intelligence.

Moreover, respondents who had already had experience with university learning indicated that the absence of extracurricular student activities did not significantly impact their current SWB. First, they particularly expressed that their motivation for choosing the programme related to getting a high-quality education at one of the leading universities in the country. Second, they "don't need any active campus life [since they] had it enough already" (P3).

Thus, for some participants, a lack of peer-to-peer communication was compensated by their positive relationships with teachers as well as their perception of the quality of education they were receiving. While participants articulated their desire for closer peer relationships, they also noted that they were able to offset this by interacting with individuals outside the university. Additionally, they emphasised that, despite the absence of a shared sense of unity, they were still able to establish closer personal connections. Furthermore, they found solace in academic communication, which served as a common foundation for all interactions among students in the programme.

Discussion

This study investigated the role of social relationships within subjective wellbeing (SWB) among undergraduate students enrolled in a synchronous online programme. Drawing on Tian's (2017) definition, SWB was defined as the subjective evaluation of satisfaction and emotional experiences within the university context. The study aimed to explore aspects of social relationships perceived as influencing SWB and examine the impact of the online learning context on these perceptions. We argued that investigating specific online formats may broaden our understanding of the role and content of social relationships in both online learning and the structure of SWB in the university setting. The results of the study have shown that social relationships play a crucial role for students regarding their SWB.

Teachers' feedback was acknowledged as the central part of participants' satisfaction with their relationships with teachers. In line with existing literature, high-quality feedback was described by respondents as prompt and detailed (Hattie & Timperley, 2007; Nelson & Schunn, 2009; Thurlings et al., 2013). Consistent with prior research emphasising the significance of feedback in fostering student motivation, a positive mindset, and an overall positive learning environment (Thurlings et al., 2013; Nelson & Schunn, 2007). Our findings have further demonstrated that high-quality teacher feedback also reduced participants' anxiety regarding course completion and fosters a perception of teacher approachability. The perception of students regarding the quality of feedback they receive plays a crucial role in their overall

satisfaction with the relationship they share with their teachers, which contributes to the cognitive component of their subjective wellbeing (Tian et al., 2015). Additionally, effective feedback that addresses students' anxieties fosters a sense of support and care from the instructors and minimises negative experiences while promoting positive ones can be linked to the affective component of subjective wellbeing (Tian et al., 2015).

Accessibility outside of class and additional academic activities can be considered part of the concept of teachers' approachability. Approachability was also frequently described as essential for facilitating positive teacher-student relationships (TSR) (Hagenauer & Volet, 2014). Our results supported these studies, showing that students consider teachers' approachability as part of their TSR regarding SWB in university. The possibility of reaching out to teachers outside the class and discussing their study difficulties gave the participants a feeling of support and reassurance.

Studies showed that the emotional component plays an essential role in such concepts of teacher-student relationships as "care" and "closeness." According to studies, experience of care and closeness helps students perceive relationships with teachers as positive and see a teacher as "good" (Tormey, 2021; Tackie, 2022; Hagenauer & Volet, 2014). Participants also noted that acknowledgement of their personal circumstances and care for their subjective wellbeing by teachers increased their sense of security, trust, and motivation for further study and course completion.

In online learning studies, relationships between students and teachers mostly showed dissatisfaction among students with the quality of such relationships. Such interactions were perceived as more distant (Tichavsky et al., 2015; Bağrıacık Yılmaz, 2022), awkward, and unorganised (Hopwood, 2022). Additionally, students experienced feelings of isolation and discomfort from interacting with instructors in a distance format (Vagos & Carvalhais, 2022). Our findings revealed that participants were satisfied with their relationships with teachers. They noticed that online formats provide some features for communication that were not available for those who studied on campus before, such as using messengers for prompt communication.

The divergence of results can be explained through the context dependency of social relationships. As previously noted, the online programme our participants are enrolled in is considered a full-time programme of the university that meets all official requirements of the university. Teachers on the programme are obliged to be skilled in online teaching to work with these students. As studies showed, teachers' variety of skills in using technology both in teaching and communication are considered a part of students' satisfaction with their teachers' relationships online (Bağrıacık Yılmaz, 2022; O'Shea et al., 2015). Thus, it may be possible that the university requires teachers of the investigated online programme to have a certain level of skill in using technology, which reduces the possibility of the emergence of dissatisfaction with relationships with teachers due to their lack of digital literacy.

Moreover, investigating student engagement in online learning at the university, O'Shea et al. (2015) demonstrated that students also start to feel detached from the learning process when lecturers become non-responsive or "disappear," leaving students alone in their study

process. In our research, teachers are required by the university to attend classes that occur in synchronous format, which creates an environment for student-teacher interaction and decreases the possibility of teachers "disappearing." In addition, teachers who are proficient with technology may organise study groups and chats that facilitate closer interaction between students and teachers during course completion, which involves more students in discussion and increases the feeling of approachability of a teacher (Kasperski & Blau, 2023). Therefore, the way in which student-teacher communication is externally organised, along with specific technological competency requirements for teachers, may partially explain why participants in our study reported feeling satisfied, contrary to the findings of other studies. Thus, our hypothesis about the possible shift of accents due to format and context and satisfaction with the student-teacher relationship may have a basis for future investigation.

The second main part of the social aspect of SWB—relationships with peers—was mostly described by participants as deficient in online study. After analysing their answers, we identified two main subtopics: academic and extracurricular communication. Academic interactions were mainly about communication about learning materials and collaborative study activities outside the class. Extracurricular communication included establishing personal relationships with peers and attending university events.

Regarding peer-to-peer interactions within the online environment, our results mostly correspond to the existing body of research. Studies indicate that students studying online usually report feelings of loneliness and isolation (Foley & Marr, 2019), awkwardness, and detachment from groupmates (Hopwood, 2022). Our participants also noted that they experienced a lack of social interactions with their peers, which they viewed as a disadvantage. The lack of peer interaction in the course, as reported by respondents, contributed to feelings of isolation and loneliness. This can impact overall SWB, as studies have shown a correlation between loneliness, negative affect, and decreased life satisfaction (Özdoğan, 2021). One of the main reasons students named was the lack of possibility for spontaneous communication due to the absence of a common environment that made such communication possible while studying on campus (Berry, 2019).

However, communication regarding participants' studies and learning experiences served as a common ground for interactions and facilitated their motivation for organising collaborative activities. Consequently, such activities decreased the feeling of detachment and gave a sense of closer, more lively communication. Examining the findings, we propose that future research on subjective well-being in the university context might explore alternative ways to design the online environment, with a particular emphasis on creating opportunities for students to engage in a broader range of activities beyond their academic pursuits. This could involve designing strategies to facilitate and promote not only academic activities, but also extracurricular engagements, which have been shown to contribute to students' subjective wellbeing.

Although participants recognised the limited social interactions with peers and expressed a desire for a closer sense of community, most reported overall satisfaction with the programme. Many emphasised that their primary goal was to obtain a high-quality education at a leading university, and therefore they had anticipated potential drawbacks related to social interaction

when choosing an online format. A similar result was found by O'Shea et al. (2015), where adult students did not perceive the lack of interactions with peers because of their main goal of getting a degree.

Thus, in answering our first research question about the content of social relationships in SWB, several topics were emphasised. The aspects of relationships with teachers were described as important: teachers' feedback, accessibility outside of class, additional academic activities organised by teachers, positive attitude, personalised approach to students, and consideration of students' subjective wellbeing. Important aspects of SWB in relationships with peers were collaborative academic activities outside class, discussion of study materials outside class, establishing close personal relationships, and participation in university events.

Regarding our second research question about students' online programme satisfaction with the quality of their social relationships, our results have shown that in the specific context of online studying, our participants were not dissatisfied with relationships with teachers. However, they acknowledged the notable lack of interactions with peers. This lack caused dissatisfaction with the relationships but did not affect their overall perception of the study process as positive.

Our results may contribute to the existing body of research about teacher-student and peer-peer relationships in online programmes at universities, raising questions about the impact of context on the reception of social interactions online in higher education. The possible findings of future larger-scale studies may become the basis for the development of recommendations for teachers and the administration of such programmes and faculties to increase student's levels of satisfaction with social relationships.

Moreover, research can be useful for future investigations of SWB beyond online education. In the existing models of SWB in the education context, relationships with teachers and peers are included in the aspect of satisfaction with school (Tian, 2015) but have not been investigated in depth. In another model of SWB in school, presented by Kanonire et al. (2019), relationships with classmates were separated into distinct parts of the model, based on the importance of peer-to-peer relationships for elementary school children. Existing models of SWB in the educational context describe schoolchildren's experiences and do not reflect the specifics of social relationships among university students.

Specifically, the role of academic communication and its importance to SWB are not explored in the existing models. First, our result showed that social relationships are perceived as a crucial part of students' SWB and relate to both cognitive (satisfaction) and affective (positive and negative emotions) components of SWB in an educational context and can be considered a separate part of the SWB model. Second, academic communication may also be included in the social relationship part of SWB as an important aspect of communication with teachers and peers. Based on these results, we propose that future research on subjective wellbeing in university settings should consider examining the role of teacher feedback, the quality of extracurricular academic communication, and the influence of the university environment on social relationships. These factors could be included as variables in models of subjective wellbeing and potentially integrated into future measurement tools, allowing for a

more comprehensive understanding of the complex factors that influence students' subjective wellbeing.

Conclusion and Limitations

Summarising our results, we can see that both relationships with teachers and peers are perceived by students of online programmes as part of their SWB. Supportive, attentive, and emotionally positive relationships with teachers give students a sense of confidence and security and increase their motivation to further course completion. The online format of learning was not identified as a factor that could decrease the level of satisfaction with these relationships. On the contrary, relationships with peers, acknowledged as an important part of SWB as well, are seen as insufficient in the online format. Although our participants expressed dissatisfaction with the quality of peer-to-peer contact in the distance format, this aspect of the learning experience did not appear to impact their overall sense of satisfaction with distance learning.

Despite the limitations of our small sample size and the focus on students with prior university experience, our exploratory study provides a valuable starting point for further research into the factors that contribute to SWB in online university environments. By understanding the nuances of social relationships within these programs, we can work towards creating more supportive and fulfilling learning experiences for all students.

Declarations

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