



*University of*  
**HUDDERSFIELD**

**INTERNATIONAL STUDENTS' EXPERIENCE OF HIGHER  
EDUCATION DURING THE COVID-19 PANDEMIC**

**OWEN KELLY**

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## **Abstract**

### **Background**

COVID-19 has negatively impacted students in higher education worldwide. International students have especially suffered throughout the pandemic. Economic challenges and loneliness are leading causes of international students' mental well-being. Living conditions and reliability on internet access have proved challenging during the transition to online learning. These factors have affected international students' motivation to learn and has taken them out of their comfort zone to traditional learning.

### **Aims**

There were three aims of this study: 1. Investigate how students' mental health has been affected during the pandemic; 2. Explore the perceptions of remote learning throughout the closure of universities; and 3. Examine the lack of social experience students have had due to the global pandemic through qualitative interviews.

### **Methods**

A multiple embedded case study design was chosen, using qualitative research methods. This study received ethical approval from the University of Huddersfield School of Research Ethics and Integrity Committee. Students were then recruited via their student emails where all the relevant information was detailed through a participant consent form and information sheet. Semi-structured interviews were conducted with the willing participants using Microsoft Teams. Data was analysed using template analysis.

### **Findings**

The findings of this study illustrate five key themes that have affected the experiences of international students during the COVID-19 pandemic: 1: Communication and Support; 2: Well-Being; 3: Access to Learning Remotely; 4: The Development of Academic Skills; and 5: The Mode of Teaching and Learning Delivery. This study also found that loneliness was endemic throughout the learning experience and had a significant impact on mental well-being.

### **Implication**

**for**

**practice**

Universities must support international students in a variety of ways, compared to traditional students. Implementing strategies such as online events to promote socialisation for international students is essential. Allocating compatible mentors can enable a more seamless transition into university life away from home.

## Introduction and Background

COVID-19 has not only had a negative impact on the global economy, but also on higher education institutions across the globe (Farnell et al., 2021; Khaoula, & Jalal, 2021; Noori, 2021). Student well-being is at the forefront of challenges presented to higher education as a consequence of the pandemic (Akpınar, 2021). Chen and Lucock (2022) explain that student mental health has been cause of concern for many years within higher education, however, the pandemic has left students at a greater risk of mental health problems. Due to COVID-19 and mitigation strategies, students are in isolation, often away from their families, and have little opportunity to engage with their peers (Leal Filho et al., 2021; Chen and Lucock, 2022). Relating the literature to Maslow's Hierarchy of Needs (1943), safety and security are recognised as basic needs for individuals, something international students are currently going without. During the pandemic, where students have had to isolate themselves in student accommodation, often not being overly familiar with the people they live amongst, it is not surprising that their mental state has struggled. Their personal security and safety are often challenging as a consequence of their surroundings; being unfamiliar with an alien country and the individuals they are now living with. Further to this, Chen and Lucock (2022) found that mental health has been a cause for concern for several years and not just as a consequence of the pandemic. It is not surprising that the safety needs, regarding health, proposed in Maslow's Hierarchy of Needs (1943) are not being met. Kivelä et al. (2022) support this, expressing that the decline in the health and motivation of students is a direct consequence of forced isolation and the unfamiliarity of the COVID-19 world. Relating the student experience and the pandemic to Maslow's Hierarchy of Needs (1943) only one of the needs is being met in the students' lives due to the decline of mental well-being, and the potential gap in personal security. In some cases, the physiological need is missing in some students, this need covers factors such as receiving food; water; shelter; and sleep. A study conducted by Russell et al. (2022) in the United States, found that countless students were struggling with financial well-being. Consequently, this could negatively impact students' access to basic resources such as food and shelter. Liu and Gao (2022) comment on the impact COVID-19 has had on internationalisation within higher education, stating:

“COVID-19 has had complex effects on university internationalisation and it is necessary to consider such effects beyond the simple distinction between challenges and opportunities.” (p.1)

This can present potential challenges for the international student community. Therefore, it is essential to consider the experiences of international students during the pandemic and garner the lessons that can be learned from this experience. Khan et al. (2021) recognises the added

struggle international students face with the pandemic. The stress related to the pandemic relates heavily to depressive symptoms among international students (Lu et al., 2022), demanding strategies needed to support the international student community (Xu, 2021).

The teaching and learning process is a learner-centred approach within higher education (Roy, et al., 2020). Workload and lack of interaction have created negative experiences with students' mental health (Armoed, 2021; Aristeidou, & Cross, 2021; Khan, 2021). Treve (2021) expresses concern for students' health when participating in remote learning for long periods of time, stating:

“Sleep disorders are already burgeoning, and researchers are still exploring the harm screen time can cause students' sleep and creativity. Prolonged classes can take a toll on students' health, and they can suffer from watery eyes, headaches, and burning sensation.” (p.219)

However, Treve (2021) does recognise the benefits of online learning such as flexibility and ease of access to study for students. Romeo et al. (2021) examines the physical impact that COVID-19 and remote learning have on students, illustrating that the fear of exposure and contracting COVID-19 both to themselves and of people in their environment was a major concern. Physical well-being, along with mental well-being must be considered during the pandemic as isolation can comprise physical activity individuals are used to having before the pandemic (Romeo et al., 2021).

Rashid and Yadav (2020) explore the financial impact of COVID-19 on universities:

The universities will have to invest more in health and safety measures and infrastructure on their campuses to ensure the safety of students and staff which may add to the financial strain on the university. (p.342)

This, alongside the demand for developing the skillset of lecturers to effectively teach online, will have a significant impact on the economy of higher education institutions. Universities will also need to address the limitations of online learning if degrees become more of a blended experience (Rashid and Yadav, 2020).

Dennis (2021) discusses the crisis of COVID-19 on the world economy, suggesting that the implications of the public health crisis could cost the global economy between \$5.8 to \$8.8 trillion. This devastating fiscal impact will also affect higher education institutions, suggesting that the fiscal challenges of COVID-19 will have an adverse impact on universities' budgets that may take many years to resolve. (Dennis, 2021). Higher education provides economic growth in countries' societies (Núñez-Canal et al., 2022) highlighting the relationship between

economic crises and institutions of education. Dennis (2021) also suggests the continuous economic decline universities may face due to the pandemic may exacerbate social, economic, and political issues within society. The impact of COVID-19 will demand universities adopt an effective digital and a more flexible approach to learning and teaching. Once restrictions are eased and traditional learning is implemented once again, universities will be expected to handle future transitions to remote learning in case of another pandemic (Dennis, 2021).

Challenges presented by remote learning were identified by Miliszewska (2007) who explains the challenges students face when learning remotely. Asking for help from academics and the interactivity of face-to-face lectures are found to be more beneficial for student success than when learning online (Miliszewska, 2007). It is clear that awareness of the challenges was published prior to the impact of the COVID-19 pandemic.

However, Mbous et al. (2022) recognise the lack of research conducted regarding international students' experience of COVID-19, presenting an opportunity to uncover their experiences. Identifying the barriers international students experience, compared to traditional students, such as adapting to a new educational system, alien culture, social norms, language, and potential bias and discrimination may explain the depressive and anxiety-related struggles they face (Mbous et al., 2022):

Prior to the pandemic, anxiety and depression were already elevated among international students (Alharbi & Smith, 2018) with reports from the literature finding high levels of depressive and anxiety symptoms, 45.3% and 24.7% (p.1)

Alharbi and Smiths' (2018) study identifies the mental health struggles international students faced before the pandemic. Again, noticing the lack of material conducted on international student well-being, Alharbi and Smith (2018) explain that the adjustment international students face when adapting to a new environment can only intensify during a pandemic where they are isolated in an alien setting. A study conducted by Xu (2021) found similar results regarding international students' psychological distress. Lockdown measures were related heavily to social isolation. Tinsley and the Office of National Statistics (2020) also found over half of the students reporting a lack of social experiences, contributing to the deterioration in their mental health and well-being. However, Xu (2021) recognises that lockdown and social distancing are not directly related to social support as students are typically familiar with the internet.

Only formal social support can effectively alleviate psychological distress, while informal social support does not play a similar role (p.1)

Xu (2021) describes formal social support as new teaching behaviours and alternative ways of learning. This indicates that international students' distress was related more towards adapting to a new learning curriculum and the support received from academics, than social interaction between peers and the community.

Nevertheless, it cannot be overlooked that international students faced psychological distress before the pandemic (Alharbi, & Smith 2018), though the deterioration in well-being issues since the pandemic is alarming. Kivelä et al. (2022) explain that a study, which was conducted in the early stages of the COVID-19 pandemic, found that 72% of international students experienced depressive symptoms. The findings from Kivelä et al. (2022) present a clear indication that international students face challenges that traditional students do not. Stress regarding large financial investments studying abroad, racial discrimination, and fitting into a new culture heightens stress factors. Furthermore, being away from their home country can induce fear in students' families and friends.

In the United Kingdom, students have experienced high levels of negative mental health stressors throughout the pandemic. Chen and Lucock (2022) found that more than 50% of students were suffering from anxiety and depressive symptoms. Their research suggested females were more at risk of mental health issues than their male counterparts. Females were found to require more socialisation (Chen and Lucock, 2022), consequently the implementation of legal isolation in the United Kingdom impacted females disproportionately. Though, Knight et al. (2021) similarly identified the crucial aspect of social support for students in higher education. Peer support, which took the form of peer mentoring, was seen as an invaluable tool throughout the students' academic year. The social support from their fellow students aided well-being as it was seen as a significant challenge due to the pandemic. Furthermore, opportunities to form meaningful relationships were limited as classes were online and people were often in isolation due to contracting the virus or because of lockdowns. Support networks for students enabled a safe space for individuals to empathise, support, and discuss with people going through the same experiences. Individuals in student accommodation commonly felt trapped, and they missed out on their social experience. This was prevalent in first year and international students. First year and international students found developing friendships and social networks extremely challenging.

Adequate practical, social, and emotional support for both students and staff will be paramount moving forward, given that containment behaviours may be required (Knight et al., 2021, p.14)

Chen and Lucock (2022) also found a link between students' physical activities and mental well-being. The students struggling with high levels of stress were often exerting less physical

fitness. Low levels of resilience were identified with students suffering from stress. This resulted in poor engagement relating to coping strategies. These factors were only magnified by their limited coping behaviours such as engaging with social opportunities.

Defeyter et al. (2021) investigated the trust between students, their universities and the government. The findings presented a low level of trust that students have in their university and government due to the handling of COVID-19. Trust between the university and student must be improved upon (Defeyter et al., 2021) as well-being and trust are intertwined in the relationship, emphasising the importance of the role of the university and asserting that universities should:

Encourage universities to pay particular attention to the relationship between trust, food insecurity, housing insecurity, gender, financial strain, and mental well-being (Defeyter et al., 2021, p.9)

Watermeyer et al. (2020) considered the impact of COVID-19 on higher education from the perspective of educators. Transitioning to remote teaching was not received well by academics, though while they felt supported by their institution, they believed their workload would significantly increase in the short term. The educators' experience of remote learning was not a fruitful one and this change would be reflected in the learning of students. Watermeyer et al. (2020) found:

a history of professional dysfunction and disturbance, of inequality, exploitation and neglect; of confidence and trust abused and squandered; of disempowerment, displacement and marginalisation; of self-concept on trial and in tatters; of vulnerability and helplessness; and of the loss of a much maligned past superseded by the perceived machinations of digital dystopia and threat of professional oblivion (p.638)

Their transition to remote teaching found significant disturbances to their personal and professional life. Though it must be recognised that the move to online learning was sudden, staff and institutions were not prepared for the swift change of teaching and learning, and as a result, strategies were limited to ensure a seamless transition to the way of working.

Lack of research regarding international students' experiences in higher education was the key issue which arose from the data (Alharbi, & Smith, 2018; Mbous, Mohamed, & Rudisill, 2022). International students are commonly ignored within higher education institutions and their declining mental state is evidence of this (Alharbi, & Smith, 2018). Recognising the continuous decline of international students' well-being must be addressed by higher education institutions. As a consequence of the pandemic, students across all categories



struggled with their mental well-being and clearly, universities need to strategise how to confront this ever-increasing issue.

Another key issue found in the research was communication. Socialisation is a crucial aspect for international students as they are commonly moving to a new environment with a culture unfamiliar to them (Kivelä et al., 2022). Higher education institutions must provide international students with opportunities to develop relationships with their peers and staff. Xu (2021) found that mental health decline was linked to the new ways of teaching and a lack of social interactionism between the student and staff members. While this is no different to the experiences of home students, international students already have heightened mental health decline to begin with. Recognising that staff behaviour and relationship is just as important as international students interacting with their peers can help reduce mental health issues.

Distinctly in relation to physical and mental well-being, Chen and Lucock (2022) found that students with higher physical activity had fewer mental health stressors. Encouraging students to consider their physical health during the pandemic could help improve students' mental health. Incorporating the research from Alharbi and Smith (2018), universities could consider promoting physical health to international students regardless of the pandemic as mental health seemed to be a prevalent issue before COVID-19.

It is evident that international students were struggling with their mental health before the pandemic. Since then, the impact on international students' mental health has worsened. Universities must develop strategies for better inclusion, improving mental and physical health, and trust.

COVID-19 and international students' experiences have proved to be a gap within research (Alharbi, & Smith, 2018; Misirlis et al., 2020; Wilczewski et al., 2021; Mbous et al., 2022). The challenges international students are facing during the global pandemic exceed only adapting to new environments. The implications of ignoring these problems may result in fewer international students studying in the United Kingdom, affecting the revenue of universities. Furthermore, mental health issues experienced by studying abroad may result in years of mental trauma and could have more daunting consequences. Drawing from my own experiences as a mentor I have identified similar responses from international students. These individuals have experienced challenges throughout the pandemic. Isolation has impacted the entirety of the United Kingdom. A category of students that were dealing with high levels of loneliness and mental well-being problems before the pandemic has been exacerbated, and this amplifies the importance of learning from the impact of COVID-19 on the experiences of international students.

## **Literature Review**

The literature review in this study adopted a systematic and methodological process proposed by Aveyard et al. (2016). Conducting an online search strategy was used to identify international students' experience of COVID-19.

Using the university-based search engine Summon, literature was also retrieved from electronic databases such as Google Scholar, PubMed and ERIC. The search approach involved identifying relevant articles and studies by implementing key terms relevant to the predetermined objectives. Three objectives were established for the literature search: 1. Examine the impact of COVID-19 on student learning; 2. Identify support mechanisms needed to ensure success; 3. Evaluate how students perceive curriculum changes due to COVID-19.

The initial search of the literature review provided a clear indication that literature already published on the topic of international students' experience of COVID-19 in the United Kingdom is lacking. Therefore, it was essential to cover the review within a global search for material to ensure the material collected was appropriate to the aims of the review. This literature review search revealed 25 articles that met the criteria following the screening process. This confirms the limited amount of literature published in this area. Considering the limited publications in this area, the recommendations of Booth et al. (2016) and Aveyard et al. (2016) were followed and included in this review.

Utilising a summary matrix, which was adapted for the purpose of this review, allows for the utilisation of an adapted thematic analysis of the articles yielded. The data collected from the thematic analysis, utilising the approach suggested by Aveyard et al. (2016), where 'priori themes' are developed from the emerging objectives of the research generated by the search strategy, demonstrated the presence of three key themes: 1. Mental Health; 2. Internet Knowledge and Access; 3. Practical Based Degrees:

### **1. Mental Health**

The literature retrieved indicates the extent of the mental health and well-being distress caused by Covid-19. Zis et al. (2021) conducted an ecological study to determine the impact on students' mental health whilst transitioning to online learning. Two anonymous questionnaires were sent out to 189 students, which established students' mental health and burnout levels pre and during COVID-19. 81.5% of students successfully completed both questionnaires. The research focused on the results from the fourth and sixth (final) year students, as they provided opposite insights from digital learning during the pandemic. Overall, burnout did not differ significantly when viewing the questionnaire entirely. However, the 24,

fourth year students found a decrease in emotional exhaustion and burnout, whilst the 26, sixth year students found an increase in both. Zis et al. (2021) suggest that the final year students have an increase in emotional exhaustion and burnout, due to the lack of experience in clinical practice throughout the pandemic, before becoming junior doctors. As a result, Zis et al. (2021) found that implementing new education techniques can cause a challenge in medicine, unlike other disciplines. Medical students require 6 years of education and in-person clinical training, concluding that digital learning poses a risk because of the practical requirements.

Furthermore, Kapasia et al. (2020) emphasise the importance of the environment and explain that 70% of students were involved in E-Learning during the lockdown in India, many of them suffering from mental health and situational concerns. Many students were reported to be in circumstances with unreliable internet access and uncomplimentary environments for learning. Kapasia et al. (2020) found that countless students face challenges when studying online, suggesting crucial interventions for safe and reliable spaces for student learning during the pandemic. In addition, they demonstrated the importance of government funding, to enable policymakers and institutional authorities to create strategies that enable positive workspaces.

Utilising results from the Student COVID Insights Survey (SCIS) and the Opinions and Lifestyle Survey (OPN), Tinsley (2020) found that students within higher education were more likely to have remained in their accommodation than those of the general public. Most higher education students during lockdown were isolating in a household with students they do not know, causing an increase in mental health challenges. In Autumn, 2020 29% of students described being dissatisfied to very dissatisfied with their current experience at university. 53% of students, in the same season, reported their social experience to be dissatisfied to very dissatisfied. Furthermore, when compared to the OPN survey, students were found to have lower levels of happiness, life satisfaction and life worthwhile, along with an increase in anxiety. Since the pandemic, three alternative studies were operated, finding similar results; that well-being and mental health declined in students due to COVID-19.

Son et al. (2020) assessed the effects of COVID-19 on the mental health of university students in America. Significantly, they identified that 71% of students had found that stress and anxiety levels had risen due to COVID-19. Stressors found were: Concentrating on work; Worry of health and loved ones' health; Struggles with sleeping; Lack of social engagement and social distancing; and Academic performance. Academic stress was not as prevalent as expected, though Son et al. (2020) suggests this could be due to the university providing a pass/fail option to modules, rather than a grade, this was to help with easing the transition to online learning. Further concerns identified were a 44% increased level of depressive thoughts and

an 8% increase in students with suicidal thoughts as a result of COVID-19. The study found that the transition of online learning and the pandemic had a negative impact on higher education and Son et al. (2020) suggested prompt action needed to be taken to combat students' mental health challenges.

Emotional reactions and coping strategies, both during and after quarantine, of students in a Lebanese university were investigated by Fawaz et al. (2021) using exploratory qualitative research. The interviews conducted were held during the quarantine period and a follow-up three months after the quarantine was lifted was conducted. During the quarantine period, 17 students were interviewed via FaceTime, whilst 3 students managed face-to-face interviews. Three months out of quarantine, all follow-up interviews were conducted in a classroom setting, in person and one on one. Fawaz et al. (2021) found 5 themes during the quarantine period of students' emotions: learning concerns; workload; technical difficulties; quarantining; and managing their problems. After the quarantine period, 3 themes were discovered: relief from academic stress; fear of health for self and family; and humiliation if contracting the virus. Fawaz et al. (2021) found that the impact of COVID-19 and digital learning has negatively impacted university students, though also note that other challenges such as economic and political issues raise concerns for students' futures.

A unique study by Feng et al. (2021) investigated the use of a new scale to determine COVID-19 fear in higher education. The study recruited 219 students, 164 were female (74.9%), leaving 55 students male (25.1%). An online study was carried out due to the seriousness of the pandemic during the time. Due to the circumstance of the pandemic, Feng et al. (2021) did not extend data collection in an attempt to recruit more participants. Exploratory factor analysis was utilised to measure the COVID-19 fear scale. Recruiting 74.9% of female participants may impact the validity of male experiences, though the researchers are aware of this. However, Feng et al. (2021) recognise the difficulty international students may experience during the global pandemic "our findings highlight the difficulty of international university students during a critical situation such as the COVID-19 outbreak." (p.256). Lastly, fear of insecurity and infection resulted in high anxiety symptoms and scores. Feng et al. (2021) propose increasing interventions to "increasing self-efficacy, social support, and addressing some existential issues triggered by the crisis would be effective to reduce anxiety." (p.256).

The impact of COVID-19 on well-being of healthcare trainees within higher education was investigated by Blake et al. (2021). The study utilised a quantitative and qualitative methods approach (mixed methods) using surveys and semi-structured interviews. Data was analysed using the thematic analysis framework. Blake et al. (2021) explain that female recruitment was intentionally high to signify the high proportion of women working in healthcare roles. The

study comprised 75% female participants and recruitment took place in 13 universities across the United Kingdom. The sample included undergraduate, master's and doctoral students, recruiting 42 participants to complete the interview and survey. Data from the study found a significant psychological impact related to COVID-19. Transmission was at the forefront of the participants' mental health issues and the impact of disruption to studies was also noted to be a recurring theme throughout the study. Blake et al. (2021) expresses the importance of implementing and promoting open conversations regarding mental health and well-being.

Nelekar et al. (2021) conducted a study recruiting undergraduate students. 61 students took part in the study, 39 (63.93%) were male, 21 (34.43%) were female, and 1 (1.64%) did not identify as either. Nelekar et al. (2021) also found that the support services at the university are not equipped with the skillset to support students virtually. Furthermore, the researchers recognise that students from India are often unwilling to discuss their mental health due to stigmatisation. Nelekar et al. (2021) explain that they are the first to implement a modified version of the western designed Embodied Conversational Agents (ECAs). The findings presented a reduction across all the student groups in relation to stress. Further research with larger participant samples and alternative populations is recognised during the study.

The literature retrieved from the search presents a clear indication of students suffering with their mental health during COVID-19. Burnout, loneliness, and isolation are key drivers of students' decline regarding their mental wellness.

## **2. Internet Knowledge and Access**

Rizun and Strzelecki (2020) examined students' experience, enjoyment, computer anxiety and self-efficacy when transitioning to online learning. Using the General Extended Technology Acceptance Model for E-Learning (GETAMEL), an online survey was conducted, obtaining data from 1692 undergraduate and graduate students. The collection of the data was performed through Google Forums, finding enjoyment and self-efficacy to be the greatest predictors of digital learning. The demographic of respondents was heavily outweighed by male students of 72.1%, compared to their 27.9% female counterparts, with no other gender option available. However, Rizun and Strzelecki (2020) illustrate that there was no significant difference in opinions between the male and female students concluding that students felt comfortable using technology and the internet. Furthermore, suggesting that the transition to online learning during unprecedented times was an intuitive move by the university, though participants expressed a preference for traditional learning methods. Rizun and Strzelecki (2020) summarise their study with an acknowledgement that this is the view of one university and propose a comparative study would be more fruitful and enhance credibility.

Apostol (2020) conducted exploratory research on 643 students within Romania, to highlight the impact of student learning during the pandemic. Whilst students believe the measures taken by the university were appropriate, two-thirds of students believed that Romania was not yet prepared to make the transition to online learning. More than half of the students who participated in Apostol's (2020) study agreed that their studies, learning and final grade will be negatively impacted by the move to digital learning.

The transition to online learning through first year international students was investigated by Novikov (2020). The aim of the study was to improve adaptability for international students, using statistical data, processed by the digital ecosystem from the university. Multiple choice, single choice and open questions were used during the study, along with interviews, finding clear disadvantages regarding international students moving their studies online. Whilst the faculty aimed to make "the process seamless while maximizing its efficiency and recreating the classroom experience" (281), the results prompted several concerns. The data found that students had delayed response times and a higher risk of cheating on their studies. Furthermore, the lecturers found a significant increase in their workload since moving the students' studies online. Though the intention of creating a seamless transition to online learning was not a success. Novikov (2020) proposes steps to make future transitions more harmonious. Implementing risk management plans and creating content to become more user friendly were found as essential steps to aiding international students' transitions to digital learning. However, the long-term effect of digital learning may decrease cross-culture adaptability, due to students receiving a limited amount of face-to-face contact.

Dawadi et al. (2020) examine the impact COVID-19 has had on Nepalese education. Based on recent documents, reports, and commentaries, Dawadi et al. (2020) found that the majority of students have no access to technology, meaning digital learning is impossible for many students. Widening the gap between advantaged and disadvantaged students during the pandemic, management for disadvantaged students in relation to learning and wellbeing management has risen. The findings suggest that the move to online learning creates additional challenges that lower-income students already face within the country. Furthermore, Dawadi et al. (2020) note that numerous external assessments had been cancelled and postponed during the pandemic, causing a further negative impact on student learning. The closure of institutes, due to COVID-19, is likely to result in high drop-out rates, comparing the impact Ebola had on Nepalese education and because economic crisis of parents losing their jobs. Therefore, Dawadi et al. (2020) express the possibility that the education system may collapse if action is not taken, as alternative digital learning is not effective when many students cannot access the internet, proposing that the impact of COVID-19 disproportionately affects disadvantaged groups.

Chattaraj and Vijayaraghavan (2021) investigated the effects of emergency remote learning in a southern university in India. Using Interpretive Phenomenological Analysis (IPA), Chattaraj and Vijayaraghavan (2021) conducted online interviews with 8 undergraduate students and 4 postgraduate students. The results illustrated a disconnect between students and their new learning spaces. Chattaraj and Vijayaraghavan (2021) propose that the negative impact of learning online could be because students had developed their learning style in a familiar working space, such as the university. As a result, Chattaraj and Vijayaraghavan (2021) promote the need for new models which include blended and online learning, to aid students in working more efficiently.

Gismalla et al. (2021) conducted a cross-sectional survey, targeting undergraduate medical students. The research carried out was to investigate how countries with limited resources, such as Sudan, found the transition to online learning. A predesigned questionnaire was used to collect data and analysed using Statistical Package for Social Science (SPSS) software. With 358 participants, only 67.9% had access to a laptop and 59.5% had static internet service. 82% of the students agreed that the closure to help stop the spread of coronavirus was necessary. However, only 64% agreed that online learning was the suitable alternative, meaning one-third of students were not comfortable with this. Students had a positive experience of learning online, though challenges were present. Approximately two-thirds of students stated that good quality internet was too expensive. This suggests that effective strategies and online access need to be considered if students are required to work remotely in the future.

Su and Guo (2021) created an online questionnaire for students who were part of online learning for 16 weeks. Convenience sampling was used to collect responses, as they believed an online survey would be more effective to collect data during a pandemic. "The survey contained questions on demographics, six indicator variables, and student satisfaction and learning outcomes. The 36 items for the questionnaire were based on previous research" (p.1582). Retrieving 457 responses, there was a slight increase in female response by 57.3%. The findings were outweighed by 389 undergraduate students, compared to only 68 (14.9%) graduate students taking part in the survey. Su and Guo (2021) found that learner and instructor interaction did not influence the student's learning experience and satisfaction, though self-discipline, learner and learner, and course design were significant deterrents in the student experience. However, Su and Guo (2021) acknowledge that different courses or teaching requirements may alter the learning outcomes and provides an introductory view on the impact the pandemic has had on student perceptions. Ultimately, the findings suggest that the participants displayed low levels of self-directed learning, recognising the need for strategies, and planning to motivate students.

Cygan et al. (2022) collected data regarding student assessment performance in Autumn 2019; Spring 2020; and Autumn 2020. Investigating these scores, Cygan et al. (2022) found minor differences in course results, exams, and assignments. Autumn 2020 recorded the highest final course scores; Spring 2020 found the highest exam scores and assignment scores. This suggests that as the pandemic was progressing, this did not hinder their results. Cygan et al. (2022) conclude their investigation by acknowledging the challenges COVID-19 has presented for both students and lecturers, though recognising the consistency of students' outcomes. Transitioning back to face-to-face learning, the researchers suggest evaluating student progression in a variety of ways to view how course adaptations affect student results.

Stevanović et al. (2021) conducted a qualitative and quantitative research study (mixed methods) with 832 participants. The study investigated the opinions students had on distance learning processes. 63% (528) of participants were female, 37% (304) were male, with the majority (31%) being in their first year of study. Participants involved came from four different years of study, with an equal recruitment size: 31% first year; 24% second year; 22% third year; and 23% fourth year. The results showed that first year students were much less motivated than the older students, viewing distance learning as less interesting and less valuable. However, fourth year students made less effort compared to the younger students. Students did recognise the benefits of online learning, finding that working to their schedule was an advantage, along with travel time and re-watching lectures.

Maddumapatabandi and Gamage (2020) compared literature to review the current effects of COVID-19 on higher education institutions. Institutions going back to traditional learning will not be a straightforward transition. Precautionary measures will be taken to ensure a safe and successful return to education, most likely occurring in stages. Courses are likely to become blended, utilising both E-Learning and face to face applications for students and teachers. Traditional learning suggests Maddumapatabandi and Gamage (2020) will implement aspects of E-Learning, though warn that the transition will have some resistance. The implementation of a blended program requires appropriate tools and methods to be used, creating a more seamless opportunity for the transition. Teachers will require training for digital sessions to be successful. Blending modules to utilise both online and face to face teaching will also require students to become more self-motivated and self-directed. Suggesting that students will become more autonomous as a consequence of COVID-19 and online learning.

Gay (2020) conducted a study on 258 students, who were evaluated on their preparedness for online lectures in January 2020. Throughout the lockdown, where students were working online, two thirds of students preferred E-Learning. However, the study found that only one third of students had acceptable E-Learning competency. During the online learning period,



6% of students returned to their home country, 6% of students had no privacy to take their final assessments, and 31% of students were dependent on Wi-Fi. The largest implication on students was their study routine being disturbed. Furthermore, Gay (2020) notes that not all students have access to a quiet space and a computer. Gay (2020) concludes that students must acquire self-discipline, utilise better routine habits, and may require assistance in study environments.

Bauler et al. (2022) collected data from 165 participants who were anatomy educators. 78% of the participants were from the United States of America. The other participants were from the United Kingdom, Canada, India, and the Philippines. 61.21% of respondents were female with a varied amount of times as educators: 0-10 years 35.76%; 11-20 years 30.91%; 20+ 33.33%. The findings show that the lecturers found the transition to online teaching challenging. Due to the nature of the course, multiple classes required completely new material as the original lecture(s) were not possible to conduct in an online setting. Furthermore, limited experiences teaching online also influenced the lecturers' readiness for the transition.

Reflecting upon the data collected during the review, it is clear that access and knowledge of technology impact the motivation and fulfilment students have when moved their studies online. A lack of understanding or internet reliability can influence how students learn and how their lecturers can teach.

### **3. Practical Based**

The third theme developed was the notion of practical and skills-based study which draws heavily on the health professions. Ballad et al. (2022) used online data collection with a cross-sectional approach. Three universities in Oman participated in the research, focusing on nursing students' self-directed learning readiness and their learning styles during the pandemic. Students were required to be in full-time education and be registered with a nursing institution if they would like to participate. 236 nursing students responded to the online questionnaire, with Google Forms as the data collection software. SPSS was used to analyse the data, finding 85.2% of the participants were female and 41.9% of students were in their first year of nursing.

Carmody et al. (2020) explain that nursing degrees require work integrated learning with the curriculum so students can familiarise themselves with the clinical environment. COVID-19 interrupted studies for nursing students as they could no longer accomplish their work integrated study, causing them anxiety. To combat this, alternative learning methods were

employed such as the case study approach. A case study was conducted, which implemented a virtual environment tool for students to access stimulated learning from home. Long lasting effects from COVID-19 enabled the tool to be accessible for student nurses to experience a clinical setting, receiving practice otherwise conducted through the work integrated learning module. To establish the effects of the virtual environment tool, the educational theory was used to determine the tools' efficiency. Carmody et al. (2020) found that the underpinning of inclusive teaching practices enabled the tool to be an effective alternative for student nurses. Furthermore, the tool provided an authentic experience for students to familiarise themselves with the clinical process and setting.

Sandhu and De Wolf (2020) express the necessity for medical students to continue their studies, regardless of the global pandemic. Since the global pandemic, UK universities have transitioned online for lectures and webinars, using platforms such as Zoom. Approximately 19.6% of students in UK universities are international, and adapting the curriculum online has enabled many to travel to their native homes for safety, whilst being able to continue their studies. Sandhu and De Wolf (2020) recognise that time zones may affect international students' capabilities to attend lectures, explaining that webinars and lectures that were recorded enable students to watch when most convenient. Furthermore, many universities have adopted open book examinations during the online learning period, ensuring that students can still complete their studies. Open book examinations at home have also found a decrease in anxiety levels, compared to levels when conducted in a study hall. Sandhu and De Wolf (2020) conclude their study by emphasising the need for qualified NHS workers, explaining that learning online is essential for medical students rather than halting studies and therefore extending students' education.

Michener et al. (2020) developed a virtual elective study for geriatric education and online learning. The core competencies that all medical students must learn for geriatric medicine are medications; mobility; mind; multicomplexity; and what matters most. The 5 M's have been used for all levels of medicine. The study found that students felt more prepared to care for the elderly after the two-week elective, engagement was raised, and the content delivered was viable and well received. Michener et al. (2020) discovered that the circumstance of COVID-19 aided the necessity of geriatric learning for students, whereas it has been overlooked previously.

Richardson et al. (2020) reveal that COVID-19 has had a significant impact on medical students studying orthopaedics. Three orthopaedic students provide their perspectives on the implications COVID-19 has had on their curriculum. Richardson et al. (2020) believe that fourth year students will be adversely affected as they will be preparing for their orthopaedic

residency; a period of external placement learning and experience. To mitigate the reduction in practical skills based learning Richardson et al. (2020) proposed the following advice for orthopaedic students “(1) read up on major orthopedic journals, (2) reach out to orthopedic surgeons in areas of interest, (3) reach out to program directors/medical clerkship directors/program coordinators for opportunities to attend their educational curriculum virtually, (4) attend online lectures and hospital grand rounds, and (5) practice suturing technique with a practice kit.” (pg.1)

Practical based studies were interrupted during the global pandemic, as many were unable to attend placements and acquire the necessary skills for their course. Subjects relating to medicine and healthcare were largely affected due to the high percentage of practical based study the students have.

### **Conclusion of Literature Review**

Mental health was a prevalent theme discovered in the literature. The global pandemic has resulted in students suffering from higher rates of depression and anxiety (Tinsley, 2020; Kapasia et al., 2020). Isolation from lockdowns and limited communication have been key contributors to students' mental well-being, as well as high levels of stress (Fawaz et al., 2021). As a result, student motivation has hindered the learning process for many students struggling with mental health (Zis et al., 2021; Feng et al., 2021; Blake et al., 2021). Son et al. (2020) found an increase of 8% in students with suicidal thoughts, and Nelekar et al. (2021) recognise the unwillingness many students have when discussing their mental health, due to cultural upbringing. These rapidly increased rates of health struggles, and suicidal thoughts have created high demand for universities to combat these rising issues.

While technology is often used in everyday life, some students are still a novice when using technology. Rizun and Strzelecki (2020) conducted a study, finding that students tend to be competent with their I.T. skills and have located no alarming developments in student success since switching to remote learning. Gay (2020) found that only one third of their sample had shown to have e-learning competencies, presenting a hindrance to students having to work remotely during the pandemic. Kapasia et al. (2020) however, have found that competency is not the only factor that universities must consider. Students require safe and reliable spaces to work effectively (Kapasia et al., 2020), suggesting that some students are in unfavourable surroundings, and this is taking a negative impact on their learning and motivation (Chattaraj, & Vijayaraghavan 2021). Dawadi et al. (2020) approach technology in a third world country, finding that many students are incapable of using technology due to the limited knowledge and accessibility of electronics and Wi-Fi.

Internet speed and access greatly impact a student's opportunity to learn when working remotely. Gismalla et al. (2021) found that students were unable to acquire reliable internet connection due to the steep prices they would have to pay. Furthermore, not all students have access to a computer or laptop and are solely reliant on working within the university. Kapasia et al. (2020) and Dawadi et al. (2020) also found similar problems with accessibility and internet speeds. Those students who did have an electronic device would often experience low internet speeds and outages. Some universities did not have the facilities to implement an exclusively remote learning process for students.

Degrees that are mostly practical based in nature have found challenges when transitioning to online learning. While Sandhu and De Wolf (2020) advocate that the transition is essential to get more practitioners working rather than halting their studies. However, Su and Guo (2021) have found nursing students to have low levels of self-directed learning during the pandemic. Due to the integration of working on wards, nursing students have developed high levels of anxiety whilst working through the pandemic (Carmody et al., 2020). Similarly, Richardson, Islam and Magruder (2020) found that students felt unprepared as their placements were proving difficult to find during the pandemic. As their placement is essential to enhance their knowledge of the industry, students encountered negative impacts of the pandemic in relation to their practical experience in their future industry.

## **Aims and Objectives**

Developing aims and objectives in qualitative research provides researchers to effectively conduct their study with relevant questions for participants (Doody, & Bailey, 2016). Reviewing the current literature on a phenomenon also separates any pre-existing assumptions a researcher has on their study and creates a process that ensures that aims are relevant to the complex nature of qualitative research (Austin, & Sutton, 2014).

The objectives were formed to create a literature review which would then determine the aims of the study. Literature reviews provide the researcher with a generous amount of knowledge that influences the aims of the researcher's study (Aveyard, 2019). From the literature, three aims were acquired, 1: Investigate how students' mental health has been affected during COVID-19; 2: Explore the perceptions of digital learning throughout the closure of universities; and 3: Examine the lack of social experience students have had due to the global pandemic through qualitative interviews. These then formed the basis of the suppositions identified in the following chapter.

Questions were then developed relating to the aims of the study. Reflecting upon the original intent of my study, the literature review and discussion with my mentees generated the following questions:

- How has the COVID-19 pandemic affected MPHIS students' social and mental well-being?
- What impact has this had on learning and teaching?
- What can educators do to mitigate the impact of remote learning?

These questions, consequently, are congruent with Yin's (2014) overall approach to case study research.

## **Methodology**

### **Introduction**

This chapter provides the rationale for the research approach adopted for this investigation and illustrates the methods adopted for data collection and analysis.

### **Choice of methodology**

Methodology choice will determine the approaches adopted for the investigation.

The chosen research methodology underpins the study and methods adopted to collect the data. Fundamental to determining the correct choice of methodology in research is the philosophical perspective that aids and determines the choice of methods. Robson and McCarten (2016) assert that the philosophical basis of research is essential as it illustrates to the reader the assumptions that researchers are making about their research and underpins the rationale for the purpose, design, and methodology of the project. Furthermore, it enables the researcher to reflect upon their chosen approach and ensure that there is an amiable fit with their personal values and assumptions of the world. Robson and McCarten (2016) and King and Brooks (2017) propose that a research philosophy is constructed of two key elements: epistemology and ontology.

### **Epistemology and ontology**

King and Brooks (2017) suggest that epistemology and ontology are fundamental components of a research study and determine how the researcher frames the inquiry in the choice of methods and approaches. Furthermore, it illustrates the researchers' beliefs and how knowledge is generated within the research.

Epistemology and ontology are perspectives that form the philosophical foundations within social science research. Blaikie (2000) describes epistemology as the philosophy of knowledge, stating "the possible ways of gaining knowledge of social reality, whatever it is understood to be. In short, claims about how what is assumed to exist can be known" (p8). Therefore, epistemology influences and determines research methodology, subsequently gearing new knowledge. Whilst to provide a holistic representation of philosophy, King and Brooks (2017) suggest that it is important to secure and explain the nature of what is perceived as reality, this perspective is known as ontology.

Social science researchers draw upon four key paradigms to determine the research approach and define and understand the phenomena representing the social procedure as that given reality (King & Brooks, 2017). Research that draws upon positivism is commonly centred on inquiries that explore behaviour within a specific social activity and is typically used in

qualitative research (Robson & McCartan, 2016). Bassey (1995) and King and Brook (2017) assert that positivist researchers utilise an ontological framework which could be created by following three principles: observable, quantifiable, and empirical evidence.

Conversely, methods such as interpretive and constructivist highlight frameworks using qualitative research. Interpretive methods identify the social reality being based on the experience and perception of an individual (Merriam, 1988; Robson & McCartan, 2016). Theories relating to the reliability and validity of interpretive methodologies are determined by the validity and reliability of the methodology selected when collating data (King & Brooks, 2017). The data from objective, precise, and predictive methods is commonly available through research designs such as empirical and positivistic, where reliability and validity of the results can be viewed as problematic from the perspective of positivist researchers. Though, Casey (1993) explains that participants are not deemed to be the study within the qualitative researcher, individuals are therefore promoted to investigate the constructs that they perceive as reality (Cohen et al., 2000). Constructionism and objectivism take differing perspectives on reality. Objectivism views reality as a phenomenon that is independent to the individual, while constructionism believes reality to be subjective within social processes (Neuman, 2014). Researchers taking an interpretive approach believe that reality is relative as you can observe and change it (Robson & McCartan, 2016; King & Brooks, 2017). Furthermore, as illustrated by Robson and McCartan (2016), interpretive, qualitative, and phenomenological studies due to their inductive nature are more appropriate to explore observations and patterns to develop explanations and theories. Robson and McCartan (2016) illustrate that this approach to research is congruent with a qualitative research methodology and is a preferred approach used to inform enquiries relating to social reality.

A qualitative approach was chosen for this current study as the focus of the study was the aim to explore the experiences of Postgraduate International Students during the COVID-19 pandemic who were studying Public Health. Social scientists utilise epistemological reflections to aid their understanding of subjective constructs and enable the capture of the perceived reality of the subjects. In the case of this study, the qualitative approach to the investigation provided the opportunity to explore the lived experience of Public Health students during the pandemic.

Three key approaches are used in qualitative research: Ethnography, phenomenology, and grounded theory.

## **Phenomenological Approach**

Phenomenology is the study of “phenomena” that is the appearance of experiences or happenings as they appear in our lived experience, described by Laverly (2003) as a descriptive approach that focuses on the structure of experience and those principles that give meanings to actions. Phenomenology is often presented both as a research philosophy and, as well as a method (Denzin & Lincoln, 2000) and is based upon a humanistic paradigm. This approach has been developed further and expanded upon as an approach known as interpretative phenomenological approach (IPA). This refined approach provides and investigates experiences lived by participants and allows the researcher to explore in detail how they make sense of their personal and social world and to inquire about the underlying structures of those experiences.

Thus, as Smith (2004) asserts IPA drawing upon the hermeneutic tradition enables the in-depth exploration of meaning-making discourse and the underlying conscious involvement and motives behind a person’s actions and behaviour. Distinctly, IPA as proposed by King and Brooks (2017) enables in-depth explorations of what constitutes and transforms human behaviour.

IPA is suitable for research that aims to understand the students’ personal beliefs and values on the pedagogy adopted during the pandemic teaching and learning. Utilising IPA would allow the researcher to discover the lived experiences of lived by the student during this time, though this would exceed the chosen questions for the study being conducted. Furthermore, human intentions are not prominent in this research. As a result, IPA was not chosen for the study (Robson & McCartan, 2016).

## **Ethnography**

Ethnography investigates a phenomenon through immersion and engagement. Streubert and Carpenter (2011) explain that this is commonly used when utilising observation to uncover social process complexities. Ethnography as illustrated by Pereira de Melo et al. (2014) can be applied when investigating phenomena in settings regarding contexts such as culture. Data is accumulated in real-world context through the researcher’s immersion in the field of study and becoming an active participant in the study’s context. (Pereira de Melo et al., 2014).

Ethnography would have been a viable method if the aim of the study was to be exploring context specific complexities. Furthermore, the utilisation of this method would exceed the study objectives and would require a lengthy process due to observational commitments (Robson & McCartan, 2016).



## **Grounded Theory**

Grounded theory is utilised by a researcher when examining a social phenomenon, which develops a greater understanding of an individual's experience, devoid of presumptions (Charmaz, 2014). Engagement of participants in their grounded reality experience is commonly used within grounded theory. This includes performing routine observations within a group or individual setting (Streubert & Carpenter, 2011). Theoretical sampling allows consistent comparison undertaken by the research of accurate recruitment for participants best fitting the research question (Bryant & Charmaz, 2010; Charmaz, 2014). Saturation is complete when all data is found and there can no longer be more categories. Data received from participants then determines a theory concluded by the researcher from the observations (Streubert & Carpenter, 2011).

Had the aim of this study been to develop theories which address the conceptual challenges on students during the pandemic, grounded theory would have been sufficient. However, due to time restrictions and the inability to perform observations during the pandemic, grounded theory was viewed as unsuitable for the study.

## **Case Study**

Bassey (1995), a prominent educational case study researcher, describes case study designs as a commonly applied method within pedagogical research as it investigates the standards of practices and identifies the requirements within a service. A case study design was determined as the most suitable method as the aim to uncover the challenges international students faced during the pandemic relates heavily to the practises investigated within case study design. Useful aspects of case study designs are in evaluation and exploratory nature relating to concerns in an identified phenomenon (Yin, 2009). This approach was considered to be most suitable when exploring the experiences students encountered when living through the global pandemic. Robson and McCartan (2016) suggest the case study approach enables the researcher to explore key associations between inherent factors within real life interventions, and are congruent with those questions that pose how, what, and why these occur. This facilitates considerations into the engagement of students, and more specifically the lack thereof during the pandemic. Utilising this type of design presents the researcher with specific strengths and limitations within the given study.

Yin (2014) explains that case studies are utilised when making a generalisation over a phenomenon, compared to relating the investigation to a specific context. Further definition by Yin (2014) states "Case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not evident. Case study copes with technically distinctive

situations in which there will be many more variables of interest than data points and, as one result relies on multiple sources of evidence with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical positions to guide data collection and analysis” (17).

Yin’s (2014) explanation of case study research matched the aims of this study as it was to gather evidence from international students’ experiences during the global pandemic. Furthermore, utilising this design allowed me to deeply analyse the aims and retrieve accurate findings while presenting undetermined considerations.

### **Types of Case Studies**

It is essential to consider comprehensive and structured methodology when utilising a case study design. Yin (2014) proposes that a case study should adopt a structured methodology and asserts there are four key designs for case studies: single case (holistic) designs; single case (embedded) designs; multiple case (holistic) designs; and multiple case (embedded) designs. A single case study is characterised by the investigation of a single phenomenon incident or case, whereas a holistic case study is when the study is investigated in its entirety. Embedded case study design is when there are subunits chosen for a single case. Where studies are conducted as multiple these are described as multiple case study designs. Pilot case studies can be utilised before multiple cases within single case study.

Yin (2014) suggests that multiple case studies can either be holistic or embedded in nature, deepening upon the focus of a whole unit or what he describes as multiple subunits within the case. A distinctive feature of multiple case studies is that cases can be selected for similarity described as literal replication to provide contrasting results described by Yin (2014) as theoretical replication. However, theoretical frameworks are required when conducting a replication strategy. Yin (2009, p54) emphasises the importance of the theoretical framework and writes that a “theoretical framework should state the conditions under which a particular phenomenon is likely to be found (literal replication) as well as the conditions when it is not likely to be found (a theoretical replication)”. Therefore, re-enforcing the importance of the theoretical framework in the design of the study. Once achieved, the individual cases should be identified, and the research design and data collection process followed within the research protocol. Furthermore, each case study finding multiple case studies should guide the conclusion made and address the nature and scope of the pre-set propositions illustrated within the study.

Drawing upon Yin, Stakes (2006) suggests that case studies can be considered as collective, intrinsic, or instrumental. An intrinsic case study is used when relating the study to the researcher’s interest and not what the case illustrates. Researchers utilise instrumental case

studies when investigating a case in a selected order for a deeper understanding of the phenomena. Within instrumental case study, researchers discover which cases can be best utilised to investigate the question. Several studies require a collective case as this utilises a comparison of the findings from the researcher (Creswell, 1998). Instrumental and collective case study can be utilised for the study being conducted. Multiple case study design was chosen to explore the teaching and learning challenges international students faced during the pandemic. This is because the researcher is able to determine a specific case, which provides the exploration of undiscovered problems within instrumental case study (Creswell, 1998). Each case was viewed as an individual student who was studying Public Health at postgraduate level. A case in this instance may provide alternative findings from their counterparts and allows for a dynamic perspective through each interview (Creswell, 1998).

Several cases were recruited for the exploration of students' mental health, perceptions of digital learning and lack of social experience. The more cases studied allowed for a more convincing and vigorous set of findings to be analysed. Utilising Yin's (2014) unique case study design allowed for a specific, rigorous investigation within the considerations of replication, and the constructs of validity; internally and externally. The following section discusses this design in detail.

### **Case Study Design**

Yin (2014, p26) asserts that the "research design is the logic that links the data to be collected and the conclusions to be drawn to the initial questions of the study."

Reflecting upon the philosophical approach, the nature of the study and discussion with my supervisory team an exploratory multiple case study design approach was chosen as this provided the most logical approach to exploring key causal relationships within the collated data and factors that are unique and largely unexplored (Yin, 2014). Yin (2009) asserts that a case study design provides a "logical model of proof that allows the researcher to draw inferences concerning casual relations among the variables under investigation" (p.26). Adopting this design enabled the identification of those causal relationships between factors that influence the teaching and learning challenges associated with the mitigation strategy adopted in response to the COVID-19 pandemic.

Therefore, this approach was chosen to enable the examination of how students teaching and learning within the Public Health setting was affected by COVID-19.

A case study design, asserts Yin (2014 p29) needs five key components, these include:

1. A study question

2. A related proposition
3. Units of analysis
4. A clear link between data and the proposition
5. Specified criteria for data interpretation.

Therefore, drawing upon this framework the following was formed:

## **1. A Study Question**

**The research question is:**

What teaching and learning challenges have international students faced to teaching and learning as a result of the COVID-19 pandemic?

## **2. Propositions**

Propositions are essential for a credible and reliable case study as they maintain focus of the research and form the basis of key questions and aims developed within the study. These, as Yin (2014) suggests, should be based on the literature review carried out before the study commences. The following propositions were identified from the literature for the purpose of this study:

### **Proposition 1:**

Unfamiliarity of teaching and learning approaches and culture within alien universities contribute to mental health and well-being issues experienced by international students.

### **Findings from Literature review:**

Kapasias et al. (2020) illustrates within India 70% of students participated in E-based learning activities and delivery during the lockdown and demonstrates that many suffered from situational, mental health and well-being concerns. Furthermore, their study, at the outset of the COVID-19 pandemic reports students typically suffered from unreliable internet access and a substandard study and learning environment.

### **Proposition 2:**

Students within the UK have good knowledge and access to IT service and support and have few challenges transitioning to university IT systems.

### **Findings from Literature review:**

An online survey conducted by Rizun and Strzelecki (2020) at the peak of the pandemic in the first lockdown found that traditional students had no issue with learning remotely, although expressed a preference to for face to face “in-person” learning.

**Proposition 3:**

International students participating in E-based learning as a consequence of Covid-19 mitigation strategies are impacted more greatly than home students.

**Findings from Literature review:**

Kapasias et al. (2020) illustrates the challenge of achieving and maintaining a reliable internet connection, and where this fails learning becomes frustrating. Furthermore, when students do not have a good and comfortable social environment that supports their learning their self-determination (Gay, 2020) decreases. Kapasias et al., (2020) further assert that where the environment is not conducive to social learning health and well-being deteriorate.

**Proposition 4:**

Practical and skills-based learning are disproportionately affected by online learning during the pandemic.

**Findings from Literature review:**

Richardson et al. (2020) and Sandhu and De Wolf (2020) assert that skills-based learning and increasingly work based learning opportunities are becoming increasingly scarce, with many employers reluctant to engage with work related student learning due to concerns regarding health and safety.

**3. Unit of Analysis**

The unit of analysis suggested by Yin (2009, p30) is the case definition and that there should be a clear and explicit relationship between the intent of the research questions and the units of analysis. The units of analysis of each definition of the case should be a clearly identified group or individuals within the case study. For example, the units of analysis of this study are the students and the case definition is the MPH students. the objective of this case study was to investigate the teaching and learning challenges presented to international students during the COVID-19 pandemic and the impact it made

**4. A Logical and clear link between linking the data and to the proposition**

The questionnaire design drew upon Robson and McCarten’s (2016) design framework and included the development of interview questions arising from each of the propositions identified. The semi structured interview was chosen to collect the data from an interview

schedule that reflected the propositions generated from the completed literature review. This is an important feature of the case study approach ensuring that the approach adopted is clear and consistent thus promoting reliability and validity (Yin, 2014). This provided the advantage of providing structure to the interview, minimising bias, and promoting consistency to the interview, it also provided a series of questions and prompts to facilitate the interview. Whilst I have well developed interview skills developed as part of my undergraduate studies in counselling, I consider that as a novice researcher, an aide memoir may well be useful (Robson & McCarten, 2016) to prevent any undue gaps or pauses with the research interview.

## **5. Specified Criteria for Data Interpretation.**

A key criticism of case study research historically (Ulin et al., 2005) is that it has little transferability and may lack reliability has the potential to exaggerate findings (Robson & McCartan, 2016) because of the investigator's preconceptions and the potential for the selective data interpretation. To ensure case study reliability Yin (2009) proposes that case study research a minimum should satisfy four key tests of credibility.

### **Construct Validity**

Construct validity is crucial as it determines the accuracy of what the case study is attempting to measure. Yin (2009) suggests that in order to achieve construct validity detailed preparation for data collection and analysis is required and that multiple sources of evidence within the case study are necessary to achieve validity. This study is characterised by a carefully thought and justified data collection strategy and the use of multiple units of data. Therefore, the rigor of this case study is congruent with Yin's notion of construct validity.

### **Internal Validity**

Internal validity is described as "the strength of a cause - effect link made by a case study" (Yin, 2014, p.239) and therefore determines the validity and uniqueness of the case. Strategies that enhance internal validity, includes pattern matching; explanation building for each case; acknowledging contrasting explanations; and logic models that explain the findings and conclusions drawn.

To promote internal validity, template analysis (King & Brooks, 2017) was used as the data analysis tool, Robson and McCarten (2016) and Braun and Clarke (2016) suggest that thematic analysis is a method for analysing qualitative data that entails the identification, analysis and the reporting of any pattern presented within the data collected and template analysis is a mode of thematic analyses that involves the production of a template that identifies a summary of the key themes presented within the data collected. In this way, data is collated and organised in a clear and structured manner. Adopting this enabled the

identification of comparable and analogous patterns and consider rival explanations that may be a contrast to the initial propositions formed. Using template analysis, a logic model based on themes and sub-themes was developed for each case.

### **External Validity**

Whilst Yin (2014) acknowledges attaining external validity is challenging within case studies, the use of external validity was achieved by using multiple units of analysis and replication, thus promoting validity.

### **Reliability**

A clear case study framework promotes reliability (Yin, 2009). For this study Yin's four stage framework was adopted from the conception of the project. This included garnering and illustrating:

1. Provide a clear methodological overview of the case study
2. Identify and illustrate all data collection and field procedures
3. A clear and concise illustration of the questions used
4. A case study report guide and overview

### **Ethics Approval**

Ethical approval was sought from The University of Huddersfield's School Research Ethics and Integrity Committee (SREIC) and granted 12.11.2021.

### **Sample**

Participants were recruited from the School of Health and Human Sciences, who were current Master of Public Health international students (MPHIS), during the period September 2020 – January 2022. This was achieved by contacting the Course leader who agreed to distribute an introductory message via email alerting them to my invitation. Whilst the preferred media for collecting the data was in person face to face individual semi structured interviews, due to the constraints of COVID-19 via MS Teams.

### **Data Collection**

Following an introductory email distributed by the course leader, all MPHIS were invited via email to participate in the study. Following an initial expression of interest participants were sent an Information Sheet and a Participant Consent Form. The Information Sheet explained the overall aim and purpose of the study and provided the individual with answers to a variety of questions they may have about the study. Further information and contact details of the

researcher, Owen Kelly; supervisors, Dr Michael Snowden, and Dr Jamie Halsall; and support of Huddersfield Wellbeing Centre, was also provided in the event the student participant required support following the interview or prior to this had any further questions they wished answering. The Participant Consent Form was provided to obtain consent and to ensure understanding and required a signature from all participants. Withdrawal information, transcription, and General Data Protection Regulation (GDPR) were explained in this form. 9 from a total of 22 student agreed to participate in the study, which reflects a very good participation rate, (Robson & McCartan, 2016). Each participant was allocated a pseudonym to maintain anonymity for privacy purposes. Any reference to peers or individuals during the interview was also anonymised.

A semi-structured interview approach to the interviews was chosen as it allowed flexibility and the dynamism to probe and adapt further questions that would contribute to a full picture of their experience.

This approach also assured the participant that their answers were respected and provided reassurance that their views were valued. An open-ended question and conversational approach were adopted as this allowed a natural and rich conversation to be developed.

Whilst face to face interviewing is the preferred mode of choice, Microsoft Teams allows an alternative and effective approach from face to face interviewing (Hanna, 2012; King & Brooks, 2017) where in person or face to face interviewing is not possible due to constraints, as in this case as a consequence of the pandemic. However, it is well documented that where non face to face interviews are conducted, for example online or telephone interviews, online interviews noticeably miss features such as the physical interactions between researcher and participant and the opportunity to garner social cues may have a negative impact upon the fluency of the interview. However, key restrictions on the data collection process, due to COVID-19 restriction, meant that face to face interviewing was not possible during the time planned for data collection. Furthermore, acquiring information can be more accessible, as some of the participants had returned to their home nation and were not in the United Kingdom when the interviews took place. None the less, the flexibility offered by online interviewing allowed the interviews to be completed within a week and as Hanna (2012) suggests, contributed to response as neither interview researcher or participant had to travel to a specific place of interview and could be completed in a place of their choosing, an important consideration during the pandemic.

The ease of accessing the internet and conducting interviews through a computer allowed for the interviews to be conducted within two days. Furthermore, using an online platform for



interviews to take place holds a greater comfort for participants' privacy, as they did not have to leave the house to participate.

### **Data Analysis**

A key advantage of using MS teams is the screen recorder and transcript tool, which enabled the rapid collation of data following anonymisation of the transcript. Data collected was stored on a university password protected device through two factor verification and along with an additional password needed to gain access on the university computer storage.

Template analysis (King & Brooks, 2017) was used as the method for data analysis. Template analysis enabled structure to be maintained but within a flexible approach congruent within case study research. The template was created from the initial themes developed thus provided a basal co-coding frame to analytical. The "piori themes," constructed enables the discovery and presentation of those predetermined themes. Subsequent review and further in-depth analysis were completed on those individual accounts collated.

### **Development of the Template**

Using the process illustrated by King and Brooks (2017), the interview transcripts were screened to aid my familiarity with the data collected. These were read initially to familiarise myself with MPHIS experiences, following preliminary coding, drawing from the presuppositions identified within the literature review. Subsequently, priori themes were then formed and then an initial template was created and developed. However, this was consistently visited as new themes emerged and began to change. At the conclusion of this process four key integrative themes were discovered which reflected the main research themes presented by the presumptions offered. With the presuppositions developed, thus contributing to Yin's (2014) notion of contributing to validity. Ensuring the reliability and credibility of the template developed and acknowledging the limitations of a novice researcher, I adopted a process of peer review recommended by Robson and McCarten (2016), in order to enhance reliability, a peer review was completed by my supervisors who were able to independently analyse a sample of my data, which they agreed and confirmed the accuracy of the themes developed. the data obtained and were satisfied with the themes identified. The themes identified were: (1) Communication and Support; (2) Well-being (Stress and Anxiety); (3) Access; (4) Skillset (Student and Staff); (5) Teaching and Learning (Strategies, Feedback, Assessment, Content).

### **Managing Data**

Each interview was recorded using MS teams and consequently enabled the use of the recording transcript tool. transcripts were undertaken using the transcription tool on Microsoft

Teams. The transcripts were then checked manually, and amended according to errors caused in dialect and pronunciation by listening and revisiting the recording and re-reading the transcripts several times to ensure they were an accurate representation of the interview. At times the participants mentioned staff and peers by name, where the participants mentioned personal information, the information was erased, and the transcript was amended by inserting "personal information." Once the transcript had been compared to the interview recording and accuracy confirmed, each transcript was then embedded within a word document. The transcripts were typed into a word document and the numbers were associated with each line. This is a useful strategy as it enables specific context to be identified and with line numbers, for ease of locating precise text. Utilising this method of transcribing enabled provides an opportunity for an intuitive and accurate analysis (Robson & McCartan, 2016) of the data acquired to ensure and maintain a credible process that reflects the real world setting of this research. Attride-Stirlings' (2001) framework was also used to provide a reflective opportunity to ensure the credibility of the systematic process along with providing structure of the analytical process.

A document was formed for each transcript and was saved as a separate document, highlighting the relevant text, which would later evolve into a theme or subtheme. Subsequently, a further document was constructed, and the highlighted text was joined and grouped with key words and phrases which would, or would not, become collated as themes and sub themes in relation to the participants' experience.

### **Chapter Summary**

Whilst several qualitative approaches were eligible for this research study, case study was deemed to be the most appropriate for the research being conducted. Utilising template analysis, and thus, using priori themes was beneficial as it determined possible themes taken from the literature review findings, before conducting the interviews. Furthermore, due to the study determining the experience of each international student interviewed, case study was most appropriate as it investigates the lived experience of participants in a specific setting.

## Findings

One semi structured interview was performed per individual, lasting between 30 – 45 minutes. 9 MPHIS agreed to participate in the research, and strikingly all 9 preferred face to face and in person teaching. Access to resources and materials were not seen to be an issue, with 9 claiming they did not struggle to access the sources needed and commented favourably upon the support received. As a result, the MPHIS were all in agreement that their final grade was not impacted by the global pandemic and learning online.

Further to this, students expressed their mental wellbeing as being negatively impacted by the global pandemic, and the transition to online learning. The move resulted in a poor social experience, which only heightened their anxiety, and left them feeling isolated.

The analysis of the interviews with the MPHIS resulted in five themes:

1. Communication and support
2. Well-being
3. Access
4. Skillset
5. Teaching and learning

### Theme I: Communication and support

The first theme highlights both the benefits and difficulties MPHIS experienced when interacting with their peers, tutors, and lecturers. Students also recounted the support that was offered to them during their studies.

International students are especially impacted socially as a consequence of online learning. They begin their studies with their families and friends in different countries, and do not know the people in their surrounding area:

*We left our family behind and obviously they're anxious whenever they learn about what's happening because all this was starting erupting in European countries first, so they were a little bit anxious and we were also little bit worried (Participant I - 178-180)*

Some lectures were even pre-recorded meaning the students did not have a platform to interact in their sessions:

*Was very much different from what you get from the online and the other thing is about the human interaction at the end of the day, everyone loved to have a human*

*interaction. Being in kind of pre recorded classes or even in his zoom. It's difficult because it's like we have certain length of of. You know, time (Participant VII - 50-54)*

Communication with their lecturers would then prove difficult as a majority of students would also be booking meetings to discuss the module:

*Access like an appointment with the professor. It was a bit different and the difficult because obviously all students were approaching professors in a sense like, so we have to wait and. Another aspect was only the availability of module leaders. (Participant I - 20-22)*

Another student mentions the impact of learning remotely in relation to having communication with their peers:

*I couldn't even go to university. I haven't. I don't know where my building is, where we're supposed to learn public health. I haven't personally met any of the tutors, and even if I see any of my colleagues outside or in a supermarket, I wouldn't even recognize them because we do not share that connection or so. That's one thing that you know was a negative experience for me. (Participant II - 347-351)*

Lack of communication had a negative impact on students' mental health as many felt lonely and ended their program never meeting their peers or lecturers:

*At some point so it took like a huge toll on me and also because everything I did at that point was online so there was no the lack of interaction for me. I'm I'm like I'm kind of a social person so I like to. You know, have a bit of a chat, so yeah, that's why I was saying got to me and yeah, because it was just a thing of wake up read do my coursework. It's like it was just a cycle and overtime, yeah it got it. (Participant III - 110-115)*

Regarding the social events organised by the university, the students felt as though they were lacklustre and did not give them an opportunity to socialise with others from the university:

*They could have organized a lot of like activities games. Just try to get students involved. You know the thing. Uhm, maybe obviously the first couple of times when you try to get people to join it. Yeah, not a lot of people joinable. If you're continuously pushing and if, let's say, what a group of 10 people at least even joined for the first time and they kind of like, you know, OK, this was nice. They would tell more people about it, right? But yeah, there was none of that. (Participant III - 187-192)*

The same student also expressed their frustration with the process of matching them up with a mentor and how the university could have implemented a platform to better socialise with their peers:

*First things first they should have created like what I feel like we're at the point of technology where we all have WhatsApp's. They could have started from, you know, just a little. Very little, in as much as yet they they, they try to, uh, when I joined, I remember they. They put me. They called it a buddy up thing where they attached someone to me. Uhm, yeah, you know how when you doing, really? When you email actually was an email thing. So when you're emailing someone you can't really put a face to who you're speaking with so. Yeah, I didn't really. I I think I only spoke to my buddy maybe twice and that was it. (Participant III - 488-495)*

Incentives for students to join social events online was to offer prizes such as vouchers to promote communication between different disciplines and team building:

*Yeah, so that could help as well, rather than just putting in random person and so in terms of the when I say activities and games they they can make it like a regular thing like oh every let's say Thursday or Friday like this activity is going on and they can kind of pull people in and then in terms of oh you win or you can win. Maybe a free Amazon voucher. You can win. And something you can get certificate. You can get a badge like something like that will just entice people so more people can join in. (Participant III - 510-515)*

Another student supports this opinion in their interview when discussing how the university could have done more for MPHIS' social experience:

*They could have done more like well being gathering so they could have, you know, connected with our own. A community gatherings like like the organisations who could help international students during this whole situation. Then it would have been better because they were lot of people in my contacts that we're facing severe distress during this pandemic time because of the jobs they have lost. (Participant I - 263-267)*

All students interviewed responded positively to the support services being offered to them by the university, explaining that the university support services would also check up on them to ensure they were still doing well:

*Well, they were pretty much supportive, and they used to, you know, keep keep on checking it on us there where like really focused on the mental health as well. Uh, so yeah university were very supportive. (Participant II - 29-31)*

Events regarding student support and reminding students that they had access to mental health platforms were also implemented by the support services:

*They did an event. Yeah yeah, just student support and occasionally like email. Uh, emailed me. I remember a, you know, letting me know or if you're ever feeling like overwhelmed and you know you need to join any. They always had like mental health and well being. And for their college support forums. (Participant III - 91-94)*

Another student explained that many support options were offered concerning illness with COVID-19 and that their lecturers were readily available via email:

*If the person is affected from COVID they supported and for learning also they gave many options actually they can like we can email the professors anytime we want. Uh, on we can ask questions also so we can book meetings with professors anytime. So yeah, the university supported very much. (Participant IV - 58-61)*

One student believed that the support services could not have done more than what they had already provided, when asked if the support could have been improved upon:

*No. I can't think of anything more that they. I think what I what I received as a student with support at that time was. So it's adequate (Participant V - 244-245)*

Whilst it was unanimously agreed that the services offered to the student's was efficient, there was only one individual who would seek support from them:

*I somehow coped and managed because I was able to reach out to, you know, support services. I was able to reach out. Uh, to the professors if I needed (359-361)*

Another student had reached out for support, but not from the university:

*I went into a depression kind of state in the middle of the sessions and so I had to take help so I didn't... You know, go to the university rather I took help from outside the university, some services so then they helped me out through it. (Participant II - 73-76)*

When asked about why the individual did not seek out support from the university, the student explained that they had tried initially, though experienced an I.T. issue:

*Well, I went actually I just there was this website called (Personal information). All I went there but then I don't know what happened. Maybe it was an IT thing. I really don't remember what exactly happened, but I don't think it was much responsive. So then I went to this (Personal information). (Participant II - 82-85)*

The students, though happy with the support services, one felt as though the service could be improved, especially in terms of international students:

*They would have approached the international students are you. Are you feeling good? Do you need any help? Because at the end of the day, international students pays more than the national students (Participant I - 259-261)*

Further interviews disagree with this statement, explaining that the support services were frequently in contact with the students:

*Keep on checking it on us there where like really focused on the mental health as well. Uh, so yeah university were very supportive. I mean everyone, even the lecturers. (Participant II - 30-31)*

Another participant explained that support services would contact them via email:

*Yeah, just student support and occasionally like email. Uh, emailed me. I remember a, you know, letting me know or if you're ever feeling like overwhelmed and you know you need to join any. (Participant VI - 90-93)*

## **Theme II: Well-being**

Stress, anxiety, and depression were common within the student interviews. The result of loneliness would leave students feeling great sadness throughout their year, impacted by both the uncertainties of COVID-19 and the isolation that came with it:

*It was really bad to be honest, so I had to, you know, I went into a depression kind of state in the middle of the sessions and so I had to take help (Participant II - 73-74)*

Another student felt similar about their decision to start their Master's:

*We were all very low point to think about that. We took a wrong decision to come and study because of the situation going on and we were feeling helpless that if and no one there to reach out. (Participant I - 186-188)*

Their mental health was impacted from the global pandemic, especially being away from their families:

*COVID has a lot of impact on the mental health that would say that because at the end of the at the beginning of the I mean when this whole thing with unravelling. (Participant I - 174-175)*

Another student mentioned the relation to their mental health and the effect it had on their academic experience, as well as their social:

*Well, it did affect my studies because I couldn't concentrate and then I had to take extensions for a few modules because I wasn't able to catch up on time. So yeah, that was a really big issue. Plus, you're not meeting anyone. Everything is online. So, if I would have met someone, I think I mean my depression would have been a bit, you know, less, that's what I assume. (Participant II - 91-95)*

One other student explained that their mental health was not great during this time and that they were trying to adapt to the new way of learning:

*Mine wasn't the best. I would say that at the beginning during the first term. Like just before the Christmas break I I was. I mean it was OK. I was still like trying to adapt. (Participant III - 102-103)*

However, one student explained that they were not struggling with their well-being during this time, explaining that their active lifestyle had prevented them from the common effects of the global pandemic:

*So, it didn't affect me much, actually. Mental health. I'm mentally active, mentally and physically active. (Participant IV - 115-116)*

Unlike other participants, however, this student did have their family with them throughout their master's degree. While many of the students had difficulties due to family living in another country, this student did not face the same challenge.

Speaking of how the transition from in person teaching to online, one participant focussed on their well-being in relation to learning the new way of learning:

*It did, uh, create this. This change of mood of studying. You know, from classroom to online. It did cause some anxiety (Participant V - 93-95)*

### **Theme III: Access**

During the students' studies, the library would sometimes be unavailable due to restrictions caused by the pandemic. Students were recounting their experiences regarding access to the required material for their studies.

All students had no issue with retrieving relevant texts for their work online. Each participant explained that Summon; the university's search database, had all the material needed for their modules:

*In terms of challenges while being on Internet while accessing resources, I don't think that we face pretty that much challenge. (Participant I - 296-297)*



Another student, who also mentions going to the library, agrees that there were no issues with retrieving journals and books during their studies:

*All the materials were online, but I would prefer to go to the library. So, I personally went and got the books from the library. (Participant II - 184-185)*

A further student said that they had no issues accessing e-learning resources:

*On a large scale, I would say the Uni did very well in terms of providing e-learning resources, but there were a few books. I guess I would say maybe it was out of, you know, their jurisdiction like goes out of hand for them. They just couldn't get hands on those books ... But about ultimately, they they that they did try 'cause I would say most of my work was done online like through SUMMON through the E Learning resources. (Participant III - 275-278 & 282-284)*

Another student explained that they would utilise SUMMON and Google Scholar:

*Mostly I will use this library SUMMON and Google Scholar only so so very easy only no problem for me. And also, many study materials was available in Brightspace. So, I used all these things. It wasn't. It was not a problem for me. (Participant IV - 177-179)*

A further student expressed ease of accessing journals online:

*I was able to access everything you know through the summons. You know, while doing my research projects, yeah. (Participant V - 186-187)*

Another student did not find any issues finding resources online:

*I did not have any problem when trying to access the SUMMON and even used Google Scholar for parts too. (Participant VI – 153 – 154)*

A further student explained that they did not use the library often due to the closures and online library:

*The library was closed at times, though I didn't really use it anyways so because of the online library. (Participant VII - 101-102)*

Another student mostly used SUMMON for their resources:

*No, I could use SUMMONS for resources I would need. (Participant VIII - 91-92)*

It was noted, however, that not everybody had IT knowledge when their course went online. One student offered a suggestion that the university should have implemented some workshops to students on how to do searches on Summon:

*Some of us we're not like IT trained, so some of the students like who studied with very mature students and they were returning back to education after a long time. So, for them it was a difficult to, you know, learn. (Participant I - 297-300)*

Speaking further, how to do refined searches on Summon were not explained to them:

*Some of mature students who are returning to education after long term they find it difficult to find where to find because they were not properly advised. Or trained by this, you know. Like the I would say, the academic counsellor or by the university team. It at least they could have, you know. Uh, train them during the induction time. Or if they have not had an induction time, they could have sent an email with a PDF folder like how to access these journals where and if you're not able to access contact us, or if you need a physical copy, this is the place where you can read. (Participant I - 304-311)*

Another student explained that the university could have offered more support during the transition to online learning, as it was unexpected:

*We weren't expecting online education, it was all a bit difficult for us. (Participant II - 200-201)*

Though students could access the material online during their course, one student recounted their experience when wanting to access a book. The book was available in the library, but was closed due to the restrictions at that time:

*I actually had I I had to ask a friend of mine who schooled who was schooling at the University of (Personal information) if she could get access to a book and she could. But I couldn't so. And I was like well, OK. Well yeah, so there was that also. There were books that I notice were in the library, but I guess they just I don't know, they just couldn't get them online. (Participant III - 278-282)*

#### **Theme IV: Skillset**

During the interviews, students would mention the skillset they did not have and would have to learn when moving to a remote way of learning. Coming from traditional learning scenarios, many students had never received their education exclusively online.

One of the individuals explained their experience as been a new-born child, having to relearn:

*You have to learn into that particular, you know MS Teams how to operate. You know like in in a sense, like you, if you want to access some of the materials, you need to learn about. (Participant I - 41-42)*

Another also explained her trouble with understanding the online system:

*Personally speaking, because I told you, the online thing doesn't work well or make sense for me. It would have been better if it was in person. (Participant II - 215-216)*

Adjusting to lectures sometimes being pre-recorded was also a challenge as you could not ask questions during the lectures. One of the individuals state:

*The other thing was because the classes were pre-recorded one. So obviously in order to ask any question, you have to definitely ask for an appointment with the professors and they will get back to us (Participant I - 44-46)*

The same student mentions that international students, in particular, should have had IT training to better equipped them with the new style of learning:

*Especially for international students. I mean, it was a very big challengeable one because in terms of you know there was, there should have been a proper IT kind of, you know, training. (Participant I - 65-67)*

They continue this notion with a possible support an international student may need when transitioning to remote learning:

*They could have provided a kind of training that you know how to operate, how to access certain resources when you share it on. And. MS teams and and obviously how to you know? Access the recordings and like all these kind of small things would definitely would have helped. (Participant I - 69-72)*

The student later discusses a particular module where an online skillset proved most challenging:

*It was very difficult because statistics need a software and to learn that software, it is not easy to you cannot. You cannot learn. You need someone to be in your back saying no, this is how you need to do it. (Participant I - 342-344)*

Another student supports the previous claims:

*I found it like a bit difficult because there are some aspects where we need to learn, for example SPSS software, so it would have been beneficial if you just go to the lab and learn about it rather than you know studying all of it online (Participant II - 8-11)*

A different student mentions this also:

*I have so I one of my modules within statistics and we had to use SPSS. So this is this is like a software that none of us at that time where like familiar with. Yeah and it was a bit difficult like yeah that that module. Yeah yeah it was a bit difficult like trying to teach us how to use it online (Participant III - 329-332)*

Working in a new environment can affect students' motivation to learn. During the pandemic, the students had to develop their skillset to remain as motivated as they were on campus.

One of the students explained that his motivation changed when the university moved to online learning:

*Everything changed when we went onto online. It really affected us in a lot of ways. You have own way of your learning. You have your own comfort and obviously I think the part of any environment, it does have an impact on students learning ability. So being in an in-home environment, it's not every time feasible. (Participant I - 104-107)*

Further to his previous statement, the student mentions how his motivation was affected by the feeling that they were lacking something from their education experience:

*And it does obviously affect our motivation to study and we all feel that we were lacking something at the end of the day. (Participant I - 127-128)*

Another student supports the previous statements when describing her experience with motivation and learning online:

*I think I need a little bit of push when it comes to learning, so when it comes to learn everything on your own that makes me kind of feel less motivated (Participant II - 243-244)*

This continues, explaining that some modules would help her motivation through guidance:

*They would, you know, guide us throughout the sessions especially (Participant II - 251-252)*

Though clarifies this as a mixed response:

*But there were some tutors who would like just say OK do this and do that so it's a mixed response. (Participant II - 258-259)*

One other student reinforces the notion of developing a skillset to help motivate her when learning online:

*Initially it was very difficult for me to cope up with this because. Ah, it's like it's not like face to face is so even sitting in home and attending all these classes, it's like very boring initially and difficult to cope. (Participant IV - 9-11)*

### **Theme V: Teaching and learning**

Teaching and learning changed drastically for both students and staff during the pandemic. The interviewed students recount their experiences of the teaching and learning that took place during their studies online.

Though the students have mostly negative opinions of their experiences learning remotely, almost all the students agreed that their grades were not impacted by the transition.

One of the students explained that their grade was not impacted:

*I would say that my grade was not affected (Participant I – 329)*

Another did not feel that their grade was altered due to remote learning:

*I wouldn't say that I was affected per say (Participant III - 47)*

A different student explained that the move to online learning was difficult initially, but then adapted to online learning and that their final grade was not impacted:

*I don't think so, because, uh, initially it was difficult for me for the past two or three subjects. After that I got on very well because I learned how to do all these things (Participant IV – 191-192)*

When asking another student if her final grade was impacted by COVID-19, her response was:

*No (Participant V – 218)*

Another student did not believe their final grade was impacted negatively by remote learning:

*No, I don't believe it did have impact on my final grades. (Participant VII – 113)*

However, this student believes that she could have got a higher grade if the experience was in person, rather than online:

*I could have done better if it wasn't online (Participant II – 214)*

Understanding and receiving feedback was a common subject brought up by students. Due to teaching being online, all students received feedback electronically. If students would like to discuss their feedback with tutors, a Microsoft Team's meeting would need arranging.

Further to this, with several lectures being recorded, students would need to arrange meetings with any questions or further detail they required.

One student explains:

*When you are in the class and you ask questions, you learn a bit more than waiting for a while, and then they come back to us. And then if you have question again, you have to email them and then it takes a lot of time so. (Participant I – 47-49)*

Regarding feedback, this student states:

*Learning the feedback from the email because at the end of the day, you're not seeing the person and you don't know what it means and you have a lot of question to ask to them that where I went wrong where ... Through the email feedback, it's not always available, it it for me for a student like me, I don't like able to interpret. I mean what they mean by that. Sometimes it do create a mixed understanding. (Participant I – 117-119 & 148-150)*

Another student relates the struggles of conducting presentations electronically, explaining that had she presented in person, she feels her mark would have been higher:

*I had performed really well and it was supposed to be a presentation. But you know, while it was online, or maybe I don't know what happened, but I didn't get the desired score ... Maybe something got lost in the translation or I don't know. It it would have been better if I would have done that presentation face to face. Maybe it would have made a difference, you know? (Participant II – 42-44 & 45-47)*

A different student also felt that her presentation was perceived incorrectly:

*I notice that particular presentation. I got a (Personal information) which on one hand I was going to. I was actually going to like what what's the word not appeal? Well maybe appealed ... did have that impact on my grade for that particular module (Participant III – 323-325 & 327)*

Opportunities to discuss students' feedback was not always easy to do. A student explains:

*There wasn't really any opportunity for us to discuss it. 'cause say and yeah, so basically it was you trying to pick up what they say and apply it by yourself to maybe your next course works or not (Participant III – 68-70)*

Another student also supports this, describing contact with her lecturers as a main challenge:

*So, the main challenge is the, oh, contact with the professors (Participant IV – 44)*

However, all of the participants explained that they received support from their lecturers throughout their studies.

One student explained that they were able to reach out to staff:

*I was able to reach out, uh, to the professors and they would support me (Participant I - 360-361)*

Another suggested that their lecturers were helpful through remote learning:

*Some of the lecturers they were like really helpful. They would, you know, guide us throughout the session especially (Participant II - 251-252)*

A different student expressed that their lecturers would aid them in remote resources:

*the lecturers, they suggested like books and when they suggested the books, they also put like the links directly to like to the uni library (Participant III - 291-292)*

*He really, he tried like he gave us like the loads of resources (338-339)*

Another complimented lecturers' feedback and support on assignments:

*Usually, the feedback will be acceptable, and they would help to support me in my next assignment (Participant IV - 82-83)*

A different student also agreed that the feedback was beneficial:

*The feedback did help because then I could improve on my next assignment (Participant V - 67-68)*

Another student explained that feedback would help for their next assignments:

*Lecturers did support us I feel with feedback and notes to help in our next assignment. (Participant VI – 209)*

A different student said that the reading lists and support aided their learning:

*The reading list and support from our professors was very helpful. (Participant VII - 154)*

Another student explained that the feedback was applicable for future assignments:

*I think it was acceptable as they would help support me for my feedback and it could be applied to my next assignment (Participant VIII - 124 – 125)*

Ultimately, the international students found challenges such as isolation and lack of communication to be the leading factors of their mental decline. While the students were unhappy with the implementation of remote learning, they felt as though they received support from their lecturers and achieved their desired classification.



## **Discussion**

The data collection uncovered a number of challenges and experiences international students faced during the pandemic. The impact remote learning had on the students was mostly negative. Students felt as though they should have been offered a discounted price, as they were not using the university facilities, and mentioned that online learning is reduced in price, such as traditional online universities like the Open University. Though the students all stand by their preference for in-person teaching and learning, many commended the university's approach to the pandemic and complimented their lecturers on the support they provided.

## **Communication and Support**

International students are defined as any student who moves away from their home country to study in another location (Shapiro et al., 2014). Whilst much research has been done on the impact COVID-19 has had on students, few studies have focused on international students (Mbous et al., 2022). Mbous et al. (2022) explain the alternative challenges international students face compared to their peers, such as residency problems and lifestyle.

The students recount their transition period as an overall pleasant experience, despite the global pandemic. While all students started their academic year believing the course would be a hybrid of remote learning and in-person teaching, this was not the case. However, upon their transition to working remotely, all of the students interviewed mentioned that they had support offered to them by the university and reflected on the wellness sessions set up by their lecturers. Though the majority of students did not utilise the university support services, they recognised and appreciated that it was there, had they required it. Ultimately, the students did provide feedback on what the university should consider in case of future pandemic learning, noting the unfamiliarity students face when moving from their home country. Transition support was not an unusual discovery, with many universities identifying similar themes. Pownall et al. (2022) mention the complexities of students transitioning to remote learning, implementing their five key considerations and recommendations for educators, as a result of the pandemic. These five considerations are: (Re)acclimatising to studying; Imposter syndrome and sense of belonging; Mental health consequences of COVID-19; Increasingly unattainable hidden curriculum; and Accounting for (in)equality of experience. Alharbi and Smith (2018) also recognise the mental health struggles international students face, explaining that international students have suffered with their mental health before the pandemic. Research from over three decades ago explores international students' loneliness and mental health struggles (Oei, & Notowidjojo, 1990). These examples only intensify the findings from the interviews that universities are not doing enough to support international student transition and integration.

Findings such as Pownall et al. (2022) and Turnbull et al. (2021), present models and considerations that educators can take for future similar scenarios, such as the implementation of Pownall et al. (2022) five key considerations. Fortunately, the students interviewed managed to transition to remote learning, leaving no significant impact on their final grades.

### **Wellbeing**

A continuous theme throughout the interviews was loneliness. Even before the pandemic, international students commonly experienced loneliness (Sawir et al., 2008). The challenges international students face with loneliness have been going on for decades. A study conducted in 1990 found that international students were significantly more likely to suffer from loneliness and depression (Oei, & Notowidjojo, 1990). COVID-19 has only amplified the experiences of loneliness affecting most students, but it has been magnified in the international community (Misirlis et al., 2020; Wilczewski et al., 2021).

MPHIS mentioned their loneliness throughout the interviews, explaining the negative impact COVID-19 had on their social experience. The students would mostly have a similar response when asked about their social experience, saying that it did not exist. Maslow's Hierarchy of Needs (1943) reflects the importance of human basic needs regarding factors such as socialisation. The impact of having no social experience is one of the main contributors to international students' wellbeing. Maslow (1943) determines that needs such as socialisation is what will increase success within an individual. Significant decline in student motivation would result in neglecting these students' needs. This is also found in the literature and interviews conducted. While their lecturers allowed discussion within the Zoom and MS Team sessions, the international students explained that they would not know who one another was if they came into contact in person. The Public Health Society was set up during their studies to allow the individuals easier access to communicate with one another. As The Public Health Society was mostly made up of international students, this was a safe-space and social opportunity for the individuals to make meaningful relationships and empathise with one another. Tinsley and the Office for National Statistics (2020) presented similar results when finding over 50% of students were suffering from loneliness and mental health symptoms throughout the pandemic due to the isolating factors of being in lockdown and away from family and friends. Further to this, Alharbi and Smith (2018) show that this is not a new experience for international students, the pandemic has just intensified the issue. Though there was a pandemic which resulted in no face-to-face teaching, the students were disappointed with how the process was handled. They felt as though some of their lectures could have been conducted in person due to the small size of their class. Furthermore, the international students experienced a feeling of neglect by the university, with their limited opportunities to get to know one another online. Students expressed their disappointment with

the lack of social events online, promotion to electronically communicate with their peers, and poor matching with mentors; where they felt it was randomly allocated, resulting in no connection between mentor and mentee. Snowden and Halsall (2018) explore the success of peer-mentoring within higher education, noting the match between the mentee and mentor as the most crucial aspect of the process as it will determine whether the pair will succeed. Allocating random mentors for students may present challenges of incompatibility as it did with one of the students. If an individual is placed into a mentoring relationship where they have no chemistry with the mentor, the process will be ineffective (Snowden and Halsall, 2018). Implementation of WhatsApp groups for international students was a suggestion made by a participant, explaining the inauthenticity of communicating via platforms such as Zoom and MS Teams. Students found that the university support services were interested in supporting students with academic issues, though other crucial aspects such as integration were not recognised.

Universities taking international students into account when considering how they can assist students is essential for their mental well-being. The support services considering culturally appropriate food during isolation periods (Defeyter et al., 2021) and acknowledging their situation will enhance trust between the institution and student.

### **Skillset**

Throughout the interviews conducted, all students were satisfied with their final grades, they believed that their overall grade for their degree was not affected by the transition to online learning. Karadag (2021) carried out an investigation in Turkish universities, finding that grades were higher during the pandemic. Supriya et al. (2021) also found an increase in student grades, though reported students experienced negative effects during their learning. This is because the students have access to online resources and are self-directed in their learning. Evidently, self-directed learning requires self-motivation, which has shown to be a skill many students have had to learn, from the interviews. This, along with isolation, has caused students to have a poor experience of learning remotely, as their social experience is connected to the entirety of online learning.

Students praised the university regarding the accessibility they had in retrieving resources online, such as journal articles and eBooks. Their lecturers also provided material and would often link the resources they would discuss in lectures so the students could conduct further reading. Students were satisfied with the resources available to them and did not feel unequipped when completing their essays.

Presentations proved a challenge for several students. Misinterpretation and technical issues impacted the grades of certain students, they believe. One student was under the impression

that if they could have completed their presentation in person, their grade for that module would have been higher. They believed that their virtual presentation skills resulted in them not receiving the desired mark. Another student experienced technical issues, with their computer shutting down mid-presentation. The individual explained that it was out of their control, though believes the experience had negatively impacted their final grade for the same module. When asking the students if they had discussed their presentation grade with the lecturer, they both responded that they had not. This presentation was one of their last summative materials and they were satisfied with their overall classification, despite disagreeing with the mark.

### **Finances**

Mbous et al. (2022) found financial difficulties were at the forefront of international students' mental health problems during the pandemic. COVID-19 has had a direct impact on countries' economies, proving it challenging for international students to secure jobs, enabling them to fund their livelihoods during their studies (Negash et al., 2021; Yang et al., 2021; Appleby et al., 2022). Furthermore, international students are commonly unable to apply for certain funds as they are typically only available to countries' permanent residents, leaving them at an additional disadvantage (Firang, 2020).

The students interviewed also had financial worries. Some of the individuals expressed how COVID-19 had impacted the job market, leading them to struggle to find a job. Students also explained that the jobs they did acquire were full time, straining the time they would have available for tutorials, seminars, and discussions with lecturers. One of the individuals rarely contacted their lecturers for feedback or general discussion as they did not have the time. They explained that their busy schedule, along with their lecturers made it almost impossible to communicate effectively. Working from home increased utility bills and with no additional financial support for international students, they had no other choice but to work longer hours because of the economic effects caused by COVID-19 (Farnell et al., 2021; Khaoula, & Jalal, 2021; Noori, 2021).

Several students also mentioned their course fees. International students started their course with the impression that they would be in the university or at least have a hybrid of working from home and coming into the university. Acknowledging that other online education platforms, such as the Open University, charge students less, the individuals believed lower course fees were only fair. The students approach academics about this issue, though they were unsuccessful in receiving lower course fees for their degree, despite it being exclusively online.

## **Mentoring**

Mentoring is an effective tool used within a variety of institutions to better improve an individual's personal and professional development (Snowden et al., 2016; Snowden, & Halsall, 2018). Implementing a peer mentoring scheme has proved to support students settling into university and enhances integration (Collings et al., 2014; Naidoo et al., 2021). Megginson and Clutterbuck (2005) explain mentoring as:

Relat(ing) primarily to the identification and nurturing of potential for the whole person (p.4).

While one of the students explained that the university allocated them a mentor, the individual felt as though it was a random allocation with no attempt of matching the mentor to the mentee. Snowden and Halsall (2018) reveal the benefits of mentoring, explaining that universities are incorporating the peer mentoring scheme due to the significant success results. However, to ensure reciprocal success between mentor and mentee, they must be properly matched (Snowden, & Halsall, 2018). This means that the relationship must be compatible, often by matching through personality types. If the pair are not fond of one another, the relationship will not be successful. Haas et al. (2018) suggest that 'Two-Sided Matching' mentors and mentees create fundamental benefits from the relationship. Furthermore, Wulf et al. (2021) support these claims, explaining that the matching of mentors and mentees is the predictor for success.

Consequently, the poor matching from the university resulted in international students not responding to their mentors and became a futile attempt at providing support.

## **Strengths**

Focusing on a marginalised group created challenges such as recruitment, as there was a limit of students who fit the research criteria. However, from the previous research, it was evident that international students were a missed group regarding COVID-19 research. Conducting a qualitative study into the impact COVID-19 has had on international students of Public Health was a gap in the masses of research being published on the pandemic.

Utilising a qualitative approach, rather than a quantitative approach provided richer results. Busetto et al. (2020) explains qualitative research as an approach used to answer questions that are not answerable using surveys, like in quantitative research. Phenomena investigating individuals' true experience and the impact an event has had on them requires a qualitative approach as quantitative methods cannot provide a detailed account of one's experiences (Mohajan, 2018).

Demand for a more seamless transition for international students is clear. The interviews provided insight of a commonly ignored group within higher education. Implementing strategies to enable success both socially and academically is overdue.

### **Limitations**

While the study has provided strengths to identify the challenges international students face, it is important to consider the limitations of this research. Ross and Bibler (2019) states “Study limitations represent weaknesses within a research design that may influence outcomes and conclusions of the research. Researchers have an obligation to the academic community to present complete and honest limitations of a presented study” (p.1). Identifying limitations enables the possibility for future work to be strengthened. Where the initial study may have had certain limitations, identifying this can make for a change in future research.

Sample size for qualitative research should exceed 10 participants (Hennink and Kaiser, 2022; Braun and Clarke, 2016; Fugard and Potts, 2015). Malterud et al. (2016) explain that the matter of sample size is dependent on the power of the information given, meaning, if the participation number is high, but the information provided by participants is lacklustre, the number of participants is trivial. However, Hennink and Kaiser (2022) explain that qualitative research needs saturation to uncover accurate findings from the phenomenon. Having a sample size that surpasses 10 participants will provide a more reliable and valid result.

The sample size in this piece of qualitative research was nine participants. Individuals took part in one, 45–60-minute interview to discuss their experiences of remote learning. The interviews were regarding the experiences of MPHIS at the University of Huddersfield. Boddy (2016) identifies that sample size can be dependent on what the research is investigating, some phenomena yield a greater individual count than others. The cohort size was 15, indicating a 60% response rate which as suggested by Robson and McCartan (2016) a good response rate. Furthermore, saturation was achieved within the sample. Restricting the study to one university also hinders the potential participation size as you are looking at one discipline at one university.

Future research could continue the specification of MPHIS in their study, though begin recruitment in several universities. This would provide more saturation in the findings. Plus, this study is exclusive to students’ experiences in one university, as a result, this does not provide a scope on MPHIS across the United Kingdom.

Further research regarding MPHIS experiences of remote learning could entail several improvements. Recruiting students for interviews could exceed one university. Implementing the potential for a larger sample size could include utilising other British universities to develop a more saturated analysis of student experience. Another possibility would be to develop the

research question into investigating other disciplines similar to Public Health. Recruiting international students from other courses could provide a greater yield of participants. The researcher could contact the School of Human and Health Sciences if they want a perspective of Social Science students.

Qualitative research provides a more personal approach to an individual's experiences and offers opportunity to uncover more information due to the nature of questioning (Ahmad et al., 2019). However, utilising a quantitative approach for research can provide a larger sample size as the study is much more accessible to individuals. Albers (2017) explains this type of research as a study which draws conclusions from the numerical data acquired. With both methods being beneficial in research, a mixed methods approach could be used in a future study. Mixed Methods Research (MMR) is a relatively new approach, emerging in the 1980's and taking off from the 1990's (Molina-Azorin, 2016; Timans et al., 2019). MMR is the implementation of both quantitative and qualitative research to enhance findings (Teddlie, & Tashakkori, 2009; McKim, 2017; Regnault et al., 2018). This approach would allow for a more in-depth analysis, retrieving results from qualitative interviews and quantitative surveys.

## Conclusion

There is a paucity of literature exploring the experiences of international students during COVID-19, this study has made a contribution to the epistemological base of COVID-19 related pedagogy. Whilst international students had experienced a decline in their mental well-being before the pandemic, COVID-19 had caused a significantly larger decline for international students. With the economy of universities being at risk, and the entire population of students' well-being on the decline, remote learning was the only alternative to help reduce the spread of COVID-19.

However, implementing this type of process has proven challenging for staff, students and institutions as the swift transition left many feeling unprepared. Research presented transitional challenges for staff and students. Staff were often unprepared for this move and experienced issues with teaching electronically, also presenting challenges in educators' personal and professional life as their routine had changed indefinitely, this then reflected on students as these factors would hinder the learning process.

The findings from this study indicate the negative impact COVID-19 had on international students during their studies. Students were found to have high levels of loneliness and anxiety throughout the events of the pandemic. While the university had implemented resources such as the support team, students believed that the social aspect of their experience was completely ignored. The students experienced challenges to isolation as they were living in a foreign country with no already established relationships. Entering postgraduate education, the international students expected a hybrid of in-person and remote teaching and learning. Due to an exclusive online way of learning, students found themselves struggling to develop relationships with their peers as they were unable to meet them and groups like societies were unable to meet. Lockdown and social distancing had left students feeling like they had missed out on social and academic experiences. The interviews presented disappointment with their course being online. Students explained that they suggested one or two in-person lectures as their class was small and students were able to effectively social distance in lecture halls. However, this was met with disapproval from the university. All the students' lectures were conducted through Zoom and Microsoft Teams, completing their degree by working remotely with no sessions in the university.

While the research found that students were satisfied with their final grade, and that COVID-19 had not impacted their classification, they were unhappy by the exclusiveness of remote learning. Academics appeared to be supportive throughout the year and attempted to create a seamless transition to online learning, despite the sudden implementation. Lecturers would link resources used in lectures so that students could be directed to the full-text online versions



for further reading. Students were pleased with the material of books and journals being created into e-copies and had no trouble completing their degree with the resources online.

Despite positive outcomes for students' final grades, the opinion of remote learning was the same as before the pandemic. Students explained that they were more interactive learners and did not enjoy the experience of working remotely. Even after acquiring their degree, this belief remained the same. Students explained in their interview that had they known their year would be exclusively online they would have deferred a year.

The interviews and literature show that universities are not ensuring a seamless and effective transition for international students. Findings from the research present high levels of loneliness, which is supported by the literature. With international students' stressors at an alarmingly high level, promotion of integration is absent within the support services. Ensuring that international students have the tools to successfully integrate and experience the social and academic elements of university are crucial considerations.

Universities can redefine their mentoring schemes, ensuring that students are correctly matched. Mentors can aid in a seamless transition for international students and university life. Integration is also much more effective if allocated a compatible mentor. During the pandemic and isolation, if international students were paired with a mentor, their loneliness levels and academic stressors could be reduced significantly. While international students have many unfamiliarities when entering a foreign land and education system, having a consistent mentoring partnership can create success for them personally and academically, as seen in previous studies.

Creating more electronic opportunities for students to interact and meet their peers is another factor that could increase integration during lockdown and the pandemic. The university had missed opportunities to implement more social events for societies and general students during the height of the pandemic. Most students only had the chance to interact with individuals during lectures and seminars, otherwise, they were isolated in their accommodation.

This study makes a distinct contribution to knowledge by illustrating the impact COVID-19 has had on international students. Mental health was found to have a significant impact on international students due to loneliness and isolation. Remote learning contributed to international students' mental health, though also proved challenging when attempting to communicate effectively with staff and understand the content being provided. Lastly, similar to the literature review findings, international students had a poor social experience during COVID-19 and reflected heavily in their mental wellbeing.

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