Tampere University of Applied Sciences

Moving Communication and Collaboration Online:

Making Changes for Home-based Learning with Kotter's 8-Step Process

Susan Buzan

Marie-Theres Whitehead

ABSTRACT

BUZAN, SUSAN & WHITEHEAD, MARIE-THERES:
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The two objectives of this qualitative study were to discover the necessary changes to pedagogy and practice for home-based learning (HBL) during COVID-19 and the use of Kotter's 8-Step Process for Leading Change with such experiences. As online pedagogy and practices are vast areas of research, the areas of communication and collaboration in teaching and learning were focussed upon, along with relevant learning theories to support these. As all changes during HBL were monumental for educators, a change management model, Kotter's 8-Step Process for Leading Change, was also discussed in reference to the necessary transition. Each of Kotter's 8-steps were investigated in terms of experience and importance as an aid in the move from face-to-face (F2F) instruction to online, HBL. Finally, the two parts of the study were connected through recommendations for future moves to HBL, notably for communication and collaboration in teaching and learning, along with the acceptability of sections of Kotter's 8-steps to future changes that may occur.

The approach of the study was a semi-structured qualitative survey (SSQS) through interviews, followed by a thematic analysis of the data collected. The experience of 16 educators was analysed by interviews with focus areas: challenges, opportunities, communication and collaboration in HBL, and the use and importance of Kotter's 8-Step Process for Leading Change in moves to HBL.

Learning theories which have been linked to online learning, such as connectivism and Online Collaborative Learning (OCL), were discussed as theoretical groundings for recognised changes to practice and pedagogy within the move to HBL. Additionally, several steps from Kotter's 8-Step Process for Leading Change were identified in the interviews as having been used or important for a move to HBL. The findings support both a required change in pedagogical approaches and a change model, such as Kotter's 8-Step Process for Leading Change, for successful HBL to occur. Further research is required to investigate both change management models as applied to education, and areas other than communication and collaboration in HBL.
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1 INTRODUCTION

1.1 Overview

On March 11, 2020, the World Health Organization (WHO) officially announced COVID-19 as a pandemic after carefully observing the global outbreak for months. By early May, educational disruption was occurring across the globe with 1.6 billion learners or over 90% of students globally had been affected, and over 190 countries across the world had closed schools or turned to online education (UNESCO, 2020). By this time countries in Asia, particularly Hong Kong and Vietnam, had already been immersed in full-time home-based learning (HBL) using online synchronous and asynchronous methods for over 3 months. This study followed the experiences of educators at two international secondary schools from February 2020 to November 2020 in their journey from the face-to-face (F2F) or traditional classroom, to a quick change to online home-based learning (HBL).

All organisations undergo change, including schools. This has never been more evident than with the quick and unpredicted move to HBL in our two educational institutions. As with all change, this move presents not only challenges, but also opportunities. In our context, the change experienced was not only that of environment and resources, but a need for alterations in teaching pedagogy and approaches.

1.2 Background

The purpose of this study was to develop recommendations for required changes in communication and collaboration during periods of HBL, and the use of a change management model. These proposals were formed from the analysis and evaluation of educator experiences during the COVID-19 forced move to HBL in two international secondary schools in Asia. To aid in the implementation of the recommendations, Kotter's 8-Step Process is discussed as it is a widely used change management strategy and has recently been updated for accelerated change in relation to COVID-19 conditions (Kotter, 2020). The method used is a semi-structured qualitative study (SSQS) through preliminary surveys and interviews. This is an applicable method for this type of study as it aims to answer

the research questions from the views and experiences of the people involved (Mack *et al.*, 2005, p.1).

We have chosen the term home-based learning, or HBL, in reference to an emergency move away from face-to-face (F2F) classes, on school campus, to virtual lessons which are conducted off campus, usually at the learner's home, due to the COVID-19 pandemic. HBL is a mixture of asynchronous and synchronous online learning, but in the context of this thesis, with little to no preparation, planning, or professional development for teachers. The inquiry through interviews into challenges, opportunities, collaboration and communication as well as into Kotter's 8-Step Change Process are all linked through the common theme of change.

The change experienced was also a need for adaptations in teaching pedagogy and approaches. The learning theories of Online Collaborative Learning (OCL) (Harasim, 2012) and Connectivism (Bates, 2014; Bates, n.d) are considered to achieve similar learning outcomes between HBL and F2F. Online environments present limitations and differences in communication and collaboration in comparison to F2F, therefore educators need not only be made aware but given the time and skills to plan the change accordingly (Kilgore, 2016). To assist educators with these, or any changes, following a change model, such as Kotter's 8-Steps Process for Leading Change, provides structure and purpose for all team members involved (Connolly, n.d.). Although the focus of this study is on changing pedagogical approaches for online learning, aspects of leadership come into the discussion as mentioned by participants in the interviews. This data and the topic of leadership are also mentioned in this study as parts of Kotter's 8-Step process apply specifically to leadership and were perceived as such by participants.

1.3 Research questions

This thesis explores the following research questions:

- Research question 1: What challenges and opportunities did educators encounter in the move to HBL?

- Research question 2: How has HBL changed communication and collaboration in teaching and learning?
- Research question 3: Which sections of Kotter's 8-Step Process for Leading Change are most suitable for moves to HBL?

1.4 Structure of the thesis

The thesis begins with a literature review, where sources and related background literature are presented on the main areas of change management, learning theories, online learning, and communication and collaboration in online teaching and learning. Following, the methodology is introduced to clarify data collection methods and analysis explaining limitations and ethical considerations to the study. The next chapter, data analysis, focuses on the presentation of the raw unprocessed data from the interviews, including quotes, along with references to preliminary surveys. The final chapter contains the discussion of the data in relation to previous research and the background literature. In this chapter, all areas are combined, trends are noted, and recommendations are made based on these findings. In the appendix, the reader can find charts from the preliminary surveys and documentation related to the interviews.

1.5 Definitions

Change leadership: the 'ability to influence and enthuse others, through personal advocacy, vision and drive, and to access resources to build a solid platform for change' (Higgs and Rowland, 2000, p. 124).

Change management: 'the process, tools and techniques to manage the people side of change to achieve a required business outcome' (Prosci, n.d.).

Blended learning: 'refers to a mix of face-to-face and online course activities. However, blended learning can also be used to describe a pedagogical mix of distance education or courseware applications.' (Harasim, 2012, p. 38)

Face-to-Face (F2F) learning: 'is conducted synchronously in a physical learning environment (utilizing appropriate safety measures), meaning that 'traditionally,' the students are in the same place simultaneously' (Iowa State University, 2021).

Hybrid learning: 'Synchronous hybrid delivery [is] defined as a course option where mutually exclusive groups of online and on-campus students are taught simultaneously using real-time audio and video technology [...]' (Butz *et al.*, 2014).

Online learning: 'Online learning (or online education) refers to the use of online communication networks for educational applications, such as: course delivery and support of educational projects, research, access to resources and group collaboration' (Harasim, 2012, p. 37).

Home-based learning (HBL): 'HBL involves both online and offline approaches to learning. Therefore, not all HBL will require the use of devices' (*COVID-19 Circuit Breaker: What you need to know about home-based learning*, n.d.).

Qualitative research – 'multimethod in its focus, involving an interpretative, naturalistic approach to its subject matter. This means qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring' (Denzin and Lincoln, 2011, p. 2).

2 LITERATURE REVIEW

2.1. Overview

The purpose of this study was to develop recommendations for required changes, to communication and collaboration, in home-based learning (HBL). These proposals were formed from the analysis and evaluation of educator experiences during the COVID-19 forced move to HBL in two international secondary schools in Asia. To aid in the implementation of the recommendations, Kotter's 8-Step Process for Leading Change is discussed as it is a widely used change management strategy and has recently been updated for accelerated change in relation to COVID-19 conditions (Kotter, 2020). Using a thematic approach two international secondary schools were studied, by keeping journals of experiences, sending surveys to staff and students, and collecting implemented policies before, during and after HBL. This preliminary exploratory data was used to guide the direction of the thesis and the 16 educator interviews that constitute the data set. Additionally, certain questions of the staff preliminary survey were used to support the data from the interviews.

As for collected data, the participants were educators which were composed of teachers, administrators or both. All surveys and interviews were sent on a voluntary basis and done anonymously and permissions from the respective head of schools were gained before sending out surveys. Interviewees represented a wide range of educators with various roles and responsibilities.

The research questions were:
- Research question 1: What challenges and opportunities did educators encounter in the move to HBL?
- Research question 2: How has HBL changed communication and collaboration in teaching and learning?
- Research question 3: Which sections of Kotter's 8-Step Process for Leading Change are most suitable for moves to HBL?

Understanding the related literature on learning theories, online learning and change management is integral to this study and the answering of the above research questions.

2.2 Change management and Kotter's 8-Step Process for Leading Change in education

Change is constant, and change is inevitable. This has never been truer than with the switch to home-based learning (HBL) worldwide due to the COVID-19 pandemic in 2020. By early May 2020, educational disruption was occurring across the globe with 1.6 billion learners or over 90% of students globally being affected. Over 190 countries across the globe had closed schools or turned to HBL in some form (UNESCO, 2020). However, this need for emergency HBL is not unique to the COVID-19 pandemic alone and this process has been utilised in response to devastating natural or man-made hazards (Sener, 2010, p. 9), for example Hurricane Harvey in Texas (Holzweiss *et al.*, 2020). Additionally, the change towards the integration of education technologies in schools was well under way before the pandemic, with global educational technology investments reaching around US$18.66 billion in 2019 and the overall market for online education projected to reach $350 Billion by 2025 (OECD, 2017; Li and Lalani, 2020).

Many aspects of change are out of our control. If change is unavoidable, then we must ensure we have the processes, tools and techniques to manage the aspects of change that are adaptable and the people involved (Prosci, no date). Change management and change leadership is the discipline that studies this directly. The main goal of change management is to reduce the disruptions to organisations often faced when undergoing change. It is a set of rules or processes that are agreed upon and followed to assist in the decision-making, leadership and work-performance needed for the change to occur and stay. Contrarily, change leadership investigates larger scale shifts in the vision and driving forces within a system (Zand and Sorensen, 1975; Kotter, 2011). Connolly, James and Fertig (2019) investigate the difference between change management and change leadership while looking through the lens of educational responsibility. In this thesis, we focus on change management, but of course the role of leadership permeates throughout and does not go without mention.

Change management literature is prolific which can present itself as a barrier for leaders in any discipline to understand and utilise research on change processes

(Young, 2009, p.524). Due to this challenge our thesis focuses on the works of Kotter and his '8-Step Process for Leading Change' as it is one of the most widely used and respected tools for change in a variety of industries like health care (Baloh, Zhu and Ward, 2018; Haas *et al.*, 2019) or workplace practices (Chappell *et al.*, 2016). Although this particular change model is not directly adapted for education, the linear nature walks any organisation through a clear process of institutional change as is the case with the experience of the urgent and necessary change to HBL. Kotter developed this model through first-hand experience in his consulting business and has also been widely referenced in change management projects since the publication of his book 'Leading Change' in 1996. Cameron and Green have commented and used Kotter's 8-Step model as it 'addresses some of the power issues in making change happen, highlights the importance of a 'felt need' for change in the organisation, and emphasizes the need to communicate the vision and keep communication levels extremely high throughout the process' (Cameron and Green, 2012, p. 126). The 8 steps cover the whole process of change, from the groundwork (creating urgency, forming a coalition, creating and communicating a vision) to the implementation (empower people to act on vision, plan and create short-term wins, consolidate improvements) and finally to institutionalising of the new approaches (Kotter, 1996). To further support Kotter's 8-Step Process for Leading Change, other studies have also identified the importance of various stages of Kotter's model. Chappell et al., (2016), Amabile and Kramer (2011) and Stouten, Rousseau and Cremer (2018) emphasize the need for a strategic vision, guiding coalition and short term wins. Sterzinger's research (2019) goes further into the value of small wins in the classroom, while Barnwell (2015) underlines the importance of removing barriers to enable actions with a focus on different leadership styles. Baxter (2002) notes 'creating a sense of urgency', Kotter's first step, is also mentioned in numerous other change strategies. Additionally, Kouzes and Posner connect with Kotter in their guide to efficient leading 'The Leadership Challenge' (2017). They state that a vision and the involvement of people from the organization as important elements in processes. Even though Kotter's model has been used in many institutional changes, it does have limitations and has been criticised as being flawed or incomplete by other experts in the field. Firstly, the linearity of the model does not allow for flexibility and it has been suggested to use a circular, reflective model instead. Additionally, due to leadership's high

involvement in the beginning steps of Kotter's model, a decrease in efficiency by other team members and follow up on change may not occur. Finally, there is always the inevitable reaction of humans to change, regardless of a robust and comprehensive model being in place (Balestracci, 2003; Sidorko, 2008; Cameron and Green, 2012).

All organisations undergo change at some point but academic institutions, in particular K-12 schools, have individual characteristics which make them different to corporations and other businesses. Firstly, it has been noted that there is a greater support from leadership in schools, as compared to other fields, to facilitate needed changes (Hechanova and Cementina-Olpoc, 2013). Additionally, Guerrero, Teng-Calleja and Hechanova compared educators to other professionals and noted their tendency to have a more holistic and integrative view to change (2018). It is important to consider the vast variety of internal stakeholders, such as teachers and principals, along with the external stakeholders, for instance parents and the wider community, that are unique to schools as they would be absent in typical corporations. The acceptance, support and involvement for any change are needed by these stakeholders for its successful implementation and continuity (Fedor, Caldwell and Herold, 2006; Marian Nastase, Marius Giuclea, and Oliviana Bold, 2012; Niculescu, 2018). Educational institutes are not immune to the pressures of constant and rapid improvement that would be felt in other industries, yet it is impossible to treat a school like a factory or service in which the end goal is something tangible, for instance to simply produce higher test scores. Schools are more dynamic, complex and unique to apply a straightforward turnaround technique or plan (Evans, n.d.).

Quite often, it takes some type of scandal or emergency, such as COVID-19, to give change management procedures the proper attention and treatment they deserve (Battilana and Casciaro, 2012). Additionally, many organizational crises could be avoided through the regular, strategically targeted monitoring of the need for change and of stakeholder engagement (Haas, 2016, p. 49). In a situation where there are high levels of uncertainty and instability, fear, anxiety and loss of control can be felt in the organisation. The leaders, or agents responsible for implementing the necessary changes, need to embrace the new

environment and let go of previous routines and policies to look for a way forward (Cameron and Green, 2012). In this study, the emergency change included a shift in understanding the process of teaching and learning online as compared to face-to-face (F2F), specifically with communication and collaboration.

Change management in a time sensitive situation adds another layer of consideration as strategies are needed to ensure the changes are swift, efficient, and appropriate (*Urgent vs. Emergency Changes | Pink Elephant Blog*, n.d.). The spread of COVID-19 had everyone in education worldwide scramble to implement some structure in order for their respective HBL programme to be successful. Both Bozkurt *et al.* (2020) and Hodges *et al.* (2020) make a clear distinction between online learning and 'emergency remote education and teaching', or as referred to in this study, HBL. While implementation of online learning is seen as a planned option, emergency HBL is an obligation due to the urgency of the situation. Preparation time for teachers is one of the biggest differences, with little to no time available for emergency HBL. Zhang et al. analyse emergency HBL in China after government mandated school closures happened. Their paper includes the details of the governmental emergency plan to move schools online, areas of improvement during its implementation and recommendations for next steps (Zhang *et al.*, 2020). Other articles have focused on the move online for universities and higher education institutions, but few have looked at K-12 schools, in particular international secondary schools (*COVID-19: Higher Education challenges and responses - IAU*, n.d.; Johnson, Veletsianos and Seaman, 2020).

2.3 Learning theories and the connection to home-based learning

Learning theories have been on the forefront of many educational researchers since the late 1900s. There are three classic theories of learning: behaviourist, cognitivist and constructivist, which explain, describe and analyse the process of learning in any environment. In the last 10 years, two additional learning theories have developed, connectivism and Online Collaborative Learning (OCL) (Harasim, 2012; Bates, 2019). For this thesis, the two aforementioned approaches have been classified as 'learning theories'; however, there is debate on labelling them as such due to the lack of a philosophical basis to support them

as such (Bates, n.d.). It is important for all educational professionals, both from traditional face-to-face classrooms and in the virtual realm to understand the strengths and weaknesses of the various learning theories to ensure which practices are best fit for their set of learners.

The first learning theory, behaviourism, was established in the late 19th century by Ivan Pavlov. His ideas incorporated classical conditioning and the belief that behaviour being independent of conscious control. Contrarily, a few years later, B.F. Skinner followed with a different approach. He stated that learning occurs through voluntary or operant behaviour conditioning and therefore, human behaviour is governable and predictable (Harasim, 2012; Bates, 2015, p. 47) In reference to online learning, Bates criticises the traditional approach of technology and computer-aided instruction towards being heavily behaviourist and therefore not resulting in deep, transformative learning (Bates, 2014).

Following behaviourism, cognitivist theory recognizes Skinner's approach of reinforcements, but more at the cognitive processes that enable learning and with it explaining human behaviour. Cognitivists tend to critique behaviourists ideals as being too simplistic and rigid on behaviours (Harasim, 2012, p. 67). Fontana goes on to define the cognitive approach's aim as:

> To understand learning not just from observable behaviour. It looks at the learner's responses to experiences, their environment and how they interpret them. The learner is 'an active agent in the learning process.' (1995, p. 148).

Since cognitivism analyses more processes, it lends itself favourably to technology enhanced and online learning. Bates does go on to critique cognitivism as well by noting its similarity with an input-output model of a machine and stating that the human mind is more complex and unpredictable than that (2014).

Constructivism moves away from the idea that everything is based on cognitive processes only. Jean Piaget and Lev Vygotsky are the names most commonly associated with constructivism (Bates, 2014). The change to move away from cognitive processes emerged from various trends in Europe and the United States that emphasized the need for people to make sense of the world around

them. Learning processes have been enhanced between the learner and the instructor. They are involved in a process that creates and therefore constructs meaning. This has been put into practice with the introduction of teaching approaches such as 'learning by doing' or 'active learning' (Harasim, 2012). Bates also mentions that the constructivist theory lends itself to the educational approach of connecting learning to prior knowledge (2015). In summary:

> Teachers who utilize the constructivist theory of learning online can provide discovery learning as well as critical thinking activities through threaded discussions as well as problem based learning projects (Weegar and Diego, 2012, p. 12).

The aforementioned comment supports the strengths of this learning theory and potential gains from implementation into either a traditional or online classroom.

According to Weegar and Diego (2012), there is value in technology integration when moving from behaviourist to constructivist learning. Therefore, this change in learning processes can be developed in a virtual environment just as successfully as in face-to-face (F2F) if executed correctly. The aforementioned three theories are already utilized in technology enhanced learning, be it through computer-aided instruction, online tutoring software or Artificial Intelligence projects; however, limits do exist with these learning theories in a virtual environment as compared to the connections made in a F2F classroom (Siemens, 2005). Stemming from these challenges with online environments, the next two theories, Online Collaborative Learning and Connectivism, have emerged directly from the omnipresence of internet and technology and have not only integrated them into learning theory, but demonstrate the huge potential for learning online.

Based on the work of Harasim in the last 10 years is the development of Online Collaborative Learning (OCL) which focuses on collaborative knowledge building in an online learning environment (2012). She suggests that the internet has reshaped the knowledge age and, along with that, the learning process. She therefore proposes a guide to transform existing instructional design. It is also to be noted that OCL tends to focus more on the asynchronous side of online learning, rather than synchronous. Bates adds that in this theory, the teacher is seen as the facilitator of the learning who provides resources and activities to

promote collaboration and learning while following a clear learning cycle. As the name of the theory suggests, collaborative activities such as forums are very important. Bates scrutinizes OCL as it relies on highly skilled trainers, small groups of learners and an understanding of cross-cultural issues to be functional. However, he does point out that when provided in the right frame, deep, transformative learning and critical, analytical thinking can be achieved (Bates, 2015).

Connectivism claims to be a powerful new learning theory that exploits the power of networks and networking to support learning. The term was first coined in 2004 by George Siemens at Athabasca University (Bates, n.d.) and is referred to as 'the learning theory for the digital age' (Siemens, 2005). In the last 30 years technology has changed the way in which we communicate, learn, and live. The connection between the networks in which we exist and those that help us learn is the base of connectivism. It is the first learning theory that attempts to radically re-examine the evolution in digital tools and their implication in society to interact with them. Therefore, the role of the teacher is less important than that of the participants and their network. The teacher may provide the initial learning environment and context; however, the learners themselves construct their personal learning environments that enable them to connect. Kop and Hill explain:

> The online and face-to face networks that people build-up throughout their lives will provide expertise and knowledge, in addition to the guidance that local or online tutors can provide. Learners will be at the centre of the learning experience, rather than the tutor and the institution. Learners will be instrumental in determining the content of the learning, in addition to deciding the nature and levels of communication, and who can participate (2008, p. 9).

According to Bates, connectivism will allow learning to automatically occur by participants being immersed in the information and naturally reflecting upon it. This works particularly well for online learning as there is no need for a formal classroom and this network can be achieved easily through technology like social media (Bates, 2015).

2.4 Online teaching and learning

With the rise of internet culture and the quick changes in the IT landscape, learning has evolved and moved to a variety of platforms, including online. Much research has been done in this field including Anderson's collection of articles from different researchers on online learning. The compilation explores the various angles of online learning such as implementation, course design, quality control and student support (Anderson, 2008). Veletsianos also published a compilation of research that focuses on emerging technologies and bringing scholars together, some of which may be of use for Massive Open Online Courses (MOOC) and online learning (2016). Bates focuses on teaching in the new media age and gives a thorough explanation of the variations of online learning by analysing learning theories, connecting them with emerging technologies, looking at MOOCs and the structure of various online teaching models (2019). Bates also keeps a well-organized and informative blog about his research and contributes with this to the vast landscape of grey literature on online learning (Bates, n.d.). For more research, journals dedicated to specific aspects of online learning, such as the 'Online Learning Journal' (OLJ) by the Online Learning Consortium or 'The Journal of Interactive Online Learning' can be consulted. Going beyond the research, and into the actual implementation of online learning courses, Salmon focuses on the structuring and design through her Five Stage Model (n.d.).

Online learning, particularly in a secondary school environment, has numerous potential advantages and disadvantages. Researchers and educators in favour of online learning link it to studies that show higher levels of individualisation, personalisation and flexible pacing than is possible with traditional face-to-face classrooms and therefore higher learner satisfaction (Sural and Bozkaya, 2016; Konnova *et al.*, 2019). Another benefit of online learning is the ability for educators and peers to give quick feedback (van Popta *et al.*, 2017; Danmeri, 2018) and access to high quality resources and teaching, particularly in rural and remote areas (Parkes *et al.*, 2015; Mulcahy, Barbour and Lahiri, 2016). Other researchers have linked online learning being with the development of 21st century skills such as critical thinking (Saadé, Morin and Thomas, 2012; Ya-Ting Carolyn Yang *et al.*, 2014). However, critics of online learning also acknowledge the potential for a dissociative process between the instructor and the learner

when building a community. In order to counteract this, Reese suggests using a constructivist approach that starts with the delivery of knowledge and moves into building up this knowledge by the learners (2015, p. 580). This is also supported by Salmon's first and second stages of her Five Stage Model for learning online, access and motivation along with online socialisation (n.d.). Other studies have investigated additional topics related to online learning, such as Kilgore (2016), who focuses on communication and collaboration procedures while Hrastinski (2008) explores the different purposes of asynchronous and synchronous e-learning.

2.5 Communication and collaboration in online teaching and learning

One of the challenges in a move to online learning is the different infrastructure of communication and collaboration. Several studies have focused especially on these two areas. Salmon states that online courses need to be developed as such and cannot simply be a replication of an existing F2F course. She explicitly integrates communication opportunities in Step 1 'Access and Motivation' and Step 2 'Online Socialisation'. Following that, collaboration is planned for in the remaining three steps 'Information Exchange', 'Knowledge Construction' and finally 'Development' which also involves the learners making wider connections (Salmon, n.d). Misanchuk and Anderson (2001) and Kilgore (2016) investigate the differences between F2F classrooms and online learning and suggest strategies for more personalised, humanised communication and collaboration. This leads to an increase in both the facilitator and the participants presence in online environments such as in HBL. Additionally, connectivist approaches are encouraged through social learning where the learners themselves are expected to innovatively connect. Giesbers *et al.* (2014) look more closely at differences of communication and student participation in synchronous and asynchronous e-learning. Their research goes into a combination of both synchronous and asynchronous communication to help student motivation. It is worth clarifying here that synchronous learning is understood as learning that happens at the same time online or in a F2F classroom, while asynchronous learning happens at different times for different students. For asynchronous learning, tools such as video recordings are used to humanise the learning that could be absent as

compared to a live lesson (Kilgore, 2016). Finally, Weegar and Diego (2012) state, despite the claim of many educators that F2F learning cannot be replaced:

> There are new technologies that are allowing for better synchronous communication. These technologies allow instructors to provide rewards and feedback in real time. Instructors and students, who are challenged by written online communication, may find that this type of synchronous online communication may help them to bridge this gap' (p.10).

They both explain and support the possibility and ability for enhanced communication in online learning.

2.6 The need for this research

As shown in the preceding subchapters, the literature of topics connected to 'Moving Communication and Collaboration Online: Making Changes for Home-based Learning with Kotter's 8-Step Process' is quite extensive; however, the link between change management and a fast move to HBL has yet to be explored explicitly. Due to the short time since COVID-19 spread, there have been few publications focused on the emergency move online, the related learning theories in the area of communication and collaboration, or the connections of change management to these topics. Therefore, this study looks at two main areas. Firstly, the experiences of educators during HBL, specifically with communication and collaboration. Secondly, the use of a model, such as Kotter's 8-Step Process to Lead Change, to implement HBL. To accomplish gathering information in the aforementioned areas, data was collected during and after the move to HBL at the respective international secondary schools. The data from both institutions was combined, analysed, discussed and compared to previous research on communication and collaboration in an online environment and change management strategies. There are numerous aspects of HBL that presented themselves in the preliminary survey, such as online assessment, well-being of teachers and students, or leadership. However, this study has limited its focus areas to collaboration and communication in HBL and Kotter's 8-step Process for Leading Change to make it more feasible for the limitations of time, location and professional commitment.

3 METHODOLOGY

3.1 Overview

The first purpose of this study was to develop recommendations for required changes to communication and collaboration in home-based learning (HBL). These proposals were formed from the analysis and evaluation of educator experiences during the COVID-19 forced move to HBL in two international secondary schools in Asia. The second objective was to investigates the process of implementing the necessary changes to communication and collaboration in teaching and learning through a change management model, Kotter's 8-Step Process. This particular model is discussed as it is a widely used change management strategy and has recently been updated for accelerated change in relation to COVID-19 conditions (Kotter, 2020). For this, a semi-structured qualitative study (SSQS) is the method most suitable as it aims to answer the research questions from the views and experiences of the people involved (Mack *et al.*, 2005, p. 1). Additionally, SSQS's have structure in their background theory and method, ensuring reliability and validity; however, not overly structured in which the participants are limited or constrained in their responses (Blandford, 2013, p. 2).

3.2 Design

This study utilised qualitative methodology that specifically followed a thematic analysis approach. Qualitative research and data collection is the most appropriate for inductive research, that is formed from experiences and sets research questions based on these. In contrast, deductive research works on the premise of developing and testing a hypothesis established on previous research in the field of concern (Merriam and Tisdell, 2015). This thesis has combined both, starting with preliminary inductive research to look for patterns in the experiences of educators in the move to HBL during COVID-19, followed by deductive interviews related directly to the research questions of the study. This then results in the building of theories to explain the phenomena in question. According to Creswell, the first stage in conducting inductive research is the collection of detailed information and data from participants (2014). This was

done by sending out surveys to students and staff, informal discussions with colleagues and personal journal entries as the researchers themselves were directly involved with the phenomenon itself. As supported by Fowler (2009), surveys were initially used as an instrument to find a clearer direction and gather a better perspective for topic focus. After combining and analysing the surveys, an elimination process of topics occurred and resulted in the research area of communication and collaboration during HBL. The lens of change management was added as it became apparent through anecdotal conversations with various stakeholders along with our own experience that a structured change management plan was not in place. The reason for Kotter's model over other change management models laid in a recently updated publication of Kotter on emergency change management which relates specifically to accelerated change due to COVID-19 along with the highly regarded reputation of these 8-Steps in this field (Kotter, 2020). The preliminary inductive research of surveys led to the deductive portion of the study, interviews, which aimed to answer the three research questions. The main collected data was based on the semi-structured interviews in regard to the experiences of educators in the move to HBL. However, the preliminary teacher surveys have some results which relate directly to the research questions and have been used in the data analysis and discussion. All individuals involved in the data collection have lived through the same event and are therefore able to give insight into their feelings, opinions and observations during the timeframe of the research. Both Moustakas (1994) and Giorgi (2009) state interviews as being an effective method to collect such qualitative, experiential data. While surveys done at the beginning of the research process were geared towards narrowing the topic down to the current one, the interview questions were purposefully built around the research questions as suggested by Creswell (2014, p. 606).

3.3 Research questions

The research and data collected was designed to answer the following questions:

- Research question 1: What challenges and opportunities did educators encounter in the move to HBL?

- Research question 2: How has HBL changed communication and collaboration in teaching and learning?
- Sub-research question 3: Which sections of Kotter's 8-Step Process for Leading Change are most suitable for moves to HBL?

3.4 Setting

The setting for the research was two international secondary schools in Asia. Both schools have an international population of administrators, teachers and students. They both use a one-to-one technology programme, where every student can either bring their own device or borrow a laptop from school. The use of an individual device is mandatory in both secondary schools. Problems with technology are dealt with by the respective IT departments, removing the barrier of accessibility or maintenance that has been mentioned as hindrance of success for online and HBL in other contexts. Additionally, as both schools are international private schools the socioeconomic status is high with all students, and home internet access was also not a significant obstacle (Schrum and Hong, 2002; Boyd, 2004; van Rooij and Zirkle, 2016). Equal access to technology is therefore not an issue and will not be taken into consideration in this study.

Both schools started the journey of HBL at the beginning of February 2020 and ran through a similar schedule in the return to face-to-face (F2F) teaching. At one of the schools a hybrid model was brought into effect around May 2020, while the other school returned to full F2F teaching with a moderate blended approach.

The schools are different in terms of their start to the academic school year, with one beginning in January 2020 and the other in August 2020. Data collected may differ due to this and the implementation of HBL with a new school year versus occurring in the middle of the academic year. This gave us the opportunity to explore both scenarios; however, due to the schools being fundamentally very similar all results were collated and analysed together. Furthermore, the similarity of the results collected support the validity and reliability of this approach.

3.5. Participants

Preliminary surveys were sent to all secondary students and all secondary staff in both schools. From the staff surveys, participants had volunteered for further interviewing. Participants for the interviews were chosen based on our goal to have a credible and varied sample in roles and responsibilities, gender and experience level. Participants were sent an email with the participant invitation letter (Appendix 1), the interview questions (Appendix 2) and consent information. For ethical reasons, each participant signed a form that explained the data collection process and gave permission to audio/video record the sessions (Appendix 3). Participants were contacted personally to set a time and place to conduct the interview which was audio recorded.

3.6. Procedures

Patton and Cochran (2002) and Fowler (2009) advise that samples must be chosen in a systematic way to ensure they are credible and indicative. Statistical representativeness is not the aim of this study but must minimise bias. It is important to note that a small sample does not represent the entire population, but the more varied the sample, the more reliable the data collected. To ensure that our sample is credible, and covers the main groups of interest, the strategy of maximum variation in the sample was utilised. This involved selecting key demographic variables that are likely to have an impact on participants' view of the topic. For our study we chose a variation of male and female, different roles (teachers from different subject areas, middle management, leadership) and different amounts of teaching experience (Patton and Cochran, 2002, p. 10)

3.7. The researcher's role

When doing qualitative research such as described above, there is the question of the personal, intensive and sustained relationship with the topic and the participants (Creswell, 2014, p. 601). In this instance both researchers have lived through the experience. In order to avoid leading comments or questions in the interviews, a bank of words was created beforehand that could be used to focus the interview towards the direction needed and enhance clarity of responses. In

an attempt to stay neutral, researchers refrained from commenting on interviewees' opinions and used paraphrasing as a technique to clarify thoughts expressed. Permission for questions, mode of interview, recording and scheduling of interviews has been obtained by both organisations and by each participant as demonstrated in Appendices 1, 2 and 3. In order to keep anonymity of participants, names of interviewees were changed, and this information is only accessible to the researchers.

3.8 Data collection

The data collection was a combination of preliminary surveys for topic focus and semi-structured interviews for deductive answering of the specific research questions.

3.8.1 Surveys

Two surveys were sent out to gather preliminary data, one to students at the end of the HBL period, and another to teachers six weeks after lessons had returned to F2F. The surveys were done on Google Forms since this is the platform used at both institutions. The links were sent in emails to the entire student and teacher body to follow the random sampling method with stratification to ensure all grade levels for students and roles for teachers were represented (Creswell 2014, p. 521; Fowler, 2009, pp. 70-71). Questions followed general, initial ideas for the content of the thesis and were reviewed by both researchers and administrators to avoid inadequate wording. Surveys included mandatory closed questions with a subjective continuum scale and open-ended, voluntary questions that gave the researchers detailed explanations. (Fowler 2009, pp. 97-102). Students and teachers were informed of the reason for the survey, the anonymity and voluntary base of it. Data collected informed the inductive part of the research about the student and teacher perspective of the move to HBL and resulted in the narrowing down of topic choice to communication and collaboration for HBL. Additionally, three questions from the preliminary teacher's survey were used in the analysis to support first-hand data on communication and collaboration practices during HBL. The student survey results were not formally analysed further once the focus of the thesis developed to include only one stakeholder, the educators.

3.8.2 Interviews

Interviews have been classified in a variety of ways in research methodology literature. For the ease of comprehension, we are moving to a double classification of interviews as both semi-structured and qualitative that are characterised by open-ended questions and a loose structure. (Patton and Cochran, 2002, p. 12; Yin, 2016, p. 142). When interviewing, researchers must be aware to not follow any personal bias in the process and, with this, compromise the validity and reliability of the data collected in the interviews. Therefore, it is of utmost importance to prepare well for the interview, structure the questions and keep as close to the research questions as possible. Yin (2016) also suggests keeping a bank of words throughout the interview so that the interviewer can stay close to the topic at hand and not get deviated by interesting turns in conversations. This is especially true in interviews where there is a pre-existing relationship between interviewer and interviewee, and it is important to keep a neutral stance. Fontana and Frey refer to this 'negotiated text' in their article in the Sage Handbook for Qualitative Research (Denzin and Lincoln, 2005, p. 716).

The conducted interviews comprised seven open-ended questions in three themed blocks. Each themed block was attached to one or two of the research questions (Yin, 2016, p. 168). The interviews took between fifteen and forty minutes, were recorded with digital devices, and stored in a folder accessible only to the researchers. Finally, all audio interviews were transcribed using online speech to text software, either Sonix© or Temi©. Following Yin's suggestion (2016, p. 158), the interviewers were careful to listen attentively and further define questions without interfering with the responses of the interviewees. However, at times, the researchers paraphrased the thoughts of the interviewees to clarify. Interviews were reproduced in the same manner for all participants at both schools. The transparency of the interviews was given by clear guidelines sent out earlier to the participants and by frequent follow-ups between the two researchers. Interviews were recorded to avoid bias and interpretation of the researcher during the data analysis.

3.9. Data recording and analysis

3.9.1 Recording the data

Yin (2016) explains various ways of recording the data collected during fieldwork. The main recording tool for the interviews was audio recordings, which were then transcribed using online services. Additionally, researchers kept personal journals, as recommended by Yin, with important dates and events. This helped in referring back to feelings and emotions at the time of the journal entry and with this reducing bias that might come up during the data collection.

3.9.2 Storing the data

All primary data collected was stored on the Google Drive of the respective organisations. This ensured the same data protection and privacy that is used by the schools themselves for all information. Additionally, the preliminary survey results were made available to the leadership teams at both organisations. Interviews were audio recorded and stored on researchers private Google Drive, but were then transferred to the organisations and deleted from any personal device. Additionally, the transcribing programs named above keep a digital copy of both audio and the transcribed files on their website. Additional encryption through a third party (zip folder) with password protection was enabled for storing the data after analysis.

3.9.3 Analysing the data

There are several ways of organizing data for analysis. A researcher can structure their analysis by focal points, for example by person, by issue, by research question or by instrument (survey, interview, observation etc.). Researchers can also combine methods if they see fit with their data analysis. For this thesis, the complete staff survey was not used for the data analysis and only the questions found in Appendices 4, 5, and 6, which were relevant to communication and collaboration, were analysed. The interviews based on the three research questions were further studied using thematic analysis. Thematic analysis is the most common method for descriptive qualitative projects such as this and once the data is commented on and themed, a code is developed for the themes, noting that certain themes can fall under one or more codes (Patton and Cochran, 2002; Cohen, Manion and Morrison, 2007).

According to Yin, there are three steps in the data analysis process: compiling the data into a formal database, disassembling the data which can include the coding process and then reassembling the data to look for patterns. Additionally, two more steps can be added at the end of the analysis: interpreting and concluding (2016, p. 184). In Yin's model, the five steps do not follow a linear process. While compiling the data forms the beginning of every data analysis and concluding the data stands at the end, disassembling, reassembling and interpreting the data are central elements that can come at any given point and repeat themselves throughout the process (Yin, 2016, p. 186). In this thesis, surveys were used as a first approach to gain a topic choice. Only three questions were used to support the data analysis due to the narrowed focus on communication and collaboration. The main data source, the interviews, followed the approach described by Yin above. Once interviews were concluded, it was decided to not use computer assisted qualitative data analysis (CAQDAS) software due to cost and time efficiency in configuring the data sets, such as through coding.

As a first step, the interviews were analysed question by question and determined codes in the responses. During this step, results from both schools were compared and found similar enough to validate a combined approach. If data had been significantly different, the results would have been analysed separately and compared. The interview was broken down into three main parts: HBL challenges and opportunities, communication and collaboration in HBL, and Kotter's 8-Steps. From these codes, patterns and subthemes were organised into two summary tables, along with the written content of data analysis all of which are in Chapter 4. In Chapter 5 the data is discussed and related back to relevant literature or as referred to by Yin as Phase 4 Data Interpretation (2016).

To ensure validity and trustworthiness, Patton and Cochran mention the need of checking by triangulation in that any evidence is found in various sources and compared, along with member checking by reconfirming information gathered in interviews by interviewees (2002, p. 21). Both of these were achieved by comparing the findings in the discussion sections with relevant literature in the literature review, and by ensuring clarity in the interviews.

3.10. Qualitative validity and reliability

The validity and reliability of the data and therefore the thesis itself was assured due to numerous considerations and careful planning. There is a clear audit trail as various data points, such as permissions in the appendices and interview transcripts are stored securely. All procedures and respective analyses are justified at the various stages of the data collection to all stakeholders. In addition, these have all been described in depth in the methodological approach.

In order to maximise validity, the data chosen for discussion needed to be analysed carefully. Additionally, the data was explained in context to ensure clarity along with careful listening during interviews (Patton and Cochran, 2002, p. 28). To maximize reliability, it is recommended to not only use the entire data set, but also use more than one researcher to code, which was achieved by combing our data and having two researchers as part of this thesis (Patton and Cochran, 2002; Gibbs *et al.*, 2007).

Gibbs et al. (2007) differentiate between qualitative validity and qualitative reliability, whereas the first one is in regard to procedures, while the second is to ensure consistency in approach. Creswell suggests eight strategies for validation: triangulation, member checking, use rich, thick descriptions, clarify bias of the researcher, present negative or discrepant information also, spend prolonged time in the field to develop deep understanding, use peer debriefing and to use an external auditor (2014, p. 639-642). For this thesis, we as the researchers achieved all of the aforementioned points and frequently communicated with each other to clarify concepts and ensure consistency in approaches. Additionally, a colleague was asked to review interview and survey questions for content, wording and applicability. Furthermore, several procedures when working with data analysis are recommended such as checking transcripts carefully, checking coding carefully for drifts and communicating and cross-checking codes with the second researcher, again all of which were completed in the data collection, analysis and discussion of this study (Gibbs *et al.,* 2007, pp. 98-100).

3.11. Ethical considerations

Throughout the entire data collection, ethical considerations and guidelines from Tampere University of Applied Sciences and the organisations from which data was collected were adhered to. For all surveys, the respective heads of school were asked for feedback and permission before the surveys were conducted. Surveys were sent to all students and staff members in the secondary schools without collecting email addresses to be completely anonymous, as stated previously. Student and staff participation were also voluntary.

At the end of the educator surveys participants were given the option to voluntarily share their contact details to be further interviewed. Interested parties were contacted via email to schedule interview times. The emails to potential interviewees consisted of three attachments to ensure transparency. The attachments included an invitation with background information, the interview questions and a consent form for each participant, all of which are located in Appendices 1, 2 and 3. The final selection of participants attempted to get the greatest breadth of viewpoints with people in different roles, departments and experience levels.

4 DATA ANALYSIS

4.1 Overview

The purpose of this study and thematic analysis was to a) develop recommendations for changes to communication and collaboration in teaching and learning during HBL and b) to analyse the application of Kotter's 8-Step Process for Leading Change for similar moves to HBL in the future. These proposals were formed from the analysis and evaluation of experiences of educators during the COVID-19 forced move to HBL in two international secondary schools in Asia. As a change management model, we have chosen to use Kotter's 8-Step Process for Leading Change since it is one of the most widely used ones and has recently been updated to include accelerated change in a COVID-19 context (Kotter, 2020). To better understand this phenomenon, the following research question guided the study:

- Research question 1: What challenges and opportunities did educators encounter in the move to HBL?
- Research question 2: How has HBL changed communication and collaboration in teaching and learning?
- Research question 3: Which sections of Kotter's 8-Step Process for Leading Change are most suitable for moves to HBL?

The data for this section was collected from 16 educator interviews, from a variety of departments, with diverse experience at the two schools. Prior to beginning the data collection process with all participants, permissions from the respective school executives were granted before sending out surveys and conducting the interviews to ensure all university and school ethical guidelines were adhered to. Additionally, all surveys and interviews were administered on a voluntary basis and done anonymously. A disclaimer at the start of the surveys was added, as seen in Appendix 1, to explain the use of all data was for a master's thesis and would be anonymous. Before interviews were conducted, an electronic version of the participant consent form (Appendix 3), along with the interview questions was emailed to all volunteers (Appendix 2). Interviewees then signed the consent form before the interview commenced. In the analysis below pseudonyms were created for each interviewee, again ensuring full anonymity.

The process of identifying focus areas and research questions were based on the lived experiences of the researchers themselves as we were directly involved with HBL due to COVID-19. Additionally, student and educator survey trends, along with anecdotal conversations with colleagues were taken into account. Stemming from the initial inductive process, deductive research questions were constructed along with interview questions solely focused on responding to those questions. All data from the interview questions was exported, transcribed using software, read and reviewed several times for accuracy (Gibbs, 2007). Next, we identified significant and common statements and quotes from the transcribed interviews of results. We repeatedly analysed and annotated the transcriptions to remove overlapping and irrelevant information that was not applicable to the research questions or recommendations section. For each focus area, codes were identified based on patterns of the interviewee's responses, followed by establishing themes (Gibbs, 2007, p. 4). The first interview questions were directed at the focus areas of challenges, opportunities, communication and collaboration in teaching and learning during HBL. The aim of these questions was to get the interviewees comfortable with the topic of HBL, as suggested by Yin (2016). Additionally, these responses can be tied into the discussion of learning processes for online learning, specifically in relation to communication and collaboration to relate back to the learning theories. We identified codes for each focus area and recorded the appearance of each code as seen in Table 1. The themes derived from these codes are explained further along with supporting statements from the interviewees below. The second part of the interview centred around Kotter's 8-Step Process for Leading Change. The purpose of these questions was to explicitly discuss Kotter's 8-Steps, an unknown strategy to the participants, and the use of the 8-Steps during the move to HBL, along with the importance of each step in any similar change process, from their experiences. We read over, analysed and annotated the transcribed responses relevant to this section and counted the appearance of a particular stage having been implemented in the change to HBL. Also, we recorded if that stage was viewed as important for any change similar to that experienced. A summary of the combined results from both institutions can be seen in Table 2.

4.2 Challenges, opportunities, communication and collaboration in HBL teaching and learning interview analysis

The four focus areas in the first section of the interview are: (a) Experiences of HBL and the challenges; (b) Experiences of HBL and the opportunities; (c) Communication in teaching and learning during HBL; (d) Collaboration in teaching and learning during HBL. The following section provides a more detailed description of the four focus areas and their related codes. They are used to answer the following research questions in the following section:

- Research question 1: What challenges and opportunities did educators encounter in the move to HBL?
- Research question 2: How has HBL changed communication and collaboration in teaching and learning?

In the table below, the four focus areas with subthemes are summarised. After the table, the data is further presented, analysed and commented upon.

TABLE 1. Educator Interview Results

Focus Area	Code	Appearance of Code in Interviews
Experiences of HBL - Challenges	Sustainability and/or inconsistency of approaches	19
	Guidance and instructions from administration or leadership	12
	Preparedness of staff and students	8
	Availability of resources	7
Experiences of HBL - Opportunities	Updating and reflection of existing programs	17
	Growth in pedagogy	13
	Increased flexibility in daily structure	9
	Feedback	6

Communication in Teaching and Learning during HBL	Changes in modes of communication	36
	Lack of central communication and unified ideas	15
	Communication and socialisation	12
	opportunity for a greater variety of students to participate	8
Collaboration in Teaching and Learning during HBL	Collaborative opportunities	19
	Changes in modes for collaboration	14
	Importance of relationships	9

4.2.1 Experiences of HBL - Challenges

The first code that was visible early on in the analysis process was sustainability and inconsistency of approaches and was the most frequently mentioned by participants. In particular, a theme mentioned was that the tools, programs and platforms used were too diverse with no consistency or guidance in preferences. As mentioned by Jessica it was seen as valuable 'having everyone really committed to learning a few platforms really well', rather than everyone working with different tools that performed similar functions (Jessica 2020, personal communication, 21 September). Another theme raised was that using the same pedagogies and strategies in HBL as face-to-face teaching is not sustainable. As stated by Martin 'just taking what we are currently doing in class and putting it online ... that works for a week or so, possibly for two weeks, but it doesn't work for longer than that' (Martin 2020, personal communication, 8 October). Additionally, due to the unknown time frame of HBL, many practices were not designed to be viable for longer periods but rather a quick solution to a then thought temporary situation. Ellen added a comment similar to Martin's, 'many things we trialled because we thought it was only going to be two weeks. We obviously realized it couldn't be sustained for a long time' (Ellen 2020, personal communication, 30 September). The lack of consistency in approaches was

another theme that participants were challenged with. Within the schools themselves, the departments, teachers, administrators all followed different strategies which was confusing not only to the teachers, but to the students and parents as well. Daniel stated:

> When we [teachers] were figuring it out they [students] had to figure it out and if we don't know what is going on, they definitely don't know what is going on (Daniel, personal communication, 16 September).

This aforementioned quotation summarised that lack of structure, and the impact that had on not only the teachers, but the students as well.

In regard to guidance and instructions from administration or leadership, this code was the second highest challenge and appeared 12 times overall in the interviews. A common theme, due to the uncertainty and constantly changing global situation, teachers expected more top-down decisions and guidance. There was little to no time to prepare for HBL. Paul stated, 'because of the circumstances the transition to HBL had to be top down. But because of the uncertainty teachers did look for that guidance as well' (Paul 2020, personal communication, 12 October). Furthermore, 'having to take managerial expectations and disseminate those in a relevant way to the members of the department required a lot of finessing just because the instructions from management were unclear' (Luke 2020, personal communication, 7 October). The constant change coming from the administration has been criticised as making the teachers and students feel anxious as supported by Jessica, 'you have to allow for that flexibility, but you also have to account that that constant changing creates a big sense of insecurity within the staff and the teachers' (Jessica 2020, personal communication, 21 September).

Preparedness of staff and students was also a challenge mentioned by some of the participants. It was expressed that little to no training was offered and teachers who lacked skills in IT or online teaching pedagogy found the process difficult. The readiness of schools with tech support was also mentioned as problematic. Michael submitted, 'it's very difficult, because we don't have any expertise or we haven't been given any technique, we're just being told that that's the new expectation of the school without being trained to this' (Michael 2020, personal communication,14 September). Roberta added, 'I'm not really prepared

enough for the IT, my IT skills were not good enough' (Roberta 2020, personal communication, 10 September). Others, such as Emma commented that they 'didn't know how to teach the skills in an online way' (Emma 2020, personal communication, 30 September). A further point was made by Janet in discussing that this situation of HBL was new globally for the age group investigated, so there was no relying on previous experiences or research. For one of the two schools, it also presented a problem that the start of HBL fell together with the beginning of a new academic year. As Amanda mentioned, 'I had not met my classes and logistics were tricky' (Amanda 2020, personal communication, 25 September).

As for the availability of resources, respondents mentioned this code 7 times as a challenge. Daniel mentions that for him this was especially the case for sections that are not connected to a specific subject and without a set curriculum to follow, such as 'supervised study', a preparation and study lesson, interviewees would have liked to have more resources made available to them. He states: 'I think also to provide people with resources, how to do that better is also important, like what I'm doing with my supervised study section' (Daniel 2020, personal communication, 16 September). For teachers of subjects like design, music and art, where equipment is needed, interviewees stated that it was difficult to provide students with activities that interested and challenged them due to the lack of equipment and resources at home (Emma 2020, personal communication, 30 September; Cara 2020, personal communication, 29 September).

4.2.2 Experiences of HBL - Opportunities

Not only were there numerous challenges associated with the swift and unpredicted move to HBL, but we also asked interviewees about the opportunities that presented themselves from their experiences. First and foremost, the chance for educators to update and reflect on existing programs were mentioned. As shown in Table 1, this code appeared 17 times and was viewed as the largest opportunity for participants. As supported by Emma, 'we've been forced to reimagine education and be more flexible, try new things (Emma 2020, personal communication, 30 September). Within this reimagination, other interviewees mentioned the creation of new resources, reorganizing of units, adoption of a

consistent platform and rethinking the teaching of both their subject and this age group of learners online (Janet 2020, personal communication, 15 September; Patrick 2020, personal conversation, 23 September; Martin 2020, personal communication, 8 October). Ellen added, 'our team collaborated really well in science, so we immediately made some changes and decided which unit was going to be the best because it was starting fresh and we made a change of the order of our units.' (Ellen 2020, personal communication, 16 September). To a certain point, teachers like Kyle saw the benefits over face-to-face teaching 'obviously, I love being with the kids and being with them in class and miss having them around, but in some ways, in terms of pedagogy and teaching and learning, it actually felt, in some ways it was better.' (Kyle 2020, personal communication, 24 September).

Leading on from the opportunity of updating and reflecting on programs, units, and lessons the participants mentioned their own growth in pedagogical practices. Teachers found themselves using new tools in new ways, and many of these were practices the participants planned to continue using in the future (Cara 2020, personal communication, 29 September; Martin 2020, personal communication, 8 October). With time passing by and the experience of HBL continuing, interviewees mentioned that they became more and better equipped for the online learning environment. As supported by Walter 'I think everyone realized that […] we're not actually automatically experts in this. There's a lot we don't know and there's a lot of technologies that we might not necessarily be familiar with, that we were learning […] I guess we were learning as we went.' (Walter 2020, personal communication, 16 September). Jessica added 'the longer we were online, the more well equipped we as a staff, individually and as an institution became to kind of deal with what was happening' (Jessica 2020, personal communication, 21 September). Furthermore, as stated by Martin, 'there have been so many fantastic things come out of this, around technology use, around actually some of the ways teaching and learning has been happening. I think it's a forced change that normally would take five to ten years to do in the space of months.' (Martin 2020, personal communication, 8 October). The previous quote also supports the opportunity of the quick pace at which educators were developing in their pedagogical practices, particularly with technology use.

Increased flexibility in relation to daily structure was mentioned as opportunity and appeared 9 times in our data set. Daniel acknowledged this as 'one of the big changing points for how we structured our day was allowing kids more time to do work' (Daniel 2020, personal communication, 16 September). Ellen added that the day was more 'fluid' (Ellen 2020, personal communication,16 September). Additionally, Patrick mentioned that the move to HBL allowed for more downtime between lessons and also cut back on travel time to and from school. This then gave students more time for more independent study and deeper research (Patrick 2020, personal communication, 23 September).

Feedback is a powerful tool for educators and can make the learning taking place visible (Hattie, 2009, p. 174). It was identified as one important area early on in this study during the preliminary teacher survey. As Appendix 4 demonstrates, 23% of the teachers recognised HBL feedback to be more effective and 37% considered it equally as effective than in F2F learning. This was further supported in the interviews as one of the opportunities presented to the participants during the process of HBL. Feedback time was being scheduled; as supported by Ellen, 'with students, I did less probably one on one chatting than I normally would. So that had to change and develop. I started putting sections on my timetable where they could sign up for individual chats' (Ellen 2020, personal communication, 16 September). This scheduling of feedback not only shows the students of its importance but gives us educators the time and space to facilitate it properly. Emma experienced another benefit and she found herself 'asking students for more feedback on what worked, what didn't, what they enjoyed' (Emma 2020, personal communication, 30 September). Her practice became more directly driven by the students during HBL. Martin added, 'the students have actually been driving a lot of the teacher's professional learning as well in an indirect way, and they've been really happy to help out. I think that's also really helped the relationship between the students and the teachers' (Martin 2020, personal communication, 8 October). This leads directly into our next focus area of communication and its importance in teaching and learning for HBL.

4.2.3 Communication in teaching and learning during HBL

Experiences of changes to communication in teaching and learning during HBL were decided as explicit interview questions in this study as it directly relates to the learning theories of Online Collaborative Learning (OCL) and Connectivism. Firstly, when participants were asked about HBL communication as compared to F2F, changes in the modes of communication arose more than any other code in our interviews. The move to online HBL from F2F created an instant and dramatic shift in the way we communicate and our sense of community. It was important to ensure that while our learners were enrolled in HBL, we needed to communicate with them appropriately and effectively to avoid the sense of isolation that some may experience (Kilgore, 2016). This was identified as an area of concern in the preliminary teacher survey, Appendix 5, where teachers indicated that collaboration and communication between teachers and students were 54% less or considerably less effective in online learning. However, during the interviews, communication in HBL was seen as more positive, perhaps due to the interviews taking place after a longer period of time of HBL as compared to the preliminary surveys. As mentioned by Luke 'teachers have been pushing for students to communicate more clearly and this had to happen during HBL' (Luke 2020, personal communication, 7 October). Additionally, 'there was more communication than ever before' and 'email has a place but when communicating sensitive or difficult information a video gives you more options' (Martin 2020, personal communication, 8 October). Daniel noticed that communicating with students and co-workers using a chat function instead of email was much more effective and efficient (Daniel 2020, personal communication, 16 September). Obviously, with the mode of teaching going from F2F to HBL it was noted that 'those comforts that you're used to in terms of regular and frequent face to face communication disappear' (Walter 2020, personal communication, 16 September). Michael spoke about the switch from personal conversations of teacher-to-student to becoming student-to-student communication:

> In terms of communication, it evolved from the beginning it was very personal and then I realized they had to do something in a group. So, the students would talk to each other rather than talk to me, which is what I think is a big motivation to interact with their peers (Michael, personal communication, 14 September).

Finally, as mentioned in the opportunities section above, the mode and amount of feedback, which is directly related to communication, was also noted to have changed and improved.

The participants then noted the challenges associated with a lack of central communication and unified ideas. This was also mentioned above with lack of consistency in general; however, this section focuses specifically on consistency in communications. Amanda noted, 'communicating with parents and keeping the message consistent' was very important to the success of the HBL program (Amanda 2020, personal communication, 25 September). Cara then explained that the process of communication developed over the course of HBL, 'in the beginning, because there wasn't an established system, students were bombarded with communication. So over communication has been streamlined and has become more efficient over time (Cara 2020, personal communication, 29 September). Lack of communication about the processes of HBL to the wider community presented an issue for Ellen:

> I think the communication to the wider community of the change and why it happened was something that was lacking or might be missing [...] you have to also justify the change to people so that they understand why the change is happening and how it's best for our students' (Ellen, personal communication, 16 September).

Jessica saw the problem more as an inconsistency of the messages sent or how they were perceived by the community and what actions resulted from this (Jessica, personal communication, 21 September). As described by Kilgore (2016) above, some students may feel large amounts of isolation while participating in HBL. Therefore, it is important that communication in our lessons also works as socialisation. Michael noted this as a deficit in his experience:

> How to compensate for the lack of social interaction with peers, what to do instead? Which is also relating to what is the mission of high school? Is it just to give content? If it's that, then fine. We should continue with that, but if it's to socialize this is not happening (Michael 2020, personal communication, 14 September).

Janet added, 'the socialization was the aspect that the students struggled with, probably outside of the curriculum. They just struggled with a lack of socialization' (Janet 2020, personal communication, 15 September).

When looking at the focus area of communication, both Emma and Paul agreed that HBL provided the opportunity for a greater variety of students to participate and communicate with their peers and teachers. Emma stated, 'students who were quiet in class, were more likely to communicate with the chat function in Zoom (Emma 2020, personal communication, 30 September). Paul added:

> Students who are quieter in class are more eager to communicate in the online environment, empowered by online context, able to send emails, meet in smaller, less intimidating circumstances' (Paul 2020, personal communication, 12 October).

Leading directly on from communication, is collaboration and its role in HBL.

4.2.4 Collaboration in Teaching and Learning during HBL

As shown in the preliminary teacher survey in Appendix 6, 81% of teachers indicated that collaboration between students was less or considerably less effective during HBL as compared to F2F. This follows the above question on collaboration and communication between teachers and students, for 54% of the respondents as also being less effective, as stated in Appendix 5. However, similarly to communication and collaboration between teachers and students, collaboration between students themselves was presented as more positive during the interviews. Again, this could be due to interviews occurring further into the timeline of HBL where more systems were in place and stakeholders were more comfortable with processes and tools. The first and most common code to develop from the focus area of collaboration was the new opportunities that HBL presented for students. Cara mentioned that the HBL environment:

> gives students an idea of what teams would look like in the real world by having them communicate as a global team, such as the designer is in Australia and the client is in Germany and you're having to go back and forth (Cara 2020, personal communication, 29 September).

Cara also noted:

> communication and collaboration were really good between students as they were less self-conscious about sending designs to the others for feedback because it isn't in front of their face. It was authentic (Cara 2020, personal communication, 29 September).

Paul supported this with 'collaboration with students is better with HBL as we are checking in more' (Paul 2020, personal communication, 12 October). Martin stated that there was:

> Direct collaboration with students as to what was working and what wasn't. For example, in regard to timetable, length of lessons, teacher contact, platforms This level of collaboration was not present before HBL, and the students felt they had more agency in decisions about their learning (Martin 2020, personal communication, 8 October).

Overall, 'one of the key benefits or positives of HBL has been the collaboration on all levels' (Martin 2020, personal communication, 8 October). Finally, Zoe mentioned that collaboration improved with time, especially when administration became involved with more specific guidelines and goals (Zoe, personal communication, 11 September).

Similar to communication, there were also many changes in modes of collaboration during HBL. Most of the interviews mentioned the use of collaborative technologies such as cloud-based documents, chat messages and video conferencing software that aided in their ability to collaborate. For example, in music students would record their own parts and then come together to mix the final piece using cloud-based software (Emma 2020, personal communication, 30 September). The educators themselves also collaborated differently:

> We were very good in our staff team at continuing collaboration meetings, so we still chatted a lot. We set up a Google Hangout Groups [chat function on Gmail] for things, and it meant if something came to mind, even though that person wasn't in the room with me, I could write it down and they were able to respond (Ellen 2020, personal communication, 16 September).

Jessica added that collaboration had become more informal and organic instead of planned (Jessica, personal communication, 21 September). However, Walter and Kyle both reported that the professional learning usually happening F2F in a collaborative setting was said to have been missed during HBL (Kyle, personal communication, 24 September; Walter, personal communication, 16 September). Overall, Luke did feel positive about the move to HBL stating 'communication and collaboration have been amplified and it's fantastic' (Luke 2020, personal communication, 7 October).

Collaboration depends on relationships, and the importance of these relationships was highlighted by Amanda. She stated'

> When it came to online learning it was challenging because you don't have the same relationships and environment as you normally would in a classroom setting (Amanda 2020, personal communication, 25 September).

Luke added that students having their camera off made collaboration difficult because he could not read body language as you normally could in a face-to-face space (Luke 2020, personal communication, 7 October). Additionally, the theme of lack of collaboration with parents was noted, 'it is the parents who are the missing stakeholder of all of this. [...] I had one interaction with a parent the whole entire time' (Kyle 2020, personal communication, 24 September).

The opportunities, challenges, communication and collaboration of teaching and learning during HBL have been presented in the aforementioned sections. These findings will be used in Chapter 5 and connected to the literature of learning theories and online learning processes. The next section focuses on the process of change and its applications to HBL. For this, Kotter's 8-Step Process for Leading Change was chosen as the model to be analysed and discussed.

4.3 Kotter's 8-Step Process of Leading Change Interview Analysis

This section analyses the use and importance of Kotter's 8-Step Change Process for the experience of HBL due to COVID-19. Interviewees were handed a print copy of the 8 steps and given time to read them over. It is important to note that they were not required to know anything about these steps ahead of time. The goal was to use the interviewees' experiences and opinions to see the connections between the events that had occurred and the literature on change management. Open ended questions were asked, firstly which of the steps were implemented in the change to HBL from their experience, and secondly which of the stages are important if or when there needs to be another similar change in the future. The appearance of a confirmation of the stage either being used, or its importance was recorded in Table 2. Below the table is a more detailed description of each stage and the results from the interviews. This data will be used to answer the following sub-research question:

- Research question 3: Which sections of Kotter's 8-Step Process for Leading Change are most suitable for moves to HBL?

TABLE 2. Educators Interview Summary of Kotter's 8-Step Process for Leading Change

Stage	Appearance (used during HBL)	Appearance (important)
Create a sense of urgency	13	2
Build a guiding coalition	7	6
Form a strategic vision	2	8
Enlist a volunteer army	3	4
Enable action by removing barriers	9	3
Generate short-term wins	11	6
Sustain acceleration	5	0
Institute Change	7	1

The first step in Kotter's model is creating a sense of urgency by helping others see the need for change (Kotter, 2020). The step was acknowledged as occurring by the majority of our interviewees. The participants mentioned that this step was present at the beginning of the move to HBL, from very early on (Michael 2020, personal communication, 14 September; Roberta, personal communication, 10 September), and the global pandemic itself created this sense of urgency, therefore it was not a planned step in the change (Janet 2020, personal communication, 15 September; Martin 2020, personal communication, 8 October; Paul 2020, personal communication, 12 October). Other participants mentioned the need and importance of identifying the top priorities when this change to HBL occurred (Daniel 2020, personal communication, 16 September; Amanda 2020, personal communication, 25 September). Emma stated that the start of HBL was a 'sense of panic more so than urgency' (Emma 2020, personal communication, 30 September). Cara then explained that:

> A sense of urgency is always there with management but no prioritising; therefore, everything needs to be done right now, especially when reacting and responding to parent feedback (Cara 2020, personal communication, 29 September).

Jessica added to this that the feeling of urgency was continuous and resulted in a feeling of burnout of many educators (Jessica, personal communication, 21 September). Cara and Patrick both acknowledged the importance of this first step in future change that may occur, particularly with another move to HBL. It was mentioned 'at the department level it's important to prioritize to look after staff and look after students, which is important to build a guiding coalition' (Cara 2020, personal communication, 29 September) and 'knowing what needs to be done immediately, that's really important' in regard to change processes (Patrick 2020, personal communication, 23 September).

The second step, building a guiding coalition, involves a group of effective people to guide, coordinate, and communicate the activities of the desired change (Kotter, 2020). Less than half of the participants believed that this step had been executed properly in their experience. As stated by Cara 'building a coalition or team of champions was attempted at times by asking for volunteers, but not everyone who volunteered was called upon' (Cara 2020, personal communication, 29 September). Daniel mentioned 'I had my team of teachers,

but didn't create a team', therefore a formal purposeful coalition was not formed (Daniel 2020, personal communication, 16 September). Walter stated that some were leaning on certain people because of their expertise, but that this was not engineered deliberately (Walter, personal communication, 16 September). Ellen supported Walter by adding that this step was not done well and only when returning to school after HBL was there a 'team of champions' (Ellen 2020, personal communication, 16 September). Jessica added:

> I like the idea of having a guiding coalition, Who is accountable for that change and everyone knows when you have questions about this, you go to that person, you go to that group of people (Jessica 2020, personal communication, 21 September).

The significance of this second step in a similar change process was stated as important by six of the participants. Janet mentioned it would help to 'get a variety of perspectives across the school' (Janet 2020, personal communication, 15 September). Furthermore, Martin stated:

> You've got to carefully select the people in that team who are going to be positive, who are actually going to go out there and be the advocates for whatever it is that you're going to do. Because I think if you don't invest in building that team of champions, change can't be the vision of one person (Martin 2020, personal communication, 8 October).

This statement demonstrated the importance of a guiding coalition as a stage for change, but also noted the considerations that leadership must make when setting up a guiding coalition.

The third step is forming a strategic vision, for clarity and initiatives, that drives the vision (Kotter, 2020). This was the least recognized step that was used during this change. As Daniel stated there was 'not enough time to be visionary', he then added 'I think the vision of strategic implementation was given to us by administration, and we interpreted that as best we could.' (Daniel 2020, personal communication, 16 September). Both Martin and Paul mentioned that there was simply no time for a strategic vision due to the emergency situation of HBL. Jessica noted that there was a strategic vision, but it 'was addressed afterwards, when we returned to school [after summer break] after reflection' (Jessica 2020, personal communication, 21 September). Cara added that the vision should have come from the administration, and the lack of it also meant a lack of priorities

(Cara 2020, personal communication, 29 September). Even though this step was the least utilized, it was viewed as the most important step for a change process to occur. Janet stated, 'the key that didn't happen was probably the strategic vision of making it long term' (Janet 2020, personal communication, 15 September). Amanda added:

> Forming a strategic vision is most important. It's important to know the direction that you're all going to move in. A lot of the other steps would feed into that vision. Making sure that that vision is communicated clearly [...] that's what you need to do in order to move forward (Amanda 2020, personal communication, 25 September).

Cara agreed and noted:

> I think a strategic vision as a whole group is really important. If you don't have buy-in from everybody, then forget about it, because I don't think that can be dictated from the top down for that (Cara 2020, personal communication, 29 September).

Therefore, a strategic vision was not noted as taking place during the experience of the educators but viewed as important as a base or anchor for other steps.

Kotter's fourth step, to enlist a volunteer army, involves having large numbers of people rallying around a common opportunity or goal (Kotter, 2020). Again, this stage was one of the least acknowledged by our interviewees as having occurred. Walter experienced this step 'with buddying, certain people would volunteer to help others within their strength (Walter 2020, personal communication, 16 September); however, Michael felt this step was a 'have to', not a 'want to' (Michael 2020, personal communication, 14 September). Paul made a similar argument that this stage was not possible as 'we all had to participate in online learning, there was no choice' (Paul 2020, personal communication, 12 October). Jessica noted that this step only happened after HBL, over the summer, and it was not very clear who was involved in this volunteer army (Jessica 2020, personal communication, 21 September). Four of the participants agreed that this step was important for a change process. As stated by Patrick, 'a volunteer army would help, but then there was a bit of ill will, in the beginning. It might have been resented by others if you were in the volunteer army and therefore be counterproductive and others may have some cynicism about this' (Patrick 2020, personal communication, 23 September). Luke then added that it was important

to 'give people buy in, people who want to vs have to' (Luke 2020, personal communication, 7 October). Finally, referencing the importance of a volunteer army, Martin stated:

> It helps you to achieve your goal, but it also elevates their profile in the school. It also gets them actually involved in the change that's happening, even though they may not realize. And the more volunteers you've got, the more ownership you then have of the change that you're going to bring into place (Martin 2020, personal communication, 8 October).

The fifth step is to enable action by removing barriers, such as inefficiencies and hierarchical processes that may hinder movement and progress (Kotter, 2020). This stage was identified by just over half of our interviewees as being adopted during the change to HBL. The theme of reflecting on practices that were not working and changing them evolved. Walter stated, 'looking at something that isn't working, tracking the progress and adapting based on that' (Walter 2020, personal communication, 16 September) and Paul added, 'removal of barriers and recognition of past failures were natural parts of the process' (Paul 2020, personal communication, 12 October). While some interviewees mentioned that 'streamlining processes' (Daniel 2020, personal communication, 16 September), 'not insisting on things that didn't work' (Roberta 2020, personal communication, 10 September) and 'learning from mistakes' (Patrick 2020, personal communication, 23 September) were important to them in this step, others noted that a transparency would have been important (Luke 2020, personal communication, 7 October; Martin 2020, personal communication, 8 October). However, Michael and Martin criticised the slow pace in which the removing barriers occurred (Michael 2020, personal communication, 14 September; Martin 2020, personal communication, 8 October). Jessica added that barriers are only truly removed if they are not replaced by other things, 'taking things away, not then replacing them with something else, because that's just changing. That's not actually removing a barrier. That's creating a barrier.' (Jessica 2020, personal communication, 21 September). Three of the participants identified this stage as important. Cara stated, 'streamlining and re-evaluating is important. Not continuous improvement but continuous reflective process to streamline' (Cara 2020, personal communication, 29 September), and reinforced the importance of enabling action by not simply removing barriers, but also including space for

reflection of what may be causing barriers. It is interesting to note that many of the interviewees see this step connected with reflective process, even though reflection is not an explicit part of this step according to Kotter (2020).

Kotter's sixth step involves generating short term wins by recognizing and communicating these with the team early and frequently. This stage was recognized by 11 of our interviewees as having occurred. Amanda stated, 'every lesson was an opportunity to engage the students again. Short term wins are really important, even within the school day' (Amanda 2020, personal communication, 25 September). These wins were celebrated as gamified lessons, feedback and communication to parents through various channels, recognition awards, or tracking their progress on shared documents visible for them. (Roberta 2020, personal communication, 10 September; Zoe 2020, personal communication, 11 September; Daniel 2020, personal communication, 16 September; Martin 2020, personal communication, 8 October; Ellen 2020, personal communication, 16 September). While Ellen mentioned a schedule change to less screen time produced a short-term win for students (Ellen 2020, personal communication, 16 September), Jessica counteracts that the school got stuck with short term wins for too long and lost view of the long-term goals (Jessica 2020, personal communication, 21 September). Of all our interviewees, 6 classified this step as important for a change process. Michael mentioned that short term wins can help students with motivation (Michael 2020, personal communication, 14 September) and Daniel added that these can energize students (Daniel 2020, personal communication, 16 September). Cara noted:

> Short wins, I just think the positivity with both your staff and students is actually really important because both parties need to feel valued. It's a bottom line (Cara 2020, personal communication, 29 September).

This connects the importance of all stakeholders feeling valued and supported during change.

The seventh step is associated with sustaining the acceleration until the vision is a reality (Kotter, 2020). Compared to short term wins, this step works with the momentum created from the change process itself. At one of the schools there was a return to HBL for a second time after F2F classes resumed. It was noticed that students, teachers and parents were more accepting of the pedagogies

needed for communication and collaboration in their teaching and learning for this mode. As explained by Cara:

> During the second round of online learning there was a boost compared with the first round as we had some time with students and they were more familiar with each other, teachers and the platforms (Cara 2020, personal communication, 29 September).

As mentioned with the first step, creating a sense of urgency, Martin noted that this step had occurred but, there was 'no choice and changes had to be made to make it sustainable' (Martin 2020, personal communication, 8 October 2020). Luke mentioned that the last two of the 8 steps were difficult due to the need for people wanting to keep the change. He stated:

> To sustain acceleration and instituting change you need people who want to change, so this was not happening. HBL will have to go on for a significant amount of time, 2 years, before real change will happen. People have already started to revert back (Luke 2020, personal communication, 7 October).

Paul also acknowledged this step as an obstacle in relation to its longevity by stating, 'there's a continuous pathway towards the change being successful' (Paul 2020, personal communication, 12 October). Interestingly, not one interviewee viewed this step as an important part of a change process when asked directly which steps are important in a change process in schools. However, although not explicitly stated in the second part of this interview section, this step is identified as valuable in the previous comments in this paragraph as the people involved need to want the change and there must be time for the vision to become a reality.

The eighth and final step is to institute the change. It is necessary to understand the change, the new behaviours and processes to ensure that the change is sustained and can become the 'new normal'. Seven interviewees mentioned the changes implemented did become institutionalized and are now used or seen as best practice. Walter acknowledged this as important to determine what things from the change process to keep. He added it is important to move on with the successes that were achieved throughout the process (Walter 2020, personal communication, 16 September). Ellen and Daniel agreed on that new practices which were not effective needed to be removed (Ellen 2020, personal

communication, 16 September; Daniel 2020, personal communication, 16 September). Martin stated, 'many of the new practices are applicable for the future', including the use of the new learning platform, live streaming more events and meetings which require less people to attend in person along with saving time (Martin 2020, personal communication, 8 October). Amanda identified that this step of instituting the change as occurring:

> From the moment of realization that HBL is not going to be a one off. This is something that is actually a reflection of the changes in our wider world (Amanda 2020, personal communication, 25 September).

However, Michael noted that for this step to be achieved the school itself must readjust its goals to be realistic and properly supported through professional development. He stated, 'expectations by the school are too high to be sustained, missing techniques and expertise due to lack of training' (Michael 2020, personal communication, 14 September). After many participants agreed that some of the changes were institutionalized, only one person determined this stage as important in the separate question; however, similar to the previous step interviewees did acknowledge the importance in an indirect way in the quotations above. Daniel mentioned that it is important to 'make the system better'. He added, 'institute change, make it sustainable for the future. I kept consistent. If it worked, I kept it. If it didn't work, I left it.' (Daniel 2020, personal communication, 16 September). In Chapter 5, the aforementioned presented data will connect Kotter's 8-Step Process for Leading Change for moves to HBL in international secondary schools.

4.4 Summary

The purpose of Chapter 4 was to describe the findings of the 16 educators who participated in this study and have been intensely and directly involved in the change to HBL due to COVID-19. The interviews were used to discover the lived experiences of these educators transforming their F2F teaching practices to sustainable, rigorous and supportive HBL with short notice, minimal professional development and during the crisis of a pandemic. There were two main sections to the interviews. The first section discussed teaching and learning during HBL with overall opportunities and challenges, along with specific reference to communication and collaboration. These questions were used to get general feedback from the educators on their feelings and practice, as well as explicitly

obtain information in relation to learning theories and processes. Three questions from the teacher preliminary surveys were also analysed as they related directly to communication and collaboration. From those focus areas of the interviews, codes were identified as shown in Table 1. In the second section, the interviewees were asked to evaluate Kotter's 8-Steps Process for Leading Change in the move to HBL. This was discussed in relation to their experience and also the importance of the different steps for future changes of a similar nature. Kotter's 8-Steps and the appropriate learning theories are connected further in Chapter 5's discussion and recommendations.

The validity and reliability of this section has been confirmed by a variety of methods. As suggested by Gibbs *et al.* (2007) and Creswell (2014), during the interview process, paraphrasing and checking with the participants for correct understanding of the content was utilized. The interview content was read over numerous times, discussed and code and themes were agreed upon in the data. Additionally, the time spent in the field was vast, from February 2020 to October 2020. This time included a move to HBL as well as the return to regular F2F classes, in hybrid and blended models and in the case of one school, a second move back to HBL after a period of F2F learning. As mentioned in Chapter 3, the five steps proposed by Yin for qualitative research were followed (2016, p. 184):

- Compiling the data: We prepared a document with tables where we compiled all the data collected from transcribed interviews.
- Disassembling the data: We had already determined the focus areas used in the interviews, but when looking through the quotes extracted, we determined codes.
- Reassembling the data: We then looked for how many times certain codes and themes had been mentioned.
- Interpreting the data: The results have been put into two tables depending on the stage of reassembling we were working on. In Chapter 5 we will be discussing our results further with direct relation to the research questions and our literature review on change processes, learning theories and online learning environments.

The data presented is connected through the experience of change and can be summarized into two main themes: challenges, opportunities, communication,

collaboration in teaching and learning during HBL, and the implementation of Kotter's 8-Steps during HBL.

5 DISCUSSION AND CONCLUSION

5.1 Overview

The purpose of this study was to develop recommendations for required changes to communication and collaboration for home-based learning (HBL). These proposals were formed from the analysis and evaluation of educator experiences during the COVID-19 forced move to HBL in two international secondary schools in Asia. To aid in the implementation of required changes, Kotter's 8-Step Process is discussed as it is a widely used change management strategy and has recently been updated for accelerated change in relation to COVID-19 conditions (Kotter, 2020). For these purposes, a semi-structured qualitative study (SSQS) is the method most suitable as it aims to answer the research questions from the views and experiences of the people involved (Mack *et al.*, 2005, p. 1). Additionally, SSQS's have structure in their background theory and method, ensuring reliability and validity; however, they are not overly structured to limit or constrain responses (Blandford, 2013, p. 2).

The inquiry through interviews into challenges, opportunities, collaboration and communication as well as into Kotter's 8-Step Change Process are all linked through the common theme of change. In this chapter, we discuss the data presented in Chapter 4 and the two main areas of research, changes in communication and collaboration in teaching and learning during HBL, and Kotter's 8-Step Process for Leading Change.

All organisations undergo change, including schools. This has never been more evident than with the quick and unpredicted move to HBL in our two educational institutions. As with all change, this move presents not only challenges, but also opportunities. In our context, the change experienced was not only that of environment and resources, but a need for alterations in teaching pedagogy and approaches. To achieve the same learning outcomes in HBL as those offered in F2F learning we must first understand learning theories and their applications to a virtual setting. Bates (2014, n.d.) and Weegar and Diego (2012) discussed implications of the most common theories, behaviourism and constructivism, for online learning and educational technology. We can see behaviourist elements

when looking at positive reinforcements in online settings. Online learning in the constructivist sense goes further and as a centrepiece has an instructor who develops learning experiences that build upon each other. This constructing of knowledge can be difficult due to the varying paces of learners in an online class (Weegar and Diego, 2012). However, if the aim is to achieve deep, transformative learning and critical, analytical thinking in an online environment, other learning theories need to be considered, such as Online Collaborative Learning (OCL) (Harasim, 2012) and Connectivism (Bates, 2014, Bates, n.d.). To facilitate OCL and Connectivism in HBL the core practices of communication and collaboration need to be considered and analysed. Online environments present limitations and differences in communication and collaboration in comparison to F2F, therefore educators need not only be made aware but given the time and skills to plan the change accordingly (Kilgore, 2016). To assist educators with these, or any changes, following a change model, such as Kotter's 8-Steps for Leading Change Process, provides structure and purpose for all team members involved (Connolly, n.d).

5.2 Summary of findings

The first section of the interview inquired about challenges and opportunities of HBL to better understand the participants and their experiences. These open-ended questions began the conversation and thought process in reference to the interview's topic. The next section investigated the participants' observations of communication and collaboration during HBL. Finally, interviewees were asked to comment on which stages from Kotter's 8-Step Process were utilized during HBL and which were important for a change similar to that of HBL.

5.2.1 Research question 1: What challenges and opportunities did educators encounter in the move to HBL?

A move from F2F teaching to online instruction is a challenge in itself, especially with the short timeframe given to our schools in February 2020. Areas of challenge that presented themselves during the move to HBL included: sustainability and inconsistency of approaches, lack of guidance, feelings of unpreparedness and finally, lack of resources. It emerged that at the start of HBL there was an inconsistent use of technology. In terms of sustainability, there was

an expectation to reproduce F2F instruction online as similarly as possible, which is simply not sustainable, nor supported by research as best practice (Misanchuk and Anderson, 2001; Bates, 2014; Salmon, n.d.). Additionally, the initial approach to HBL was quite behaviourist with the simple transfer of information from the teacher to the student as it was viewed as being a quick fix to a short-term issue (Harasim, 2012; Bates, 2014). The critique in lack of guidance builds upon the aforementioned inconsistencies and relates directly to the communicative portion of the change process. The information and decisions were top-down, and there was a lack of buy-in from staff due to unclear instructions and constant changes in directions. However, much of this was due to the uncontrollable crisis and panic of the pandemic that most stakeholders experienced during the first months of the change to HBL. The preparedness of staff and availability of resources were another theme that developed from the interviews. While educators did not feel that they had the professional development or technological skills to grasp such a move, they also felt that practical resources were missing at times to reproduce F2F learning online, as that was the initial expectation. Overall, educators were challenged by a lack of support and transparency, which then impacted the ability to provide robust and rigorous HBL. As discussed later, certain sections of Kotter's 8-Step Process for Leading Change aid a move to HBL and can minimise or counteract some of the challenges experienced by educators. However, even with the aforementioned difficulties, the major shift to HBL also presented numerous opportunities.

The participants recognized many opportunities that arose from the move to HBL. The most significant was the possibility to review, reflect, streamline and update existing programs. The educators also mentioned the chance for professional growth, especially in the area of technology enhanced learning. Examples of newly acquired skills included instructional videos, cloud-based collaboration and gamified lessons all of which complimented learning programs and educators' professional expertise. All of the aforementioned opportunities also lend themselves well to OCL and Connectivism (Harasim, 2012; Bates, 2014) in that both a review of F2F content and adaptation to more collaboration (OCL) or more connected learning (connectivism) is needed. It is also important to note that the role of the instructor changes in both models, which interviewees also specified to be a further connection to their professional growth. Increased flexibility for

both teachers and students was stated as another opportunity in both the preliminary surveys and interviews as it gave more space for individual learning. In a similar way, feedback was seen as being more personalized, timely and a good way to connect to the students and their learning, again noted in the preliminary survey. Additionally, this coincides with previous research in that personalization or flexibility in pacing can be improved in online learning as compared to F2F (Sural and Bozkaya, 2016; Konnova *et al.*, 2019). Van Popta *et al.* (2017) and Danmeri (2018) also note the ability of delivering quick feedback between instructors and students that is on offer in online courses. In conclusion, educators experienced important growth in their professional career due to the necessity of exploring new tools and strategies. The possibility of a less structured timetable and feedback cycle was noted and seen as positive improvement. The mentioned opportunities were perceived by many as changes that they wanted to maintain, even in the return to F2F.

5.2.2 Research question 2: How has HBL changed communication and collaboration in teaching and learning?

Communication and collaboration are key aspects to both Online Collaborative Learning (OCL) and Connectivism (Harasim, 2012; Bates, 2019). Furthermore, communication and collaboration tools, strategies and processes vary significantly from a F2F to HBL and must be considered extensively when making such a change of environments (Misanchuk and Anderson, 2001; Kilgore, 2016). In the second part of the interview participants were asked to explain the differences, in their experience, of communication and collaboration during HBL.

Changes in modes of communication during HBL arose more than any other code in our interviews. It was noted that the natural comforts associated with body language and physical proximity were not present in HBL and therefore other ways of making personal connections needed to occur. As explained by Kilgore (2016), online learning environments present limitations on modes of communication and therefore teachers need to adapt their practices and expectations accordingly. As well, there was a greater variety of tools resulting in different types of communication and also greater amounts of communication that was student driven as compared to F2F. Furthermore, it took a conscious effort

to decide the purpose of any communication with the learners as sometimes an email would be best suited, while at other times a video recording or even a simple conversation. Additionally, participants acknowledged a deficit in a unified, consistent, central system for communication, particularly at the start of HBL. Access and motivation, according to Salmon (n.d.), is the first stage in the development of any successful online course and this was lacking from the experience of our interviewees, therefore an area of improvement. Finally, the social aspect of communication was noted in the interviews. According to Hrastinski, social support provides a space where communication is stimulated (2008) and this socialisation and relationship building was stated as missing or lacking in some HBL classes. In contrast, other participants noticed that they themselves were doing less talking and the students began leading the lesson either verbally, or through the chat function. The ability for non-verbal communication also allowed a great variety of students to participate, who would normally be quiet during a F2F classroom discussion. Interestingly, this shift in from teacher driven to student driven is one of the main key features of OCL (Harasim, 2012). In summary, participants found that even though there was more communication in certain areas, there was sometimes a lack of connections and socialisation that would normally take place in F2F, as were noted early on in the process of HBL in the preliminary teacher survey (Appendices 5 and 6). Only over time HBL lessons became more student directed and new ways of collaborating began to form, which was stated in the interviews. In any future move to HBL, these changes from teacher to student driven learning should be considered as an important area to focus on.

Both communication and socialisation are desirable to support knowledge building in any setting, be it F2F or online (Hrastinski, 2008). Even though our participants noted some challenges with communication, when asked specifically about changes in collaboration, their responses were more positive than negative. Firstly, it was acknowledged that HBL presented new modes and more opportunities for collaboration. This was most discussed in the use of cloud-based collaborative documents and software. The need to be in the same room to collaborate disappeared as teachers set up collaborative opportunities for students online. These shared documents also created a sense of community, learners were less intimidated to give each other true, constructive feedback

therefore learning from each other and creating a connected network. It was mentioned that these new collaborative tools would continue to be part of their practice even upon the return to F2F and also is embedded in the newly designed programs mentioned in the opportunity section above. Additionally, the ability for students to work synchronously and asynchronously in such a manner to solve problems through discourse leads itself well to both OCL, during live online lessons, and the connectivist approach, with asynchronous collaborative tasks (Harasim, 2012). As with communication, collaboration relies on relationships, and the importance of these relationships was highlighted. Studies investigating the social ability of students in online learning environments, such as by Yang *et al.* (2006), show that social interaction is of utmost importance in student learning. If students are not given enough opportunity for collaboration and interaction, they perceive their learning as less compared to F2F learning, regardless of academic achievement results being similar. This data further supports the importance of qualitative data on perceived experiences.

Based on the interviews, we found that some teachers moved between OCL, where the instructor is in the middle and builds around, and connectivism, where the student is in the centre and is expected to make connections based on guidance from the teacher. This was not necessarily done on purpose but developed as the HBL program continued and the educators tried what worked and what did not. There was a lot of direct feedback from the students themselves and most teachers took on this advice freely due to the increased flexibility that was offered. This natural process of feedback, change, and making connections through networking, which are all student centred, is also constructivist (Harasim, 2012). Our data shows this with new modes of collaboration and communication, where the teacher did not set themselves in a lecturer role, but that of a facilitator.

5.2.3 Research question 3: Which sections of Kotter's 8-Step Process for Leading Change are most suitable for moves to HBL?

In a situation where there is high uncertainty and instability, feelings of fear, anxiety and loss of control can be detected in an organisation. The leaders, or agents responsible for implementing the necessary changes, need to embrace the new environment and let go of previous routines and policies to look for a way forward (Cameron and Green, 2012). As previously discussed, educators have

explicitly experienced this with the global situation during the COVID-19 pandemic. This swift change to HBL resulted in numerous challenges and opportunities in many areas, as discussed above. However, this study focused on the communication and collaboration in teaching and learning part of this phenomena. To better facilitate a change in learning, such as the one experienced in HBL to F2F, a change management strategy can be beneficial (Connolly, n.d.). This section of the interview gathered information on the steps of change that were experienced. The data collected shows that educators and leaders utilize certain parts of Kotter's model, albeit unintentionally, and identify others as important to future change processes. Kotter's 8-Step Process was chosen due to widespread popularity, ease of language and also its 2020 update for accelerated change. The participants were given a list of the 8 steps and asked if they identified any of the steps as being used, in their experience, in the move to HBL. Although the focus of the interview was teaching and learning, certain comments of participants also included actions from leadership. As mentioned in the background theory and literature, change management is not isolated from change leadership and vice versa. Therefore, these comments in regard to leadership have been noted, analysed and discussed and they provide valuable data for recommendations and future studies.

To begin, all participants agreed that a sense of urgency did not need to be created, but came from the outside, from the rise of a pandemic. Throughout the conversations, everyone understood the urgency which created buy-in for the change to be necessary. In relation to this first step, Kotter states:

> This Big Opportunity – a compelling vision of why you need to transform and what is possible if you do – will galvanize others around the need for change using an inspiring, bold statement that articulates why it's critical to act (Kotter and LoVerme Akthar, 2019).

While participants did not mention the creation of urgency as intentional, they were recommending more prioritization within this urgency to not cause burn-out in staff at the very beginning. Baxter (2002) also supports the necessity for creating a sense of urgency to initiate change in his study, however he does not mention if this urgency needs to be intentional. This step was not a planned process in our study, but the reason for the change itself was forced upon everyone.

The second step identified as being used most was generating short term wins. Interviewees were clear that it happened through a variety of ways, such as positive reinforcements by teachers, awards and positive communications to parents. Many comments from educators acknowledged these short-term wins aided with motivation, which connects to this step also being viewed as important by our participants. Motivation in the workplace is crucial for organisational success, and small wins are good for internal motivation (Amabile and Kramer, 2011). To further support our findings on the importance of small wins, a study by Sterzinger makes the connection between small wins, the role of the teacher on increased student motivation and participation and their positive effects on education (2019).

Enabling action by removing barriers was also noted as having occurred by some of the participants in our study, and it was also stated to be of importance in a change process. This step can be interpreted as the constant change that many of the interviewees discussed in the conversations and were seen as 'removing barriers' by adapting plans. Barnwell also acknowledges the importance in this step in his qualitative interview study. He discusses strategies to aid leaders in the removal of barriers to improve work environments for their employees (2015).

The next two steps in Kotter's process are 'building a guiding coalition' and 'instituting the change'. Building a guiding coalition has also been deemed as very important by the participants in reference to changes in education, while instituting the change was not acknowledged as frequently. Chappell et al. (2016) support the idea of a strategic vision and guiding coalition viewed as most important in implementing healthy workplace initiatives in the healthcare industry. What we can deduct from this is that a guiding coalition forms an integral part of the change process, since it means accountability and trustworthiness. This is also mentioned in Kouzes and Posner's' 'The Leadership Challenge' (2017), where they speak of 'enabling others to act'. As stated by several interviewees in the above challenges section, it was not always clear who made decisions and where to go in case of questions. Stouten, Rousseau and Cremer (2018) support this idea in their comparison of different change management models and their main steps. They refer to 'building a guiding coalition' as based on 'coalition

member trustworthiness and credibility, their position power in organization, relevant expertise and leadership skills' (p. 16). Therefore, choosing members of a guiding coalition should be done methodically to ensure the correct individuals are leading the change.

From the data on which of Kotter's 8-Steps the interviewees found most important, it becomes clear that the switch to HBL needs to have a strategic vision, a guiding coalition and short-term wins, which are all supported by research as mentioned above (Amabile and Kramer, 2011; Chappell *et al.*, 2016; Stouten, Rousseau and Cremer, 2018). A common thread throughout many interviews was the mentioning of inconsistencies, be it in approaches, processes or communications. If a clear strategic vision is formulated at the beginning of the change process, these inconsistencies could be clarified at once and frustration is kept to a minimum. This goes hand-in-hand with a guiding coalition, as challenges mentioned earlier in the interview included not being involved in decision-making or to know who made decisions to seek clarification and make queries. It was also mentioned that being involved in the change process through volunteering created greater ownership. The third important step mentioned by interviewees was that short-term wins needed to be celebrated. Many interviewees mentioned the uncertainty of the length of HBL and the problem to keep the motivation high. They thought that celebrating small wins would keep this motivation up, even more so when HBL continues for longer than expected. As briefly mentioned above, this leads back to the behaviourist learning theory, where positive reinforcement is a fundamental idea. Educators that have come from F2F learning environments, usually do not see motivation as such a big factor due to the human interaction in the classroom and the celebration of small wins on a daily basis. In online learning, educators needed to find new ways to engage students and claimed this as being a big challenge.

5.2.4 Summary

To achieve the same learning outcomes in HBL as those offered in F2F, educators must revise their use and modes of communication and collaboration. According to the research presented, the learning theories of OCL and

connectivism support this by fostering deep, rigorous, transformative learning (Harasim, 2012; Bates, 2014; Bates, 2019). This change in pedagogy requires time, professional development and most importantly a shift in teaching and learning. This move to HBL presented challenges, along with opportunities as discussed with the participants. A change management strategy, such as Kotter's 8-Steps, can aid in facilitating the required changes in moves from F2F to HBL. Overall, of Kotter's 8-Steps for Leading Change, the steps of 'create and sense of urgency', generate short term wins' and 'enable action by removing barriers' were identified to have been utilised most frequently in the participants experience of the move to HBL. The most important of the 8-Steps for a similar change process were stated as, 'build a guiding coalition', 'form a strategic vision' and 'generate short term wins'.

Our data shows that interviewees found that building a guiding coalition together with a strategic vision would have benefitted the change process to HBL greatly. It is mentioned often that these two steps would have given the move to online learning a clearer goal (vision) and people to refer to (coalition) in case of inconsistencies or doubts. Although implemented, generating short term wins was one of the steps that interviewees agreed to be able to improve. The general benefit in this step was to keep the motivation of students in their learning journey going, despite the lack of clarity in the length of HBL.

Summarizing the data collection, challenges encountered included: sustainability and inconsistency of approaches, guidance and instructions by administration, preparedness of staff and availability of resources can be supported by applying the aforementioned stages deemed as important (or used) by interviewees. A guiding coalition can help with inconsistencies and guidance. Additionally, a strategic vision can help prepare staff, students and resources needed in the change early in the process and finally short-term wins keep the motivation going and ease the feelings of anxiety or chaos that many interviewees have mentioned.

5.3 Implications

For the research questions and through the background literature, there are two areas that have been investigated:

- Change in pedagogy is needed for collaboration and communication in HBL
- A change process, similar to Kotter's 8-Steps for Leading Change, can aid institutions such as schools, to achieve the required changes for HBL

As shown in Chapter 2, the literature review, and sources throughout the thesis, the uniqueness and unfamiliarity of COVID-19 forcing worldwide HBL has not allowed for in depth research at this current time. Various researchers have looked into providing online education in rather synchronous, holistic model of and have not particularly focused on communication and collaboration specifically. (Park and Bonk, 2007; Hastie *et al.*, 2010; Harasim, 2012; Romero-Hall and Rocha Vicentini, 2017; Dziuban *et al.*, 2018). Other researchers have studied socialisation during online learning which has been noted as a challenge by some of the interviewees in this study (Salmon, n.d.; Yang *et al.,* 2006; Reese, 2015). Previous research on socialisation indicates the need to help students socialize with carefully planned activities around collaboration. This was criticized by interviewees and seen as a difficulty due to the limited professional development offered and the timeline with which the change was implemented. Looking at Kotter's steps that were deemed important by interviewees, it is noted that forming a strategic vision, where clear goals are set, is needed for any change. For this particular study the vision and goals could directly and explicitly include strategies for successful online communication and collaboration based on OCL and connectivist learning theories.

The lack of studies for change management in reference to changing pedagogy, specifically HBL learning, further supports the need for more research and investigation in this area. This study aims to make connections using Kotter's 8-Step model for secondary education, be it in F2F or HBL. This also has not been researched thoroughly to date, although Kotter has stated that more and more requests have reached his firm on these grounds (Kotter and LoVerme Akthar, 2019).

Our findings from both the interviews and the background literature support the benefits in using learning theories, such as OCL and connectivism, and change

management models in education. Although not all steps from Kotter were deemed important by the interviewees, it became clear that educators found it interesting to be following clear stages of a model to provide more consistency, a clearer vision and direction throughout the change. From this, it is recommended that educators be made aware of new learning theories and change management models to help implement the necessary changes to practice in experiences like HBL.

5.4 Limitations

This study presents certain limitations, especially in the data collection process. Due to our interest in the vast topic of HBL and the timeline, certain data collection were done to aid with a clearer direction of the thesis topic at an early stage. Student and teacher data were collected either during the initial stages of HBL or shortly after the return to F2F. This data was intended to be used in the thesis itself, but most eventually only served the purpose of giving the thesis a clearer direction into the current change of pedagogical focus in communication and collaboration in HBL.

Another limitation is the lack of perspectives of stakeholders other than educators, such as students and parents, in this thesis. The only experiences studied in this thesis were from a sample of secondary administrators and teachers with various backgrounds. Additionally, the number of interviewees of 16 leaves out possible views of educators that did not volunteer for the study and could present a different picture of the situation. The preliminary surveys did include students and other educators; however as previously mentioned the majority of this data was not analysed fully due to the limited frame of this thesis. Nevertheless, this survey data could be used in further research.

Finally, this study focuses solely on online learning. While many schools eventually utilised combinations of F2F and online learning, called hybrid or blended learning. The challenges to implement blended and hybrid learning are different from a complete online HBL learning environment. Park and Bonk (2007) and Parker White *et al.* (2010) provide studies of the implementation of synchronous hybrid environment and analyse its benefits and challenges. The

challenges resulting from such a hybrid environment have not specifically been investigated in this thesis and could be looked at as further research.

5.5 Recommendations

To achieve the same learning outcomes in HBL as those offered in F2F, educators must revise their use and modes of communication and collaboration. According to the research presented, the learning theories of OCL and connectivism support this by fostering deep, rigorous, transformative learning (Harasim, 2012; Bates, 2014; Bates, 2019). Traditionally, F2F teaching and learning has been based more on behaviourist, cognitivist and constructivist learning theories. However, with the move to a complete online learning environment, that is using Online Collaborative learning (OCL) or connectivist learning ideas, there needs to be a shift in pedagogy that requires a goal, time and professional development. A change management strategy, such as Kotter's 8-Steps, or parts of it, can aid in facilitating these required changes, in communication and collaboration, in moves from F2F to HBL.

Based on the data collected and the background literature, Kotter's 8-Step Process for Leading Change is an achievable, clear and well-regarded model for education, in particular international secondary schools. This is even more so valid with Kotter's updated model for accelerated change due to COVID-19 (2020) which can bear results in a fast change of pedagogy. Furthermore, certain steps of the process are perceived as more crucial than others for a successful change. Below are the steps that are recommended for future changes like the move to HBL:

- Create a sense of urgency: Without the close of schools, HBL would not have taken place, so there is a clear need of an urgent situation, in this case a pandemic, to force educators to start a change process.
- Building a guiding coalition: Data shows that a guiding coalition was necessary to know who to address and divide tasks in the change process. This is especially important when thinking about collaborative environments for staff and for students.

- Form a strategic vision: Interviewees deemed this one as the most important step to know the direction and goals of the change. For staff and students, this was important in terms of sustainability of approaches.

- Enable action by removing barriers: Interviewees also mentioned that people could only act when certain barriers were removed, such as simplifying tools and platforms for communication and collaboration.

- Generate short term wins: Data shows that educators used short term wins to keep learner's motivation going, but also stated that it needed to happen from the beginning. Short term wins could be shown through awards or through communication with various stakeholders, such as parents and the wider community.

5.5.1 Adaptations to Kotter's 8-Step Process for Leading Change in education

One of the interview questions explicitly asked participants their opinion on editing or adding new steps in the model. Several interviewees mentioned the need for a stage of reflection. Cameron and Greene (2012) have criticised the lack of this step in Kotter's 8-Step Process for Leading Change. Interviewed educators also mentioned the need for constant review and reflection, not just at the end of the process. This allows for the change process to be adapted to the situation as it develops, which was particularly true with the constant changes occurring to laws, rules and regulations during the COVID-19 pandemic.
Additionally, the linearity of the model did not allow for reflection or adaptation. However, this was reviewed in his 2020 publication for accelerated and emergency change. He has noted that the steps can be done in different order and with multiple steps occurring at once. Unfortunately, a reflection step is not included in the updated version of the model.

Finally, due to leadership's high involvement in the beginning steps of Kotter's model, a decrease in efficiency by team members may happen and a follow up on change may not occur. Furthermore, here is always the inevitable reaction of humans to change, regardless of a robust and comprehensive model being in place (Balestracci, 2003; Sidorko, 2008; Cameron and Green, 2012). Therefore, even though there are significant advantages to using a change management

model, such as Kotter's 8-Step Process for Leading Change, no model will make the transition faultless.

5.5.2 Suggestions for further research

This thesis has mainly focused on the two areas of communication and collaboration in the move to HBL, and the use of a change management model to facilitate the necessary changes in pedagogy.

Further research in this field could focus on:

- Different areas of pedagogy such as assessments or well-being, including screen time.
- The role of leadership to implement required changes in an emergency situation such as a pandemic.
- Implementation of hybrid and blended learning models instead of online learning.
- Perspectives of other stakeholders than educators.

5.6 Conclusion

The sudden move from a traditional F2F classroom to a complete online, HBL environment had educators around the world scramble to achieve learning that was robust, interesting and rigorous. There are numerous aspects in moving from F2F to HBL; however, this study aimed to investigate the changes in communication and collaboration for HBL. If the aim is to achieve deep, transformative learning and critical, analytical thinking in an online environment, learning theories such as Online Collaborative Learning (OCL) and Connectivism need to be understood and followed. To facilitate OCL and Connectivism during HBL the core practices of communication and collaboration need to be considered and analysed, since online environments present limitations and differences in communication and collaboration in comparison to F2F. This study also investigated the role of a model, 'Kotter's 8-step Process for Leading Change', to assist educational institutions in the needed shifts to teaching and learning for HBL.

Overall, of Kotter's 8-Steps, 'create a sense of urgency', 'generate short term wins' and 'enable action by removing barriers' were identified to have been utilised most frequently in the experience of the move to HBL. As for the most important of the 8-Steps for a similar change process 'build a guiding coalition', 'form a strategic vision', 'generate short term wins' were recognised in the data. Changes to communication and collaboration for HBL can be supported by the learning theories of OCL and connectivism. This said, the data shows clearly that for a transition to HBL and its required changes in pedagogy, specific sections of Kotter's 8-Steps Process for Leading Change should be applied in order to help educators, students and other stakeholders in the move.

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7 APPENDICES

Appendix 1. Participant invitation email

To _____:

I am inviting you to participate in an interview that follows up from a survey you completed in June. My thesis study focuses on 'change management strategies for temporary home-based learning in international secondary schools during COVID-19'. This interview is being conducted as part of my MBA in Educational Leadership at Tampere University of Applied Sciences in Finland and will serve to fulfill my thesis data collection requirement.

As a participant in this study, you will be asked about change management practices and your experiences of COVID-19 related temporary home-based learning. The interview is seven open-ended style questions, structured in 3 themed blocks and will take approximately 35-45 minutes to complete.

The interviews will take place either in person or using web-conferencing software such as Google Meet or Zoom. In case the interview takes longer than the proposed length, two interview sessions can be scheduled.

In addition, the researchers will also look at artifacts such as relevant documents and surveys to present a rich source of information for the study. Please note that participation in this study is completely voluntary, that all participants and their data will remain anonymous and protected, as will the responses to your interview questions. There are no perceived risks involved with this study. There is no monetary compensation for participating in this study.

If you have any questions, please contact me. If you are interested in participating in this study, please respond by Friday September 11. The interested individuals who respond will be asked to sign a Participant Consent Form. Thank you for your consideration.

Appendix 2. Interview questions

Thank you for volunteering for this interview. The data collected will be used in a Master thesis about change management practices and your experiences of COVID-19 related temporary home-based learning in 2 international secondary schools in Asia.

The interview is structured in 3 themed blocks and consists of seven open-ended style questions.

Theme 1: Moving to HBL

Related to research Questions: 1 and 2

1. I'm interested in finding out about your experiences of the move to temporary home-based learning in February. Could you describe your journey, such as your feelings and processes, in a few sentences?

(prompts will be used if clarification is needed such as: what were your thoughts, what events occurred, what opportunities and challenges did you experience?)

2. a) How have communication and collaboration in your teaching and learning developed over the course of the temporary home-based learning?

(prompt: with students, colleagues, admin, parents)

b) Did you find any tools or strategies particularly useful?

(prompt: with communication and collaboration)

Theme 2: Change management implementation

Related to research questions: 3 and 4

3. Please look at the following stages in a change process.
   a) Based on your experience of temporary home-based learning during COVID-19 were any of these stages put into action either by yourself or by others? If yes, how so?
   b) Based on your experience, which of these stages are most important? Which are least important?

   (prompt: ask why or to explain if needed)

   · Create a sense of urgency (prioritizing, what must be completed immediately?)
   · Build a guiding coalition (team of 'champions', an accountable and diverse group of people)
   · Form a strategic vision (focus on initiatives and actions, 'SMART goals', head + heart)
   · Enlist a volunteer army (have to vs. want to)

- · Enable action by removing barriers (streamline processes and re-evaluate norms) prompt: failure of past initiatives, complacency, legacy, transparency
- · Generate short-term wins (track progress and energize)
- · Sustain acceleration (use wins as momentum to continue)
- · Institute Change (make it sustainable for the future)

4. How would you add to or edit these stages based on your experience?

Theme 3: Preparedness for future temporary home-based learning

Related to research questions: 4

5. Thinking back on your experiences, what advice would you give other educators about temporary home-based learning?

6. Do you have anything else that you would like to add?

7. Is there anything you would like to ask me?

Appendix 3. Participant consent form

To _____:

You are invited to participate in an interview for my thesis study which focuses on 'change management strategies for temporary home-based learning in international secondary schools during COVID-19'. This interview is being conducted as part of my MBA in Educational Leadership at Tampere University of Applied Sciences in Finland and will serve to fulfill my thesis data collection requirement.

Title of the study: Kotter's 8 Stages in Temporary Home-Based Learning During COVID-19

Principal investigators names: …..........................

Background information: As a participant in this qualitative study, you will be asked about change management practices and your experiences of COVID-19 related temporary home-based learning. If you have any questions or concerns, please contact either …............. or …...................

Research procedures: The interview is seven open-ended style questions, structured in 3 themed blocks and will take approximately 35-45 minutes to complete. The interviews will take place either in person or using web-conferencing software such as Google Meet. In case the interview takes longer than the proposed length, two interview sessions can be scheduled. Each interview will be recorded to allow the researchers to analyse the data.

Risks and benefits of participating in the study:
There are no known risks by participating in this study.

Compensation:
There are no monetary benefits for participating in this study.

Confidentiality:
All participant data will be kept completely confidential and all participants will be listed in the study using pseudonyms. This confidentiality ensures that all participants' information is protected and that each participant will be given the freedom to share data concerning the lived experiences of the topic being studied.

Voluntary nature of the study:
Participation in this study is voluntary. You should be aware that you are free to decide not to participate or withdraw at any given time without consequences.

How to withdraw from the study:
Please email me your wish to withdraw at …...... or …..
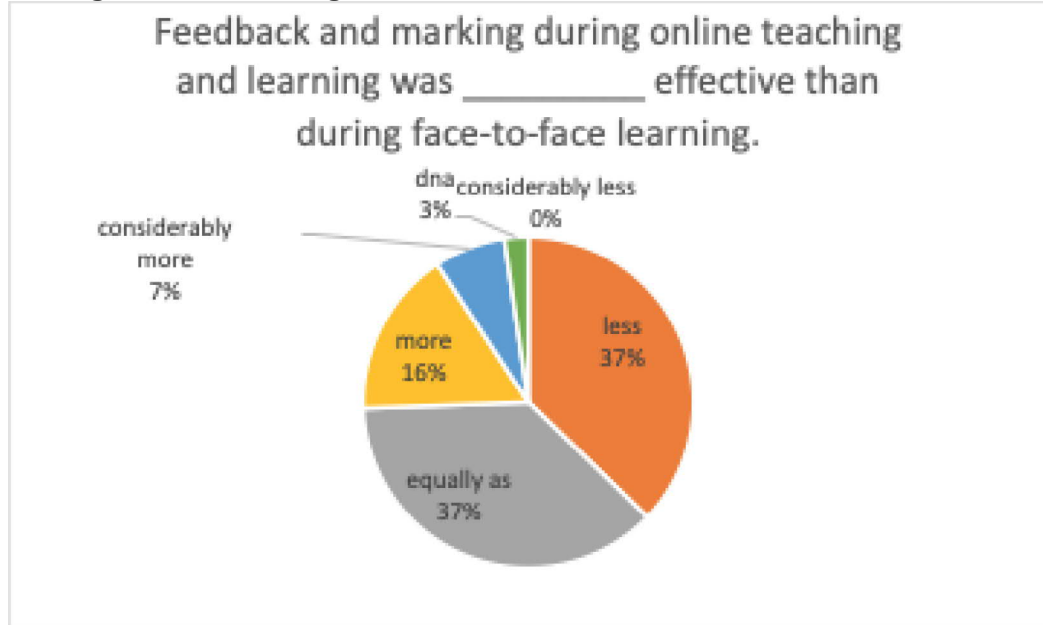
Statement of consent:
I have read and understand the procedures of this study. I hereby give my consent to participate in this interview.

☐ The interviewer has the right to audio-record and/or video-record me as part of my participation in this study.

Participant's name: **Date:**

Appendix 4. Preliminary teacher survey result - feedback and marking during online learning

Feedback and marking during online teaching and learning was _____ effective than during face-to-face learning.

- considerably more 7%
- dna 3%
- considerably less 0%
- less 37%
- equally as 37%
- more 16%

Appendix 5. Preliminary teacher survey result - collaboration and communication between teachers and students during online learning

Collaboration and communication between TEACHERS AND STUDENTS during online teaching and learning was _____ effective than during face-to-face learning

- more 7%
- considerably more 5%
- considerably less 11%
- equally as 34%
- less 43%
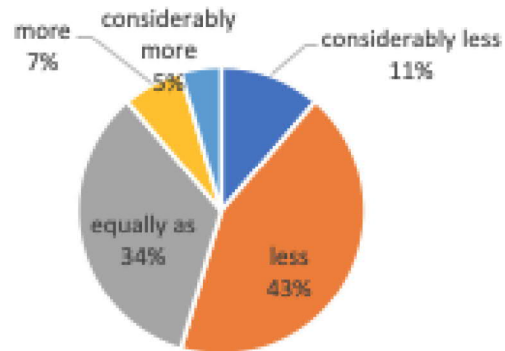
Appendix 6. Preliminary teacher survey result - collaboration between students during online learning

Collaboration BETWEEN STUDENTS during online teaching and learning was _____ effective than during face-to-face learning

- considerably more 0%
- considerably less 36%
- less 45%
- equally as 14%
- more 5%