



L-Università ta' Malta
Faculty of Education



Early Childhood &
Primary Education
RESEARCH GROUP

THE COVID-19 AND EDUCATION IN MALTA (Cov-EM) STUDY

Perspectives of University Students in Initial Teacher Education

RESEARCH REPORT 1

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Foreword

With more than twenty-three thousand academic papers, books and reports on the impact of COVID-19 in the field of higher education, published over the past three and a half years, do we need yet another report?

The authors are not just academics who happen to have to research and study phenomena in order to clarify issues and contribute to the development of knowledge, but most importantly they belong to the teaching profession which by its very nature imposes on its members the need to commence any learning experience by taking into consideration the learners and their actual contexts. COVID-19 radically altered the context, experience, and identity of learners. Indeed, this study does not only reflect on the actual learning experience and the modality of learning but takes into consideration student's perceived wellbeing and relationality. What might have been taken for granted prior to the outbreak of the COVID pandemic has come to the fore. While we hope that the worst is over, we are more than aware that the complexity, as well as, the condition of fragility and non-permeance in which learning takes place, has always been and will remain with us.

It is in this knowledge, that the study of my colleagues is timely and essential. It provides us, initial teacher educators, with better insights into the conditions of learning and how to better educate and equip future educators to place the learner at the centre without being slaves to any tool in the process of adaptation. Technology has been essential to help us through the moment of crisis. It would be unwise not to consider the benefits that the technology allowing synchronous and asynchronous learning provide us with, but as the data in the present study reveal, it would likewise be foolish to believe that this technology is the one and all. As Marshall McLuhan (1964) has most famously stated, "the medium is the message." Learning, content, context, learner and educator are entwined in a delicate balance that requires constant monitoring and reflection.

Teaching is the profession of the free. It allows its members to adopt any knowledges, skill and tool, even those that have not been specifically developed for the profession, in the process of adapting learning and challenging learners. It reflects on past experiences in order to prepare a seed for a better future.

Prof. Adrian-Mario Gellel

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List of Abbreviations

BA	Bachelor of Arts
Cov-EM	COVID-19 and Education in Malta
COVID-19	SARS-CoV-2 (2019-nCoV) coronavirus and Coronavirus Disease 2019
DECPE	Department of Early Childhood and Primary Education
ECEC	Early Childhood Education and Care
ECPE	Early Childhood and Primary Education
FoE	Faculty of Education
FREC	Faculty of Education Research Ethics Committee
HE	Higher Education
HEI	Higher Education Institution
ITE	Initial Teacher Education
MTL	Master in Teaching and Learning
TP	Teaching Practice
UM	University of Malta
VLE	Virtual Learning Environment

The Authors' Biography

The Early Childhood and Primary Education (ECPE) research group comprises five female academics. All members form part of the Department of Early Childhood and Primary Education (DECPE), within the Faculty of Education at the University of Malta.



JOSEPHINE MILTON is the Head of Department and Senior Lecturer of Early Childhood and Primary Education. She has worked in Early and Primary Education for over twenty years and has occupied various roles in working with educators and young learners in formal and non-formal organisations. Her research interests focus on teacher education within early childhood and primary education, the use of language in teaching and learning, children's literature, English language learning, and literacy.



CHARMAINE BONELLO is a Lecturer in Early Childhood and Primary Education. Her areas of research interest in Early Childhood Education and Care are Early Literacy, Children's Rights, Postcolonialism, Quality Interactions, and the Emergent Curriculum. She is co-founder and Vice President of the Early Childhood Development Association of Malta (ECDAM), a member of the Board of Administrators of the Malta Foundation for the Wellbeing of Society and the author of the Routledge book *'Boys, Early Literacy and Children's Rights in a Postcolonial Context'* (Bonello, 2022). She was recently appointed as the co-editor of *Postcolonial Directions in Education*.



ROSIENNE CAMILLERI is a Lecturer in Early Childhood and Primary Education. Prior to this engagement, she worked in several schools, both as a teacher as well as occupying various managerial positions. Her areas of special interest in lecturing and research include high ability and giftedness, transitions in education, the Emergent Curriculum, as well as teacher and learner identities. She was a member of the working committee for the recently published *Early Childhood Education and Care: National Policy Framework for Malta and Gozo (2021)*.



JOSEPHINE DEGUARA is Senior Lecturer in Early Childhood and Primary Education. She has occupied different roles in researching and working with young children and educators in Early Childhood and Primary Education. She is a member of the European Early Childhood Education Research Association (EECRA) and the Editorial Board of the *International Journal of Early Years Education*. Her research interests focus on curriculum philosophy, children's rights, play and learning, the environment as a pedagogical tool and multimodal meaning-making in early childhood education and care.



TANIA MUSCAT is a Senior Lecturer within the Department of Early Childhood and Primary Education. She is a language educator with a specialisation in native language (Maltese) and literacy. Her research interests focus on using language as social practice namely the notion of children's identities as social, discursive, and materialist constructs. Over the years she has been involved in national project/s (*One Tablet Per Child*), national policy working group/s (*Teaching Maltese as a Foreign Language, 2019*) and small-scale EU funded project.

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Our families and loved ones for their patience, constant support, and encouragement to persevere in our academic and research endeavours.

The present members of the Early Childhood and Primary Education (ECPE) Research Group for all the reciprocal support and encouragement in this journey to grow together professionally as teacher educators, researchers and colleagues.

Executive Summary

Alongside many higher education institutions worldwide, the Faculty of Education at the University of Malta (UM) shifted its teaching and learning modes from campus-based to online overnight in March 2020 due to the COVID-19 pandemic. During this time of disruptions and challenges the ECPE Research Group identified an opportunity to study the impact of the pandemic on five groups of stakeholders in education (ITE University Students, Early Childhood Educators, Primary School Educators, Leaders in Educational Institutions, Parents of Children in Early or Primary Education).

Perspectives of University Students in Initial Teacher Education

The purpose of the current research study was: (i) to explore ITE university students' views about the impact of COVID-19 on *teaching and learning* within teacher education and gain insight into their practices in view of the pedagogies and strategies adopted during the COVID-19 pandemic; (ii) to learn more about the new *learning spaces and environments* used by university students in ITE, and how these influenced their experiences and practices during the pandemic; and (iii) to examine how the rapid shift to online learning and adhering to ongoing updated COVID-19 mitigation measures have affected their lives, *practices, relationships and personal well-being*.

Methods

An online survey was selected as a safe, effective and efficient manner to collect data during the pandemic. The survey was first conducted in September 2020. Since the pandemic persisted, the research group decided to launch a second modified and adapted version of the survey in September 2021. The questionnaires were designed to measure respondents' attitudes, opinions or perceptions and were composed of multiple-choice items with a few open-ended items. The data was extracted and imported into SPSS for analysis. The participants were enrolled in ITE programmes for early years and primary education at UM (BA. Hons. ECEC and MTL in Early Childhood and Primary Education). The first survey totalled 127 participants (59% response rate), whilst the second survey yielded 68 participants (30% response rate). In both surveys, the large majority of participants were female (94.5% and 95.6%, respectively), and their average age was 23 years (ranging from 18-54 years).

Main Findings

Findings from both surveys will be presented in three sections. Each section is headed by one of the subsidiary research questions as these reflect the three main concepts that frame the study. Some questions were only included in the first survey and some others are new additions to the second survey. Where the same question item is referred to for both surveys the percentages are rounded-up and many follow in a bracket for the first and second survey respectively (1st survey % and 2nd survey %).

What were the perspectives of teaching and learning held by university students in ITE during the pandemic?

1. Synchronous lectures were the most common mode of teaching and learning reported at 83% in the first survey and 96% in the second. Most students experienced synchronous lectures in a more engaged manner and the majority usually remained sufficiently engaged to take notes.
2. Advantages of synchronous lectures reported included that respondents could enjoy interaction with fellow students and could participate actively.
3. Asynchronous lectures were also a common teaching and learning mode experienced by 34% and 88.9% in each survey, respectively.
4. Advantages attributed to asynchronous lectures in the first survey were that respondents could follow lectures flexibly according to their own schedule (89%), email the lecturer if in difficulty (83%), and stop the recorded lecture to research-related content (81%). Asynchronous lectures also facilitated the sharing of devices and working spaces at home.

5. In the first survey, 40% perceived that they learnt more when the lecture was synchronous, 31% reported that they learnt more when it was asynchronous, and 28% said that it made no difference to them whether the lecture was recorded or not.
6. Modes of assessment common in both surveys were assignments submitted online (82% and 94%) and documents uploaded through VLE (80% and 85%). In the second survey, presentations, project work and assignments submitted to lecturers were more frequent than in the first survey. Group work tasks submitted online were popular during both academic years.
7. Satisfaction with the overall quality of remote learning was higher in the second survey (82%). In the first survey this was considered inferior quality for 30% compared to 10% in the second survey.
8. In both surveys higher levels of motivation and engagement were indicated for synchronous online experiences, such as, being involved in interactive lectures, participating in online tutorials, and collaborating in small groups in breakout rooms.
9. In the second survey Teaching Practice was rated as a better experience than the previous practicum by 60%, but worse for one-third of the respondents.

Which pedagogies, strategies and learning spaces did the university students in ITE experience and make use of during the pandemic?

1. Sheltering at home impacted well-being negatively as it entailed not meeting friends, being confined indoors and experiencing less physical activity.
2. The most common learning spaces and modalities experienced were video-conferencing and learning platforms.
3. Looking towards post-pandemic times, more than half the participants in both surveys indicated they would opt for a blended approach (55% and 67% respectively). On the other hand, some would either choose only online learning (27% and 33%) and others only face-to-face lectures (27% and 22%).
4. The large majority of ITE students had access to the necessary devices to support their studies, with this increasing in the second survey (84% and 96%). However, it is of concern that in the first survey up to 16% experienced some level of difficulty in accessing the necessary devices.
5. Sufficient internet provision was a challenge for about 10% of respondents encountered in both surveys. In the first survey 29% participants reported that they sometimes experienced difficulty in ensuring sufficient internet provision.
6. Almost three quarters of the respondents had access to natural light and an undisturbed study space in their home during the second survey.

In what ways, if any, did the pandemic impact the relationships and overall well-being of university students in ITE?

1. Half of the respondents of the first survey felt happy with more time to study at home and were able to switch off and rest.
2. Over half of the respondents of the first survey felt 'stressed and out of control' (very often, 21% and often, 34%), whilst 39% felt negative towards their studies.
3. Almost half of the respondents in the first survey indicated that they found support from university with their studies (49%), whilst only 30% claimed that they found support from university in relation to their mental well-being. In the second survey participants felt that their family and friends (89%) and fellow university students (83%) and university lecturers at (55%) provided them with most support during the academic year.
4. The first survey indicated the majority of respondents spent more time than before the pandemic with their family (71%), following 'online lectures and doing related academic work' (60%), and chatting and socialising with friends online (52%).
5. In the first survey, 40% claimed that they felt happier and more satisfied with their lives compared to pre-pandemic times. The pandemic negatively affected the happiness of 35%, and the satisfaction with life of 28% of the student teachers. A quarter felt that their happiness had not changed either way, and almost a third reported that satisfaction with life remained the same as before the pandemic.
6. Comparing the 2020/21 academic year with the previous one, participants reported no change in their happiness and satisfaction with life during the year (at 32% and 43%, respectively). 34% of the respondents felt happier during 2020-2021, and 23% felt more 'satisfied with their life'.
7. Positive outcomes indicated in the first survey included better use of time, such as 'not having to think about what to wear' to university (79%), 'less stress to get ready early' in the morning (79%), as well as 'less time travelling' to/from university (79%). Remote learning also allowed for 'more family time' (69%) and 'eating more regularly and healthily at home' (56%).
8. Negative aspects of learning remotely indicated by the respondents in the first survey included strained eyes due to long hours of online learning (77%), missing interacting face-to-face with their fellow students (76%), and stress due to dealing with many changes at once' (73%). Establishing a study/work-life balance was also challenging for 72% of the participants.

9. Salient feelings expressed in the second survey about studying during the pandemic indicated that the majority of participants felt 'Happy that I managed to survive the year despite all the challenges' (79%), and 'I feel that I did a good job' (53%). In contrast, 32% felt that their 'mental health has suffered', others were 'exhausted' (23%) or felt 'overwhelmed' (21%).

Recommendations

In view of the main findings highlighted above it is clear that the COVID-19 pandemic had an impact on university students in ITE in the spheres of teaching and learning, learning spaces, and relationships and well-being. The following are a few recommendations from the study:

- Going forward to post-pandemic times, the FoE should seriously consider offering more programmes of study through more flexible blended modes of teaching and learning to cater for the learning preferences and life situations of potential ITE students.
- ITE programmes would benefit from investing in more small group discussions and activities where student teachers feel more at ease and participate more freely (e.g. breakout rooms).
- Retaining the good practices reported in the provision of remote teaching and learning in ITE would also prepare future teachers for the new learning modes adopted in early childhood and primary educational settings and schools and be prepared for any future emergency teaching and learning realities.
- Support those who may have suffered learning losses during the pandemic by providing mentors, recovery programmes and more flexible options to retake study units.
- Academic staff should continue to develop their remote, and face-to-face, teaching and lecturing repertoire and not simply revert to the lecture room comfort zone.
- Counselling, therapy and support services need to be visible and readily available to assist university students. The study has shown how the mental health and well-being of many students have been impacted negatively.
- There needs to be more awareness amongst faculty about the extent of students currently suffering from stress, anxiety, depression and substance abuse brought on, or aggravated by the pandemic and the mitigation measures.
- Financial aid should continue to be provided for those who cannot keep up with their expenses while studying during and post-pandemic.
- Provide social spaces and organise events for UM students who feel cheated of the campus life they associate with the university experience so they may feel a sense of belonging and form new friendships.



CHAPTER 1

The Cov-EM Study

As the COVID-19 virus spread swiftly across Europe in March 2020, it turned the lives of adults, youth and children upside-down. Overnight, people had to become accustomed to new ways of working and living. In the Maltese islands, all educational institutions, from childcare centres to the university campus were compelled to close their doors to in-person teaching and learning. Amidst a pervading sense of fear of the unknown across all sectors in Malta and around the globe, lecturers and teachers in the educational arena were faced with the challenge of finding alternative ways of educating students remotely using the digital resources and tools available to them; either through their institutions or their homes. The entire profession of educators, from the early years sectors to the higher education sectors, were now compelled to change their usual way of teaching. The shift from face-to-face methods of teaching to modes and forms of technologically mediated online teaching impacted learning and influenced the manner of learning.

1.1 The ECPE Research Group and Cov-EM Study

Following the disruptions and challenges brought on by these unforeseen periods of school and university closures in Malta due to the onset of the COVID-19 pandemic, in March 2020, two academics from the Department of Early Childhood and Primary Education (DECPE) at the University of Malta felt it necessary to react to the challenges being faced. This led to the inception of the Early Childhood and Primary Education (ECPE) research group. A number of individuals came together to create a space to work collaboratively online as they (i) felt the need to interact and support each other while maintaining physical distance, and (ii) identified an urgent need to fill in a gap in local research on COVID-19 and early, primary and higher education in Malta. In 2020, the eight members published their first research paper that tracks the birth and growth of the ECPE research team (Bonello et al., 2020) and another two papers related to COVID-19 and education (Bonello et al., 2021; Spiteri et al., 2022). In 2021, five members of the team continued to develop and extend the team's initial research work on the impact of COVID-19 on Education in Malta through the Cov-EM Study. The cluster of studies includes five research reports based on surveys presented in this research report, in addition to another four reports which address the impact of the COVID-19 pandemic on key stakeholders in education (Bonello et al., 2022; Camilleri et al., 2022; Deguara et al., 2022; Muscat et al., 2022).

The key stakeholders in each research report are (see Figure 1.1).

1. **ITE University Students**
2. **Primary Educators**
3. **Early Childhood Educators**
4. **Educational Leaders**
5. **Parents of Early Years and Primary School Children**

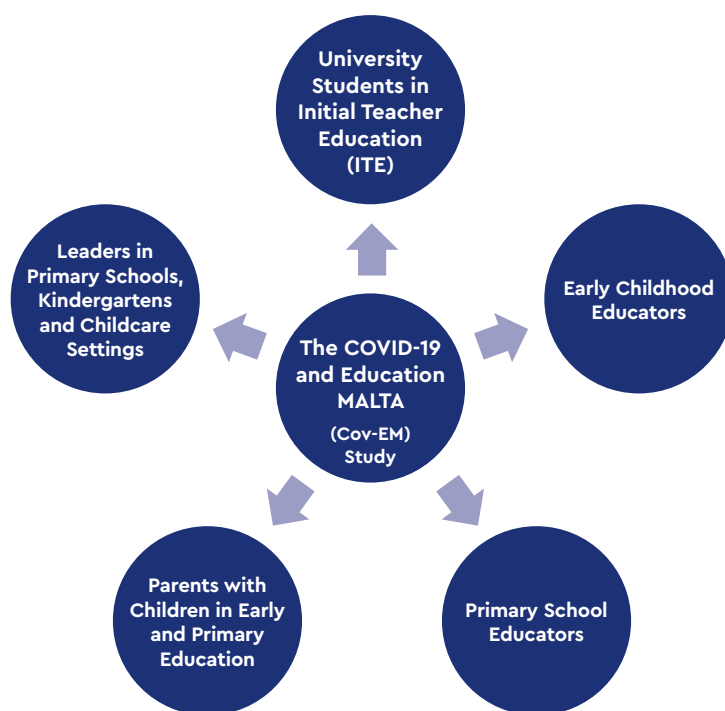


Figure 1.1: The cluster of five studies within the Cov-EM study

Each study offers perspectives from one of the various stakeholders mentioned above involved in Maltese education. The educational concepts of teaching and learning, learning spaces, and well-being and relationships are central to the Cov-EM study and run through each of the five studies.

The Cov-EM study was conducted over two phases. The first phase, or Run 1, consisted of posting questionnaires online for the different stakeholders (university students, early childhood educators, primary educators, education leaders and parents) via social media platforms, which was conducted in September 2020. The second run, which likewise consisted of sharing adapted online questionnaires online amongst the different stakeholders, was conducted as the second phase in September 2021.

1.2 The overarching research aims and objectives of the Cov-EM Study

While initially it was thought that the COVID-19 emergency was mainly an issue of a few weeks, as things unfolded, stakeholders in education realised that the pandemic may influence our life for longer than we thought. Following two years of COVID-19 in Malta, newspapers reported that on the 10th of January 2022, as children returned to school, “several classrooms had to resort to online schooling because many students and teachers are stuck in quarantine” (Calleja, 2022, p 1). Consequently, we continue to witness how an education at all levels, is forced to shape and reshape to meet the emerging needs of all learners and rely on several remote methods for a significant part of the learning process.

As a research group, we are continuously concerned with how this new reality and changing educational scenarios are undoubtedly impacting stakeholders in early, primary and higher education. Ongoing dialogue, permeated through online meetings (during the first lockdown period), assisted us in identifying the key concepts we wanted to unpack to create new understandings about the impact of COVID-19 on the different stakeholders. We tapped into our personal and professional experiences in COVID-19 times and the relevant literature in search of the boundaries to frame our studies. We realised that the uncertainty this period brings presented challenges and opportunities for innovations in how ‘teaching and learning’ take place, and how this was continually reshaping education in Malta. The use of technology and online learning and its gradual uptake was becoming integral to compulsory and Higher Education.

Therefore, we inevitably extended our dialogue to the new ‘learning spaces’ stakeholders in early and primary settings and schools were experiencing. We also questioned the influence on relationships between the key players in the learning process and the impact on the stakeholders’ well-being and concerns: How is the reshaped teaching and learning within new ‘learning spaces’ impacting their overall ‘well-being and relationships’ of the different stakeholders?

Thus, we were then able to identify and agree upon the research questions that also contributed to the process of determining the boundaries of the Cov-EM study in relation to the three main concepts of teaching and learning, learning spaces and well-being and relationships

The overarching research question posed for the five studies is:

What lessons can we learn from the perspectives of different stakeholders in early, primary and higher education during the COVID-19 pandemic in Malta?

The collaborative dialogue, through online meetings amongst the research group, allowed us to identify a conceptual research framework and theoretical background (see Figure 1.2 in Section 1.2.1) in which to couch our main research question for our research study, together with subsidiary questions specific to each of the five studies (see section 1.3.1).

1.2.1 The conceptual framework and theoretical background

A conceptual framework was developed (based on the three concepts depicted in Figure 1.2 below), to guide the research design and to provide a theoretical lens through which to view the study and the research questions.

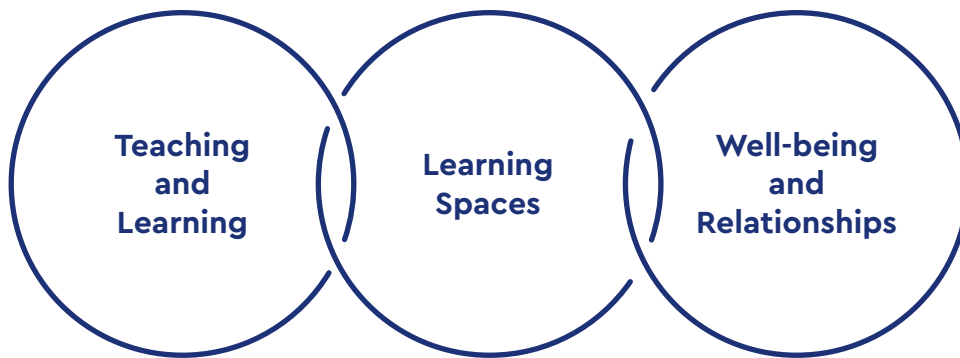


Figure 1.2: The three concepts that thread through the Cov-EM study

Teaching and Learning: For the purpose of this study, the term ‘teaching and learning’ focuses on the sudden shifts from physical to remote online teaching and learning brought about by the pandemic. This implies that terms such as hybrid, synchronous and asynchronous teaching and learning, and other new pedagogical discourse are prominent in the way the concept of ‘teaching and learning’ is unpacked throughout the present study.

Learning Spaces: For the purposes of this study, the term ‘learning spaces’ refers to those spaces where different stakeholders in early, primary, or higher education are experiencing online and/or offline teaching and learning during the pandemic. These include new learning spaces such as the home environment; online platforms; and school/university learning spaces functioning within both online and offline zones (e.g. university students and lecturers present in the lecture hall, while some students follow the same lecture online from home).

Well-being and Relationships: For the purposes of this study, the term ‘well-being and relationships’ includes the following aspects of these concepts as experienced by the different stakeholders during the pandemic:

- **Well-being** - a focus on subjective well-being, that is, including the different stakeholders’ positive and negative subjective evaluations of their lives during COVID-19 times. These include life and work satisfaction and their general physical, social, emotional and psychological well-being as a reaction to the pandemic.
- **Relationships** - the quality and opportunity of spending time with others in their personal (life relationships) and professional lives (working relationships).

The COVID-19 pandemic-related disruptions influenced the three concepts that frame the Cov-EM study (as depicted in Figure 1.2). Thus, relevant literature brought to the fore several classic and emerging theories that assisted in meeting the demands of:

1. new modes of teaching and learning;
2. novel learning spaces or environments; and
3. diverse physical and psychological aspects of well-being and relationships.

This study is framed in four main theories that apply to the aforementioned needs. As it taps into the concepts of new pedagogical approaches and learning spaces, this research study mirrors Vygotsky's sociocultural theory (1978). His theory is grounded in the belief that knowledge and thought are constructed through social interaction with more knowledgeable others who we learn from, such as educators, peers, family and friends. Vygotsky's theory underpins this study in two ways:

- (i) The Cov-EM study was designed, developed and analysed by a group of researchers to co-construct new knowledge through an exploration of how COVID-19 impacted diverse stakeholders in Maltese education; and
- (ii) The study discovers how the use of new modes and means facilitated the process of learning from others during a pandemic.

Given the sudden turn to online learning in the new reality, this study's theoretical frame extends to Siemens' contemporary learning theory (2004). Siemens' theory sees the integration of technology and social interactions as a space for the co-construction of knowledge. On the other hand, Maslow's (1987) 'hierarchy of needs' underpins the concept of 'well-being and relationships' present in this study. The pandemic brought about new needs in the personal and professional lives of stakeholders in education. Maslow talks about the importance of feeling safe from physical and psychological harm, feeling respected, valued and accepted by others through interactions to realise one's potential. The Cov-EM study uncovers the needs of five groups of stakeholders during COVID-19, taking us back to the foundations of Maslow's hierarchy. The fourth theory that frames this work is Bronfenbrenner's (1979) ecological systems theory. In line with his view, the Cov-EM study sees the interaction of different stakeholders and environmental factors (for example, the unprecedented pandemic) as having a major influence on the learners' development, well-being and learning. With such a theoretical frame of mind, we opted to investigate the impact of COVID-19 on five main groups of stakeholders in Maltese education.

1.3 The Cov-EM study, Research Report 1: University Students in Initial Teacher Education

The study presented in this research report is guided and framed within this triad conceptual framework (see Figure 1.2 above) to obtain a clearer understanding of the effect that the COVID-19 pandemic had on the pedagogies, learning spaces, well-being and relationships of student teachers, reading for a degree within the Department of Early Childhood and Primary Education. Most importantly, this study focused on giving the university students in ITE an opportunity to make their voices heard following their experiences during COVID-19.

The objectives of this research study were:

1. to explore ITE university students' views about the impact of COVID-19 on *teaching and learning* within teacher education and gain insight into their practices in view of the pedagogies and strategies adopted during the COVID-19 pandemic;
2. to learn more about the new *learning spaces and environments* used by university students in ITE, both online and offline, and how these influenced their experiences and practices during the pandemic; and
3. to examine how the rapid shift to online learning and adhering to ongoing COVID-19 mitigation measures have affected their lives, *practices, relationships and personal well-being*.

The main research question and sub-questions selected for this study about University Students in ITE are presented in the next section (1.3.1).

1.3.1 Research Questions for the University Students in ITE Study

The study presented in this research report is guided by the framework provided by three main concepts to obtain a clearer understanding of the effect that the COVID-19 pandemic had on the pedagogies, learning spaces, well-being and relationships of university students in Initial Teacher Education (ITE). Most importantly, it focused on capturing university students' perspectives, voices and experiences of how the shift to remote online learning may have, positively or adversely, impacted their learning, well-being and relationships as trainee educators and young people.

The main research question identified for the ITE study was:

What lessons can be learnt from the perspectives of university students in ITE during the COVID-19 pandemic in Malta?

This main question was further unpacked and supported through the following subsidiary questions that were developed to guide the research more clearly, as follows:

1. What perspectives of **teaching and learning** were held by university students in ITE during the pandemic?
2. Which pedagogies, strategies and **learning spaces** did the university students in ITE experience and make use of during the pandemic?
3. In what ways, if any, did the pandemic impact the **relationships** and overall **well-being** of university students in ITE?

Participants in this study were enrolled in two Maltese ITE programmes for early years and primary education at the University of Malta: students reading a three-year Bachelor of Education in Early Childhood Education and Care (B.A. Hons. ECEC) degree, and those following a Master in Teaching and Learning in Early Childhood and Primary Education (MTL Early Childhood & Primary Education). The former programme of studies prepares students to work with young children (aged three to five years) in kindergarten classrooms, and the latter prepares students to teach in primary schools (children aged between five and eleven years). In this study, the terms student teacher, preservice teacher and ITE students may be used interchangeably to refer to the participants.

CHAPTER 2

Review of the Literature

2.1 Introduction

The COVID-19 pandemic considerably affected the higher education sector. Face-to-face instruction was mainly replaced by synchronous and asynchronous modes of online teaching and learning; albeit at times, a blended approach was adopted (Arnhold, Brajkovic, Nikolaev and Zavalina, 2020; Donitsa-Schmidt & Ramot, 2020; La Velle, Newman, Montgomery & Hyatt, 2020). Even though digital learning is not new to higher education institutions (Abad-Segura, et al., 2020), novel transformations in teaching and learning in higher education that usually take years to be implemented, were introduced in a matter of days because of COVID-19 (Adedoyin & Soykan, 2020), turning the pandemic into an innovative learning opportunity for the academic community (Dhawan, 2020; United Nations, 2020; Viv et al., 2020). However, shifting to a completely online or remote mode caused challenges and hardships for academic staff and students alike, who may have suffered fear and anxiety due to the pandemic (Bonnici, Clark & Azzopardi, 2020) and at times struggled to adapt (Allen, Rowan & Singh, 2020; Edge Foundation, 2020; World Bank Group Education, 2020).

The switch to online learning meant that university students had to learn from home. This resulted in some students having to study in cramped housing conditions, especially if other members of the family were likewise working or studying from home. This problem could have further been amplified by inadequate access to good technology devices coupled with a weak broadband internet connection (World Bank Group Education, 2020). Other problems which university students faced worldwide included high prices for a stable internet connection and the crashing of online platforms and websites due to a high online traffic of students logging-in simultaneously (Arnhold et al., 2020). Issues of equity came into play, where the pandemic increased the digital divide between students coming from different socio-economic backgrounds (Arnhold et al., 2020; World Bank Group Education, 2020).

Like other HEIs, initial teacher training institutions had to immediately switch to online teaching and learning (Donsita-Schmidt & Ramot, 2020; La Velle et al., 2020). The pandemic and the subsequent closures of in-person initial teacher-training education (ITE) brought panic, anxiety and shock caused by an abrupt change to their practice, even more so to a profession, which is traditionally considered as 'resistant to change' (Ellis, Steadman and Mao, 2020, p. 561). The main challenge was how student-teachers would interact with digital teaching and learning during a time of crisis. While there is much research on the potential impacts of the disruption COVID-19 caused to teaching and learning at different levels, little is known about the impact of using a comprehensive framework to examine issues related to online teaching and learning in ITE (Carrillo & Flores, 2020).

This study sought to explore the impact of COVID-19 on initial teacher education (ITE) in Malta. In particular, it set out to explore the online learning trajectories of student teachers in early and primary education. In doing so, it intends to give a voice to student teachers reading undergraduate and postgraduate degrees in education at the University of Malta, in matters that concern them and impinge on their academic growth and development as well as their well-being. This is also in line with the Bologna process whereby HEIs strive to promote and implement student centred learning through pedagogical innovation and student participatory research (Eurydice, 2012).

2.2 The impact of online remote learning on student teachers

2.2.1 The effects of COVID-19 on Teaching and Learning

As part of a series of measures to mitigate the spread of COVID-19, the World Bank (2020) and UNESCO (2020) assisted Ministries of Education worldwide to facilitate the continuity of education for all through remote online learning. Even if during pre-COVID-19 times, most universities already had in place virtual learning environments (VLEs) and provided online library services (Becker, 2000; Ruzgar, 2005), this was no guarantee that the “second digital generation” (Abad-Segura et al., 2020; Fortunati, Taipale & de Luca, 2017, p.96) made optimal utilisation of digitised libraries and other learning platforms. By spring 2020, many Higher Education Institutions had moved to synchronous and asynchronous modes such as live and recorded online lectures and began to operate via a myriad of online platforms and interactive tools such as Zoom, Skype, Google Meet and Microsoft Teams (Allen, Rowan & Singh, 2020; World Bank Group Education, 2020).

In fact, shifting to completely online modes was not without challenges and lecturers and students alike at times struggled to adapt to online and remote modes of teaching and learning (Allen, Rowan & Singh, 2020; Becker, 2000; Ruzgar, 2005; World Bank Group Education, 2020). It is worth noting that Aristovnik et al., (2020), held that Maltese students who participated in their study, reported adjusting successfully to learning online as well as being highly satisfied with the teaching staff during the COVID-19 pandemic.

The use of a synchronous mode of teaching and learning enabled lecturers to instil an online classroom culture allowing students to shift from being passive and/or muted to taking on a more active role (Sweetman, 2020). The concept of active lecturer-learner partnership is relevant here since it is believed that if there was to be no possibility of functions during online remote teaching in the likes of audio and video share, screen share, chat, virtual hand raising, small group discussion breakouts, and annotations, individuals could not engage with them, nor could they appropriate their affordances in ways they habitually came to do during the COVID-19 pandemic (Allen, Rowan & Singh, 2020; World Bank Group Education, 2020).

The forced migration from face-to-face teaching and learning to remote online modes over a few days (Streilkowski, 2020), has further uncovered new needs and demands, such as more time needed by students to grasp concepts disseminated during online teaching and learning. This novel educational landscape has further uncovered new needs and the rise of potential inequalities across career set-skills of different racial and socio-economic groups (Scherer & Siddiq, 2019). One such scenario is the negative impact on students' overseas mobility as experienced by many students who seized opportunities to develop and share knowledge and experience in institutions in different countries.

Indeed, any change has an amount of resistance and contention, and students' competence, readiness and technological access are of particular interest to this report. In fact, Sommer (2014) found a significant disparity between young people's perception (or false impression), and their real (actual) knowledge of computer skills. Although most have fused their social lives around technological tools and applications to send messages, check emails, post and share content on social media, to mention a few, this cannot be considered as sufficient proof that today's higher education students are digitally literate (Helleve, Almås & Bjørkelo, 2020; Milton, Giæver, Mifsud & Gassó, 2021). Indeed, despite their distinctive digital natives' characteristics, students still needed reassurance and assistance to ensure access, participation, and engagement as the transition to online remote learning occurred (Daniel, 2020). Arnhold et al. (2020) stated that students with poor access to technology and/or a weak internet connection were left behind, as were students with learning disabilities and/or challenges.

While shifting to an online mode ensured continuity in learning, some students experienced learning loss and felt daunted by the online modes. In contrast, other students preferred the flexibility offered by remote online teaching and learning modes. Slack and Priestly (2022, p. 1) hold that their findings point to a complex reality, whereby *'some students report online learning and assessment to require more effort in comparison to traditional methods, other students value the increased flexibility afforded by online learning and assessment'*.

2.2.2 The effect on teaching practice (TP) in schools

The main difference that ITE institutions had to face was the practical work trainee teachers experience in educational institutions. The widespread school closures led to a reduction in placements for trainee teachers in 2020-2021, and this, in turn, resulted in lost opportunities for observation sessions and practising teaching in schools (Donsita-Schmidt & Ramot, 2020). In fact, Donsita-Schmidt and Ramot (2020) voice their concerns that current trainee teachers might suffer from a lack of good preparation for future employment due to the lack of field placement, or teaching practice in schools. Perhaps a counter argument could be made for their additional experience and preparation for digitally mediated online teaching and learning situations than previous student teachers were due to the pandemic.

Teaching practice placement in schools is usually a key component of initial teacher education, helps pre-service teachers to develop their identity as teachers, to work on their planning, pedagogy and practice, develop their professional attitude and work ethic, and reflect on their practice; skills lost due to lockdowns and students' inaccessibility to schools. These limitations question whether current trainee teachers would be adequately trained during the pandemic. In a study conducted with four English universities, La Velle et al. (2020) found that most teacher trainees missed out on approximately one-third of their teaching placement in schools, amounting to between eight and nine weeks (40-45 out of the recommended 120 days).

According to La Velle et al. (2020), the fact that most trainee teachers were not allowed to do a work placement in schools resulted in more time for reading and deep reflection, resulting in better overall grades than in previous years. Some universities also came up with their ways to overcome these challenges. Donsita-Schmidt and Ramot (2020) explored the example of the Kibbutzim College of Education (KCE) in Israel, where positive use was made the schools' shift to online learning. They partnered with schools and required trainee teachers to do their practicum online, thus acquiring experience in online teaching while experimenting with innovative synchronous and asynchronous modes.

2.2.3 Assessment procedures

Another challenge which university institutions faced during the pandemic was related to assessment procedures of course work and field practice. Universities had to adapt to new modes of assessment such as microteaching via BlackBoard Collaborate, writing blogs, creating portfolios, producing interactive digital posters, creating podcasts and presentations, sitting for online timed-tests or assessments and orals via email and online video conference meetings or virtual learning environments or platforms (Arnhold, et al., n.d; Donsita-Schmidt & Ramot, 2020; La Velle et al., 2020). Montacute and Holt-White (2020) indicate that 74% of students in the United Kingdom (UK), reported that assessments and exams were being held online (Donsita-Schmidt & Ramot, 2020). If introduced appropriately, online assessments give students broader possibilities for self-actualisation, taking more responsibility for their learning and gaining confidence at all study-courses stages (La Velle et al., 2020). This links closely to the shift from passive to a more active role taken by students in higher education (Allen, Rowan & Singh, 2020; Sweetman, 2020). Implicit in this is the idea that e-learning supports constructivist alignment as lecturers become facilitators of learning (Alsadoon, 2017).

2.3 The effects on Learning Spaces

2.3.1 Challenges and hardships experienced

Since this report seeks to explore how Maltese student teachers dealt with online remote learning during the pandemic, it recognises the profound role of teaching pedagogies. Implicit in the 'turn' from a teacher-controlled environment to a student-learning climate is the idea that students and educators are active participants and open to change. This perspective acknowledges current practices imposed due to social/physical distancing policies to stay-at-home (Gostin & Wiley, 2020).

During the pandemic lockdown, most students and lecturers spent their days learning and teaching remotely online within the confines of their bedroom or other private spaces while simultaneously sharing their space with other family members and dealing with potentially complex home environments. University students had to deal with family disruptions such as crying siblings, pet intrusion and noisy neighbours (Manfuso, 2020). At times this was also compounded by inconsistent connectivity from personal devices, emotional stress and lack of proper formal orientation and training (Agormedah, Henaku, Ayite & Ansah, 2020).

For example, findings by Montacute and Holt-White (2020) in the UK show that students from working-class families were twice as likely to have a home environment that was less conducive to learning.



These results show that, during the first wave of the pandemic lockdown, university students experienced a lack of an appropriate place to study (23%), insufficient internet access (5%) and a lack of adequate devices for learning (6%), when compared to students coming from middle-class backgrounds. This divide is corroborated by a study conducted by YouthSight (2020, as cited by Montacute and Holt-White, 2020), as results show that students from lower socio-economic backgrounds were less likely to have a suitable study space, and were more likely to experience a lack of adequate technological devices and good internet access. Arnhold et al. (2020) also claimed that this divide was not only reflected among students within the same country but also between European countries such as Ukraine, Uzbekistan, Bulgaria and Georgia. Likewise, the OECD (2021) reports that in Denmark, Slovenia, Norway and Austria, amongst others, over 95% of students had access to a computer to study from home, which highly contrasts with 34% of students in Indonesia.

Thus, a clear picture emerges of the stark digital divide between countries worldwide. Similar to most Western European countries, Malta has a solid online infrastructure, which allowed educators to make a rapid pedagogical shift from traditional face-to-face platforms to online platforms (Daniel, 2020). In Malta, the government, through the Ministry of Education, provided free internet and loaned computers to approximately 250 school children while schools were closed (Abela, 2020, 14 April). However, this initiative was not inclusive of HE students at UM.

2.4 The effects on university students' well-being and relationships

2.4.1 Isolation, loneliness, anxiety and remote learning

Moreover, having to isolate for long periods, impacted the psychological well-being of a number of students, as this caused stress, depression and anxiety (Arnhold et al., 2020; Kavvadas et al., 2022; Kornilaki, 2022; Nadareishvili et al., 2022; Rahman et al., 2022; Thomas, 2020). This is supported by multiple researchers who claim that spending long hours in front of a screen without physically interacting with others, combined with the lack of physical and leisure activities, impaired students' ability to focus on the learning process, hence, resulting in learning loss (Darling-Hammond and Hylar, 2020; Di Pietro, Biagri, Costa, Karpiński & Mazza, 2020; Donsita-Schmidt & Ramot, 2020). On the other hand, the World Economic Forum (2021) holds that remote learning during the pandemic has resulted in a considerable increase in students' ability to retain learning, to between 25% to 60%, when compared to only 8% to 10% in face-to-face classrooms.

Thomas (2020) claims that trainee teachers ached for the routine of going to class, of getting in-class support and motivation, and for the social ambience and distractions university campuses provide. Clarke et al. (2019) and Azzopardi et al. (2021) reported that experiencing the lack of a campus experience resulted in an increased sense of isolation and loneliness amongst Maltese university students compared to pre-pandemic data.

2.4.2 Lack of motivation to participate actively in the learning process

Online modes of teaching and learning are not always motivating for students. Many teacher training programmes require constant collaboration, interaction and cooperation amongst students. In their study, Donsita-Schmidt and Ramot (2020) found that engaging students online was frequently problematic, as students showed a lack of enthusiasm to participate online. They also found that while students generally logged into online lectures, they frequently left their cameras off, to hide behind a black screen, as they either did not feel comfortable with exposing their living conditions, did not want to show the way they looked or because they wanted to do other things while following lectures. At times, even if the camera was on, students appeared to be occupied doing other things. This gave lecturers the challenge to involve students in an interactive and meaningful way (Donsita-Schmidt & Ramot, 2020).

2.4.3 Fear of COVID-19, Mental and Physical Well-being

The negative impact of the COVID-19 pandemic on university students' mental health has been documented through recent studies (Bonnici et al., 2020; Evans et al., 2021; Kavvadas et al., 2022; Kornilaki, 2022; Nadareishvili et al., 2022; Rahman et al., 2022; Son et al., 2020). Compounding the challenges related to university closures and financial insecurity mentioned above was the fear of the pandemic and the stress and anxiety it caused. The fear of the pandemic and contracting COVID-19 impacted the well-being of many people around the world. Bonnici et al. (2020) confirm Maltese university students experienced fear, and the findings show that female students were more susceptible than their male counterparts to such fear.

A local study uncovered the risk of increased substance use during the pandemic to add to the stress, and turmoil young people experience during adolescence and early adulthood (Bonnici, Clark and Azzopardi, 2020). Rahman et al. (2022) concluded that during the pandemic, South East Asian Nations university students neglected their physical health by consuming more unhealthy food and beverages, and less portions of fruit and vegetables, while some students experienced low mental well-being and tended to smoke more and increase alcohol intake. Studies confirm that stress, anxiety and depression increased, especially during the second year of the pandemic. The mitigation measures of containment and distancing has left a mark on the well-being and mental health of higher education students (Kavvadas et al., 2022).

2.4.4 Financial difficulties and uncertainty

Another effect of the pandemic many higher education students faced was increased financial difficulties (Arnhold et al., 2020; The Edge Foundation, 2020). The hospitality sector where many students work to support their studying, was one of the most affected by the pandemic lockdowns or closures. Montacute and Holt-White (2020) claimed that 34% of university students in the UK either lost their job, had their working hours reduced, or were not paid for their work. This created financial insecurity (Thomas, 2020). Some students were forced to quit their apartment rental and return to their families, even more so because most universities physically closed their campuses (Donitsa-Schmidt and Ramot, 2020). This financial strain put university students in a tight place, placing their studies in jeopardy. While this is unlikely to be an issue in Malta, as university courses are free and students are given a yearly grant and a monthly allowance to cover their learning expenses, some might have experienced financial difficulties in supporting themselves or their families who might have experienced job loss.

2.4.5 Positive effects on well-being

The pandemic and the transition to online remote learning had a negative effect on the well-being of some university students, whilst others may have experienced a positive effect. Holmes et al. (2020) hold that despite the challenges posed by periods of isolation, for some, this was compensated through the strengthening of family ties which mitigated feelings of anxiety and stress while building resilience.

When students were sheltering and confined to their homes, they did not have to spend time, money and energy commuting to and from their institutions and this resulted in less stress for some students (CONAHEC, 2020). This was combined with less stress as there was no need to think about other mundane issues like what to wear. Moreover, for some, the home environment was more comfortable and hence, more enjoyable and stress-free. In face-to-face classes, they would be expected to interact with their peers and lecturers on campus or at community sites, such as schools, during teaching practice placements.

Despite the pandemic having a negative impact on the physical health of many young people, it is interesting to note that for some, the pandemic provided the opportunity to prioritise their health, start exercise routines to increase their physical activity and eat more healthily (Marty et al., 2021; Murillo et al., 2022). Family relationships were also a key factor that impacted well-being. Findings indicate that if these relationships were positive, they proved to be a source of emotional support and 'protective factors' (Nadareishvili et al., 2022). Living at home was also one of the factors Murillo et al. (2022) identified that enabled some students to make more positive dietary and physical activity choices during the pandemic.

CHAPTER 3

COVID-19 and the ITE Context in Malta

3.1 The University of Malta

For this study, it is pertinent to provide a context through an overview of the local scenario experienced by university pre-service teachers as they were faced with changes to their tertiary education experience that impinged on their ITE programme at the University of Malta (UM).

In March 2020, as in many countries, Malta experienced the enforced closure of its educational institutions. This containment measure was set in place by the Superintendent of Public Health and included childcare settings, primary and secondary schools, and post-secondary and tertiary institutions (Cefai, Skrzyzypiec and Galea, 2021; Bartolo, Grech & Grech, 2022). All schools and Higher Education institutions in Malta were closed on the 13th March 2020. Virtual learning environments were quickly set up to provide educators with a remote tool as an alternative to face-to-face teaching and learning.

In an unprecedented manner, to cater for the unforeseen emergency, the university rapidly shifted from a face-to-face campus-based mode to remote and online modes of teaching, learning and assessing. These measures were kept in place for all lectures and examinations until the end of the academic year. A survey by UM researchers holds that despite the challenge, by July 2020, 'the vast majority of students and staff at the UM underwent novel experiences and acquired new skills and competences' (Cuschieri, Attard, Bartolo, Attard, Cilia & Cacciottolo, 2020, p2).

3.1.1 Shifts to Online remote teaching and learning

September 2020 saw the beginning of the academic year introduced with a clear decision by the UM Senate strongly urging physical presence and lectures to be held on campus (UM Senate decision on 23 Sept 2020). However, after concerns were raised by the union representing UM academic staff (UMASA), and lecturers were granted the discretion to teach remotely. Furthermore, by December 2020 (Communication of Rector to Staff and Students, 31 Dec 2020), following a surge in COVID-19 cases, teaching and learning was once again shifted online until February 2021, when the 2nd semester was due to start. Faculties and Institutes were directed to decide on modes for assessment and to indicate whether examinations and assessments would be held in person or online.

Following another surge in positive COVID-19 cases across the island, on the 10th of March 2021, exactly a year after the onset of the pandemic, through a press conference and the release of a Legal Notice, the government announced that schools and other educational institutions were to close down between the 15th March and the 11th April, 2021 (Public Health Act, Cap. 465, 2021). Hence, a second shift to online modes across university and other educational institutions in Malta was observed in March and April 2021.

7 March 2020	First COVID-19 case in Malta
13 Mar-30 Jun 2020	Lectures shift online (schools online too)
1-30 Jun 2020	Semester 2 Examinations held mainly remotely
5 Oct 2020	Semester 1 starts with mitigation measures in place. <i>First Year students were given priority to attend in person</i>
7 Oct 2020	Schools re-open with mitigation measures in place, some children attended online
31 Dec 2020-Feb 2021	Lectures shift online
1 Feb 2021	Semester 1 Examinations held mainly remotely
22 Feb 2021	Semester 2 starts with lectures online and/or in-person
12 Mar-11 Apr 2021	Lectures shift online (includes Easter Recess) (and all schools)
12 Apr-Jun 2021	Schools open with classroom 'bubbles' and mitigation measures in place until June 2021
5 Jun 2021	Semester 2 Examinations held mainly remotely
27 Sept-Dec 2021	Schools open with physical attendance with restrictions in place
27 Sept 2021	Semester 1 Continuing Students to return physically on Campus (Physical-Remote alternating mode for large groups)

Table 3.1: Timeline of main events relating to teaching and learning during the COVID-19 pandemic at the University of Malta (2020-2021)

By the following academic year, September 2021, the UM issued guidelines (University of Malta, Sept. 2021) with the aim to strive, 'towards achieving some degree of normalcy' to achieve:

a balance between mitigating the COVID-19 related risks and ensuring that UM students can experience the appropriate educational journey on campus without the distress and social disruption that the pandemic has brought about. (p. 2)

Thus, a strong drive to return to face-to-face modes of classroom-based teaching on campus, with mitigation measures in place, permeated the guidelines. Exceptions were to be made for large groups (of over 50 students), where the measure of physical distancing could not be accommodated due to the limited size of the lecture halls. In such cases, a Physical-Remote (P-R) hybrid mode was recommended whereby part of the group would attend in person while others would follow through remote modes. The groups following in-person or remotely would alternate weekly (University of Malta, Sept. 2021). In these guidelines, remote delivery is considered as a means to reduce disruptions should students or lecturers be in quarantine.

3.1.2 Virtual Learning Environment, Video Conferencing and Internet

Prior to the pandemic, the university already had the infrastructure of a virtual learning environment (VLE) platform in place, which facilitated the initial phase of this shift through immediate availability of communication channels with university students. The University offers free internet access on campus to all students through the eduroam Wi-Fi network which caters to students' daily internet demands while on campus. Although students could not make use of this service during times when the campus was officially physically closed, the broadband capacity at UM was increased to cater for the additional demands of students and employees working and studying online.

An online cloud-based video conferencing service (Zoom Video Conferencing) was adopted across the University. This provided lecturers and students across the institution with a level of stability and coherence in the availability of a standard video conferencing tool with break-out rooms and a secure chat facility that could be accessed via a computer, tablet or mobile phone. To facilitate interactive online teaching and learning sessions, 'Zoom Rooms' were set up as well as a number of temporary structures with tables and chairs at a safe distance in line with preventive and mitigation measures to host students who needed a space to study or follow remote lectures on campus (UM, 2021; 2022).

3.1.3 Provision of Psychological Support and Financial Aid

Amongst the many goals and priorities set out by the University in its Strategic Plan for 2020-2025 (UM, 2020a), one strategic theme is 'Societal Factors and Impact, wherein it aims to 'expand health promotion and wellbeing services' towards ameliorating the current support services. To this end, UM has recently reorganised various support services offered to students and staff under the operations of the Health and Wellness Centre. It is interesting to note that research and a proposal to extend these services started pre-pandemic. The heightened awareness and plan to expand these support services could not have happened at a more opportune time, just before and at the initiation of the pandemic. The counselling services began operating on extended hours from the 1st of March 2020. Grech (2022, p. 34) holds that,

'... the mental health services delivered were extended and the centre is now open on weekdays between 8.00am and 8.00pm to deliver a service to both staff and students. During COVID-19 pandemic, services were extended online'

Thus, in parallel with teaching and learning, counselling and psychological support sessions also shifted online to continue to be accessible to students and staff throughout the pandemic.

During COVID-19, a number of students experienced financial distress. Financial difficulties were experienced by students due to various circumstances and meant they could not keep up with their expenses due to loss of part-time employment, periods of self-isolation, illness or difficult personal or family situations while studying in COVID-19 times. In view of this situation, the UM established the Student Solidarity Fund (SSF) 'to assist students facing financial difficulties with basic and essential needs' that surfaced due to the COVID-19 pandemic' (UM, 2020b).

3.2 The Faculty of Education and ITE in Early and Primary Education

The pandemic has caused serious disruption to the academic journey of students around the world. Like many HEIs, the Faculty of Education at the University of Malta shifted its teaching and learning modes from campus-based to online overnight in March 2020. Thus, programmes of study did not come to a standstill due to the pandemic but continued remotely through online modes. This was not without its challenges for programmes of study where practical sessions or field placements form an integral part of the programme. For ITE university students, the shift to online learning meant disruptions that impacted their participation in lectures and tutorials at university, and the practical fieldwork components of their programmes. Access to kindergartens and schools becomes very difficult due to containment and mitigation measures in place at university, as well as in all other local educational institutions. This entailed that Teaching Practice and any other field work usually held in preschool kindergarten settings, or Primary Schools was significantly disrupted, postponed or even cancelled for many ITE students.

The two groups of students pertinent to this study are: students reading a three-year Bachelor of Arts (Hons.) in Early Childhood Education and Care degree (B.A. Hons. ECEC), and those following a Master in Teaching and Learning in Early Childhood and Primary Education (MTL).

3.2.1 Field Placement for B.A. (Hons.) Early Childhood Education and Care

The undergraduate degree prepares students to work with young children (aged three to five years) in Maltese kindergarten classrooms, and the post-graduate course prepares students to teach in primary schools (children aged between five to eleven years).

During the disrupted TP sessions of 2020, some student teachers in early childhood settings carried out their practicum in kindergarten classes as planned. Where this happened, the practicum was assessed physically or remotely depending on the examiners concerned and the policy adopted in the specific centre or school.

During the following academic year, 2021-2022, class observations and TP sessions were usually held in person with the student teacher physically in class with the learners. Assessment of the practicum took place through both in person visits by examiners as well as through video recordings of sessions uploaded in their Google Drive folders for examiners to access in order to assess remotely (more detail in section 3.3).

3.2.2 Field Placement for MTL Primary and Early Years

By March 2020, the MTL 1st Year cohort had their weekly Wednesday school observation sessions cancelled or restricted due to physical closure of educational institutions. This was followed by the postponement of their practicum due to feedback from the schools that they would not be in a position to accommodate this group for a 5-week practicum or for the planned weekly classroom observations (Field Placement Office, 2020). This meant that the MTL Early and Primary 1st Year students saw their practicum (5-week block) postponed from March–April 2020 to the following academic year.

On the other hand, during the same TP session of March–April 2020, a number of MTL 2nd Year student teachers recorded asynchronous activities, or lessons, to send to their examiners to be assessed instead of implementing them in class or remotely with children because of the uncertainty surrounding operations of, and access to, educational institutions. At times, if the whole primary school class was in mandatory quarantine, they held lessons remotely for that specific period of time, returning to physical classes in due course according to the guidelines issued by the Health Authorities. At that stage, the Department of Early and Primary Education and the Field Placement Office of the Faculty of Education liaised with the schools and the Directorate for Education to enable the MTL 2nd Years to complete their practicum in their assigned classrooms and schools. It would be challenging to replace the TP at a later date, given that it was their last year of studies, and if an additional TP period were to be held during November–December 2020 when TP resits or recycles are held, this would inevitably overlap with their first term of full-time teaching.

Even when the schools and centres opened, more stringent access conditions were imposed that significantly reduced access to ITE candidates. To counter this situation, some schools and settings accepted university students observing the class teachers and children through video conferencing. However, this was not a widespread practice.

During the TP session of March 2021, MTL Early and Primary students in their 2nd Year were also given access to classes in Primary Schools for five weeks and held their practicum in person with educators and learners in class while adhering to the enforced mitigation measures of mask-wearing and physical distancing. They carried out two 5-week blocks of teaching practice in Primary Schools (TP 1 in November–December 2021 to replace the cancelled TP in the 1st Year; TP 2 in March–April 2022 as the regular TP for the 2nd Yr), with some student teachers retaining the same class and others assigned to a new class.

The academic year 2021-2022 saw a decrease in the number of COVID-19 cases reported in Malta and field placement class observations in preschools, and primary schools resumed. The 5-week teaching practicum blocks were also held without too much disruption whilst keeping all measures in place as directed by Public Health Policies. Although access was easier for ITE student teachers on practicum, as they would become part of the immediate contacts of the educators and children in a class (referred to as a 'bubble'), this was not always the case for the Faculty of Education examiners. In many cases, examiners wishing to enter school would only be granted around 40 minutes in class to limit exposure to outsiders for the children and educators. Examiners were at times given the option to assess through physical presence or remotely and subsequently give feedback about the practice observed through either mode as well as indicated in the following section.

3.3 Procedures and Assessment of Teaching Practice

The Faculty of Education and the Department for Early and Primary Education adopted a procedure whereby ITE students could be assessed remotely. In order to assess TP remotely, examiners were to view video-recorded lessons provided by the student teachers. The recording would feature the student teacher and the class of learners while they were engaged in face-to-face lessons. This entailed setting up a secure cloud-based repository space (a secure folder was prepared for each student teacher on Google Drive) where the student teachers filed all their TP planning, resources, documentation, reflections, profiles and so on and uploaded videos of a number of the requested lessons to be assessed. The folder would then be shared by the student teacher with the assigned examiners to grant them secure access. The TP Assessment Sheets used by examiners were updated and adapted to the needs of remote assessment as well as the pandemic mitigation measures.



Of course, care was taken to ensure that all ethical procedures were followed and that informed consent was obtained from the parents of the children concerned. The examiners would view the videos, assess the documentation, and prepare a report (Field Placement Office, 2020). The report would then be shared with the student teacher, and progress discussed during an online video conference with the examiner/s. During the second academic year that this took place the system was better organised and both student teachers and examiners knew more about the procedures in place and how to work with the technological tools adopted more efficiently (Field Placement Office, 2021; TP Requirements, March 2022).

During the TP sessions of 2021-2022, some part-time examiners were also in a position to conduct visits in persons due to being employed in one of the placement schools or educational settings or by obtaining access through the school leadership teams on a case-by-case consideration.

3.4 Early Years Settings and Primary Schools

In March 2020, teachers in schools had to quickly learn how to use online software such as Microsoft TEAMS and Class Dojo to teach their students and to simultaneously communicate with and support parents (Grech & Bartolo, 2020). This resulted in considerable change in the children's learning environment: from physically being done at school to being held remotely within the confinements of their homes (Cefai et al., 2021).

Teachers tried to maintain some form of routine, where they planned modified timetables, where students had to follow activities or lessons in a mixture of synchronous and asynchronous modes. According to Grech and Bartolo (2020) and Cefai et al. (2021), this transition brought many challenges to children and their parents. Some schools even offered training for parents, students, and teachers on navigating around the schools' online platform/s. They were provided with webinars that helped them address struggles and anxieties brought to the fore by the pandemic (Grech & Bartolo, 2020; Berger, 2021). Borg and Mayo (2022) caution that the pandemic has uncovered serious inconsistencies in educational provision and school engagement with children, especially children with disabilities or learning difficulties.

In the academic year 2020-2021, schools opened with a partial second lockdown in March and April 2021 (Calleja, 2022, January 10). This time, the transition was smoother than in the previous lockdown, and in an interview featured in a local newspaper, Anna Napier, a Head of a Primary School (Berger, 2021, October, 24th) writes that throughout the pandemic, schools have shifted from 'emergency education' as experienced in March-April, 2020 to 'education in times of an emergency'. This implies that by 2021, educators not only changed their pedagogy but were also able to plan and adjust accordingly. However, attendance was not regular during the academic year 2020-2021. The Ministry for Education conducted a study about school attendance which showed that during the academic year 2020-2021, absenteeism was high for a considerable number of children (Berger, 2021).

Taking into consideration the educational losses, the social disruption and distress children were exposed to in 2020-2021, in October, 2021, it was a priority for the Maltese government to have all educational institutions and schools open and all classes resuming to maintain some form of normality as well as routine in the children's lives (Farrugia, 2021; Ministry of Health, 2021).

Some 36,000 students across all levels of the education system were expected to return to school, following the necessary protocols such as the use of masks, social distancing and the bubble concept. In a set of guidelines published by the Ministry of Health, (2021), for the scholastic year 2021-2022, which were drafted for childcare centres, kindergarten centres, primary and secondary educational settings, the aim was to, 'enable the physical presence of children in school whilst protecting the health of children and the school community' (Ministry of Health, 2021, p.6). Physical school attendance became compulsory once again in the third scholastic year affected by the COVID-19 (Calleja, 2022, January 10). A timeline indicating physical attendance and online teaching and learning during the COVID-19 pandemic in Early and Primary Education Malta (2020-2022) is available in Appendix C.

CHAPTER 4

Design and Methods

Due to the impact of the pandemic on education around the world, a need was felt for valid data to explore the views and perspectives held by various stakeholders; including those of pre-service teachers studying at the University of Malta. To capture a first snapshot of the reality experienced by stakeholders in education the Cov-EM study adopted a mainly quantitative approach, partly reflected by the administration of online survey questionnaires, a positivist epistemological stance to capture the reality experienced by the participants in the educational sphere, in this case, university students pursuing initial teacher education at two points in time. This study explores the views and perspectives of student teachers in Malta during COVID-19 times about their educational and personal lives through an online survey. The survey was launched twice and conducted over two time intervals. Initially, this quantitative study was to be carried out once in September 2020 (Run 1). However, given that the pandemic was still with us a year later, the ECPE Research Group decided to launch a second study run in September 2021 (Run 2) using a modified version of the questionnaire to capture the ongoing nature of the pandemic and the challenges it posed.

4.1 The participants

The participants of the study were student teachers within the Department of Early Childhood and Primary Education, within the Faculty of Education of the University of Malta. Recruitment of participants took place through dissemination of the online survey via social media platforms and university channels. Table 4.1 below presents the participants according to the degree courses the pre-service teachers were currently reading at the Faculty of Education.

ITE Programme	Academic Year 2019/2020 Survey 1		Academic Year 2020/2021 Survey 2	
	N	%	N	%
MTL 1 st yr	11	8.7	22	17.6
MTL 2 nd yr	29	22.8	6	32.4
BA (ECEC) 1 st yr	0	0	10	8.8
BA (ECEC) 2 nd yr	16	12.6	18	14.7
BA (ECEC) 3 rd yr	52	40.9	18	26.5
<i>Missing data</i>	19	15	0	0
Total	127	100	68	100

Table 4.1: Participants according to ITE programme, academic year and survey

The BA (Hons.) in Early Childhood Education and Care is a three-year full-time programme and the MTL is a two-year full-time Master’s in Early Childhood and Primary Education.

A total of 127 pre-service teachers completed the online questionnaire during the first run of the survey in September 2020. The majority of respondents were Maltese (n=124). The sample was composed of 94.5% (n=120) females and 5.5% (n=7) males. The age of the participants ranged from 18 to 47 years, with the average age being 22.8 years. For the second run of the survey, in September 2021, 68 respondents answered the online questionnaire. Of these 95.6% (n= 65) were females and 4.4% (n=3) were males. For the second survey the age-group was indicated instead of their specific age, thus the grouped data yielded an average age of 23.3 years. The ages ranged between 18 and 54 years. The gender disparity is very pronounced in the group of participants as the number of female participants highly outnumbered males (or ‘others’). We acknowledge that a gender disparity is common amongst educators in early childhood and primary education settings (Besnard & Letarte, 2017; McGrath & Sinclair, 2013) and is evident in Malta too (NSO, 2021b).

During the academic year 2019-2020, the Department of Early Childhood and Primary Education had 215 registered students, which increased to 228 the following academic year (2020-2021). Thus, the first survey yielded a higher response rate of 59% from amongst the potential sample of ITE university students in early years and primary education (127 out of 215), compared to 30% in the second run (68 out of 228). It is clear that a higher response rate was registered in the first run of the Cov-EM study. This decrease in response rates was observed across the various stakeholder groups, and this may be indicative of the ‘need’ of the participants to share their experiences, perceptions and even frustrations during the uncertain times experienced after the first wave of the pandemic.

Region	September 2020 Run 1 % (n)	September 2021 Run 2 % (n)
Northern	10 (13)	19 (13)
Northern Harbour	31 (39)	19 (39)
South Eastern	18 (22)	18 (12)
Southern Harbour	12 (15)	18 (12)
Western	19 (23)	21 (14)
Gozo and Comino	19 (23)	6 (4)
Total	100 (127)	100 (68)

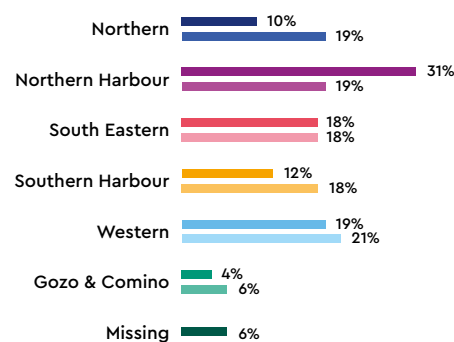


Table & Figure 4.2: Participants of the surveys according to geographical region

4.2 The Survey

4.2.1 Online Survey

The use of an online survey offered the opportunity to conduct this quantitative research study in an effective and efficient manner as data was immediately available (Sumi, 2019). The online nature of the survey afforded the facility to work remotely and collect data while in isolation or at a physical distance. Moreover, it also avoided the unsustainable use of a paper-based survey at a time when the use of disposables had increased. Despite the advantages of an online survey, according to Wright (2005), a main disadvantage may be encountered in relation to sampling issues, due to respondents being those who regularly use the internet and social media. In this case, our targeted participants were university students and tended to be users of social media platforms and proficient in going through the process of completing an online survey.

4.2.2 The Questionnaires

The September 2020 and the September 2021 questionnaires focused on the participants’ views about their experience of their learning as mediated through teaching by remote means during COVID-19. Both questionnaires were designed by the research team and were made available to participants in English. The first questionnaire consisted of 28 items, of which 2 were open-ended whilst the second questionnaire consisted of 25 items of which 4 were open-ended (see Table 4.3).

Each questionnaire consisted mainly of multiple-choice items. Some of these were arranged around a 5-point Likert scale designed to measure respondents' attitudes, opinions or perceptions. Others invited the participant to select one answer from the selection offered. To cater for a situation where the given list of answers or statements may be incomplete, especially given the nature of this study, at times the field 'other' is included as an answer option. A comment textbox is provided for any participants who choose to write their own personalised response.

Questionnaire Sections		Description and number of items in the first questionnaire		Number of items and number of items in the second questionnaire
A Demographics & Background	8	Age, gender, nationality, region, ITE programme, highest level of education in household, parental occupation, type of residence	6	Included: same except for age-range instead of age. Excluded: highest level of education in household, type of residence.
B Teaching and Learning	10	Remote learning & assessment methods, engagement in live online lectures and recorded lectures, advantages of live online lectures and recorded lectures, comparing learning remotely and 'normal' University study, concerns about online learning, quality of learning during COVID-19 times. Open-ended question: to mention one online experience when learners felt more motivated and engaged than usual	11	Added: new question items related to Teaching Practice & Field Placement. Same: Open-ended question: to mention one online experience when learners felt more motivated and engaged than usual.
C Learning Spaces	4	Access to facilities to support learning from home, effect of spaces on well-being, modalities used to learn/work during COVID-19 times, learning spaces/modes to retain on returning to 'normal life'	3	Excluded: modalities used to learn or work during COVID-19 times
D Well-being & Relationships	5	Well-being during COVID-19 times, daily time spent on activities, happiness and satisfaction, advantages/disadvantages of learning remotely.	4	Excluded: daily time spent on activities, advantages or disadvantages of learning remotely. Added: an item on support provided; open-ended question about their overall experience of learning during the pandemic.
E Any comments	1	Open-ended question: to write any comments the participants wished to share.	1	Same

Table 4.3: Items of the Survey included in the first and second questionnaire

A limited number of open-ended questions were included in the questionnaire. Each survey contains a few optional open-ended questions to allow respondents to express their feelings, thoughts and experiences without being totally restricted to predetermined answers. Such questions may yield answers that highlight more personal experiences that would be not captured through the questions and answers in the questionnaire. Moreover, these would be expressed in the language and style of the specific respondent. The second source of 'open-ended responses' considered in the surveys refers to the opportunities built into the questionnaire to allow some optional short-form custom responses in the field listed as 'other', at the end of a number of statements given in a multiple-choice questionnaire item. The latter instance can be illustrated through a question item where the option to add an additional response is afforded the participant through a write-in response.

A level of comparability between the first and second run was generally maintained for the university ITE students' questionnaire, with some question items remaining the same, others amended or removed, and a few new questions added. Both questionnaires were organised in three parts around the elements of teaching and learning, learning spaces and well-being. Lessons learnt following the administration of the first questionnaire led to some changes in the second questionnaire. For example, during the process of designing the questionnaire for the second time around, a new section was introduced to allow pre-service teacher respondents to answer items relating to their teaching practice placement or field work. Table 4.3 describes the items in the first and second questionnaires in brief.

Both questionnaires were field tested with a number of volunteers before being disseminated amongst the ITE students. The feedback obtained was useful in ensuring that the questions were clear, answerable and that potential technical difficulties with the online format were resolved.

4.3 Data Collection and analysis

The surveys were launched online using SurveyMonkey and were disseminated on social media through various Facebook groups and pages between August and September 2020 and then again in September 2021. The data were later extracted and imported into SPSS for analysis. The internal reliability, or consistency, of the questionnaires as instruments was analysed for both the first and second versions of the surveys. Cronbach's alpha was computed and indicated a very good level of internal consistency for the first and second questionnaire, with coefficients of 0.858 and 0.773 respectively. This means that the measure of internal consistency for the questionnaire items is satisfactory and the items are shown to fit together well as a set or group of questions (Taber, 2018). These computations were based on the questionnaire items that included ordinal scales (ratings).

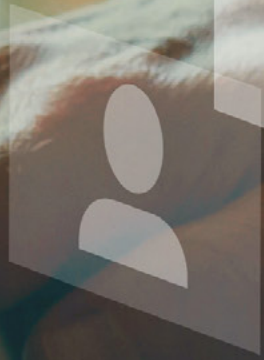
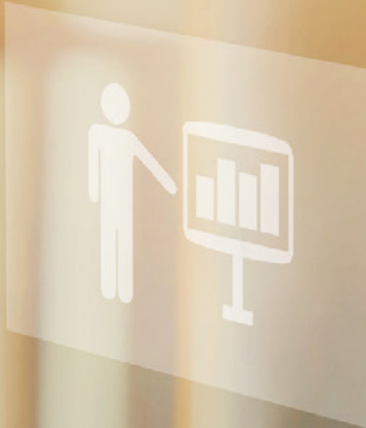
For the purpose of this publication the participants were analysed as one group, that is, they were not split according to gender, programme of study, geographical region and so on. However, at a later date we carried out a separate analysis of every questionnaire item in the Second Survey and split these according to the ITE group, BA Early Childhood Education and Care and MTL Early Childhood and Primary Education side-by-side. This was done through applying the Independent-Samples Mann-Whitney U Test yielded differences in results in only 3 sub-questions of questions: Q8 Take notes during lectures; Q19 Having to learn mainly online; and Q21 How happy you felt during 2020-2021. Thus, in these 3 items there was a significant difference noted between the responses of the participants pertaining to either group. The research group plans to present and discuss these findings in a future publication.

4.4 Ethical Procedures

The study was approved by the Research Ethics Committee at the Ministry of Education and by the Faculty of Education Research Ethics Committee (FREC) on behalf of the University of Malta Research Ethics Committee. The online questionnaires included an introductory page detailing the purpose of the study and a data protection statement to explain the procedures set-up to ensure data would be collected, stored, and used in an ethical manner. Participants were assured responses would remain anonymous, IP addresses would not be collected, and the data would be used solely for the purposes of the research study. They were informed that participation was voluntary and that submitting the questionnaire would be considered as granting informed consent (Allen & Roberts, 2015). No gifts or other incentives were offered to prospective participants. Contact details of the research group were available allowing prospective participants a means of accessing additional information should this be required.

4.5 Limitations

Pre-service teacher participants were invited to complete the survey questionnaires through self-reporting. Although known as a very convenient and efficient manner to collect data this is not without its drawbacks (Jones, Baxter & Khanduja, 2013). When self-reporting participants may at times unwittingly provide inaccurate information due to changing perceptions of events or experiences that may have happened in the past, social desirability or acquiescence through trying to give the 'correct answer' (Ferrando, Lorenzo-Seva & Chico, 2009). Though no self-reporting endeavour can eliminate such limitations, the fact that the questionnaires were completed electronically and anonymity was reassured is likely to have encouraged participants to offer responses that align with a more truthful interpretation of reality.



The female participants by far outweighed the males and constituted 94.5% and 95.6% in both surveys respectively. We acknowledge that this disparity in early childhood settings (Besnard & Letarte, 2017) and primary schools (McGrath & Sinclair, 2013) is a common scenario. The gender imbalance of participants in our study reflects the cohorts of students who were reading for a degree in Early and/or Primary Education at the time, as well as the wider scenario pertaining to the great majority of female educators in early and primary education locally (NSO, 2021b).

The technical design of the first survey allowed respondents to skip as many questions as they wished. This resulted in a substantial amount of missing data and fewer complete data sets per participant (15% in the first survey). This limitation was addressed in the second questionnaire. Participants were only allowed to proceed to the 'next question' of the online survey (excluding the open-ended items) once the previous item was completed. Moreover, the second survey was planned quite unexpectedly due to the ongoing nature of the pandemic. Hence, had we known at the outset that the survey would take place twice, the items in the first questionnaire would have been planned differently to enable better parallel comparisons between the first and second runs. Also, the same participants could have potentially been followed up in the second survey allowing for a longitudinal study.

CHAPTER 5

Findings

This chapter, which is organised in two main sections, presents the results from the first survey (section 5.1) and from the second survey (section 5.2). Both sections present frequency and percentage figures for the study elements of teaching and learning, learning spaces and for well-being and relationships as illustrated earlier in Figure 2. Additionally, the teaching and learning element in the second survey questionnaire, which refers to section 5.2, includes items that focus on students' views of their practicum. Results are first presented for the 2019-2020 data collected and collated during the first round of the Cov-EM study in September 2020, followed by presentation of the 2020-2021 data which refers to the second round of September 2021. The discussion highlights similarities and/or differences in the results of both surveys. The main findings will be discussed in the light of the relevant literature and within the conceptual framework highlighting the three elements of Teaching and Learning, Learning Spaces and Well-being and Relationships.

It is also useful for the reader to note that the figures used to illustrate the results refer to data from responses on a 5-point Likert scale. This scale has been retained so that the reader may appreciate the range of responses. However, for ease of reference when writing about the results, the 5-point is frequently collapsed. This means that results for the 'very often' and 'often' ends of the scale may be aggregated and results presented as a cumulative percentage. For instance, a response yielding: 'very often, 25% and often, 40%' is sometimes added together and presented as 65%. Similarly, this also applies to results at the other end of the scale. However, there are also times when separate percentages on the 5-point scales are identified when a specific finding is highlighted in the results.

As indicated in the previous chapter, both questionnaires feature a minimal number of open-ended questions. In the first questionnaire for ITE university students this amounted to 2 items, and subsequently increased to 4 in the second questionnaire. These include open-ended questionnaire items where respondents are invited to write about one online experience when they felt more motivated and engaged than usual, and the final question item inviting participants to write 'Any additional comments'.

Generally, respondents wrote a phrase or a sentence. There were instances where longer responses of two sentences were registered. While we appreciate the value of such responses, we acknowledge that statistically interpreting and writing-up qualitative findings would take up a considerable amount of time. Therefore, for the purpose of this report, the main focus is on the close-ended survey items of both questionnaires, while the open-ended responses will be featured to add some qualitative insight to the findings. These will be illustrated through the use of word clouds to generate a visual depiction or display of open-ended results, through highlighting the most frequently featured words in the selection of responses (mainly limited to around 50 of the top words/phrases).

5.1 Results of the First Survey – Cov-EM 2020

At the time that the Cov-EM survey questionnaire was first administered, pre-service student teachers had experienced online lectures for most of the 2nd semester; that is from mid-March up to June 2020. At this point it is useful for the reader to keep in mind that the first questionnaire was completed by 127 respondents, that the majority of pre-service teacher respondents were female (94.5%) and that the average age of all respondents stood at 22.8 years.

5.1.1 Teaching and Learning

With the onset of the COVID-19 pandemic, University of Malta academics were quick to shift to more remote modes of teaching in response to the learning requirements of their students and higher education institutions. Pre-service teachers were asked about the modes of remote learning, the type of assessment that they experienced, as well as their views about learning. Consequently, this section refers to the following questionnaire items: 'modes of remote learning and assessment', 'engagement of pre-service teachers during synchronous online lectures', 'advantages of synchronous lectures', 'advantages of recorded asynchronous lectures', 'views about the advantages of recorded asynchronous lectures', 'comparison between remote learning and pre-COVID normal University study', and 'views about the quality of learning during COVID-19 times'. For each of the above items respondents were allowed the possibility of selecting more than one statement to describe their experience of learning through remote means and about remote assessment.

This part of the findings for Teaching and Learning will be concluded through the presentation of some findings yielded through an open-ended question inviting participants to recall an experience related to their teaching and learning during the pandemic when they felt 'more motivated or engaged than usual'.

Figure 5.1 illustrates that the majority of students experienced 'live online lectures' (82.6%) and submitted their assignment online (82.4%). A considerable number of students also reported that they were engaged in 'group tutorials on Zoom/ Microsoft teams' (very often, 19% and often, 25%) and/or were set 'online tasks on the VLE' (very often, 22% and often, 40%). Many also reported that lecturers had 'documents uploaded on the VLE' (79.6%). This describes a remote lecturing situation in which the use of remote technology appears to have been predominantly used more, by academics/lecturers, in a synchronous manner.

Other modes of online delivery are described in Figure 5.1, such as, 'asynchronous forum' (very often, 7% and often, 17%), 'recorded online lectures' (very often, 5% and often, 29%) and 'synchronous forum' (very often, 10% and often, 17%) were reported by students to have been employed by lecturers considerably less than 'live online lectures' and 'group tutorials' (live). This appears to be descriptive of a situation in which academics/lecturers transferred their physical face-to-face academic pedagogical approaches and lecturing strategies to the virtual 'online' realm. It is also suggestive of an initial situation in which academics/lecturers transferred familiar lecturing methods in order to provide regularity and consistency in lecture delivery.

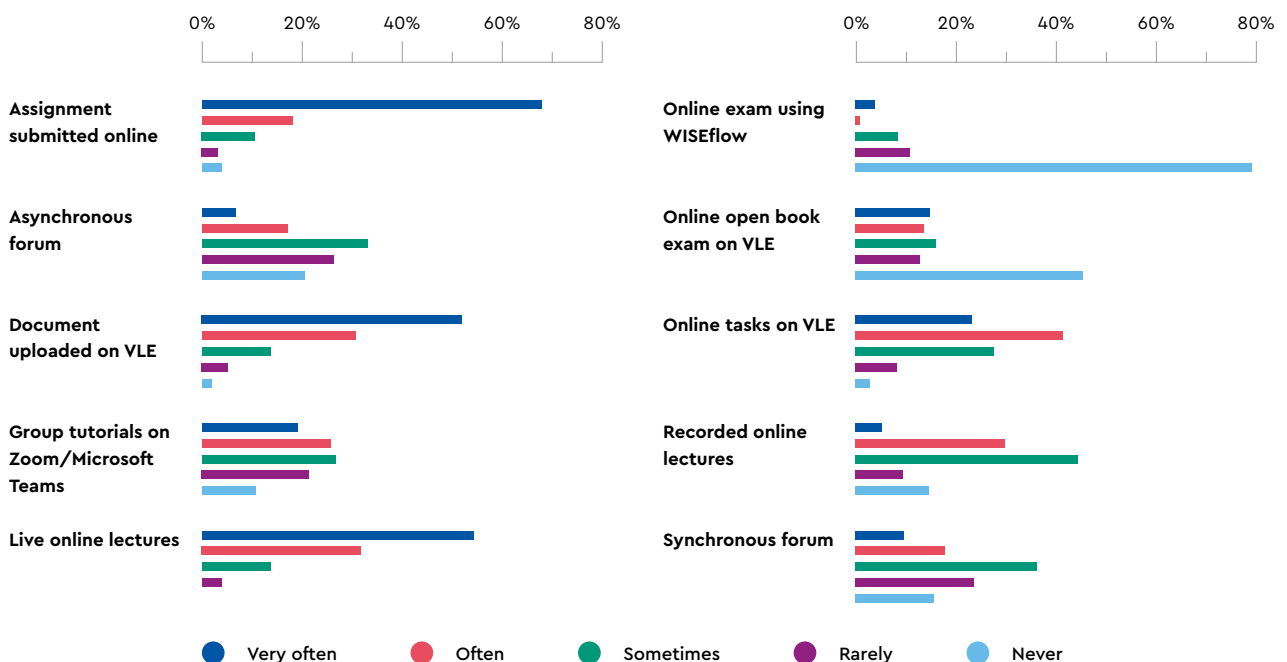


Figure 5.1: Modes of remote learning and assessment

The issue of familiarity in the choice of delivery methods also appears to feature in students' experiences of being assessed through remote means. The majority of students reported that they submitted their assignment online (82.4%). This describes a situation in which academics/lecturers sought to provide stability in assessment by keeping as much as possible to the modes of assessment previously employed prior to the onset of the pandemic.

Figure 5.2 provides further description about the behaviour of students whilst attending synchronous online lectures. More than three quarters of the respondents devoted their attention to the synchronous 'live' lecture in that they never left to do something else (never, 52%, rarely, 27% and sometimes, 16%).

Most students reported that they took notes whilst listening to the lecture (very often, 46%, often, 34% and sometimes 17%). Rather interestingly, nobody reported never taking notes during lectures. Also, close to 20% of respondents did report leaving the lecture on while doing something else (often, 5% and sometimes 16%). Many respondents frequently (24.5%) used the chat function at some point during synchronous 'live' online lectures with other respondents sometimes (46%) using this function.

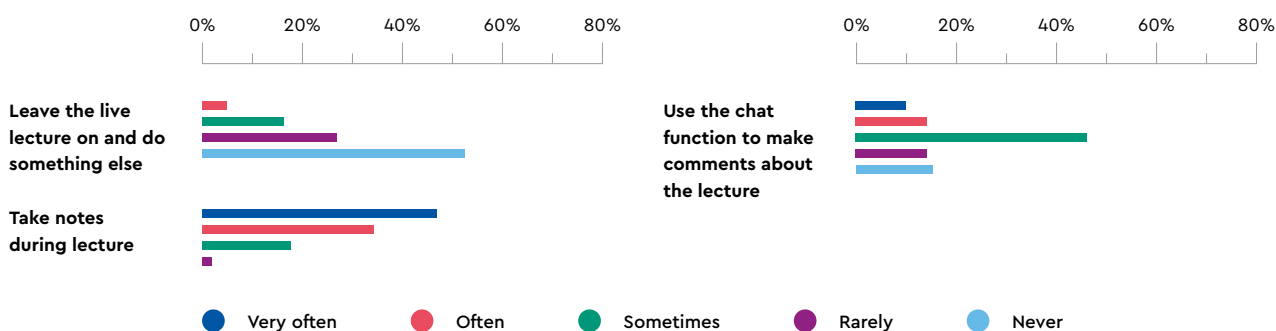


Figure 5.2: Engagement of pre-service teachers during synchronous online lectures

Figures 5.1 and 5.2 above highlight that most students experienced 'live' synchronous online lectures in a more engaged manner and that most students remained sufficiently engaged as to take notes.

Figure 5.3 below describes pre-service educators' views about the advantages of synchronous recorded 'live' lectures. Many reported that they enjoyed spontaneous interaction with fellow students (64%), could easily ask the lecturer to explain if they encountered any difficulties (58.5%) and could participate actively (53.3%).

The majority also thought that synchronous lectures allowed the lecturer to 'plan the following lecture effectively' (64%). This was probably because the lecturer would realise whether the students were following or were struggling with a concept and adapt the following lecture accordingly. The participation of students during a live online lecture, interaction between the group, as well as the possibility to receive and answer questions during the lecture would give the lecturer concerned a very good indication of the students' understanding.

Respondents were also asked whether they thought that they learnt more when the lecture was asynchronous or recorded. Interestingly, responses were mixed. A third of respondents reported that they learnt more when the lecture was recorded (31.4%), the greater proportion of respondents reported that they thought that they did not learn more when the lecture was recorded (40.7%) and around a quarter of respondents reported that it made no difference to their learning whether the lecture was recorded or not (27.9%). Around half of respondents reported that for them it felt more 'normal [natural] to follow a live lecture' (56%).

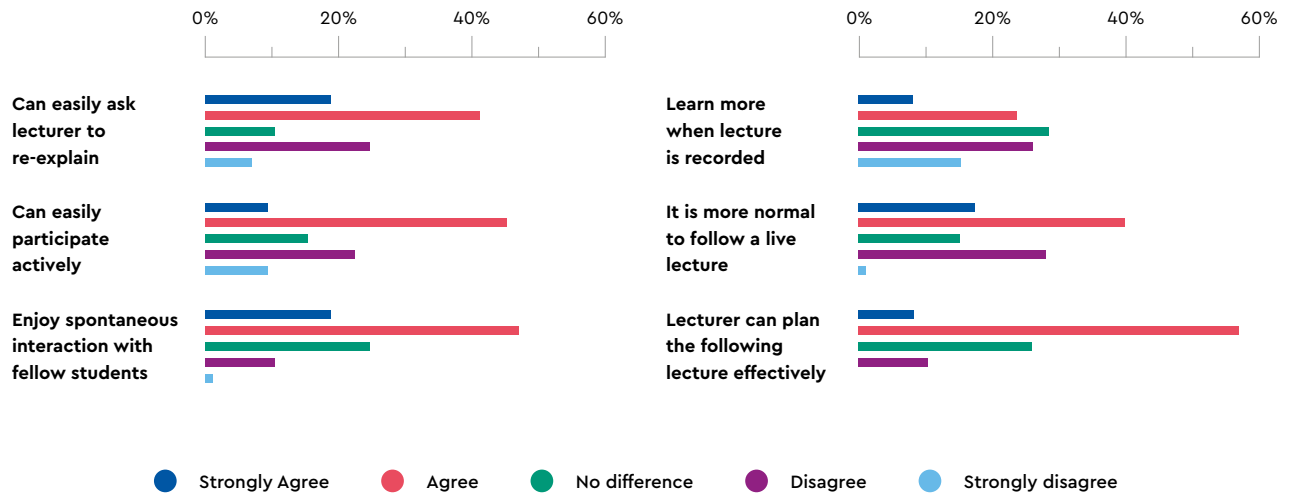


Figure 5.3: Advantages of synchronous lectures

Asynchronous recorded lectures are likely to allow students to manage more the ‘when’ and the ‘how’ they follow lectures. Figure 5.4 describes results about the advantages of asynchronous recorded lectures. The majority of respondents reported that they took notes as they listened to the recorded lecture (76.8%). Slightly more than half of respondents listened to the lecture online before the next lecture of the study unit was uploaded (54.9%). Similarly, 53.1% of respondents always listened to the uploaded lecture regardless of whether it was needed for assignments or not.

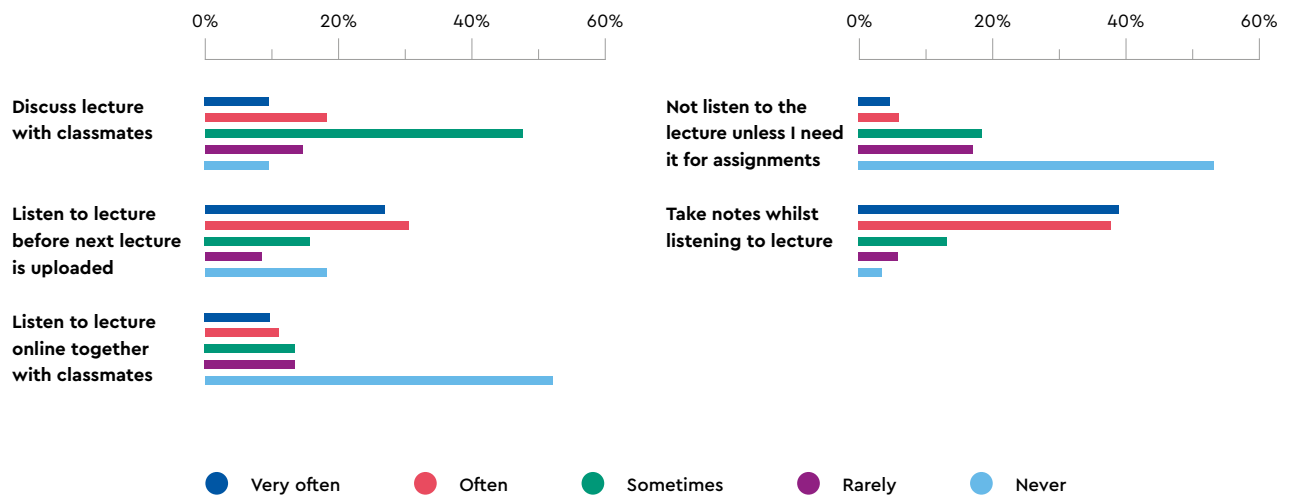


Figure 5.4: Advantages of asynchronous recorded lectures

Most students discussed recorded lectures with their fellow classmates to varying degrees. Nearly half of respondents chose to discuss recorded lectures with their fellow classmates ‘sometimes’ (48%). On the other hand, fewer respondents reported discussing the lecture with their fellow students very often (10%) or often (18%).

Figure 5.5 describes the views held by pre-service student teachers about asynchronous recorded lectures.



Figure 5.5: Views about advantages of recorded asynchronous lectures

The majority of pre-service educators reported that asynchronous recorded lectures afforded them some advantages over synchronous modes. Thus, having more flexibility in choosing to listen to lectures at their pace and according to their own schedules and convenience was the highest rated advantage (89%). This was followed by the facility to email the lecturer concerned if they encountered a difficulty related to the lecture (83.4%), as well as the facility to pause the lecture to research additional material related to the content of the lecture (81%) were the three advantages with the highest ratings for this question. They also indicated that they can 'discuss with fellow students when I do not understand' (79.8%) and that it is 'easier to share devices and working spaces at home' (63%).

The responses of pre-service student teachers exhibit greater variation in connection with: 'not feeling self-conscious with other students present during lectures', not wasting 'time waiting for the lecturer to sort out the internet' (to ensure the zoom meeting is set up with all students admitted, sound and video feed working) and that there would be 'no interruptions during explanations'. According to 47% of the respondents, a disadvantage is that, in their view, 'recorded lectures take longer to follow' than synchronous lectures.

An important objective of the first Cov-EM survey was to gauge the change in the quality of pre-service teachers' experience of learning at University due to the onset of the COVID-19 pandemic (Figure 5.6).

When comparing learning remotely to in-person pre-pandemic lectures many pre-service student teachers reported an 'increase in university workload' (70.9%) and many also responded that they often spent 'more time following online lectures and doing tasks assigned' (60.8%) besides finding that 'learning became more difficult' (50%). A notable proportion of students reported that they: 'had more time for consolidation of learning' (47.3%) and had more time to read academic publications (46.6%).

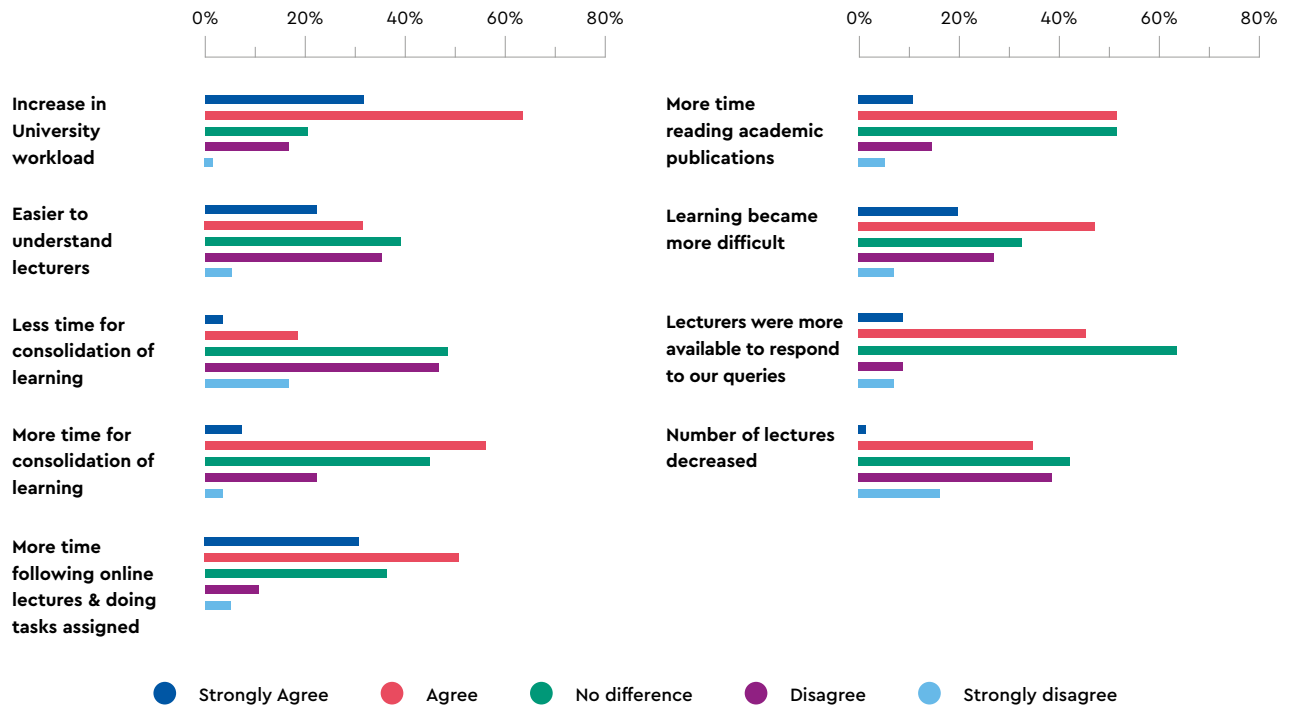


Figure 5.6: Comparing learning remotely due to COVID-19 and 'normal' University study

Some held that they found it 'easier to understand lecturers' (40.3%) and reported that 'lecturers were more available to respond to queries' (40.6%).

It is interesting to note that 47.3% held that they did not experience any difference in the availability of lecturers to respond to their queries when comparing the online learning time with pre-COVID times. Generally, most students (72.6%) reported either 'no difference' in the number of lectures or they disagreed that the 'number of online lectures had decreased' in comparison to the number of face-to-face lectures (no difference, 31.5%, disagree, 28.8%, strongly disagree, 12.3%).

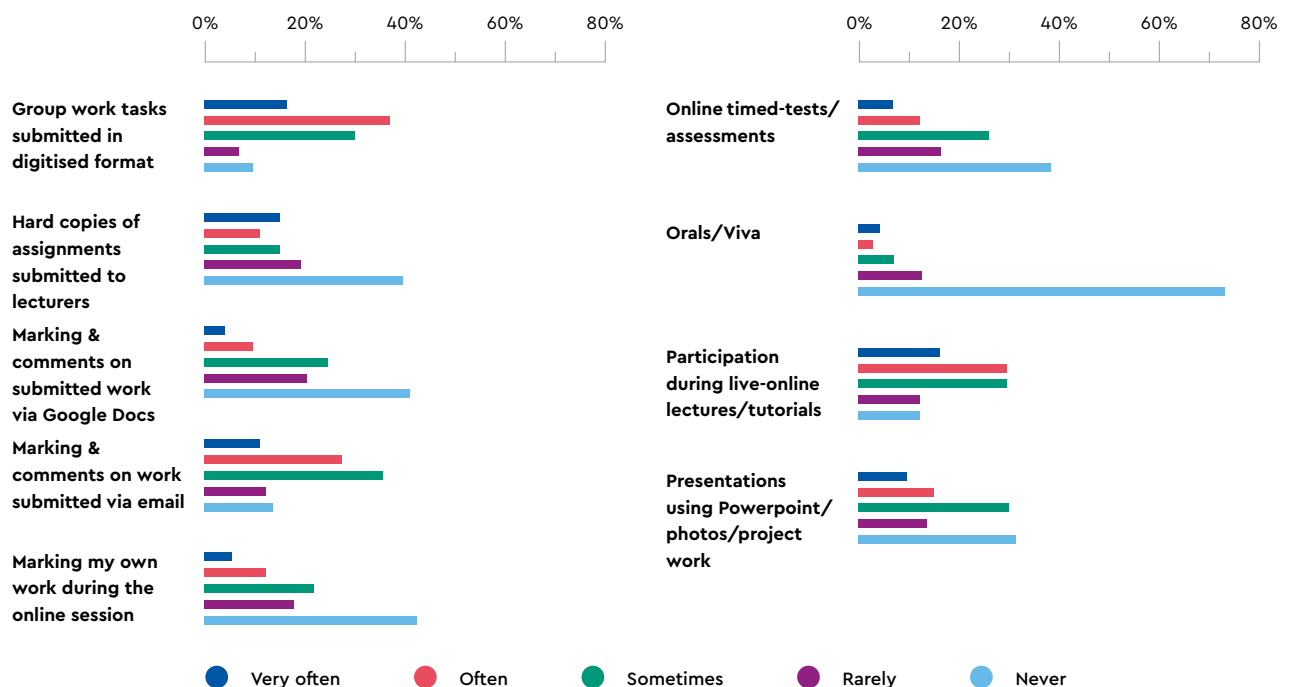


Figure 5.7: Means of assessment and feedback during remote learning

Generally, the responses displayed above, represented in Figure 5.7, show that the assignment remained the predominant means of assessment. Despite the reliance on assignments, it seems that lecturers were exploring a wide range of modes of assessment, including ongoing assessment through participation in lectures and tutorials and group-work. Responses indicate that students were often assessed by written 'group work tasks/assignments submitted in digitised format' (53.4%) and 'participation during synchronous online lectures or tutorials' (46%). Some students also reported being often (10%) or sometimes (15%) assessed through 'presentations using PowerPoint'. A good number of students reported that they often (38.4%) 'received individualised feedback through marking and comments sent to them by email'. Others reported that they received feedback on assessment through 'marking and comments on individual work submitted via Google docs' (very often/often, 14% and sometimes, 25%).

From the responses above, it is clear that 'assessment as learning', where students are encouraged to assess their learning does not happen frequently enough, as indicated through the majority of responses of 'never/rarely' in relation to 'marking my own work during the online session'.

Figure 5.8 displays the responses of pre-service student teachers about remote online learning compared to pre-COVID-19 face-to-face learning during 'normal times'. Pre-service student teachers often responded that they considered that: 'teaching has become more traditional' (67.6%), 'students cannot maintain continuous online engagement' (66.2%), students 'lack face-to-face interaction' (63%) and that students experienced 'lack of engagement' (61.1%). Half of the respondents often perceived a 'lack of support for learners' (50.7%).

Around a third of respondents often reported that they considered that content and teaching time had not changed following the move to online lectures (35%) and that teaching time was reduced (36.6%). However, it is interesting to note that 28.1% felt that teaching time had increased.

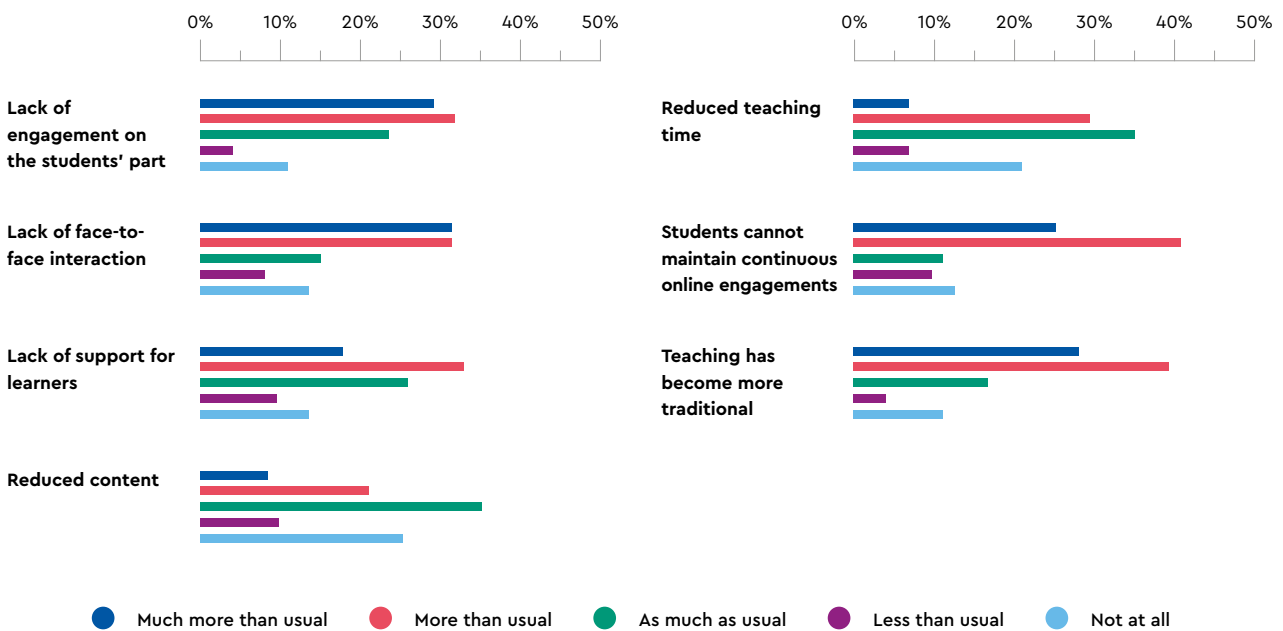


Figure 5.8: Concerns about online learning compared to learning during 'normal times'



Figure 5.9 illustrates the responses of pre-service student teachers about their views concerning the overall quality of learning as this was mediated through the quality of lecturing provision. Results are mixed and slightly more than a third of respondents thought that the quality of their learning was better than pre-COVID (37%). Thus, despite the respondents having mixed reactions to this question, the quality of learning was considered much higher by 5.5% and quite higher by 31.5%. Around a third thought their learning was in keeping with the quality of their learning pre-COVID (32.9%). More than a quarter (30.2%) thought that the quality of their learning was poorer in comparison to pre-pandemic times.

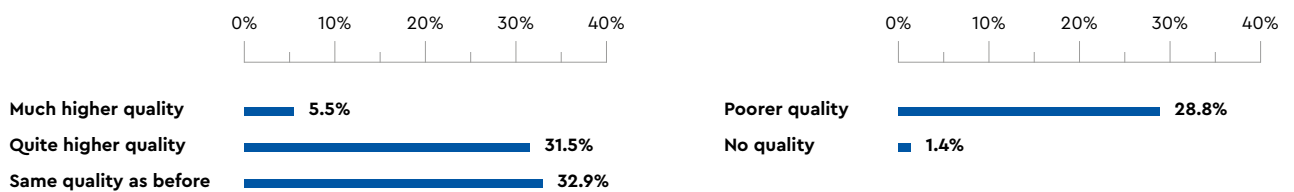


Figure 5.9: Views on the quality of learning during COVID-19 times

As shown in Figure 5.9 there is a tie between quality that is regarded to be quite higher, same quality and poorer quality, at roughly 30% each. This may be indicative of the need for lecturers to have a wider repertoire of pedagogical strategies and the possibility of provision of blended modes of teaching and learning in a bid to meet the needs of *all* students.

Feeling more comfortable learning from home was also mentioned by three participants, with one participant stating that, **'I can work more comfortably with documents near me on my desk while jotting down notes related to lectures... easier than on campus because of small desks'** (Respondent 20). The availability of the chat option to interact through writing comments or questions to the whole group or to the lecturer was helpful if they felt shy and did not feel at ease speaking up in front of the whole group.

Some student teachers were appreciative of the support extended by lecturers during synchronous online sessions, and appreciated, **'...when the lecturer was engaging, understanding and spoke to us about the situation rather than only the lecture itself'** (Respondent 51). Others listed that they were motivated due to a better use of their time, frequent breaks, lack of distractions, and sharing work with course mates.

The open-ended responses to the question pointed to students' need to be involved in their learning process. Breakout rooms seem to have empowered more students to take part and to be given a voice during synchronous sessions.

5.1.2 Learning Spaces

While learning from home during the pandemic (Figure 5.11), the majority (84.1%) reported having the 'necessary devices to study' and follow their courses remotely, having 'natural light' in the space they use to study (66.6%) and 'enough space for different work/study activities' (66.7%) and the availability of 'undisturbed space' (58.7%). Only 28% reported that they had 'access to outdoor spaces' where they could study or work. Despite this, a number of respondents lacked or did not have constant access to enough space for the different activities for work/study (sometimes, 25.4% and never, 7.9%).

Internet connectivity was also an issue for 39.7% of respondents and 8% rarely or never had the 'necessary devices' they needed to follow their studies. Moreover, 12.6% reported lack of sufficient 'natural light' and more than half of the respondents experienced lack of 'access to outdoor spaces for study or work' (31.7%, never and 23.8%, rarely). Most did not have 'a residence other than their home' where they could go to spend time to study/work (39.7% 'never' and 23.8% 'rarely').

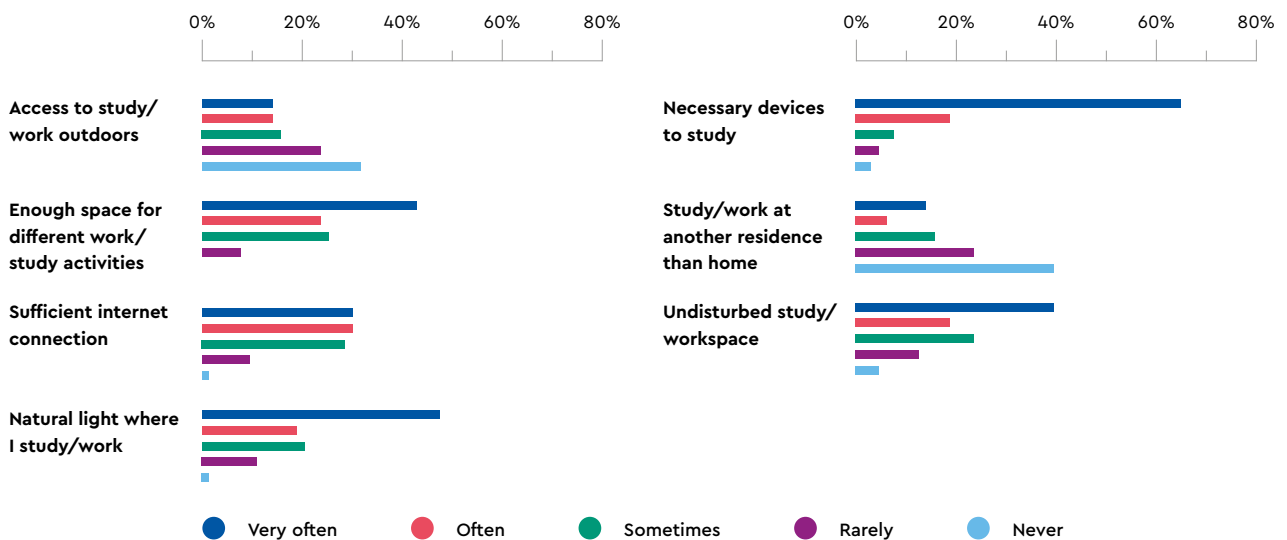


Figure 5.11: Access to facilities to support learning from home

As shown in Figure 5.12, the effect of different spaces brought about by the pandemic mitigation measures on the well-being of participants was predominantly negative. 39.1% reported that learning mainly online had a negative impact on their well-being. On the other hand, 35.9% reported a positive impact due to learning mainly online, whilst 25% felt that this made no difference to their well-being.

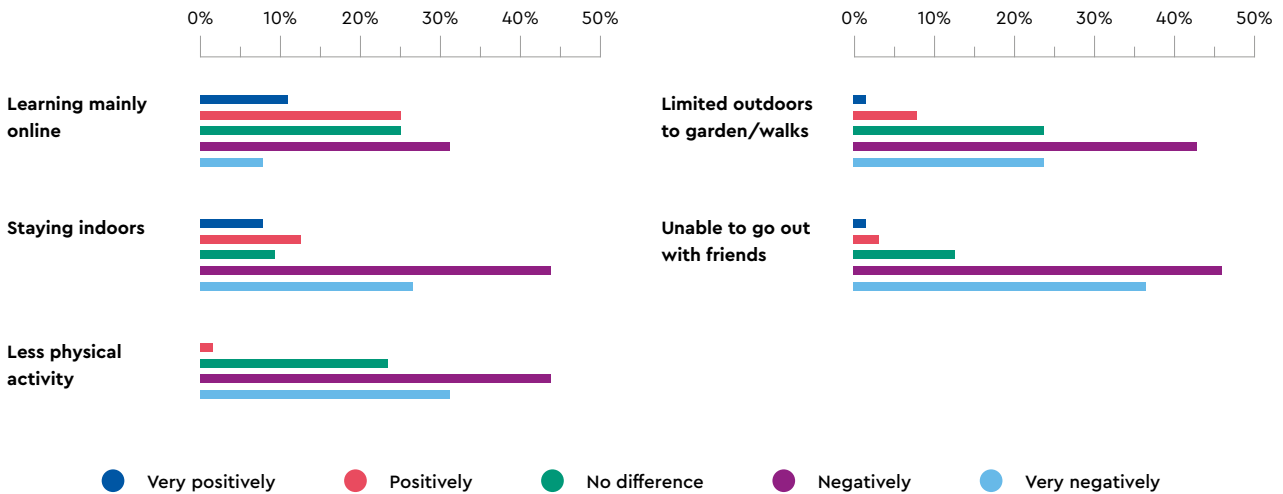


Figure 5.12: Pre-service teachers' views about the effect of spaces on their well-being

Overall, a negative impact was experienced due to being 'unable to go out with friends' (82.5%); 'less physical activity' (75.1%); 'staying indoors' (70.1%); and 'limited access to outdoors, gardens or walks' (66.7%). This is indicative of the need for human beings to connect with others and with nature. The link between being able to move freely and make choices and overall well-being is strong here.

Figure 5.13 illustrates the learning modalities the student teachers experienced while learning remotely during the pandemic. Video-conferencing (93.8%) and Learning Platforms (92.2%) were by far the most frequently experienced online modes by the participants during COVID-19. The use of 'blogs' and 'PowerPoint with voice-over' and 'shooting and editing filmed tasks' were marked as less frequently or never used. 'Personal Facebook pages', 'platforms and portals for teaching and learning', and 'PowerPoint with notes' had a wider spread of responses.

This may suggest that maybe lecturers were not yet confident enough in adopting different modalities and thus resorted to the same modalities once they gained experience and competence using Zoom and VLE.

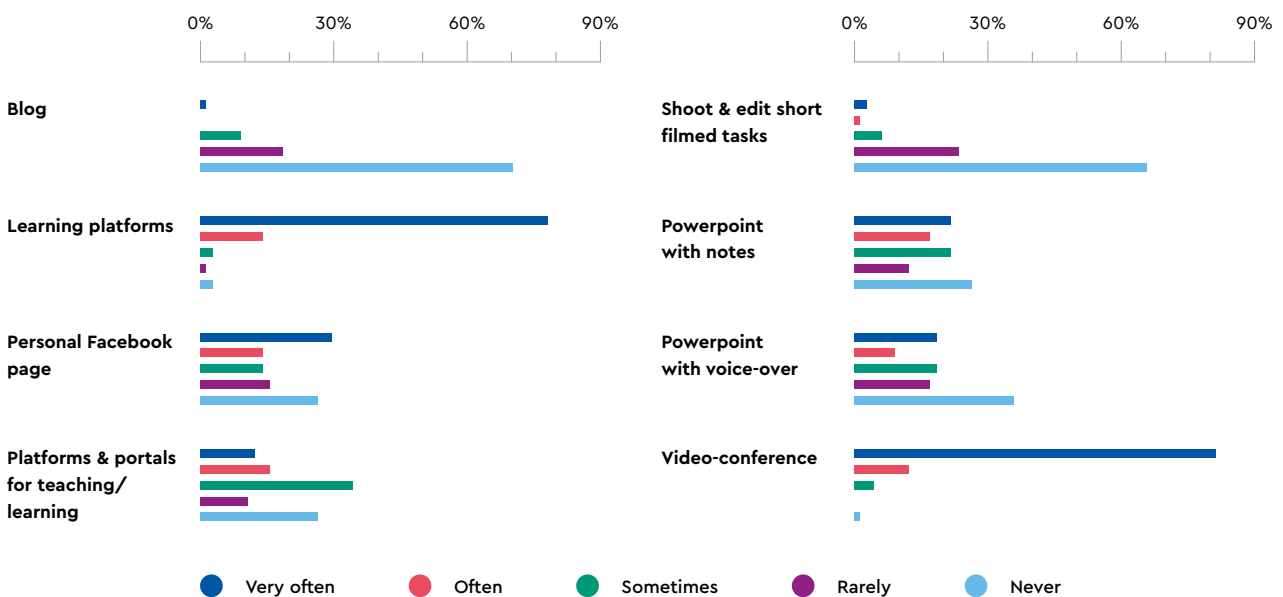


Figure 5.13: Modalities used to learn/work during COVID-19 times

Participants provided varied responses when asked how much of the given learning spaces or modes they would like to retain on returning to post-pandemic normal times. Figure 5.14 shows the spread of these divergent views across the learning spaces of blended, face-to-face and online modes. 54.7%, indicated that they would prefer to retain a blended approach to their university studies.

The option for a 'blended approach' is further reinforced through the other two clusters of bars, where the option of retaining some face-to-face lectures and online learning is also evident. 46% of student teachers reported they would prefer to revert to learning exclusively through 'face-to-face in lecture rooms' (always, 27% and quite often, 19%), whilst slightly more than a quarter of the respondents (26.9%) indicated that they would opt to retain 'online learning'. It is interesting to note that 4.8% would choose to have no 'face-to-face' lectures at all.

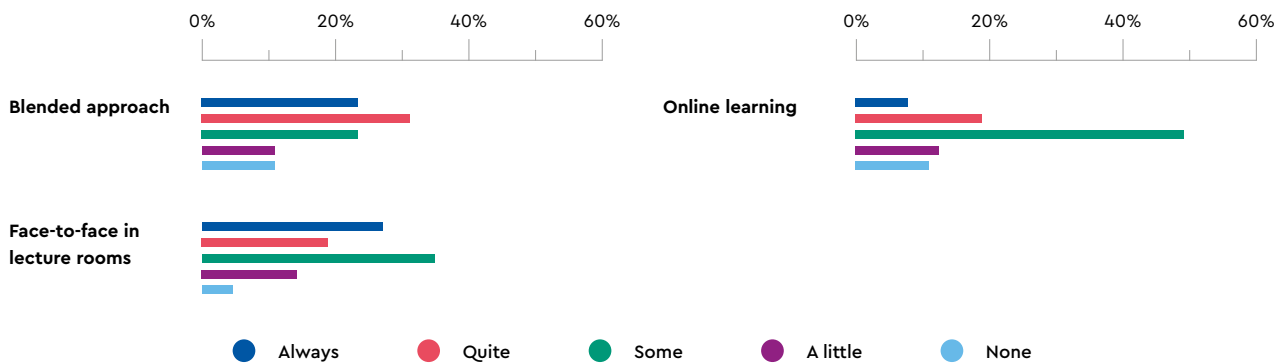


Figure 5.14: Learning spaces/modes to retain on returning to 'normal life'

5.1.3 Well-being and Relationships

During the COVID-19 lockdown, as illustrated in Figure 5.15, almost three quarters of respondents (73.3%) felt that they 'found meaningful ways to stay connected with family and friends'. Half of the students felt 'happy having more time to study at home' (54.9%) and were 'able to switch off and rest' (51.6%). On the other hand, over half of the respondents felt 'stressed and out of control' (very often, 21% and often, 34%). Responses show a range on the five-point scale of responses about whether participants were able to 'bounce back as quickly as they normally would' after a set-back, with 38.7% who reported they managed, 32.3% who did not, and 29% to whom it made no difference.

It is noteworthy that 38.8% 'felt negative towards [their] studies' during this period. With regards to productivity during COVID times, 45.1% felt that they were 'more productive', whilst 21% reported that it made no difference. The majority, 56.4%, claimed that they 'felt confident learning via online technology', whereas 29% disagreed.



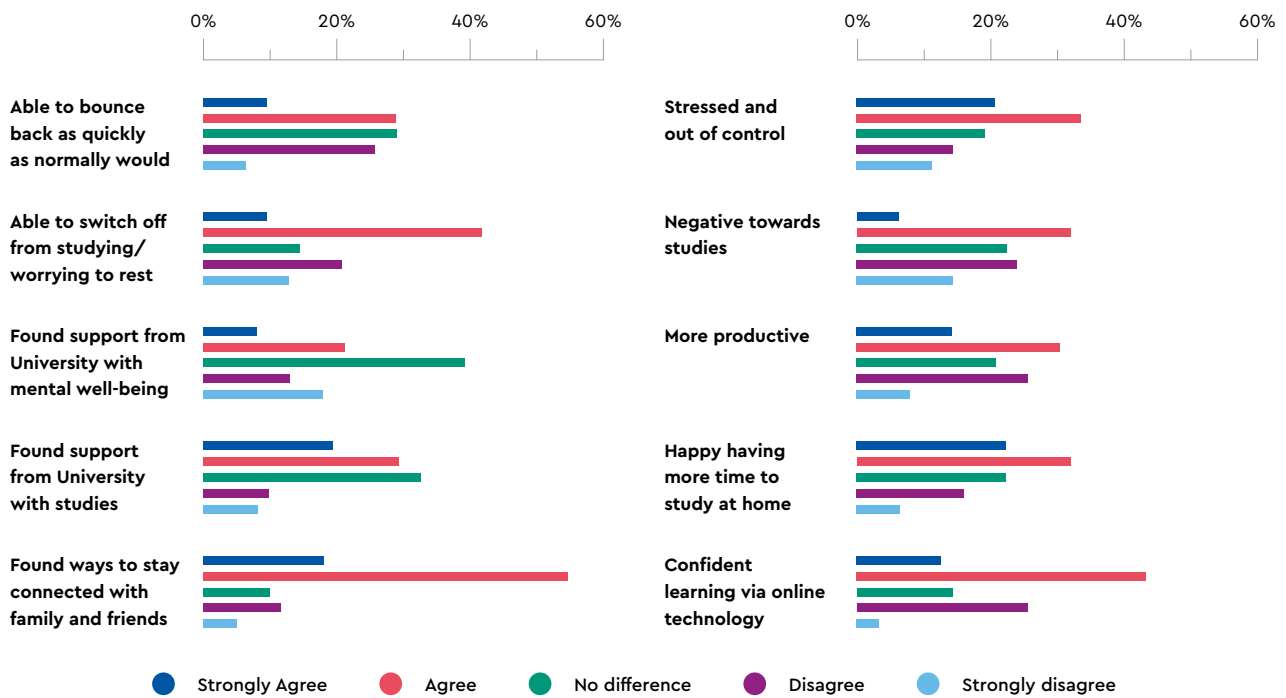


Figure 5.15: Well-being during COVID-19 times

Almost half of the respondents indicated that they ‘found support from university with their studies’ (49.2%), however, it is of concern that only 29.5% claimed that they ‘found support from university in relation to their mental well-being’. These results seem to point towards a situation where university students felt more supported by university in their studies but much less in issues related to their mental health and well-being.

Figure 5.16 presents data about how much time the participants spent daily on the listed activities as compared to the time spent pre-COVID. The majority of respondents spent much more time than before the pandemic with their ‘family’ (71%) and following ‘online lectures and doing related academic work’ (59.7%). ‘Chatting and socialising with friends online’ also increased for more than half of the respondents (51.7%).

It is interesting to note that 40.3% indicated that they now had more time for ‘leisure and hobby activities’, 35.5% reported less time and 24.2% said that they experienced no change in the time they allocated to such activities. Similar responses were given for the question about physical exercise, as 35.5% found more time, 40.4% reported less time, and 24.2% said this remained the same as pre-pandemic.



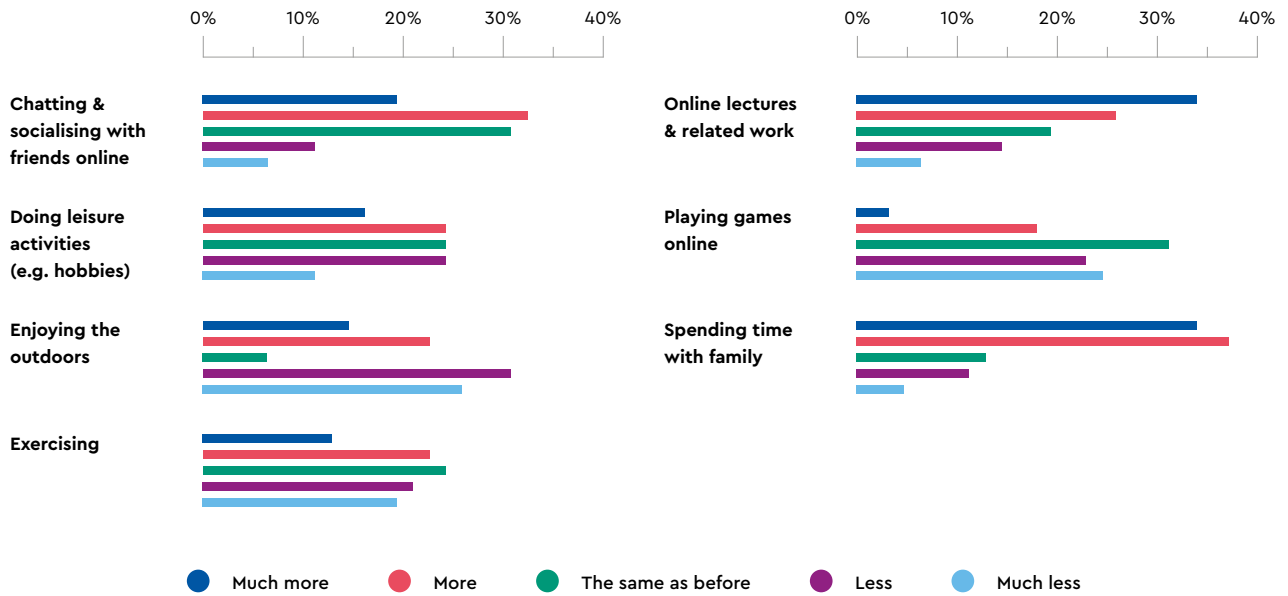


Figure 5.16: Daily activity duration during the pandemic compared to pre-pandemic

'Enjoying the outdoors' remained constant for only 6.5%, whilst it decreased for 56.4% and increased for 37.1%. Time for 'playing games online' was the daily activity that remained the most constant, with 31.1% saying their time dedicated to this remained the same, whilst it increased for 21.3%, but decreased for 47.6% of respondents compared to before the pandemic.

Figure 5.17 indicates clearly that the reported levels of happiness and satisfaction with life of the student teachers who participated in this study do not appear to have been impacted drastically. Almost a quarter of participants (24.6%) reported that they felt that their happiness has not changed either way, and almost a third (31.7%) reported that their satisfaction with life remained the same as before. The COVID-19 lockdown negatively affected the happiness of 34.5%, and the satisfaction with life of 28.3% of the student teachers.

On the other hand, it is interesting to note that about 40% claimed that they felt happier and more satisfied with their lives as compared to pre-pandemic times.

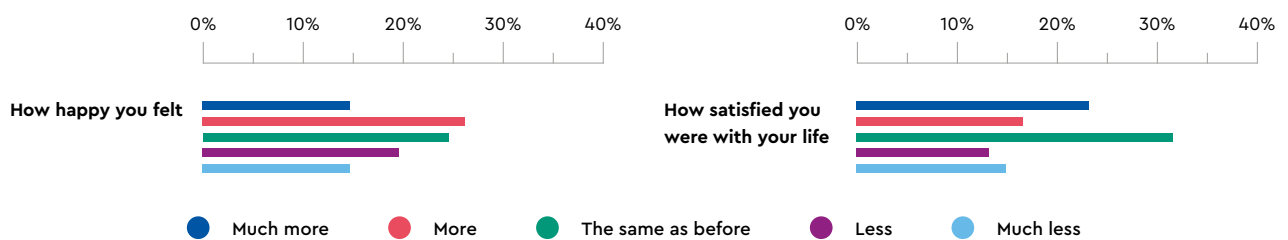


Figure 5.17: Happiness and satisfaction compared to pre-pandemic times

Numerous features of learning remotely from home during the pandemic were experienced positively by a number of pre-service teachers as shown in Figure 5.18. These included aspects related to using their time, such as, 'not having to think about what to wear' to university (79.1%), 'less stress to get ready early' in the morning (79%), as well as 'less time travelling' to/from university (79%). Remote learning also allowed for 'more family time' (69.4%) and 'eating more regularly and healthily at home' (56.4%). Moreover, for those student teachers who are parents, 'not having to worry about going to university if their child/ren is ill' was another advantage (26.7%). Participants reported that when learning remotely, they experienced 'more communication with lecturers' (25.8%) and had the opportunity to work more independently ('work on my own', 63.9%).

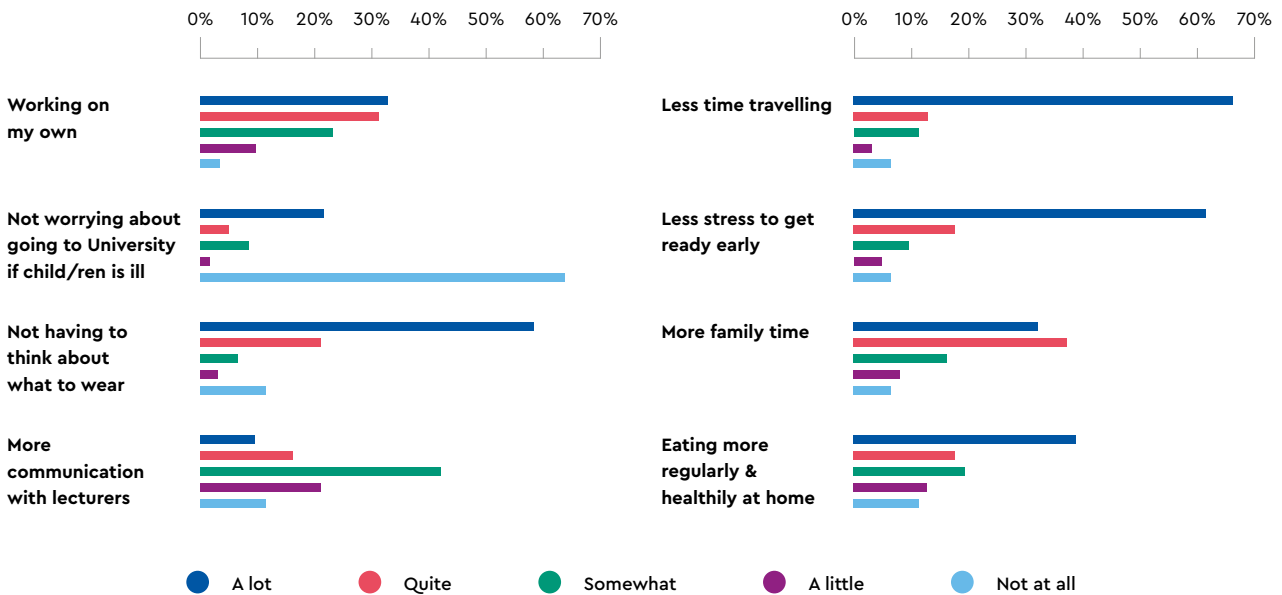


Figure 5.18: Advantages of learning remotely during the pandemic

Despite the clear advantages reported in Figure 5.18, respondents also experienced disadvantages of learning remotely from home as shown in Figure 5.19.

The most common disadvantages of learning remotely indicated by the respondents included 'strained eyes due to long hours of online learning' (77.4%), 'missing interacting face-to-face with their fellow students' (75.8%), and 'stress due to dealing with many changes at once' (72.5.4%). 'Establishing a study/work-life balance' was also experienced as a challenge by 72% of the participants.

Other disadvantages experienced by more than a quarter of participants also reflected the challenges they faced in following lectures due to 'distractions at home', 'lacking a quiet area' to follow lectures at home, and 'family interruptions during online lectures'. Others 'missed hanging out at the canteen' with friends or 'studying in the library'.

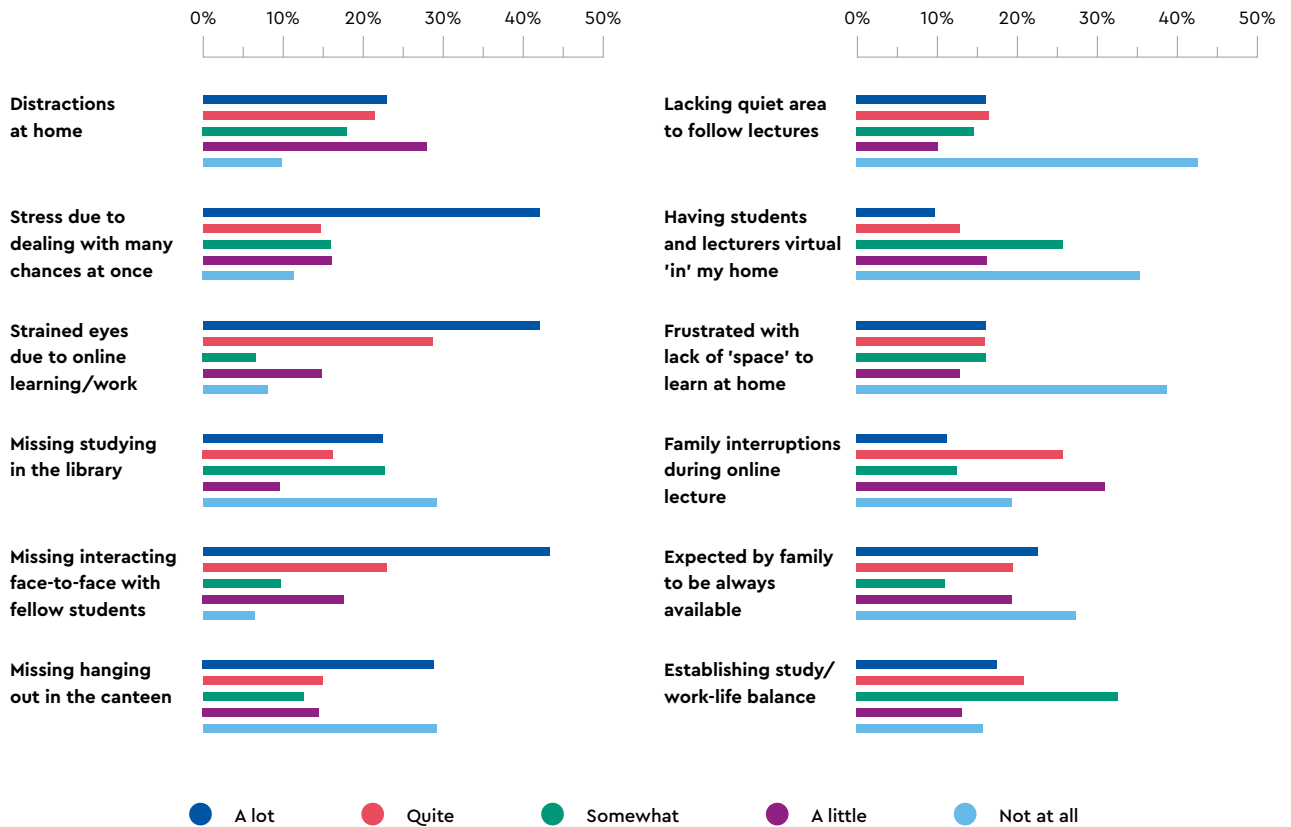


Figure 5.19: Disadvantages of learning remotely during the pandemic

5.1.4 Any additional comments

The last question in this section was open-ended and invited any additional or final comments from the respondents. As a result, these entries (n=15) were quite varied and are rendered in the word cloud below.



Figure 5.20 Word Cloud: Any Additional or Final Comments

Some respondents highlighted the advantages and disadvantages brought to the fore by remote learning during the pandemic as follows:

I don't think online learning for us University students was too bad, at least for me it wasn't. I feel that lecture-wise I got the same level of knowledge I would have got in a physical lecture hall. I do however feel that the interaction with the lecturer and with fellow colleagues was hindered simply because it couldn't really take place. On the other hand, if I was to teach online at the moment, primary children or younger, I wouldn't be too happy about it as I want to be in the physical classroom and have that interaction and "normal" teaching life, so it isn't easy for many I'm sure. (Respondent 3)

And another respondent also mentioned that despite the challenge to understand and adapt to online lectures, this mode generated a sense of well-being and security during uncertain times and was very time efficient.

The past months taught me how to be a more flexible learner. Whilst I am experiencing some difficulties to properly understand lectures which usually take place in the labs, this method of teaching saved me a lot of time and made me feel safe during these uncertainties. (Respondent 15)

A comment was related to the increased students' workload during this period, while another expressed that online teaching was teacher-centred. For some, learning remotely was a positive experience, helped with concentration, reduced anxiety, and led to more participation and learning. A suggestion was posed to keep online teaching as part of a 'mix' or blended mode of university teaching and learning once the pandemic is over, as quoted below:

Overall, I think that this way [learning remotely] was much more beneficial for me. I learnt more. My anxiety improved as I have some free time AT LAST. I also concentrate much more and participate much more during online lectures. I hope that they will still constitute part of the teaching and learning for the following years. I suggest a mix for later on. (Respondent 12)

Appreciation towards lecturers was also expressed by student teachers for the support offered during this time. The respondents were thankful for emails from lecturers asking about their well-being during the university closure and the time when lectures shifted online. Another participant held that lecturers were 'doing their best to keep us motivated to learn' and believed that staff had 'adapted very well to remote learning' (Respondent 15). On a more personal note one student teacher believed that, 'despite being a silent killer of many innocent souls', the COVID-19 pandemic offered a much-needed time of reflection and time to set priorities and look after oneself as follows:

...with the pandemic still present, I've come to enjoy family time even more than I ever did before and eat more home-cooked meals, compared to before... In the past few months, I feel like I rediscovered myself, my passions and talents, and started to take care of myself more than before ... (Respondent 8)

Thus, from the quotes yielded through the open-ended question, which was the last one in the questionnaire for students in initial teacher education, one can see how diverse the experiences and perceptions of student teachers were during the pandemic. Some respondents argued in favour and some against remote online teaching and learning. Others commented about lecturers' competence in using digital technologies or their interest in the well-being of the students. Life lessons learned during the pandemic featured too.

At this point, when the data collection of the first survey took place, the participants had experienced the pandemic from March 2020 to September 2020. The pandemic was experienced at times by having an opposing impact on the participants and their learning and well-being: for some this was positive while for others it tended to be more negative. It will be interesting to see how this is featured in the second survey after the passage of another year, that is by September 2021.

5.2 Results of the Second Survey – Cov-EM 2021

This section presents percentage figures for the study elements of teaching and learning including views about field placement, as well as, learning spaces and well-being and relationships. Again, it is useful to remember that the second questionnaire was completed by 68 respondents, the majority of pre-service teacher respondents were again female and that the average age of all respondents stood at 23.3 years. More detailed information about participants is available in Appendix A.

5.2.1 Teaching and Learning

As shown in Figure 5.21, with regards to remote learning/assessment methods adopted during the 2020-2021 academic year (Figure 5.18), a mixture of synchronous and asynchronous modes was adopted by lecturers - using different strategies to meet the needs of their students. The most commonly used were 'synchronous (live) online lectures' (96.3%), followed by 'assignments submitted online' (94.4%), 'asynchronous (recorded) online lectures' (88.9%), 'documents uploaded on VLE' (85.2%), 'online examinations using Wiseflow' (83.3%), 'online tasks on VLE' (79.6%) and 'group tutorials via Zoom/Microsoft Teams' (74.1%). 'Examination through in-person presence on campus' was noted to be the least adopted method during the academic year (1.9%).

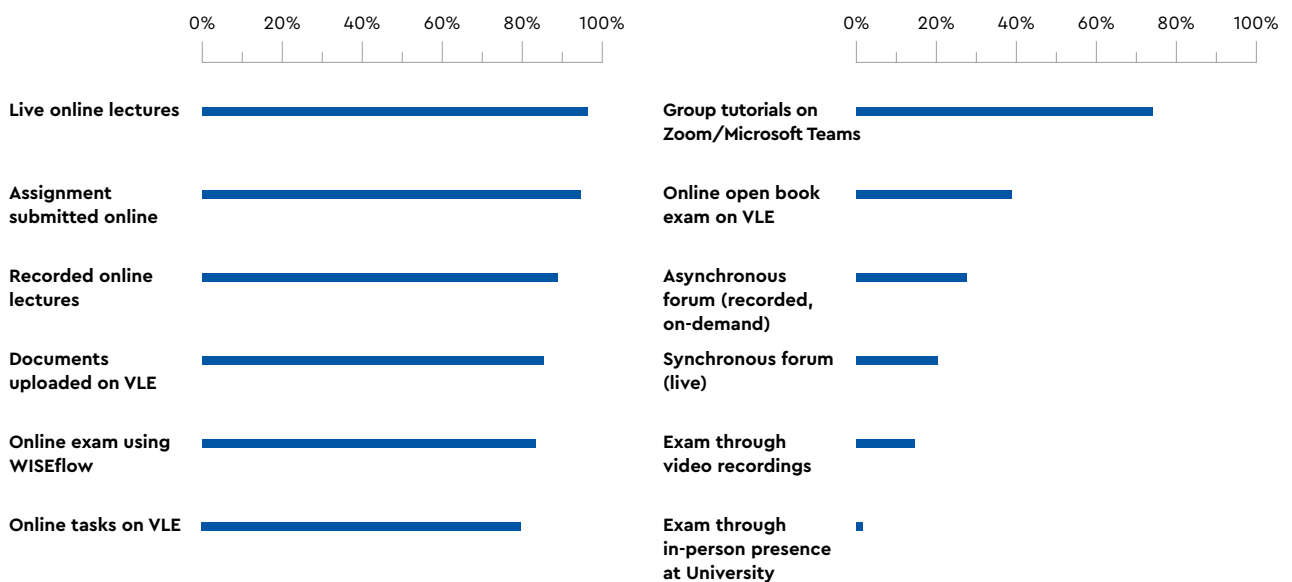


Figure 5.21: Learning and assessment methods adopted during academic year 2020–2021

During online lectures, 'take notes during lecture' was the most common activity reported by 77.8% of the participants (38.9%, always and 38.9%, often) (Figure 5.22). 37% of the participants 'sometimes' use the chat function to write comments about the lecture'. 81.5% of the 'students participated actively by engaging with lecturer/fellow students' to varying degrees (7.4%, always 27.8%, often and 46.3% sometimes), whereas 18.5% reported that they rarely (14.8%) or never (3.7%) did so.

The respondents were usually attentive during online lectures and stated that they 'never' (22.2%), or 'rarely' (37%), 'leave the lecture on and do something else' while appearing present. On the other hand, about a third (31.5%) reported that they 'sometimes' do something else during the lecture.

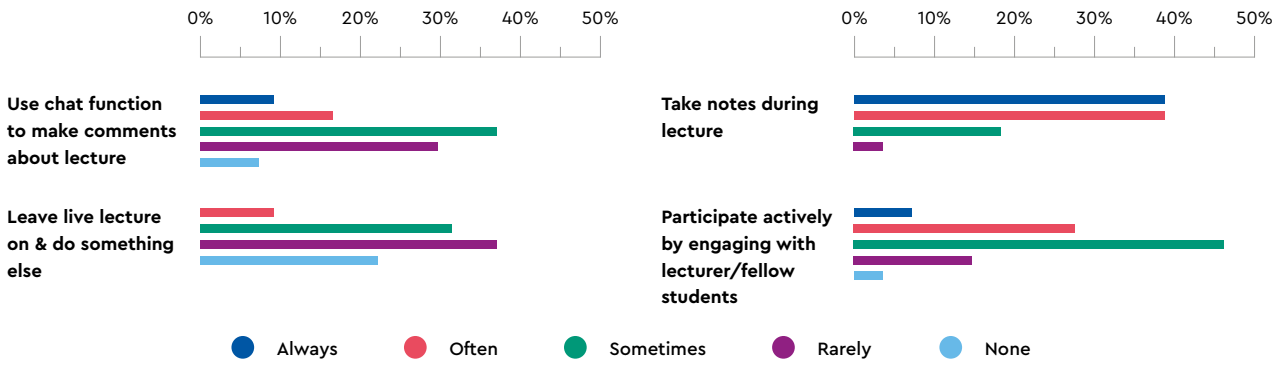


Figure 5.22: Engagement during live online lessons

When asked about modes of assessment employed (Figure 5.23), participants indicated that ‘presentations using PowerPoint, photos and project work’ were the most commonly used whilst learning remotely (81.5%). This was followed by ‘group work tasks submitted in digitised format’ (63%) and then ‘hard copies of assignments submitted to lecturers’ (55.6%). Half of the participants indicated that they were assessed through their ‘participation during [synchronous] live-online lectures and tutorials’. 92.5% received ‘marking and comments on work submitted via email’ (48.1%), or as Google Documents (44.4%). ‘Online timed tests/assessment’ were reported only by 38.9%, followed by ‘video recordings assessed by examiners on google drive’ were a mode of assessment for 35.2%. ‘Marking [one’s] own work online sessions’ and ‘oral/viva’ examinations were noted to be the least used form of assessment as reported by an equal amount of 11.1% participants respectively.

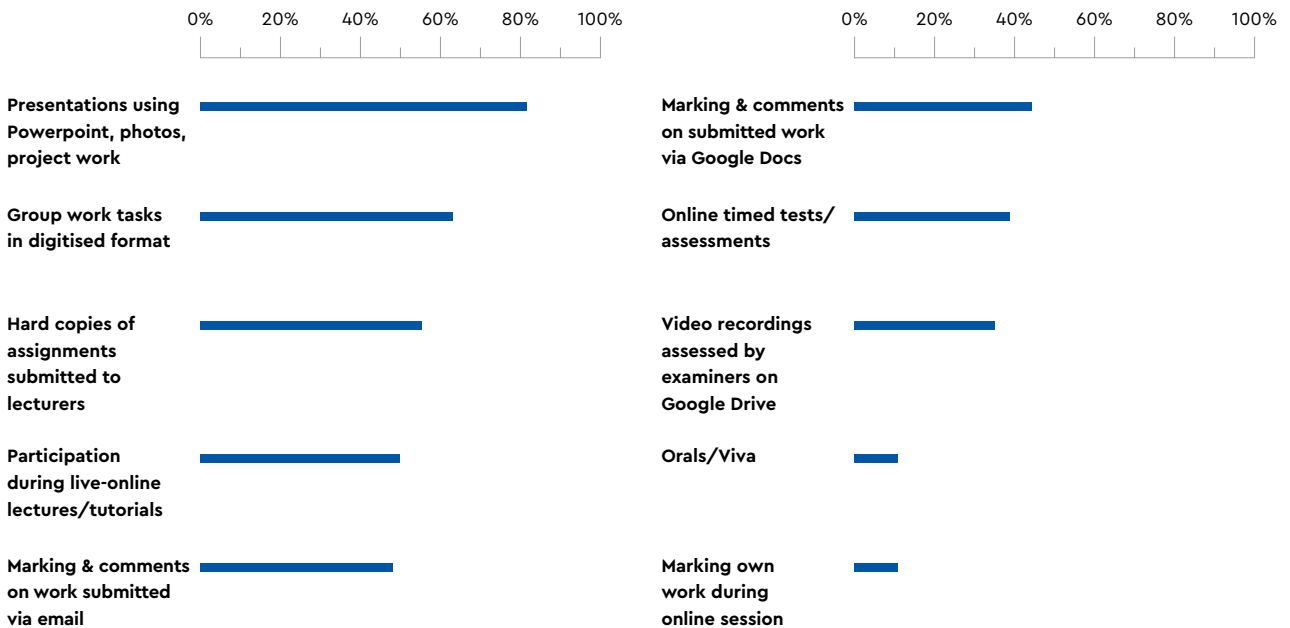


Figure 5.23: Assessment during remote learning

Participants were asked to rate the overall quality of learning provided during remote learning. 20.4% were very satisfied and 61.1% felt satisfied. The second highest rating was 29.6% of participants who opted to remain neutral in their reply to this question (Figure 5.24 below). Less than 10% reported that they were dissatisfied with the overall quality of this learning during the pandemic (unsatisfactory, 7.4% and very unsatisfactory, 1.9%).

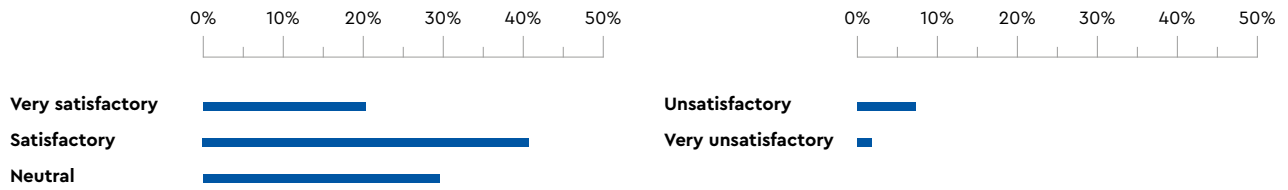


Figure 5.24: Satisfaction with quality of learning during the pandemic

5.2.1.1 When did you feel more motivated or engaged than usual?

44 participants responded to the open-ended question (S2, Q11) where they were invited to name ‘one online experience in which as learners they felt more motivated and engaged than usual’. The word cloud presented below (Figure 5.25) gives a visual indication of the most frequently used words in their response to this open-ended question.



Figure 5.20 Word Cloud: An online experience when pre-service educators felt more motivated and engaged than usual.

One participant appreciated participating actively during online lectures and expressed the following:

I cannot mention one specific online experience when I felt more motivated and engaged than usual, but I can surely say that when the lecturers used to involve the students in discussions... students are participating actively whilst also listening to multiple points of view about a subject. (Respondent 12)

Another preservice teacher respondent highlighted how group work was efficiently carried out in breakout rooms and meant that the group could dedicate their time to the task instead of meeting on campus.

When there were breakout rooms. I wished more time were given to these types of online experiences. I much prefer online group work than at university – because much more work can be done because less time was taken to travel to university. (Respondent 4)

Two participants mentioned activities that took place through online platforms such as Kahoot and Mentimeter. Others commented on feeling ‘more comfortable at home during recorded lectures’ and being well-aware of what will be discussed during the lecture allowed one ‘to prepare beforehand’ and understand better the presented concepts and arguments. Another respondent highlighted the advantages of active participation during synchronous lectures, while also pointing out advantages of recorded asynchronous lectures, as follows:

Personally I felt motivated and engaged when I was allowed to speak up during online lectures. I acted the same way I would have if it was a normal lecture at uni. Some lecturers had recorded sessions therefore you cannot participate but it also had its advantages as if you do not understand you can rewind the recording and listen to it again. Pros and cons for everything I guess! (Respondent 16)

The same participant also proceeded to mention group work and the positive impact of collaborative work when university shifted online: 'The work in groups for the assignments helped so much' because, 'at least you can talk to a friend while still getting things (work) done' (Respondent 16). Another participant also pointed out that this experience held advantages in view of time management and well-being:

It provides much more time for studying and working on assignments as no time is wasted on travelling from home to university also offers students more personal time which is essential to keep focused and not getting too stressed (rep 35)

Despite these positive comments, there were participants who claimed that they did not feel very motivated this year. One respondent stated this clearly:

Unfortunately, provided the circumstances, there were not many opportunities in which I felt motivated and engaged in my studies and I am sure that many of my classmates and University students can relate to this. I feel like we did not get the University experience that graduates prior to us talk about. This year, although I felt happy with my course decision, I felt it was more about getting through the year and at least achieving passing grades, rather than enjoying the learning experiences and environment that the University has to offer. (Respondent 18)

The participants also appreciated when they were supported by lecturers who spoke to them about the situation they were living through and found time to connect as quotes below:

A particular lecturer made sure to ask us how we are and connected to us. It felt more like a conversation rather than a lecture at times as she was able to ground us and relate to theory and practice. (Respondent 42)

As one can see the open-ended question yielded varied responses with most comments centred on participation during interactive lessons where they felt they were 'active participants in their own learning' through being 'engaged in discussions' (n=11), small group tutorials (n=10) and when interacting in breakout rooms (n=7) and having the lecturer ask questions individually as being engaging.

This question was posed to explore the experiences of the student teacher respondents about one online event they felt was 'more motivating or engaging than usual'. It yielded a diverse collection of responses. A number of respondents mentioned the beneficial effect of remote learning on their well-being in view of better time management and more time to dedicate to their well-being and studies.

Students seem to prefer breakout rooms, discussions and the use of group tasks as well as the use of digital tools such as Kahoot and Mentimeter. Asynchronous/recorded modes were also favoured for the flexibility they offer in terms of viewing them according to their own schedule, however they pointed out that recorded sessions did not encourage participation amongst students or communication with lecturers. This was counteracted with comments that valued having asynchronous group tasks or group assignments where learning happened in a social context.

Some experienced a negative impact on their wellness and mental health and were upset that they did not experience the university life on campus that they were looking forward to. Interestingly, the participants who experienced the COVID-19 pandemic more negatively chose to reply to this open-ended question that was intended to capture the positive experiences or events. This may indicate their need to share their experiences and highlight how challenging these times were for them.

5.2.2 School Placements and Teaching Practice

This second survey featured a new section with questions about school placements, which included field work, classroom observations and/or teaching practice placements (TP). The restrictions placed on schools to reduce or contain the spread of contagion during the pandemic meant that field work, school placements and TP were severely impacted. This, in turn, led to a decision by the Faculty of Education and the Directorate for Education, to postpone the practicum for some of the programmes for year groups (refer to section 3.2 for more information).

Most participants (62.3%) responded that they were given the opportunity to do school placement observations and/or teaching practice. They reported an average of 23 days of practicum and 0.24 of missed days. However, 37.7% replied that they 'did not experience a practicum or observation sessions' as these were postponed or cancelled due to restrictions and mitigation measures in place in schools.

As shown in Figure 5.26, 93.3% of respondents experienced 'TP through physical presence in class'. This entailed assessment of the practicum took place through documentation being shared on Google Drive and video recordings of activities or lessons uploaded for examiners to view online. Almost a quarter responded that they had the opportunity to undertake their weekly fieldwork through, 'regular class observations as part of the School Experience study unit or tutorials' (23.3%), whilst 3.3% held 'online class observations through video calls' (via MS Teams or Zoom).

Some student teachers (16.7%) were assessed through submitting asynchronous 'TP video recordings of some lessons to send to examiners', whereby they would video record activities or lessons that they prepared held without pupil participation. It is interesting to note that 10% of the participants experienced 'TP through remote means [synchronous] for learners at home' during school closures or when the whole class was quarantined.

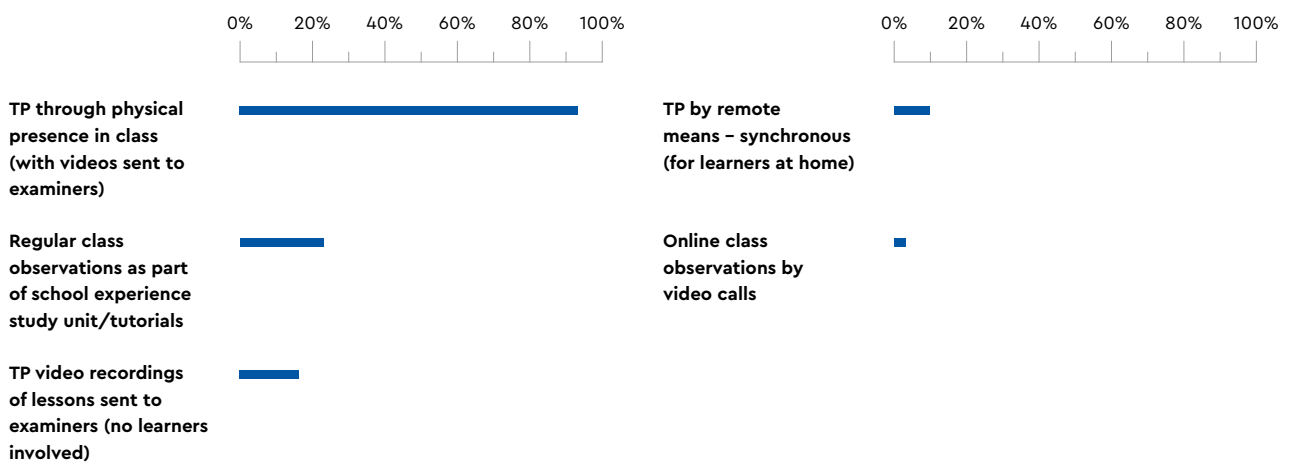


Figure 5.26: Modes of assessment experienced during fieldwork or TP

Participants were asked about which modes of online learning they believed most effective to cater for children's learning (Figure 5.27). The majority of respondents (66.7%) were clear in their strong preference for 'synchronous' modes to effectively cater for children's online learning (strongly agree, 40% and agree, 26.7%). This was followed by a 'blended approach', chosen by 36.7% of respondents (strongly agree, 3.3% and agree 33.4%).

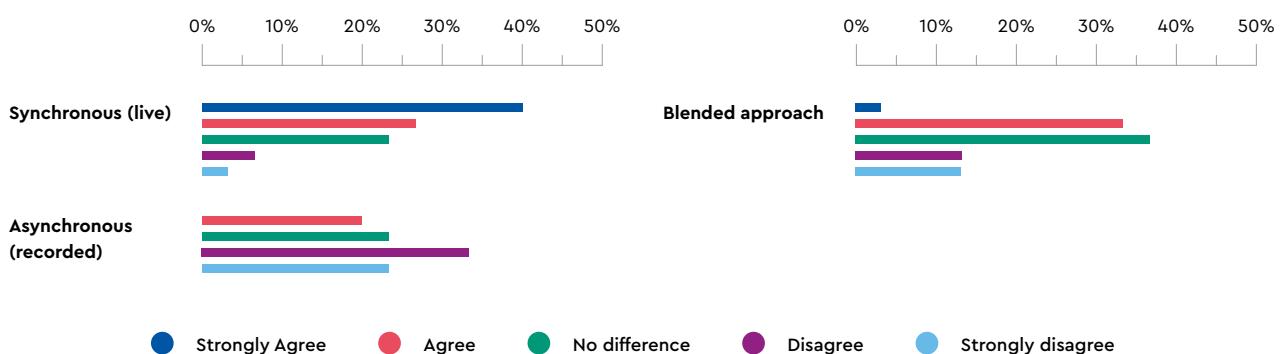


Figure 5.27: Most effective modes of online learning to cater for children's learning

Since our lectures were mostly provided to us online, at first TP was a little bit of a challenge, having to portray all of our knowledge into physical practice. I learned how to better adapt to given circumstances and always finding a means to better myself, and my abilities, for those around me, in this case, the children in my TP classroom (Respondent 11)

Other respondents felt that they learnt more about time management, how to 'adopt different fun teaching methods while maintaining social distance', learnt 'new ways to work/deal with children', and 'how to deal with professional relationships'. It is worth noting that during teaching practice, due to pandemic mitigation measures student teachers were limited in the activities they could implement. One participant felt this strongly as follows,

Comparing this year's TP and last years, I can say that there was minimal experience gained as a student teacher. (Respondent 16).

However, despite the restrictions being imposed due to the pandemic, another respondent learnt '**How to adopt different fun teaching methods, in the midst of a pandemic**' (Respondent 1). A student teacher respondent reflected on meeting the diverse needs of learners and in diverse situations was challenging, as follows:

...how challenging it is to cater for the diverse needs of the classroom as well as for the diverse situations that may occur [such as] COVID-19, remote learning and adaptation for children. (Respondent 3).

Another participant mentioned that during TP they learnt, '**how to carry out online lessons using various digital resources**' (Respondent 13). Another comment was that:

TP made me further acknowledge the impact a teacher has on a child's upbringing, and also opened my eyes in relation to the amount of work and dedication TP entails. (Respondent 7).

One respondent also emphasised that '**...not all examiners grade under the same criteria and this is quite challenging for the students to understand what that particular examiner wants from them**' (Respondent 18). Personal resilience was also featured in the response of a student teacher who had experienced TP who wrote that she learnt, '**How to be more flexible and adapt to new situations**' (Respondent 21). This was further evident in another positive response, '**That if I managed to carry out my TP during a pandemic - with all the restrictions - I can do it on any other day!**' (Respondent 9).

The experiences and learning of pre-service educators during their practicum ranged from:

- becoming proficient in using new digital skills for teaching and learning in schools and their remote learning as university students;
- planning learning activities to cater to children's needs in such a challenging scenario;
- dealing with issues of TP assessment; and
- recognising their resilience and flexibility in the face of the COVID-19 pandemic.

Therefore, it is clear from the selection of responses above that the student teachers experienced a very different classroom situation than they would have in a pre-pandemic situation.

5.2.3 Learning Spaces

When participants were asked about the spaces, they had access to during the COVID-19 remote learning time (Fig 5.30), the large majority of participants (95.9%) reported that they had access to the 'necessary devices to study' (e.g. laptop) and sufficient internet connection (89.8%).

Almost three-quarters of respondents reported that they had 'natural light where I study/work' (73.5%), and 'undisturbed study space' in their home (71.4%). 59.2% had 'enough space for the different study or university work activities' they undertook. On the other hand, availability of space to 'access to study or work outdoors' was reported by less than half of the participants (42.9%). Almost a quarter (24.5%) had the option of 'study/work from 'a residence other than home'.

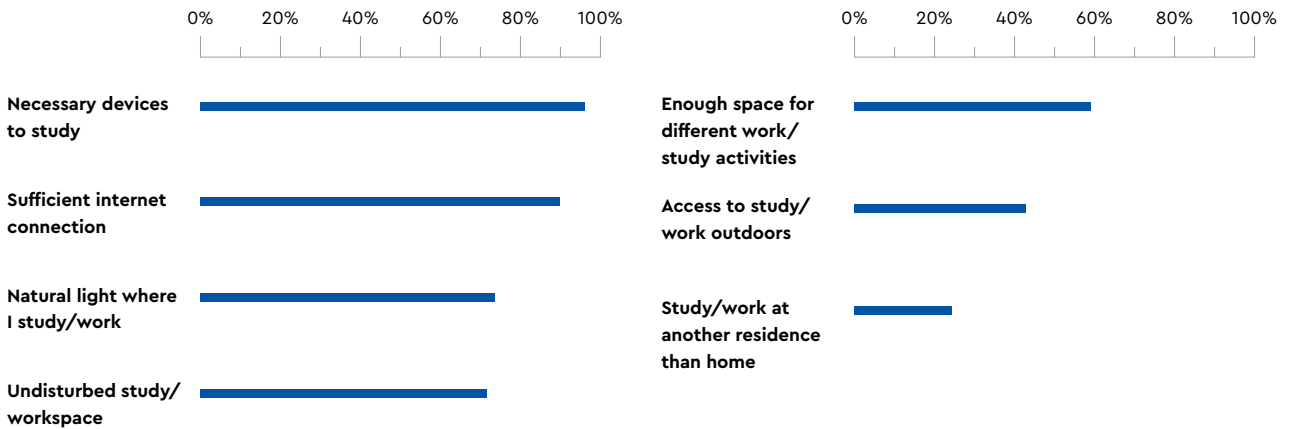


Figure 5.30: Access to learning spaces to support learning from home

As shown in Figure 5.31, some aspects related to physical or social spaces were indicated by participants as having a negative impact on their well-being. ‘Unable to go out with friends’ was chosen by 77.6% as having a negative effect on their well-being (very negatively, 18.4% and negatively, 59.2%). This was followed by negative impacts due to having to ‘stay indoors’ (very negatively, 14.3% negatively, 46.9% and cumulatively, 61.2%), ‘less physical activity’ (very negatively, 12.2% and negatively, 42.9% and cumulatively, 55.1%), and ‘limited outdoor access to gardens or walks’ (very negatively, 6.1% and negatively, 44.9% and cumulatively, 51%).

Mixed reactions were reported about the effect of ‘learning mainly online’ on their well-being, with 57.2% holding that this had a positive effect, whilst 32.6% felt it had a negative impact on their well-being.

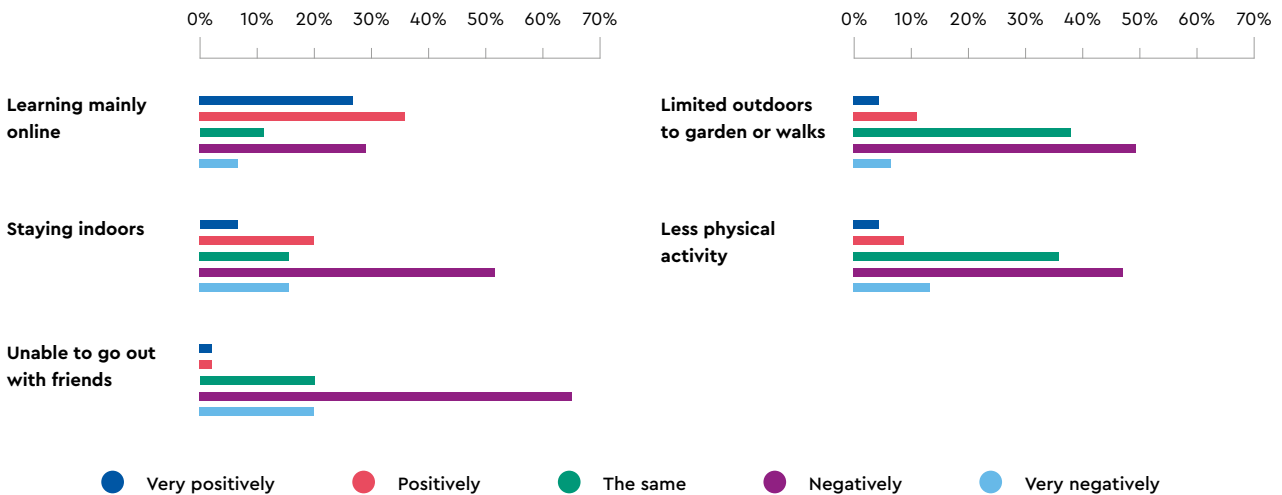


Figure 5.31: Effect of learning spaces on well-being

When asked which mode of learning they would prefer to retain post-pandemic (Fig 5.32), the majority, 67.3%, were in favour of retaining a blended approach. 32.7% were interested in retaining online learning, whilst only 22.4% would opt for face-to-face sessions in lecture rooms.

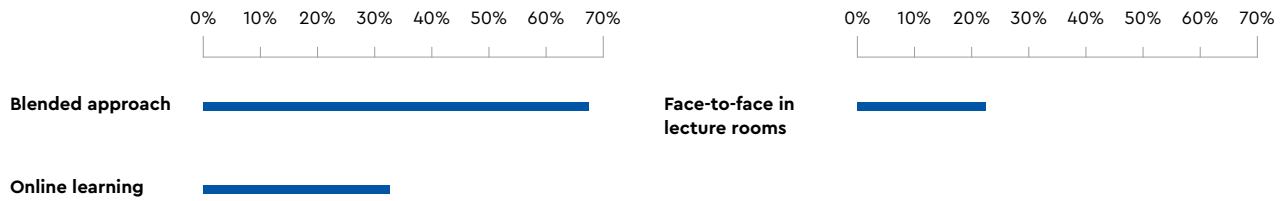


Figure 5.32: Learning modes to retain in post-pandemic times

From being an emergency measure put in place at the beginning of educational institutions' closures due to the pandemic, online and blended learning modes have garnered a positive response and the majority of the student teachers in this study would like to see some elements retained in post-pandemic times.

5.2.4 Well-being and Relationships

When asked to compare the current academic year (2020-2021) with the previous one (2019-2020) (Figure 5.33), participants felt no change to their levels of happiness and satisfaction with life during the 2020-2021 year (at 31.9% and 42.6% respectively). On the other hand, 34.1% of the respondents reported that they felt happier during 2020-2021 than they felt in comparison to the previous year (better, 27.7% and much better, 6.4%). 23.3% felt more 'satisfied with their life' than they did the previous year (better, 21.3% and much better, 2.1%)

However, it was noted that 51.1%, felt that their stress had increased (worse, 27.7% and much worse, 23.4%) during the year 2020-2021

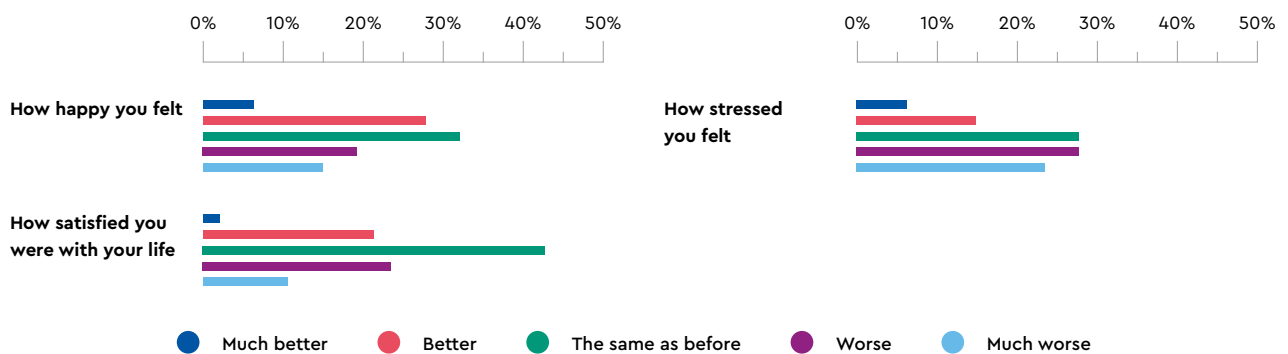


Figure 5.33: Happiness, satisfaction and stress in 2020-2021 compared to 2019-2020

Figure 5.34, captures the 'feelings due to studying during the pandemic' that the participants experienced. The statement selected by 78.7% of the participants was, 'Happy that I managed to survive the year despite all the challenges'. This was followed by 53.2% who held that, 'I feel that I did a good job'. Over a quarter of participants (27.7%) believed that they had 'learnt a lot this year'.

It is clear that the pandemic has impacted the mental health of many of the participants, and it should be noted that the third most selected response indicated that 31.9% felt that their 'mental health has suffered'. In fact, this is further illustrated through the response of 23.4% participants who felt 'exhausted', while 21.3% felt 'overwhelmed and considered resigning' from their course. However, of note is that while some considered resigning, others felt empowered as educators (19.1%) and believed that they had 'strengthened my levels of resilience' (14.9%). Moreover, 4.3% believe that the pandemic has 'put a serious strain on family life', with only 2.1% reporting a 'stronger relationship with family'.

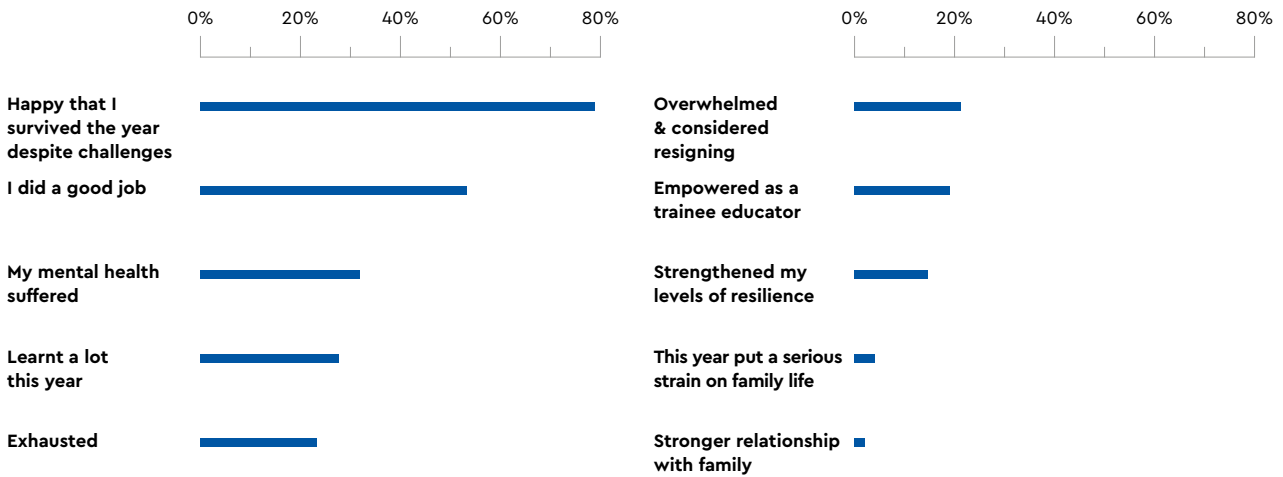


Figure 5.34: Feelings due to studying during the pandemic

Five participants chose to add their own comments in the field that invited 'other' responses and included entries such as: 'I learnt more because I was less stressed', 'Disappointed that I missed out on certain experiences', 'I feared failing...I was finding it very difficult to remain focused during lectures', and 'I did surprisingly well consider the levels of anxiety and stress experienced'

Participants were invited to tick three options as to who provided them with support during the 2020-2021 academic year (Figure 5.35). Participants felt that their 'own family and friends' (89.4%) and 'fellow university students' (83%) provided them with the most support during the academic year. This was followed by university 'lecturers' who were identified as the third highest source of support by 55.3%.

For the participants who had a school field placement, the teaching practice 'class teacher' and the school-based fieldwork 'mentor' (46.8%) were also perceived as offering support. It was noted that 'students' (14.9%) and 'parent/s of students' (10.6%) were perceived as offering less support.

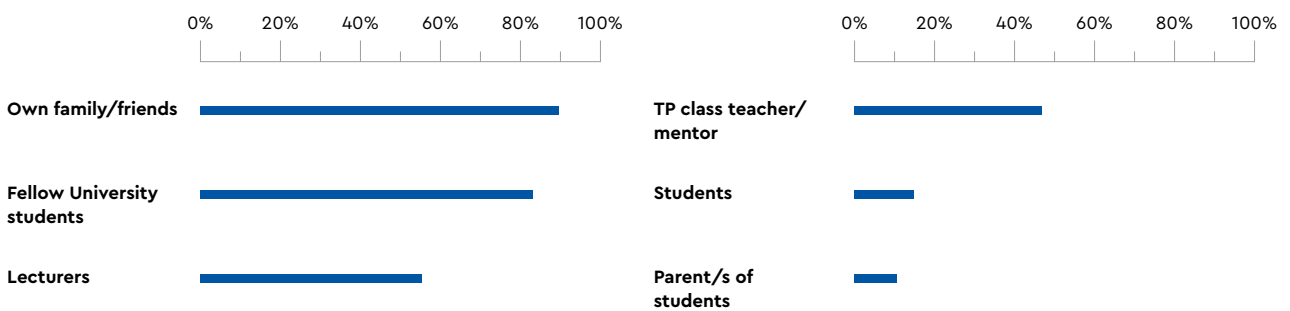


Figure 5.35: Support provided during the 2020-2021 academic year

5.2.4.1 What was your experience of learning as a university student during the past 18 months of the pandemic?

The open-ended question (Figure 5.36, Q24) at the end of the section dedicated to well-being and relationships, yielded 43 responses. The word cloud highlights some of the main points mentioned by the participants.

Very different but positive as well. I am still surprised by the fact that we managed to study for 1.5 years online already, and looking back I still managed to graduate from home and finished the 1st yr of my MTL from home as well. (Respondent 17)

However, other participants experienced some mixed emotions and despite some positive features, they felt it was a challenging experience (n=12) with some referring to it as being stressful (n=8) and having a negative impact on their mental health (n=5) and being 'exhausting' (n=4). The change in daily routine and long hours in front of a computer were balanced out despite the negative impact on mental health as stated by one respondent below:

A rollercoaster of emotions. It took me a while to stick to a routine that helped me be productive. However, most lecturers understood that we had many hours and gave us short breaks to recharge. On the whole it was a positive experience although my mental health has suffered but I got through it. (Respondent 41)

Another respondent also held a balanced view and acknowledged some advantages but also the impact on mental health due to the lack of clear boundaries between work and life.

All right. I believe that there was some good in it. I loved not having to leave at 6am for lectures in order to search for a parking space or to avoid traffic. I also worked during free periods between lectures which made me more productive. But I believe that all this also took a toll on my mental health as I found it extremely hard to set boundaries between work time, school time and family time (being that all was done within the same household) (Respondent 31)

The challenge of achieving a work-life balance is expressed again in this entry:

...I believe that it was very stressful. This is because of the long hours of lectures online ... a big amount of assignments to do, leaving us with little or no time at all to do other things which were not University related. I would have preferred if there was a better balance ... (Respondent 9)

A participant expressed the wish to experience the physical presence on campus of face-to-face lectures as follows:

There is something about physically going to university that gives you a sense of belonging and you also feel a greater sense of support (Respondent 19)

Others also echoed this yearning for being present on the university campus as follows, 'It would be nice to experience the environment of University' (Respondent 35).

It is clear that for some student teachers the experience of learning from home during the pandemic was not a positive one for them. One participant (Respondent 5) wrote one word in response: "Terrible". Respondent 15 claimed that: 'It was overall very draining and exhausting for both us students and our lecturers.' The responses below illustrate how they felt isolated, stressed, tired and 'cheated' out of the university campus life experience.

Very stressful and isolated. The continuous routine and lack of face-to-face interaction was very tiring. (Respondent 11)

I feel robbed of the best years of my life as the first 4 months I spent on campus were the best of my educational experience. (Respondent 27)

From the selection of open-ended responses above it is evident that their experiences of learning during the pandemic differed and student teachers' lives were impacted in different ways - some thrived, others 'managed', while others struggled to different extents while learning remotely from home.

5.2.5 Any additional comments

The last question item (Figure 5.37, Q25) of the survey was open-ended, and invited participants to write any additional comments they wished to share. Eighteen participants chose to submit their comments. Some of the responses echoed and reinforced those provided for the previous open-ended question at the end of the section about well-being and relationships. A number of university students (n=18) completed this field with their open-ended replies.



Figure 5.37 Word cloud: Additional Comments shared with us

An overview of the responses indicates that many comments focus on learning spaces as depicted through their preferred teaching and learning modes. Some student teachers suggest that online remote modes of teaching and learning be retained for various reasons. These ranged from the advantages associated with remote learning that cater for learning at one's own pace and being time efficient, allowing for better time management and balancing of work and study commitments, being an effective means for learning safely during the pandemic and challenging times. One respondent mentioned the lack of parking difficulties on campus. Some of these responses are featured in the quotes provided below:

*Please use **online learning** more especially at University Level. These recent years you may have noticed that you don't have students only but you have working students **trying to manage work to have an income for the future and studies**. This would make our lives much easier and less stressful! Please pass on this message for future students and for this year. The pandemic hasn't ended yet...* (Respondent 1)

*I believe that **online learning** has its benefits especially due to the fact that the **lecture can be seen anywhere and a lot of time is saved**. If it wasn't for being online this year, I think I would not have managed.* (Respondent 16)

*Apart from the fact that we still **managed to complete our studies online**, we as students did not have the daily **parking issue** on campus.* (Respondent 7)

*Since this year we have **two teaching practices, exams and a dissertation** to finish, I would prefer **online lectures**, as it would stress me out less. I find myself more comfortable working from home ... This scholastic year hasn't even started and I'm already stressed out.* (Respondent 18)

On the other hand other student teacher respondents make an argument for more face-to-face lectures held physically on campus. Their reasons vary from finding it difficult to concentrate or remain engaged during online lectures, the desire to experience university campus life, to having the equal opportunity to attend lectures in person. Some of these sentiments are captured through these quotes:



*While a lot of lecturers clearly put in a lot of effort to improve the online lectures, I found **online lectures very frustrating and I found it really difficult to stay motivated and attentive.** (Respondent 12)*

*I truly wish that this upcoming year we will experience face-to-face **lectures again** to grasp the true meaning of learning. (Respondent 10)*

*I have **never stepped into university.** (Respondent 11)*

*As a student I would like to be given the **same opportunity as others to attend lectures** on campus. (Respondent 13)*

Some other student teachers expressed the preference for retaining a blended approach, where some lectures would be held remotely while others would be held on campus through face-to-face lectures. The responses included below indicate how a blended approach could accommodate university students in using their time efficiently, cater for the diverse learning styles of the students, allow for more social interaction on campus while offering a remote mode when needed to safeguard their health, as well as encourage more potential students to read for a degree.

*I truly appreciate if this year we can have a **blended** approach. Personally, this year was too stressful for me and my mental health has suffered badly. (Respondent 4)*

*I think that it would be a great idea for future reference, if some lectures which are held too early or too late as regards to time, could take place **remotely**, while the rest of the lectures could take place **physically**. In my opinion this will make the students' University life easier and engage them more to keep studying. (Respondent 8)*

Field practice is a very important component in ITE and was the focus of some responses centred around the teaching practicum. A few also commented upon the stress and anxiety caused by the thought of having to undertake two 5-week teaching practicum sessions during their forthcoming 2nd Year of the MTL programme (due to the 1st Year practicum being postponed due to the school closures the previous year). Some student teachers indicate that they would like to know the class to be taught during TP as early as possible to be better prepared, would appreciate being given more balanced and positive feedback about their practicum, and would prefer to retain the practice of preparing an online TP file on google drive instead of having to print out all their TP documentation.

*Having missed a TP in Year 1 of MTL has put a lot of anxiety on us as students since we now have to **face two TPs and also complete a dissertation.** (Respondent 14).*

*...hope tutors will find a better balance between **constructive criticism** but also give some encouraging remarks about what we did good, they help more than they think. (Respondent 15)*

*I think the **TP file** should be kept online on Google Drive. It is more efficient and more environmentally friendly. (Respondent 6)*

Some participants used this open-ended space to extend their appreciation to their lecturers, '**who supported us, students, through these difficult and extraordinary times**' (Respondent 2). Another respondent wrote that, '**Overall, I appreciated all the lecturers' efforts and oftentimes sympathised with them as it is not easy to communicate or receive feedback over Zoom**' (Respondent 16). Another comment highlighted the role of support received from peers during the pandemic and how collaborative tasks helped to bring them together to work effectively and support each other.

*If it wasn't for my small **circle of friends** I would not have managed this year. We kept each other going. The fact that you are **working on an assignment with someone** and occasionally you just have a break together and talk about something completely different kept me sane. (Respondent 5)*

Through the final open-ended question, it is clear that the student teacher respondents were eager to share their experiences, make comments upon aspects they were not satisfied with and suggested recommendations according to what worked well for them. These responses are truly a valuable source of personal experiences and provide a source of qualitative voices to complement the quantitative data collected through both surveys.

The next chapter will provide a discussion of the results across both surveys.

CHAPTER 6

Discussion of Results Across Surveys

This chapter presents an overall discussion of the findings. It addresses the research questions posed, which focused on capturing the ITE university students' perspectives of how the shift to remote online learning may have positively or adversely impacted their learning, well-being and relationships as trainee educators and young people. The main findings of both surveys will be discussed cross-thematically through the lens provided by the triad conceptual framework adopted for this study, namely: teaching and learning, learning spaces, and well-being and relationships. In proceeding in this manner, the research questions will be addressed directly as well.

The main research question and the three sub-questions that guided the study are:

What lessons can be learnt from the perspectives of university students in ITE during the COVID-19 pandemic in Malta?

- (i) **The Cov-EM study was designed, developed and analysed by a group of researchers to co-construct new knowledge through an exploration of how COVID-19 impacted diverse stakeholders in Maltese education; and**
- (ii) **The study discovers how the use of new modes and means facilitated the process of learning from others during a pandemic.**
- (iii) **The study discovers how the use of new modes and means facilitated the process of learning from others during a pandemic.**

The main findings that emerged from the ITE university students' responses to both surveys are synthesised and discussed below in sections 6.1, 6.2 and 6.3.

6.1 Teaching and Learning

Teaching and learning underwent drastic changes in approaches and modes due to disruptions experienced by the unprecedented COVID-19 pandemic. From mainly face-to-face approaches, educational institutions including the UM shifted to online remote teaching and learning. The results of both surveys identify that the most common learning mode reported during both academic years (2019/20 & 2020/21) was the use of synchronous online lectures. Differing views were evident about whether participants preferred learning in the lecture room through face-to-face interactions or remotely via online modalities. Consensus was not reached either about whether ITE university students would opt for synchronous or asynchronous lectures.

Online vs in-person (blended approaches) and synchronous vs asynchronous (modes)

Synchronous live lectures were reported as taking place more in the 2020-2021 academic year than the previous academic year (2019-2020).

The most common modes of **assessment** included assignments submitted online and documents uploaded through VLE. In the 2nd survey, presentations/photos/project work and hard copies submitted to lecturers were more commonly used as parts of the assessment when compared to the first survey. **Group work tasks** submitted online were popular during both academic years.

In the 2nd survey, most participants were more **satisfied with the overall quality of learning** provided during the remote learning periods, whilst in the first survey, there was a significant number of participants (30%) who felt this was of poor quality. This could largely be attributed to the first shift to online remote modes being the result of an emergency temporary measure (Hodges et al., 2020). This echoes outcomes of research by Adedoyin and Soykan (2020) who hold that the educational provision during the first forced global shutdown was marked by emergency remote teaching rather than well-designed remote online learning. Thus, during subsequent periods of remote online teaching and learning, both staff and students at UM were better prepared and equipped for this mode.

In both surveys, participating in **interactive lectures, online tutorials, and discussions/tasks held in small groups in breakout rooms** were the online experiences in which learners felt more motivated and engaged. This seems to mark a move towards a more active role as learners in higher education as pointed out by Allen et al., (2020) and Sweetman (2020). The open-ended responses confirm the higher levels of interaction and engagement reported by participants during online group work and small group discussions and tasks that were made possible through the use of breakout rooms. This is a salient finding related to online teaching and learning, and future ITE programmes should keep this in mind and consider retaining such activities that proved positive in courses offered. Moreover, via blended modes and e-learning, lecturers seemed to have increasingly taken on the role of facilitators of learning (Alsadoon, 2017).

Teaching Practice

In the second survey, two thirds of the ITE respondents indicated that they undertook a fieldwork placement (TP or classroom observations) and that this was held through physical presence in class with videos and planning documentation sent to examiners through Google Drive folders for assessment. This entailed using various virtual learning platforms and video-conferencing solutions adopted by the practice placement school, the FoE, and the UM concurrently.

The TP held in the 2020-2021 academic year was rated as a better experience by more than half the participants, but worse for one-third of the respondents who had experienced a practicum the previous year when the pandemic first hit. The respondents perceived synchronous online sessions as the most effective mode to cater for children's learning, whereas blended approaches and asynchronous modes of learning were considered as less effective in early and primary years. Interestingly, in the local context (Bonello et al., 2022) asynchronous modes were resorted to most with children in early years (childcare and kindergarten), especially during the early stages of the pandemic.

Similar findings related to the mismatch between the learning needs of young children and the digital modes to provide these activities emerged in other studies (Foti, 2020; Panesi et al., 2021; Steed and Leech, 2021). Pre-pandemic, remote online modes have also been found to be a valuable means in providing homeschooling to enable access to education to ill children who require extended periods of time away from school for treatment or who live in remote areas (van Pelt, 2015). During the course of the pandemic some children who are neurodiverse experienced negative experiences due to changes in routine and disruptions in relationships, however, some experienced aspects of online learning in a positive manner as they could concentrate and learn better in a familiar setting with less distractions and more control over sensory input (Ameis et al., 2021; Genova et al., 2021; Vanderbeek & Carr-Kaffashan, 2021).

The open-ended comments about the practice placements undertaken by ITE university students during the second run of the study indicate that the practicum experience was more challenging due to the pandemic, but it also prompted them to learn to be more flexible and adapt to new situations during exceptional times.

However, it must be kept in mind that at times the practicum was disrupted, cancelled, or postponed due to the pandemic and that meant that student teachers experienced uncertainty and worried about whether they would have a practicum and if they did whether this would be seen through to the end. Moreover, they were unsure of how to navigate the new modes of teaching and learning. At times due to mitigation and containment restrictions, there was a lack of school observation sessions, reduced face-to-face meetings with teachers or other educators in preparation for the practicum. The physical spaces of the classrooms were altered due to physical distancing protocols: tables were placed at a specified distance from each other, learning stations and areas in the class were removed, tangible resources were stored away, and wall displays were removed. This meant that they could not draw fully on pedagogies that entailed collaborative work, hands-on activities, or the use of different spaces in the class or school environment.

The experiences and learning of the university students in ITE ranged from becoming proficient in using new digital skills for teaching and learning in schools, as well as for their own remote learning as university students, planning learning activities to cater for the children's needs in such a challenging scenario, dealing with issues of TP assessment as well as recognising their own resilience and flexibility in the face of the COVID-19 pandemic.

6.2 Learning Spaces

In both surveys, the environment or physical space for work or study, and/or provision of digital devices was an issue for some respondents. The most common learning spaces and modalities experienced by university students in ITE in both surveys were video-conferences and the use of online learning platforms. For online remote teaching and learning to take place, access to digital devices and broadband internet supply were necessary to make use of these digital tools appropriately in order to be in a position to participate in online learning modes (Arnhold, et al., 2020). An adequate physical space was also a basic need to be met in order for university students to follow and participate in lectures and learning activities effectively (Cruz et al., 2020; Fluharty et al., 2021).

Access to technological devices and connectivity

The large majority of ITE students had access to the necessary devices and a reliable availability of broadband internet services to support their studies. In Malta university students are awarded Students Maintenance Grants in their first year of full-time study, to offset some expenses related to educational material, textbooks, and equipment, including purchasing a computer (Ministry for Education, 2020). This may explain the finding that the large majority of ITE students had the necessary devices to follow lectures and continue with their learning and assessment through online remote modes.

Therefore, the availability of such devices was not foreseen as a very daunting challenge to the student body as was the case in some countries or institutions (Adedoyin & Soykan, 2020; Arnhold, et al., 2020; OECD, 2021). Despite this, it is worrying that in the first survey 16% of the respondents experienced difficulty in accessing the necessary devices (7.9%, sometimes and 4.8%, rarely and never, 3.2%), whilst this decreased to 4.1% in the second survey. However, it could be the case that some university students at times shared their device with siblings who were also learning from home, or with parents who were working remotely during the pandemic.

This may also point to a situation of socioeconomic difference in circumstance of the university students and their families in view of providing the necessary devices (Montacute & Holt-White, 2020; Scherer & Siddiq, 2019), suitable physical spaces wherein to study or work (Adedoyin & Soykan, 2020; Cruz et al., 2020; Fluharty et al., 2021) without undue disturbances (Manfuso, 2020). In the first university and school closure uncertainty reigned and at first families made do with the devices and equipment they had at hand, sometimes even using a mobile phone to follow online lessons. During the second run of the survey, more than a year and half into the pandemic, a lack of devices was reported by very few as by then many families had probably procured more devices and were better prepared for the situation than the first year.



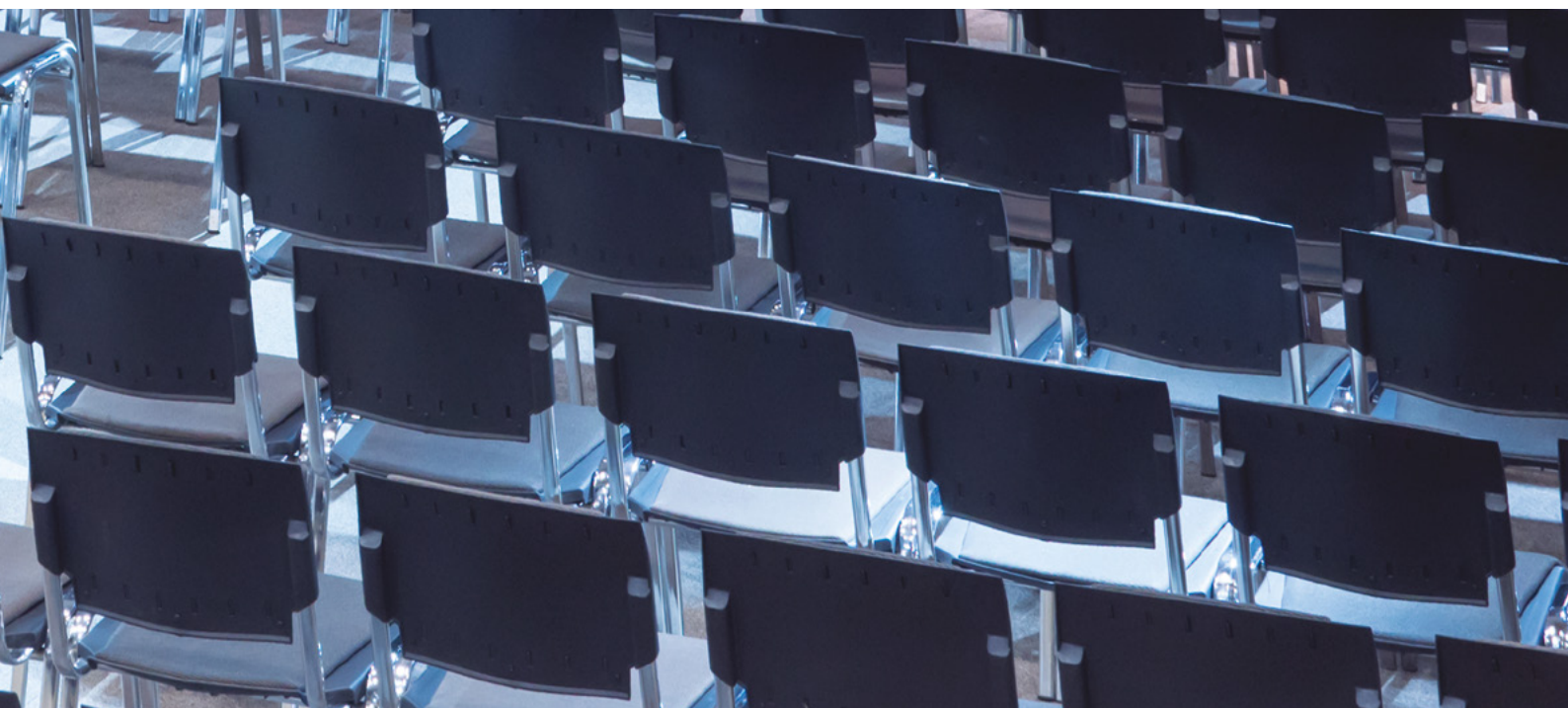
On the other hand, sufficient internet provision was also a challenge for some participants. In the first survey, more than a quarter of the participants reported that they sometimes experienced difficulty in ensuring sufficient internet provision and this mirrors findings by other researchers too (Cruz et al., 2020; Montacute & Holt-White, 2020). As with devices, the first survey that reported on part of the first year of the pandemic, yielded higher percentages of respondents struggling with accessing reliable and consistent broadband provision. This may be due to households suddenly requiring more than the usual supply to allow for multiple members of the family to be online at the same time. This tended to result in weak internet connectivity that would make online synchronous lectures or meetings lag. At times students in ITE had to switch off their cameras or use their mobile phone to follow some lectures uninterrupted. The data from the second survey indicate that less student teachers experienced these difficulties. However, in both surveys about 10% rarely or never had access to sufficient broadband service. This is of concern as Malta is considered as having a strong online infrastructure, with NSO (2022, p. 1) reporting that 'almost 9 out of 10 persons aged between 16 and 74 years used the internet in 2021'.

Suitable spaces and environments for remote learning

Regardless of the additional structures and reliable internet provision provided on campus for students to follow remote lectures, many students chose to follow lectures remotely from their homes and this is further corroborated through a number of open-ended responses. Some respondents in this study struggled to find a suitable physical space wherein to study or work without distractions or interruptions from siblings, pets, or neighbours. This is similar to findings reported by other researchers where the challenge of locating the available physical space at home or an environment that is comfortable and conducive to learning may become more pronounced according to the socioeconomic circumstances of the household (Adedoyin & Soykan, 2020; Cruz et al., 2020; Fluharty et al., 2021; Manfuso, 2020). This was also manifest in some responses as almost a quarter reported having lack of sufficient natural light in their learning space and a lack of some outdoor space where they could work or study (such as a garden, yard, or terrace) when they were learning remotely and confined mostly to their homes. Some participants observed that whilst learning from home they had more time to look after their health and followed exercise routines online, ate more healthily, and overall felt well.

University Life and Campus Experience

According to Slack and Priestley (2022) 'a loss of identity, sense of purpose and belonging' may be experienced when students are displaced away from the university campus due to social distancing and mitigation measures. It is worth pointing out that in Malta, unlike many large countries, the majority of university students usually reside with their families while they undertake full-time studies. Since there are no long-haul distances to commute, moving away from the family residence into student accommodation is not common. Some students from Gozo, the sister island, rent apartments that they share and then return to their homes for the weekend. Therefore, the sense of identity and belonging would be experienced in a different way than students who move to live near the university and the 'displacement' from university would not take accommodation into account but rather the lack of interaction with fellow students on campus during lectures, group activities and free time.



In this study university students in their first year of undergraduate study were more likely to report that they felt 'cheated' of the university campus experience and some suffered loneliness as they had not yet made connections and forged friendships with others on the programme. Continuing students (in their second or third year) on the other hand, were already familiar with the university campus life, had already established a sense of belonging and become part of the group over previous years. This may indeed be one of the reasons for the overwhelming positive feedback from respondents about the use of breakout rooms during synchronous lectures, tutorials, or other activities. The ability and opportunity to connect and interact with fellow students and lecturers, through following lectures and participating in university commitments online may also have contributed to the students' well-being through some form of normality. Establishing a routine and following their studies provided some students with interaction with peers as well as a focus during the uncertainty of the times. Clarke et al. (2019) and Azzopardi et al. (2021) hold that the lack of a campus experience resulted in an increased sense of isolation and loneliness amongst Maltese university students as compared to pre-pandemic data.

6.3 Well-being and Relationships: Better or Worse?

It is very clear from the results of this Cov-EM study, that the pandemic did not affect ITE university students' learning or well-being in the same way. In both surveys similar findings were reported related to factors the participants felt impinged negatively or positively on their well-being.

Happiness, Satisfaction and Stress

In the first survey, the COVID-19 closures negatively impacted the happiness and satisfaction of some respondents, and in the 2nd survey most participants reported that they felt equally happy and satisfied as the year before, although more stressed. In the second survey some participants reported that they felt happier (34%) and more satisfied (23.4%) than the previous year. Despite this increase, there were mixed emotions, and the overall sentiment was negative in the quantitative results.

The majority, almost 80% in the second survey, felt, 'happy that I survived the year despite challenges'. This indicates that despite experiencing challenges and hardships during COVID-19 times, they are viewing the experience from an overall positive perspective. In fact, more than half felt they 'did a good job' in following their programme of studies, although they also reported that their mental health suffered. Around a quarter of the respondents stated that their mental health suffered, and some felt exhausted and overwhelmed. This is corroborated by findings of other studies undertaken during COVID-19 times (Bonnici et al., 2020; Evans et al., 2021; Kavvadas et al., 2022; Kornilaki, 2022; Son et al., 2020). During the 2020-2021 academic year, unsurprisingly family or friends and fellow university students were perceived as providing most support to the participants, followed by university lecturers. During practicum placements, the Teaching Practice class teachers and school-based mentors were reported as being supportive by half the participants.

A better use of one's time was featured in both surveys. Positive outcomes indicated in the first survey by almost 80% of the participants included a better use of time, such as, 'not having to think about what to wear' to university, 'less stress to get ready early' in the morning, as well as 'less time travelling' to/from university. Remote online learning also allowed for more time with family and the possibility of adopting more regular and healthy eating habits while at home (Murillo et al., 2021).

Open-ended responses offered a good insight into how the experience of learning from home was very positive and was a more productive time for some who stated that they learnt more, performed better in their assessments, had more time for their families and to pursue their own interests. In turn, this better distribution of their time led to reduced levels of stress usually associated with commuting to and from campus and the task of finding a parking space or bussing to university. Respondents experienced the new levels of flexibility to be advantageous, especially if they had families with young children, and they or their children happened to be unwell or if another family member was in mandatory quarantine.

Loneliness and Anxiety

Imposed mitigation measures of physical and social distancing during the pandemic entailed having to shelter at home and university students could not attend university lectures or activities or participate in any group leisure or social events. In turn this resulted in not being able to go out with friends or mingle socially. In many cases, these measures also led to a decrease in physical activity due to limited access to the outdoors, walks and the closure of gyms and restrictions on team sports.

In the first survey half reported feeling 'happy' to have more time to study at home, whilst the other half felt stressed and worried, and more than a third felt negative towards their studies. Thus, while some enjoyed a slower pace, more time with family, time to read and rest whilst sheltering at home, others felt lonely and missed meeting friends and attending social activities (Bonnici et al., 2020; Evans et al., 2021). The majority of participants found ways to remain connected with family (70%) and spent time chatting and socialising online with friends (52%). Hence, we see that the participants experienced the pandemic in different ways. Clearly, some were impacted more negatively than others and experienced social anxiety and a fear of contracting the coronavirus itself. This was especially the case if their mental health was already a concern prior to the pandemic (Evans et al., 2021; Kavvadas et al., 2022). Bonnici et al. (2020) in their study of Maltese university students found that females were more prone to this fear, and this is of particular concern for ITE in Early and Primary education as the vast majority (over 90%) of university students in the programmes are female, as were the participants of this study.

Workload: Increase or decrease?

For some students online remote teaching and learning was a negative experience as they perceived that their workload had increased, and they even considered resigning from the programme. Ironically, other students perceived online learning as a positive experience and afforded them additional time to focus on their studies, increased freedom to work according to their schedule, and offered more overall flexibility. The first survey indicated that the majority of respondents perceived they spent more time than before the pandemic following 'online lectures and doing related academic work' (59.7%). This could be due to the uncertainty and disruption brought on by the pandemic, being unfamiliar with the new modes of learning as well as adjusting to the changed pedagogical and assessment routines (Tam, 2022). Thus, the presented study echoes Slack and Priestley's (2022) findings that some students prefer online learning and experience the increased flexibility and accessibility in a positive way, whereas others may struggle with this mode of learning, and feel it is less rewarding and more time-consuming.

Well-being and teaching and learning modes

Another interesting finding is that in both surveys, the majority of participants indicated that they would like to retain a **blended approach** to learning, drawing on both online and offline modes when returning to a post-COVID-19 life (Survey 1, 54.7% and Survey 2, 67.3% respectively). They preferred this mode over opting for exclusively online learning or exclusively face-to-face learning in the lecture room.

In both surveys 27% and 22.4% indicated they would prefer to revert to only face-to-face lectures at university. Considering that prior to the pandemic they followed their lectures mainly in-person, through physical presence on campus, it is surprising that only about a quarter of the respondents wish to revert to this mode. Having experienced remote online teaching and learning, albeit maybe not always of the highest quality due to the sudden shift to 'emergency online teaching' modes (Adedoyin & Sokyan, 2020), seems to have significantly marked their preferences for a blended approach. Reasons for such a high preference in favour of a blended approach to teaching and learning through online and offline modes are mainly due to the increased flexibility this offers to university students who are in employment, have family commitments, feel that they are more productive, independent pacing, or have come to prefer learning from the comfort of their homes.

Some respondents preferred learning remotely due to mental health challenges, anxiety, or fear of contracting the coronavirus themselves, or of being an unwitting source of contagion for elderly or vulnerable relatives (Evans et al., 2021; Fluharty et al., 2021; Slack & Priestley, 2022). In view of these findings, it is clear that support services should be available to all students, not only those who may seem obvious candidates through having already sought some professional support or who may have failed courses or suspended their studies. Although this does not fall directly under the remit of the current study, research points to an increase in substance use amongst young people and university students due to increased levels of depression, anxiety, and stress (Kavvadas et al., 2022; Nadareishvili et al., 2022).

CHAPTER 7

Conclusions and Recommendations

The aim of this chapter is to draw together the salient findings of both surveys carried out with the university students in ITE and to pose some recommendations in the light of the findings.

7.1 Recommendations

The study has shown that the COVID-19 pandemic had an impact on university students in ITE in the spheres of teaching and learning, learning spaces, and relationships and well-being. We urge all stakeholders to be proactive in responding promptly to our recommendations to meet the needs of students in ITE that emerge from the findings, as well as to retain good practices, as follows:

- Going forward to post-pandemic times, the FoE should seriously consider offering more programmes of study through more flexible **blended modes of teaching and learning** to cater for the learning preferences and life situations of potential ITE students.
- ITE programmes would benefit from investing in more **small group discussions and activities** where student teachers feel more at ease and more likely to participate freely and actively during lectures, tutorials, and discussions.
- Retaining the good practices reported in the provision of remote teaching and learning in ITE would also prepare future teachers for the **new learning modes** adopted in early childhood and primary educational settings and schools and be prepared for any future emergency teaching and learning realities.
- Support for those who may have **suffered learning losses** during the course of the pandemic by providing mentors or academic tutors, **recovery programmes and more flexible** options to retake study units and/or assessments.
- Academic staff should continue to develop their remote, as well as face-to-face, **teaching and lecturing repertoire** and not simply revert into the lecture room comfort zone.
- **Student Support Services** to provide a wider provision of counselling and therapy. These services need to be visible and readily available to assist university students. The study has shown how the **mental health and well-being** of many students have been impacted negatively.
- There needs to be more awareness amongst faculty about the extent of students currently suffering from stress, anxiety, depression, and substance abuse brought on, or aggravated, by the pandemic and the mitigation measures.
- **Financial aid** should continue to be provided through initiatives such as the Student Solidarity Fund (SSF) for those who struggle financially due to the pandemic.
- Provide **social spaces and organise events** for UM students who feel cheated of the campus life they associate with the university experience so they may feel a sense of belonging and form new friendships.
- HEIs need to ensure more student participation, through participatory research, by listening to the voices of their students so these are not only heard, but valued as per the recommendations of the Bologna process.

7.2 Final thoughts

This study explored the perceptions and experiences of ITE university students in Early Years and Primary Education at the University of Malta for two academic years impacted by the COVID-19 pandemic. Although the shift to remote online teaching and learning started as an 'emergency remote teaching' response to the pandemic, it brought to the fore the possibilities afforded through innovative practices and creative solutions that drew on twenty-first-century skills to ensure a continuous educational provision in HEI. The advantages pertaining to remote online teaching and learning should be recognised and retained by offering innovative, effective, and pedagogically sound programmes where more hybrid and blended modes are applied.

In light of the results of both surveys, it can be concluded that despite living through the same pandemic, ITE university students perceived and experienced these tumultuous times differently. As this Cov-EM study shows, listening to students' voices allows for a more socially just position to meet HE students' diverse needs (Eurydice, 2012). We recommend that the provision of initial teacher education and training be reconceptualised through a pandemic/post-pandemic lens that includes student participatory research at its centre.



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Appendix

Appendix A

Respondent Demographics

The table features an overview of the demographics of the 127 participant university students of the first survey and the 68 participants of the second survey.

Variable/Characteristic	Survey 1 2020 (N=127)	Survey 2 2021 (N=68)
	% (n)	% (n)
Gender		
Female	94.5 (120)	95.6 (65)
Male	5.5 (7)	4.4 (3)
Other	0	0
Total Respondents	100 (n=127)	100 (n=68)
Age range in years		
18-24	83.5 (106)	86.8 (59)
25-34	11.8 (15)	5.9 (4)
34-44	3.1 (4)	2.9 (2)
45-54	1.6 (2)	4.4 (3)
Region/Location of residence		
Southern Harbour, Malta	12 (15)	18 (12)
Northern Harbour, Malta	31 (39)	19 (13)
South Eastern Malta	18 (22)	18 (12)
Western Malta	19 (23)	21 (14)
Northern Malta	10 (13)	19 (13)
Gozo	4 (5)	6 (4)
Missing data	7 (6)	0
Nationality		
Maltese	97.6 (124)	100 (68)
Other	2.4 (3)	0
Programme being enrolled in		
B.A. (Hons) ECEC - 1st year	0	8.8 (6)
B.A.(Hons)ECEC - 2nd year	12.6 (16)	14.7 (10)
B.A.(Hons) ECEC - 3rd year	40.9 (52)	26.5 (18)
MTL Early years and Primary - 1st year	8.7 (11)	17.6 (12)
MTL Early years and Primary - 2nd year	22.8 (29)	32.4 (22)
Missing data	15.0 (19)	0
Highest level of education	-Within household	-Of participant
Secondary Level	14.2 (18)	22.1 (15)

Vocational Qualifications	14.2 (18)	16.2 (11)
Bachelor's Degree	32.3 (41)	48.5 (33)
Post-graduate degree	26.0 (33)	13.2 (9)
Missing data	15.0 (19)	0
Mother's occupation		
Craft and related trades workers	0.8 (1)	0
Skilled agricultural, forestry and fishery workers	0.8 (1)	0
Technical and Associate Professional	0.8 (1)	0
Unemployed	1.57 (2)	0
Elementary occupations	6.30 (8)	0
Manager	7.87 (10)	0
Clerical Support Worker	8.66 (11)	0
Professional	12.6 (16)	0
Service and Sales Worker	19.7 (25)	0
At home	27.6 (35)	0
Missing data	13.4 (17)	0
Father's occupation		
Elementary occupations	2.4 (3)	0
Unemployed	2.4 (3)	0
Skilled agricultural, forestry and fishery workers	3.1 (4)	0
Clerical Support Worker	4.7 (6)	0
Armed Forces	5.5 (7)	0
At home	6.3 (8)	0
Manager	6.3 (8)	0
Technical and Associate Professional	7.1 (9)	0
Craft and related trades workers	7.9 (10)	0
Plant and machine operators, and assemblers	8.7 (11)	0
Professional	13.4 (17)	0
Service and Sales worker	1.6 (2)	0
Missing data	16.5 (21)	0
Types of residence		
Maisonette	28.3 (36)	0
Flat/apartment	22.8 (29)	0
Terraced house	19.7 (25)	0
Semi-detached Villa/House	7.9 (10)	0
Detached Villa/House	4.7 (6)	0
Other	3.1 (4)	0
Missing data	13.4 (17)	0

Appendix B

Geographical Regions of Malta

The six Maltese geographical regions according to the NSO classification as follows:

1. Southern Harbour

Cospicua; Fgura; Floriana; Ғal Luqa; Ғaḷ-Żabbar; Kalkara; Marsa; Paola; Santa Luċija; Senglea; Ғal Tarxien; Valletta; Vittoriosa; Xgħajra.

2. Northern Harbour

Birkirkara; Gżira; Ғal Qormi; Ғamrun; Msida; Pembroke; San Ġwann; Santa Venera; St Julian's; Swieqi; Ta' Xbiex; Tal-Pietà; Tas-Sliema.

3. South Eastern

Birżebbuġa; Gudja; Ғal-Għaxaq; Ғal Kirkop; Ғal Safi; Marsaskala; Marsaxlokk; Mqabba; Qrendi; Żejtun; Żurrieq.

4. Western

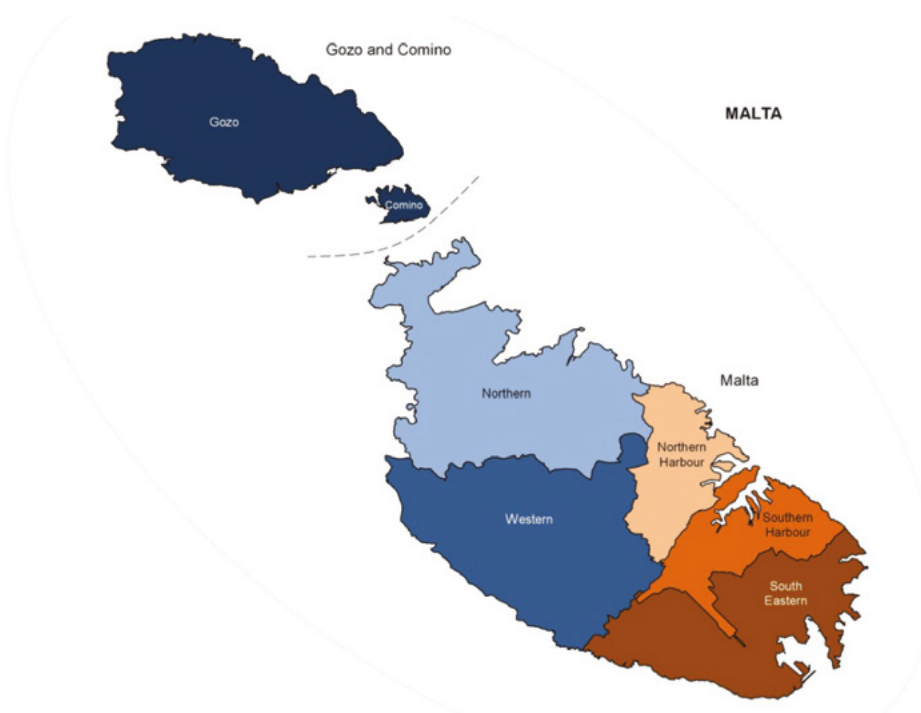
Ғad-Dingli; Ғal Balzan; Ғal Lija; Ғ'Attard; Ғaḷ-Żebbuġ; Iklin; Mdina; Mtarfa; Rabat; Siġġiewi.

5. Northern

Ғal Gharghur; Mellieħa; Mġarr; Mosta; Naxxar; St Paul's Bay.

6. Gozo & Comino

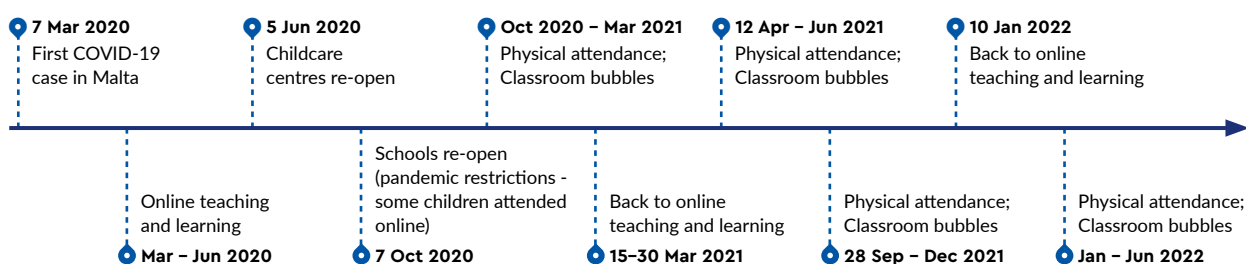
Fontana; Ghajnsielem; Għarb; Għasri; Munxar; Nadur; Qala; San Lawrenz; Ta' Kerċem; Ta' Sannat; Victoria; Xagħra; Xewkija; Żebbuġ.



Graphical Illustration of MALTA by NUTS Classification (NSO, 2021)

Appendix C

Timeline of COVID-19 school closures



Timeline indicating physical attendance and online teaching and learning during the COVID-19 pandemic in Early and Primary Education Malta (2020-2022)



L-Università ta' Malta
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