



The effect of the Global Corona Pandemic on Effective Academic implementation and Students

- Agile Trends

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MASTER'S THESIS
December 2020
International Business Management

ABSTRACT

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The Effect of the Global Corona Pandemic on Effective Academic

Implementation and Students: Agile Trends

Master's Thesis, 40 pages plus 6 appendixes

As the impacting evidences of the COVID-19 pandemic has been felt in almost all aspect of human life, the impacts in various sectors and aspect of human activity must be accessed. On one side various organisations are taking on the initiatives to take on various quantitative and qualitative impacting evidences. On the other hand, there comes the need to also access our responses both intuitive and strategized ones which formed the basic modes for facing the most threatening and globally impacting pandemic ever in mankind's history.

This work, a study into the *perceived impacting force of the COVID-19 pandemic into effective academic implementation* on the lines of *agile thinking management concept*; students experience and thought, and the adopted coping modes and responses which gives us insightful overview on emergencies and unplanned events as presented by the pandemic. This intend should grant academic authorities the forecasted insight and possibly the sense of assessment of current and previous actions; the importance of these as well as documenting the best and verified strategies of academic implementation under the assessed conditions of the currently threatening pandemic and to look into the uncertain future with best practices without a visitation to the adopted uncertain academic trends of this day.

This study though generic in nature with recounting contributions of various reports and studies of students across the world; additionally however, it has been consented by the head of English taught programmes at Tampere Universities and this has also ensured this study was done mainly with the practical inputs from various students of the university. Therefore has a specific redress to Tampere University and perhaps by extension the Finish education system.

ACKNOWLEDGEMENT

I will like to use this opportunity ultimately to thank Jehovah God for his blessings in supporting me come this far. To all my family members who have supported me on this wonderful journey especially my mom Dorothy and Uncle Gideon who have showed great concern and support right from the beginning of my admission at TAMK, often enquiring of my progress and well-being as a foreigner here in Finland. Also I am thankful for encouragement from my sisters and brother who have been supportive throughout this journey.

I will also like to thank the school especially my previous department head Hanna Pihlajarinne and now manager at TAMK, from whom I had received the approval of this Thesis and had believed and encouraged it is an interesting and useful topic to consider. I consider this work as a present to your new academic management position also. I pray for a resounding success in your managerial role at the school and beyond.

Big acknowledgement and thank you to the hard working course coordinator Sven Rassi, also Janne Hopeela and all my tutors. Petteri Vilen my Thesis supervisor for his flawless detailed commentary and guiding instructions on the topic.

Finally a special thanks to my fiancée Maarit, a wonderful woman whom I met on this journey. I deeply appreciate your understanding and encouragement on various times I had to be busy with studies, also your support and making it easier for me to see Finland more like a home to be than just a foreign place of study.

May God richly bless you all who have been part of this journey to this end.

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ABBREVIATIONS

OECD	Organisation for Economic and Corporate Development
VUCA	Volatility, Uncertainty, Complexity and Ambiguity
TAMK	Tampere University of Applied Science

INTRODUCTION

1.1 Background on the topic

Experts say it a family of viruses that causes diseases in animals, a virial family designate of a corona decent. The term was probably mostly familiar to health experts only until December 2019, marking the arrival and dawn of the new virus of the corona family group. This one like its predecessors made a lip jump from animals to humans in a geographical source of a formerly less popular Wuhan province, China; in a wet market where birds, fish and other dead and live animals were a major merchandise but with close to no health controls (Sarah Newey et al, 2020)

And the non-containing challenge or behaviour of this new discovery to man at this point in time is perhaps not just because a new vaccine or effectively proven treatments were not yet available for corona symptomized patience, *but the surprisingly rapid and viral surface contact medium of transmission which forcefully permeates nations or human lives, knowing no regard for certain economic sovereignty, best health equipment, genius political strategies or best educational systems in the world.* Needless to say, the vulnerability of the world in it entirety has been spelt out, at the mercy of this pandemic and more so for certain nationals than others.

I reckon this perhaps is the single most threatening and impacting force on humanity-as-a-whole-in-one-time towards re-adjustment in life style and social flow, ranging from cities and businesses shut down, to the largest humanity quarantine art ever in mankind's history.

With terms like 'social distancing' surfacing with a more political and legal backing, a son wilfully and rightly stays away from grandma without physical contact; spouses cautioning the movements of their partners; employees choicelessly working from home and via some contactless means engages the client; The least said about blatant restrictions on transnational movement the better since city-to-city movements have been on lockdown amidst strict surveillance. Again, one can simply put it as the single moment in human history when contactless mediums was approved largely and unanimously by the nations, right here in our twenty-first century. One can bet the twenty-

second century and beyond will need this word descriptions above better than we do, and so far it is the only advantageous thing about the corona pandemic in our era: that is we will better tell the story as eye witnesses some day and not hearers.

The global effect of this virus and the counter measures, inevitably have also had impacting consequences on global academic implementation both on the lines of academic management and implementation with regard to social distancing as a compulsory act. Most academic bodies of the tertiary status across the globe did not go the way of a complete academic discontinuity amidst the effects but a remote study option. For example at Tampere University of Applied Science (TAMK) Leena Stenman on 3rd March in a news blog announces the premeasures of the management committee of the university to enrol mainly to online learning option (Leena Stenman, 2020). This was a quick agile move in response to the situation and in response to academic restructuring in Finland.

Elsewhere in US, Canada, Hong Kong, South Africa, China etc. the announcement of academic gearing towards remote studies and development has been an imminent reality and the obvious way forward, with most Asian Universities as pioneers in this move. (The World University Ranking, 2020) With students mainly at the far and receiving end of academic implementation and restructuring effects. (Arturo S., 2020)

A comment by the UN Secretary-General in a CNN report critically points to agility as an inevitable action in today's academic implementation. In his comments Antonio Gueterre points out *"We are facing a generational catastrophe in education... and for this reason we have a generational opportunity to reimagine education... We can take a leap towards forward looking systems that delivers quality education for all."* (CNN, 2020) (Radina G. et al, 2020)

With much concern expressed with regard to the sudden academic plunge towards remote learning throughout the world, and the possible destabilization of future academic structures and implementation in the face of the threatening pandemic, this research work sorts to steer into academic development or improvement as aiding contributions and solutions to the overriding effects of

the Corona pandemic on our current academic systems and beyond.

Specifically it intends to 'reimagine education' in agile retrospect and responses to the evolving educational trends of remote learning, as presented by the Covid-19 pandemic. And if not at all, to suggest ways to reduce those straining effects on teachers, students and administrators now and in the future.

1.2 Purpose and Scope of Thesis

A briefing on the entire phase of students and teachers survival might sound not only interesting but also bring an interesting perspective to various survival and agile methods of re-adjustment in similar pandemic or emergency situations.

This topic will also serve the purpose of collecting data on interesting and brilliant ideas from students and teachers perhaps on their brilliant ideas on survival methods in effective academic implementations now and in future tragic situations with further probing into their survival skills or challenges.

Simultaneously a search in immerging and progressive technological advancement in respect of various virtual communication tools such as zoom, Microsoft, Skype etc. will be conducted. These tools which over the pandemic have served the purpose of primary communication mediums and have all edged on competitive rapid advancements and updates relating to pandemic or crisis situations. Hence a probing into the usefulness and benefits of those immerging technologies and advancements in narrow relation to effective academic implementation will be focused herein.

1.3 Structure of Thesis

Research will mainly consider the main embodiment of the TAMK research requirements in the following respective

- Framework and use of references
- Methods, Thesis Process, ethicalness and reliability
- Result conclusions and discussions

Academic discussions will mainly be in respect of management emergency response measures and other agile management styles. Also remote education technics will be discussed in relation to the corona pandemic and social distancing.

Discussions of the effect of the pandemic from students and teachers perspectives, personal effects and alterations to normal academic implementation. Some of the major utilized and preferred tools during time of social distancing. Further developments.

Quantitative methods will be aimed at gathering the information above as discussed and further discussions into better ways to manage such emergency situations or further developing tools and the psychological preparedness for remote learning, all from the students, teachers and also academic authority's perspective.

The use of carefully considered questionnaires aimed at retrieving information from students here in the three combined tertiary institutions (TAMK, TUT and UTA) of Tampere University on both (1) specific speculated effects of the pandemic on students and teachers (evidencing or disproving these speculations through this questionnaires contributions) and (2) on the other hand general effects contributions.

Related research work lately worldwide in response to the effect of the pandemic on academic implementation will be acknowledged and factored herein on conclusions and in comparison with the general world action through those related research conducted world-wide.

Analytical conclusions in respect of brilliant contributing ideas on improving 'pandemic academic systems' as a follow up response on students current expressed concerns, and better still suggestions for managing similar eventualities.

1.4 Strategy at TAMK and about TAMK

TAMK is mainly a professional higher education institute with a cultural orientation towards research, development and innovation. There is a higher factoring in of its curriculum focus on technology, wellbeing services, business management and culture. TAMK is part of the academic community of Tampere Universities. A community of some 30,000 degree students (TAMK, 2020) and just like most world standard universities running contact and online courses.

2. REASERCH PROBLEMS AND METHODOLOGY

2.1 Research Objectives and Questions

The following are being considered in respect of effective academic implementation in social distancing situation

Direct effects: What are some of the identified impacting shocks with respect to academic planning, Implementation and forecast in relation to the corona pandemic and social distancing? This mainly looks to the assessment of the alterations to the academic implementation systems, during the Covid-19 hit. Also the impact of those new system alterations on students and teachers, as well as their efficiency in normalising the academic disruptions

Extent of student-teacher relations effect: To what extend did the global Corona Pandemic affect students and teachers relations? All things being equal, if it can be said teachers effective engagement of their students contribute immensely to productive teaching, then this consideration will also investigate into the impacting evidences of remote/eLearning on effective teacher engagement of their students, due to the Covid-19 influenced social distancing on academics.

Management styles and adaptations: To what extend did student and lecturers adopt to changing situations and constraints? Academic authorities just like most sector managers had to improvise to safeguard the sustainable flow of the academic calendar; Students somehow have coped with unfamiliar methods of learning, perhaps first time in their entire academic life. The extent and impact of these improvising and adaptations will be discussed herein.

Agile responses and highlight: What other agile management methods or technological upscale in communications besides the known will likely serve to good students and teachers relations in similar encounters? The theoretical concepts of the agile methodology will be discussed. Also the importance and necessary application of this agile thinking concept to the effective management of the academic disruptions caused by the pandemic will be looked at. Major highlights on technological upscale in agile retrospect to the redress of the covid-19 situation, and technology becoming main medium of communication will be looked at. Additionally how helpful or impacting these communication mediums has been, or can be, to remote learning.

Progress lessons and development: What have we learnt with the future of academic implementation during the Covid-19 pandemic? Effective analysis and conclusions in relation to the above factors should unearth the importance and

effective projective view of the future of academic implementation with regard to any impacting emergency situations such as that presented by the Covid-19 pandemic.

2.2 Research methodology

2.2.1 Mixed Research Methods

The mixed research method effectively combine certain traits of quantitative with the qualitative methods. This is mainly designed to utilize structured survey interviews with other methods such as observations also unstructured interviews and mainly dealing with certain targeted group in either sequential or simultaneous manner (Axinn et al. 1991)

Due to its multidimensional nature it been said the mixed method effectively offers the opportunity to tap and utilize multiple sources of information thereby gaining and emphasizing credence on conclusions from the stand point of multifaceted angles or sources (Axinn et al 1991) ; (Kertzer et al,1997).

Mixed methods research is a methodology for conducting research that involves collecting, analyzing and integrating quantitative (e.g., experiments, surveys) and qualitative (e.g., focus groups, interviews) research. This approach to research is used when this integration provides a better understanding of the research problem than either of each alone.

Quantitative data includes close-ended information such as that found to measure attitudes (e.g. rating scales), behaviors (e.g. observation checklists), and performance instruments. The analysis of this type of data consists of statistically analyzing scores collected on instruments (e.g. questionnaires) or checklists to answer research questions or to test hypotheses.

Qualitative data consists of open-ended information that the researcher usually gathers through interviews, focus groups and observations. The analysis of the qualitative data (words, text or behaviors) typically follows the path of aggregating it into categories of information and presenting the diversity of ideas gathered during data collection.

By mixing both quantitative and qualitative research and data, the researcher gains in breadth and depth of understanding and corroboration, while offsetting the weaknesses inherent to using each approach by itself. One of the most advantageous characteristics of conducting mixed methods research is the possibility of triangulation, i.e. the use of several means (methods, data sources and researchers) to examine the same phenomenon. Triangulation allows one to identify aspects of a phenomenon more accurately by approaching it from different vantage points using different methods and techniques. Successful triangulation requires careful analysis of the type of information provided by each method, including its strengths and weaknesses.

2.3 Data collection and analysis

The data analysis should be taken into consideration right at the very beginning of the research. The researcher need to consider the amount and the relevance of the type of data to the research conclusions. Also the various impacting variables which is likely to impact the result partially and biasedly. The key variables in this sense could be gender, age, social class, religion etc.

The qualitative data research may consist of various several approaches ranging from exploration, group interviews, customer feedback, case study and the likes. Davies asserts that a focused interview may always be a good and rich starting grounds for good contributions to assist inexperienced researchers. (Davies, M. 2007, 51, 82-88)

For better clarity and prevention in vague conclusions most questionnaires considered in this regard are focused and tailored to some specific assertions in line with the research questions. Others are personalised on specific levels of contributions. Students and teachers across the Tampere University were allowed to rate or give satisfaction levels on various aspect of the impacting effect of the pandemic.

Some of this students I happened to meet in person to have a discussion and interview sections on the various topic ad also gathered contributions through questionnaire simultaneously.

As shown in appendix there were 13 questions for students to both either rate or contribute by means of text, 6 additions of this related questions were also tailored for teacher's consideration and contribution.

2.4 Ethics and validity of the research

There is the need to acknowledge and observe concerns of various regulatory bodies or institutions upholding the safety of subjects involved in research and it is very important sometimes legally so to seek the consent of involving institutions or authorities before undertaking research in their interest. In some cases some of these consent may involve signing documents of confidentiality or accepted dos and don'ts related to the institution guided principles of publicity (Indian J, 2016). Legally or in principles the researcher may therefore be bound under the professional act or in this case the research regulatory codes of the academic institution.

There has been pandemics in our history books of humanity however the widespread severity of the corona makes it uniquely threatening and perhaps has triggered more concern than its predecessors. I reckon this associated unique concern has put us all under a common ethical pedestal: we all feel a unique urgency and responsibility to combat a common enemy, the corona virus; we have felt the great need to socially distance or wash hand or sanitize. This combined force in attitude has ensured at least through this research experience that people are willing to discuss the topic freely now. Students gave their contributions freely without any confidentiality restrictions or unanimity. I believe the schools authority approval of this topic in its name is also in the spirit of finding solutions together to our common challenge other than the scare of any smear in the name of pandemic mismanagement.

Students and teachers have spoken freely on their concerns through the questionnaire and in some instance interviews. Tampere university (the commissioning institute) however in principle retain the right to consider the concerns raised by both students and teachers via this research report and to act on them or not.

This report is on most part generic in retrospect to the pandemic on academic implementation. It seeks to be both currently and futuristically developmental in

this wise and therefore does not propose a future lifespan limitations to it proposal now, neither can it clearly see one. A much adopted focus however is that in the face of the currently threatening pandemic, it is adopting to a more urgent and proactive reporting tone via its recommendations as the needed actions to square off the herein related effects of the pandemic on academic implementation now or in the immediate future.

3. AGILE MANAGEMENT, STRATEGY AND PLANNING

3.1 Agile Management and Academic implementation

Until now the term or concept of agile management has mainly and strongly been associated with mainstream commercial managements or project and portfolio management. With little subtlety the term has been considered in academic development and recent researchers in this direction have sort to find it place in academic development (Andrew W. 2014)

In the typical commercial world, business managers have strategized towards agile modes in responses to a VUCA world environment (Volatility, Uncertainty, Complexities and Ambiguity). Individuals with flexible mind set are most likely to thrive over the ever changing situation, these individuals termed agile learners who will quickly learn from past experience and move forward with evolving ideas are better prepared to face tomorrows world. (Micheal W. 2017)

In his award winning bestselling book Marshall Goldsmith elaborate on the importance of the concept, redressing VUCA by simply coining the thought provoking phrase "What got you here will not get you there"

Successful CEO's or managers knows this and therefore adopt a more proactive and pragmatic flexibility, gearing towards uncertainties in the best confidence possible.

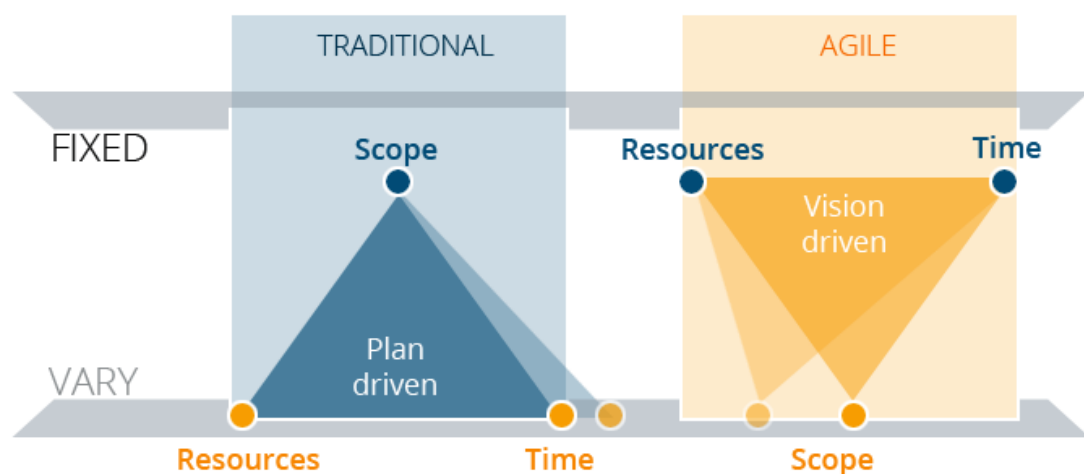


Fig 1

As seen in the figure above agile is more vision driven and hinges on a varying pendulum of scope, traditional methods may look to a fixed scope and plan. Agile therefore is responsive to situational calls or alteration to scope towards better embrace and fluidity to change. In this sense it can be said following a

plan is good but responding to changes through a flexible plan is even more important.

Illustration below gives an insight processes of the agile methodology



Fig 2: Agile Methodology

Paul Allsopp's reflects on correlation of the Covid-19 effects and agile management as a necessary response for now and future of management by expressing the following:

"With capacity issues in the office, added to the inevitable financial savings the post pandemic recession will require companies to make, and greater staff experience and demand in home working, it is clear the pendulum of agile working at the moment is moving more towards the virtual and remote rather than the physical and presence in the office." (Paul Allsopp, 2020)

The relation of this observations to academic implementation perhaps is that, the current changes in academic trends should inform academic managers to relook at academic systems and process redesigns. Mainly based on meaningful behaviours and actual needs of students, teachers and other workers to optimize value in the holistic situational academic conditions of the current remote learning systemization.

The agile process therefore may require some of the redesigned procedures in academic implementation to be inclusive of students and teachers and to be observed and adjusted overtime in order to restore value under the covid-19 influence and similar disruptions. The process therefore ensures the following benefits:

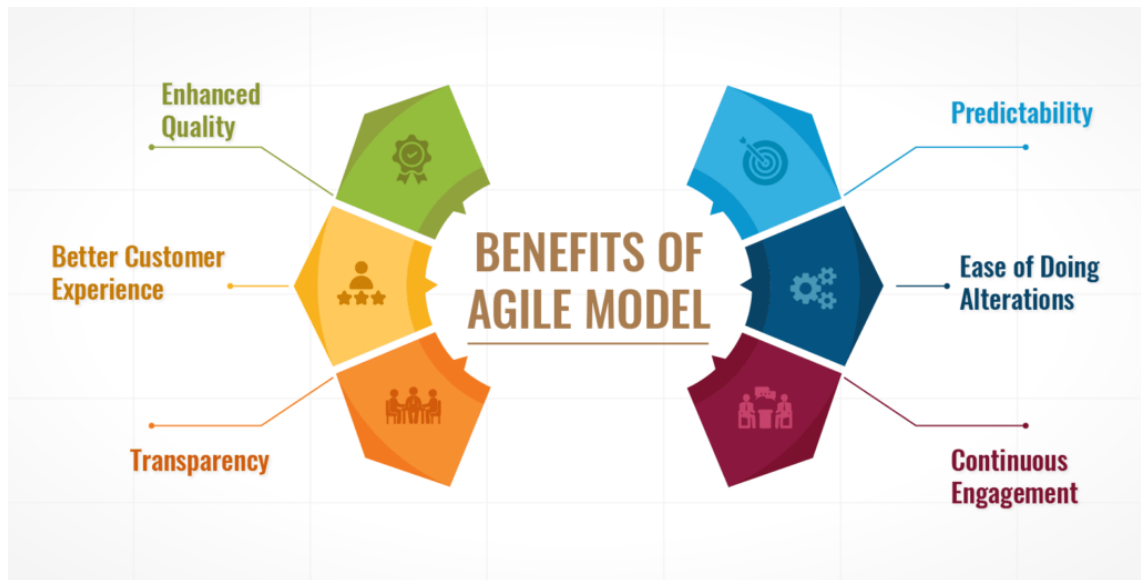


Fig 2: Various benefits of Agile Methodology

3.2 Traditional academic implementation

Formal education or academic implementation has constantly seen evolving trends and improving changes from medieval ages through current civilization. From once mainly, under the influence and management of the church in medieval ages to a currently viewed as a national interest and itinerary for reinforcing economic growth and general life improvement.

Also from medieval times male child education prioritized over girl child to the current primary prioritization of unisex education and its enforcement. The point really is that academic implementation has proven to be progressively dynamic and evolving in its trends over the last century just like most aspect of humanity.

3.3 Agility verses Academic Implementation

The application of the agile concept in academic implementation will require a more current adjustments to traditional academic trends and look to the future with a more in-depth VUCA concerns and strategies. This will mean addressing efficiently the best management approaches to the current and future needs of eLearning. *Should the current radical shift to remote learning therefore offer us the opportunity to throw more awareness and resources to researching new and efficient academic systemisation and policies to effectively confront the Covid-19 situational academic disruption now?*

In a similar related report titled: Embracing digital learning and online collaboration, The Organisation for Economic Corporation and Development (OECD, 2020) recounts on some thought provoking challenges which students may likely face: One of these was that with the ardent likelihood and eagerness to move online, having the mind set of simply replacing schooling hours by online lectures and discussions is likely to have a toll on students health. The report encouraged having shortened lectures combined with non-digital learning possibilities. With my personal relation to this point, it has been true in my case that constantly staring on digital screens for hours can create some sort of boredom and not without eye straining defects in the long run. Considering all lectures and other group discussions were coming in some sort of on-screen viewing format. To illustrate, a student having 2 hours lectures in 3 multiples a day plus some 2 hours group discussion should therefore have some eight hours minimum on-screen viewing. The optician and the psychologist will be a better informant on the short and long time defects of this routines.

Perhaps the real quest therefore is to exploit what these non-digital learning options could be and activating them as mainstream learning mediums when under crisis as proposed by the OECD.

Secondly with the current digital shift, one may assume that all students have equal capacity and opportunity regarding accessibility to electronic devices at home. This may not necessarily be so, and therefore creating a common social enabling for all students in this regard can take some financial stress from students already tied to student loans, insurance or handicap deficits. (OECD, 2020)

With some of these highlights agile possibilities may look to academic management policies and governmental backing which seeks to address these corona situational needs in academic implementation.

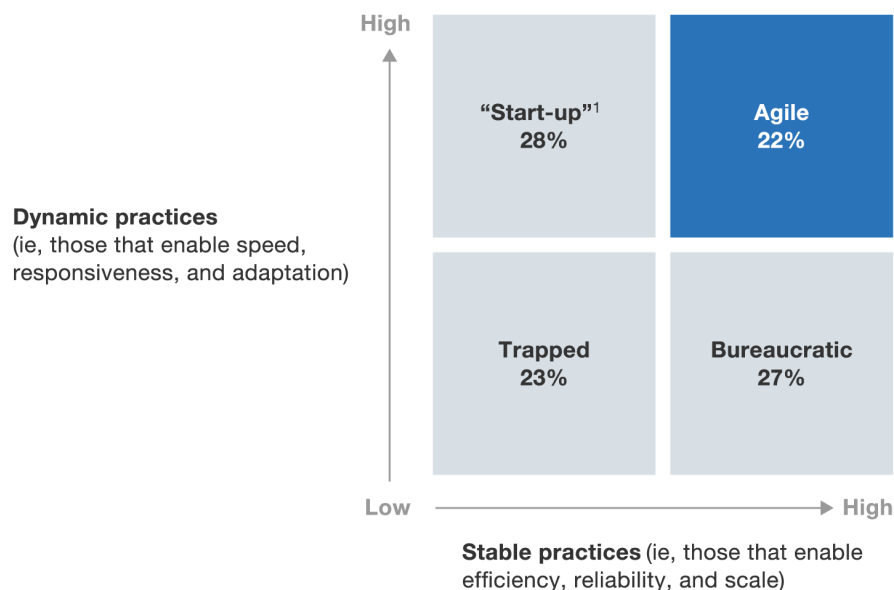
3.3.1 The Agile Fantasy

As attractive and reasonable as the agile concept may be, findings of researchers suggest there are what I may call "agile bluffers" or "Agile fantasist" and therefore those in power of academic implementation for one needs to be aware of this possible illusion state. Who or what is this? A survey by Mckinsey also Deloitte on one of the main challenges of being agile in management implementations is the hurdle of walking the talk.

The report details out how over 90 percent of some top management personnel easily professes agility but with vast irony in reality to implemental effect in operations. A survey by McKinsey shows only close to a quarter (22%) of those who professed to the concept actually demonstrated this in operations. (Deloitte, 2017)

According to respondents, less than one-quarter of performance units are agile.

% of performance units, based on respondents' ratings of 9 dynamic and 9 stable practices



¹That is, performance units with a mode of operating that is suited to very small start-ups but are not actual start-ups.

Fig 4: The above survey and matrix depicting percentage reality of agile implementation among some top managers professing to be agile. Turns out not all managers necessarily know or apply the concept even as they think they do.

As evidenced through Deloitte report, this may serve as a caution to academic authorities also to be abreast with the concept and possibly apply through this VUCA times of academic implementation instabilities. There is no doubt with regard to the related current Covid-19 academic disruptions, quality education of the future is the one that is agile in its systemization implementations.

4. Review on global Corona pandemic on management and academic implementation.

4.1 Student Virtual/Online studies as a default response answer

Remote learning has become the biggest default option to contact learning in most tertiary institutions across the world in the face of the covid-19 hit as indicated and evidenced in introduction. It may not be the exact best for effective academic implementation but there is no running from the fact that at least there seem to be no other option in response to emergencies of social distancing as presented by the Covid-19 pandemic.

With the very common ones: Zoom, Microsoft teams and Google meet in view, experts have even tried to help by offering consulting services on which is the best fit for various occasions based on competitive analysis (Owen Hughes, 2020). Various universities have subscribed to one package or multiples of these, depending on circumstantial needs.

The surging demand opportunity for these virtual products during the pandemic period has also seen to it that there has been competitive technological advancements with these platforms quite rapidly.

After a research by a Stanford University professor and also Microsoft study on the brain, they suggested the extreme fatigue that comes with virtual meeting under the currently known grid mode (Juha Saarinen, 2020)

These researches gave reality to the fact that the virtual conferencing platforms may be an answer for student lectures through the pandemic but not without its inevitable side effects in the long run. In fact the Stanford University professor puts it like "virtual reality can teach us how to die better" (Jeremy B. 2019)

These findings also became a factor inspiring one of their outstanding new development features called: 'Together mode' on their Microsoft teams conference platform in the quest to reduce the afore mentioned side effect. (SusannaRay, 2020)

Microsoft 365

Brain activity suggests Together mode in Microsoft Teams may decrease meeting fatigue

Source: Study conducted by Microsoft using physiological signal monitoring (EEG) in June 2020 to compare brain activity of people who systematically switched between two meeting views in Microsoft Teams: Together mode and grid view. The visual shows the average brain activity across research subjects. Color coding reflects overall amount of energy emitted from different brainwaves.

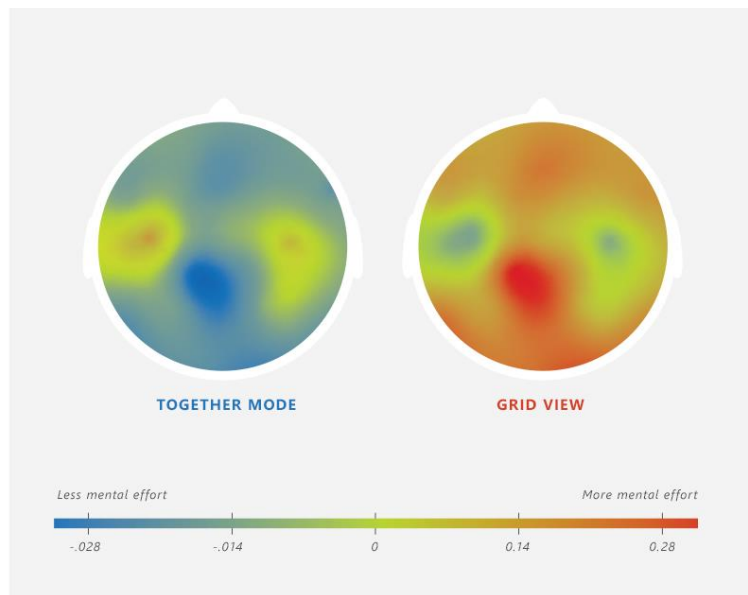
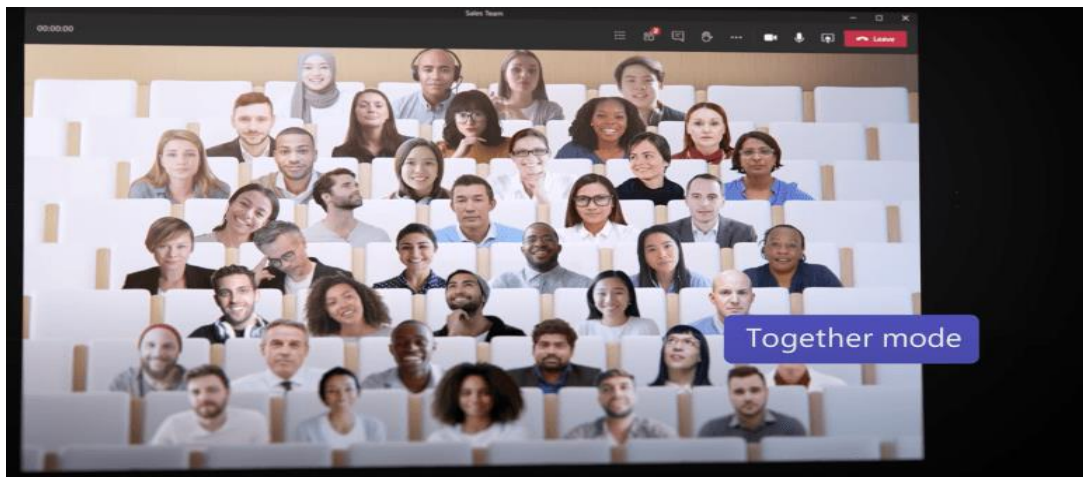


Fig 5: Brain activity during grid view and together mode video call.
(Microsoft 365, 2020)



Figs 6: Together mode views

It does seem the 'together mode' though still on screen, helps to suppress the mental awareness to individualism, psychologically activating a pretentious we-feeling as though one is in a lecture class or a theatre. And as research has proven this has been one innovation towards wellbeing with virtual platforms.

4.2 Tampere University specific agile management responses to corona pandemic

As already mentioned the university just like most universities across the globe took very early steps in response to the pandemic. As early as beginning March 2020 the university had already conveyed some laid down structures to teachers and staff via its online corona update feed. By 16th of March students and teachers were all aware and began the implementation of the decision to go entirely remote in studies. All staff had begun teleworking by 18th of that same month except for some few support staff on campus (TAMK, 2020)

As a student myself who constantly followed up on some of these updates, I can say for sure the school was eagerly matching up to the task on bringing teachers and students up to speed with the pandemic situation.

Below are few list of some critical updates on the schools website agile towards aiding efforts for students and teachers to cope with the situation (TAMK, 2020)

Dates	Comprehensive Information updates for students and teachers	Designate
24th March	Specialised employees only to access university building	Teachers
26th March	Education and learning services at TAMK	For students and teachers
26th March	Library provides printed materials necessary for completion of thesis	For students
7th April	Use of lecture recording facility in current circumstance	For teachers
7th April	From study Psychologist – How to respond effectively to the corona crisis	For Students
7th April	From Study Psychologist – distinction between leisure and study time how to get motivated	For students
9th April	Conversational support for staff	For staff
13th May	Further instructions for students and staff on continuing restrictions on corona recovery plan	For students and staff
27th May	Library material reserve and pick up and opening new pick up points	For students

5. EMPIRICAL RESEARCH

5.1 Research result from students and teachers analysis

It was really the case that students at Tampere Universities by this research extrapolations were highly admmissive and appreciative of how the universities management and teachers dealt with the effect of the covid-19 on academic implementation at least nine months into the Covid-19 experience and at the time of this research, hence with very little suggestions of their own than possibly expected.

The comment of some few discerning students even points to the fact that the extensive nature of the effect of the pandemic meant perfection could not be sort after in the very heat of the critical moment. For example one respondent wrote against question 13* "It was a difficult situation for all".

Virtual tools: The question of *preference for and the efficiency of virtual lectures as a comparative tool to contact lectures* was given an average rating of 3.4 out of 5 by some 63 students responses.

Also the question of virtual platform's support for *efficient student-teachers relation and interaction* was not exactly popular among respondent as some 32 students in total opted to comment on this out of some 64 students. it is not exactly clear though why some chose to ignore this section entirely. Was it of less concern to some students? Or these students felt extremely guilty for not contributing to it? Or did these student feel such student-teacher relations can possibly not exist on those virtual platforms? Some comments by others for consideration though were on the following lines:

- ❖ **Social inclinations of virtual tools by most youngsters and non-familiarity** verses the now option of being viewed as platforms for main stream lecture mediums. One student wrote:

"I believe the downsides of using these platforms are more related with people not being used to them and perhaps some people being more socially inclined and thus less motivated by online learning, than the tools used having any notable imperfections"

This comment was evidenced as student respondents in all, rated their *virtual platform familiarity (Zoom, Microsoft team, Google meet) prior to the pandemic* at a peak average at some 2.7 out of 5 maximum.

Perhaps over time usage of these tools by students will bridge the familiarity gap. Suggestively, further scientific studies on teaching approaches geared towards altering the social mind set orientation of these newly adopted main stream tools for students to foster motivation for eLearning could be helpful. Especially in academically critical situations of inevitable virtual shift like that presented by the current Covid-19 pandemic

Also about 62% of respondent on *teacher's familiarity or efficiency with virtual tools from student perspective*, in a wider view point pool, suggests there was no significantly identifiable major flaws of any sort which was impacting except for minor ones. Whiles the second largest percentage of this category thinks there could be improvement for teachers with these tools.

NB: This may not be exactly an absolute measure of excellence, especially as it is from students who were themselves not absolutely familiar or experts on these tools (per their own ratings). However this report is dwelling on the ability of the lecturer to exhibit influential and impacting teaching skills on their subject (students) by the use of these virtual tools, and that can at some level be told by the students being taught.

One comment therefore mentioned:

"In Zoom students participation were possible and well organized. Some instructors had difficulty managing this part (using the tool)."

- ❖ **Virtual audio usage verses video appearance** :On ensuring effective teacher and students relation and engagements on this platforms, one student wrote this as an observable problem on the side of students:

"Relying entirely on audio and even teachers streaming video"

In addition to the above comments I can also recall during one online presentations by one lecturer who is very excellent at engaging students via

contact teaching, but this time on a virtual platform where less than a third of students were on the video mode, he kept asking *"are you guys there? Do you agree? I cannot see your faces to determine your reaction"*. This was a good one but you could still tell the teacher was not having it easy on this one. Whilst preference for the audio mode may be considered a matter of choice one can equally bet that this cross and non-aligning options of students-audio-teachers-video defeats the purpose of effective interaction and engagement. And worse yet, one will agree that this interactive relationship gap between the two will only worsen or widen in the long run if this is the case for a long time.

5.2 Capacity Building

It is not surprising that similar to the OECD'S report mentioned above one student respondent blatantly mentioned the exact detail of one challenge of the new eLearning shift as also enumerated by that report:

"Everyone needs their own computer and not everyone can afford one."

Could we bring our mind to the taught that this student, just like many other students, was telling his own story? His or her own challenge under those extreme circumstances of forced remote learning? This observable comment also mentioned by the OECD points to the fact that perhaps some students somehow fully rely on the university's set up computers for their academic assignments if not as a backup facility for their own laptops. Additionally those with laptops of their own sometimes experience technical problems or break it entirely and may need some time to replace it, if not financially endowed to do so immediately.

Perhaps this may also be a rare line of thought in all the attempts by most academic implementers to assist students. But even if this was a topic for consideration, one will probably stop at the thought of huge financial cost involvement with such an unplanned provision of providing personal computers for students, which undoubtedly it is.

But one suggestion by the OECD report as a solution gives us an insightful thought that it is not all about providing new laptops or computers for students at their homes at the cost of government or the universities. Though this can be

one socially effective option, however a more important factor for consideration is creating equal enabling platform and accessibility for all students. And so in addition to the laptop provision option, the report also reckon that with students and most others, phones are more accessible and readily available compared to computer devices and this could be taken advantage of more under the consideration of creating equal enabling for all. So the take home point really is that since not all computer programmes can be accessed on phones but mostly on all computers, will the IT department be utilizing mobile platforms as a basic platform for academic communications and additionally create provision on the side for any other situation of excessive demands?

That is to say can a simple mobile phone access a certain recorded lecture pod cast for example? Or one will necessarily need a laptop computer to do that? *Alternatively under such constraining demands of quarantine and total/partial university shut down, do students preferably have to file a report of "I have no access to computer at home" in order to be considered under a certain provisional assistance?*

In the worse scenario, could a special provision for computer access at the school under the strictest social distancing rules be erected for only students filing situational report of "no computer access at home"?

The picture Illustration below is from the article publication: *Where can students go on remote learning days?* Perhaps to be considered as one of the very few strategies of excellence in academic implementation under the social distance experience.

The article detailing how some schools in some community in the United States, namely Lafayette community and some businesses were seeing to total academic provisional needs of the community's students during the pandemic (Catherine M, 2020)



Wonder Think Study Pods is an initiative by Wonderland Performing Arts to assist families who have chosen full-time virtual learning or who have children who attend school in the hybrid model. There are also spaces available for students to be led in exercises and arts activities during the day, including theatre games and stretches. Friday, Aug. 7, 2020. SCOTT CLAUSE/USA TODAY Network

News Information on the Tampere university website detailing instructions for university lecturers to pick up working gadgets from the school point to the fact that university lecturers were considered under this kind of thought, and were provided for. Which is good, however this line of thought could equally apply to some less privileged students or students in general.

One could have possibly thoughts students were going to be hit hard by the pandemic, which is true. Students just like most aspects of human life were destabilized from the start of the pandemic and its later developments, but perhaps just not in an unusual manner as suspected (as professed by Tampere university students through this research). However we are also learning the silver lining to the extent of the effect at Tampere Universities has been the management by academic implementers handling of matters such that the effect were brought to a minimal level. As a student myself, one of my personal observation to this good management was the fact that the arrangement on students subsidised food even under quarantine still rolled out on a newly engineered manoeuvrings of innovation to ensure students were still fed under

that program. Student's food was distributed across the Tampere region at various restaurants being the pickup points, or on delivery option.

All responding teachers on the survey averagely gave a high rating of 4 out of 5 on the category of *agile responsiveness by the school towards academic implementation* amidst the quarantine. Some of these teachers also commented "maybe" or "somewhat" to the idea of the entire online transition being a little overwhelming or psychologically draining. However even without those unemphatic answers, this goes without saying that those thoughts of uneasiness with the online transition evidently did not only rest with students but also "somewhat" with lecturers.

The 'somewhat' nature of these feelings under the sudden total online shift, perhaps can be effectively transitioned into a much more higher levels of confidence for lecturers through continuous professional development (CPD) provisions for teachers now as a preparedness against the VUCA academic future.

On the Harvard extension school of professional development platform with the theme and topic respectively: Communication strategies: Presenting with impact, we find those words "...communicating your message with poise, confidence, and conviction is essential in connecting with your audience and inspiring them by building trust and credibility..." (Harvard, 2020). Therefore one can definitely agree out the fact, that much of these skills, combined with technical proficiency of tools used by teachers may be much more needed on eLearning where students have less motivation ratings or preference for this medium.

6. RECOMMENDATIONS AND CONCLUSIONS

6.1 General recommendations and proposals for actions.

It is evidenced herein that the current covid-19 pandemic has unearthed a huge deficit in capacity building in academic implementation with both teachers and students as candidates for this debt fills. Not only are students and teachers being overwhelmed by the sudden transitions of eLearning on the main streams of academic implementation, but also the orientation on tools and the skills upset necessary for this situational transition is either in absolute deficit or is currently not up to the most desirable standards to ensure the most efficient result. This in the long run is at great disadvantage to both teachers who may be pitched on a KPI of student's results, and also to students who may not be having the necessary preconditions to achieve their best potential under the harsh conditions of forced eLearning.

Admissively, the Covid-19 pandemic was sudden and unplanned for, and so was the sudden mainstream eLearning transition. Therefore managements of academic implementation needs to be commended on their sudden agile improvised management approaches which has sustained the educational calendar through the pandemic. However one needs to admit improvising may not be quite as detailed as meticulous and systemised planning.

A critical review of the various phases of the sudden transition needs to be taken a look at under a proper systemised planning standards, in the professional hopes of filling some of the slacks, some of which are identified by students and teachers herein.

In line with the suggested review, it can counter be said perhaps not very long from now the Covid-19 pandemic will abate and the educational flow will be back to normal. However, putting efforts in taking a critical look at our best and most efficient strategies under the current situation and very importantly documenting our approaches now will mean learning from the historic moments of today. In those professional sense there will be no visitations to our mistakes in the coming future on similar eventualities but be confidently prepared to meet any academic disruptions in the future.

All teachers for one must be trained on the skills of eLearning. If not as a Continuous Professional Development (CPD) then this emergency trends of teaching responses must be instilled at teacher's professional qualification training levels.

Students on the other hand must be preconditioned to this situations and if possible briefly expose them to the use of virtual education early at the elementary stages of education in attempts to condition the minds to entire eLearning possibilities under state of emergencies.

Needless to say, I like to think that in Finland and most elsewhere, school graduates are required to serve briefly in the military to orient them and as an emergency preparedness against any threat of war. In like manner, education has immense contributions to national development probably more than wars can protect and therefore orienting or preconditioning citizens towards any likely threat on any aspects of academic breakdown should be viewed and treated with much severity and in national interest

The bigger picture: In the face of all the rising threats and concerns towards traditional face to face academic implementation, it is prudent to think that the position of Finland as one of the very renowned academic systems implementers stands threatened, as the major pointers of corona pandemic points to the fact that norms in academic implementation may be changing or be added upon.

This does not render the good old systems irrelevant. However in addition, One can prudently envision that some few months or years from now, the catastrophically shake up world education system during this pandemic, will mean the best academic systems will be the ones agile and factoring in effective actions towards emergency situational responses efficiently, with less stress on teachers or students.

The Corona pandemic has highlighted or opened this new default chapter of *"agile academic implementers"* to the world on very neutral grounds for all national academic implementers to consider and possibly compete. Academic implementers in Finland for one will want to dive in this new take off trend, to maintain it good image or better still lead in global educational systems

6.2 Recommendations based on answers in questionnaire

Many students have expressed a fairly satisfying remarks over the management response to the pandemic as analysed through some comments below. Some few comments seemingly directed at recommendations

Anonymous	"Some sort of interactive platform, maybe. To have more activating tasks during online lectures. Just staring and listening gets a bit boring."
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This comment and similar ones calling on teachers demand for contribution and participation as a stimuli or a means for combating further bridge in students-teacher-interaction through eLearning; this brought to mind could some portion of student's credit therefore be apportioned to participation when even on eLearning?

Anonymous	"More interaction with students. Teachers should have demanded us to contribute."
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This comment perhaps also highlight that if less influence is issued and afforded by a teacher, as a flexible teaching technique then student online are at liberty to respond in line with their demotivated self on eLearning. This behaviour is only natural for students to settle in their comfort zone though this may not yield to the best of productivity. Teachers need to have full control and command of the entire eLearning process, and to definitively communicate this control through the course roll-out processes.

For example if a teacher determines the technicality of a particular course demands a high level interactive relations between students and teachers to be able to achieve efficient teaching, then a 100% video attendance can be made a necessary condition for students participation: a lecturers right to determine that.

Some 73% of students outrightly believes there are no better tools than available used ones, neither can they suggest some better mediums than one used. This was in sharp contrast to the misconception that students might have some brighter alternative than used ones by the school.

Anonymous	"I think the tools are fine but the use of those tools can be enhanced, use the tools in their full potential."
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Anonymous	"First of all this method of learning is very new for most of the students. Also this way of teaching is new for the lecturers. The transition from contact learning to online teaching was very quick and smooth without much hassle. But, Recorded lectures were not as effective as the live classes. It was very hard to motivate myself to Listen to those recorded lectures and prepare the assignment."
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However these students did not fail to highlight the real supposed problems which is the efficient use of those tools to their full potential and familiarity, which mainly suggest training recommendation for teachers and somehow for students as suggested through the analysis above.

Now one comment even hints on health related consequence as broadly explained in analysis, therefore calling for the need and recommendations on health implications.

Anonymous	"I am sure the school has done everything they can and beyond. For some background, I have a mental illness that was diagnosed after an intense crisis and I am going through a recovery process, so my replies can be biased, because my experience studying before and during the pandemic has been different from most other students. I'm also very likely to have undiagnosed ADHD, which could explain the difficulties I've always had with online learning, among other things. If anything, mental health and special assistance services could be made even more easily available for students."
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As suggested above there is a call on the need to research into alternative teaching techniques. Teaching methods which are not necessarily mediated on-screen as a health-friendly compliments for eLearning

It was on the subject of motivation for students that some comments repeatedly run through, some of these comments or suggestions listed below:

anony mous	Keep some areas of the school open. Studying from home is extremely difficult compared to studying in the school facility
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anonymous	I think the school could have more encouraged the students to form online study groups or something alike.
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anony mous	Support and information in the spring was enough, but since the corona situation during the summer was good, school premises would have been open. I studied from home from March to August, and it was hard sometimes
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anonymous	Yes, by arranging face-to-face meetings in a safe fashion.
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anonymous	My master's program is designed for remote or online studies, so I didn't face Any difficulties.
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Of course from the above comments there is no running away from the fact that physical presence at the school is a big part of student feel. And owing to Covid-19 the lack of this aspect detracts a lot from student's motivation immensely.

The point therefore is that if this element of students motivation linked to the presence at the schools premises is to be considered carefully and seriously, then could the school still make some restricted provisions for students who are

bored at home and occasionally wish to be at the premises ? As in the related example from some USA community, could the highest standard on distancing restrictions be defined making it possible however for those necessary to access this rare provisions?

6.3 Recommendation for further research

The current shift for remote studies have not factored enough the capacity need for students and teachers. One recommendable research in relation is *finding out the extent to which students are dependent on the schools set up computers for their academic activities*. This in tend is to give an idea of the extent to which students may own and depend on their own laptops or computers at home.

Answering this question can mean academic implementers will have an idea of the extent to which students must be cut off from the schools set up computer facilities under the strict norms of social distancing and eLearning. Otherwise be provisioned for under a complete remote education or partially so.

Also since teachers are considered as the professionals in this situation of teacher-students-relationship-crises under this virtual learning platforms, research or workshops on effective teaching techniques to ensure effective engagement of students under this conditions must be researched. This workshops will empower teachers to have control of teaching and eLearning conditions as oppose to students for example opting to put on audio mode (and maybe playing games) whiles teacher is on video mode attempting in vain to engage students.

7. REFERENCES

APPENDIX 1: Questions to students

1. Which one of these are you currently at Tampere Universities Student (Teacher/Student)
2. It is true that the Corona pandemic is one situation the world or most organizations were not prepared for in terms of management. How will you however rate the response of the school in relation to academic implementation (5 being the most effective, quick and agile responds such that there was close to no interruption in academic implementation)
3. Various video conferencing platforms (Zoom, Microsoft teams, Skype) were used by teachers to complement learning under compulsory social distancing condition. (True/False)
4. How will you rate the effectiveness of this tools with academic implementation (1-5; 5 as almost the same with contact learning)
5. How will you rate the preparedness and effective use of this tools by your teachers (5 Teachers seems excellent and efficient both technically and ensuring teacher-student relation in it use)
6. Do you think there was some major flaws with teacher's preparedness, technical ability and ensuring efficient student-teacher relations in using these platforms? 6. (Yes/ No/ Maybe)
7. Would you want to elaborate, what are some flaws in the use of those tools (zoom, Microsoft teams etc.) in ensuring effective teacher-student relation and participation by teachers?
(Fair idea but not used before <1 2 3 4 5> excellent knowledge)

8. How will you rate your personal orientation to those tools prior to the pandemic and online learning transition? (1 to 5 rating)
9. Do you think there could have been some other means or tools to reach students more effectively other than the one used for you, or in addition to the ones used. (Yes/ No/ Maybe)
10. Please your tips will be appreciated. Write some few, and why you think it could be used in combination or why it is better than the one used (.....)
11. How will you rate your motivation during the online study comparatively to usual contact learning
(Reduced motivation <1 2 3 4 5> usual motivation as contact study)
12. Could the school have done something to boost or maintain your motivation as a means of support? If yes what could this be?
(.....)

APPENDIX 2: Questions to Teachers

13. It is true that the corona pandemic is one situation the world or most organizations were not prepared for in terms of management. How will you however rate the response of the school in relation to academic implementation (5 being the most effective, quick and agile responds such that there was close to no interruption in academic implementation)
14. Various video conferencing platforms (Zoom, Microsoft teams, Skype) were used by teachers to complement observing compulsory social distancing. (True/False)

15. Personally the entire online transition was a little overwhelming and somewhat psychologically draining, at least from the start (Totally agree, Somewhat agree ,Do not agree Maybe)

16. Technically I was not endowed or prepared to handle entirely online transition Totally agree Somehow agree (Do not agree Maybe I struggled and poorly engaged< 1 2 3 4 5 >Excellent and usual as contact teaching On various factors of students corporation and familiarity)

17. How will you rate the online performance on effective engagement of students online with the transition, comparatively to usual contact teaching?

18. With most/some students not showing their faces on video I could not exactly tell if students were engaged enough or effectively. (Totally agree/ Somehow agree /Do not agree / Maybe)

19. In my opinion teachers were receiving swift technical support to be agile enough to the situation (Extremely agree/ Somehow agree/ Extremely disagree/ Somehow disagree/ Could have been better)

REFERENCE

Arturo S, (2020) article: six ways to save the academic year from corona virus <https://www.eaie.org/blog/save-academic-year-coronavirus.html> [read 10/8/2020]

Axinn, William G., Thomas E. Fricke, and Arland Thornton. (1991). "The Microdemographic Community-Study Approach: Improving Survey Data by Integrating the Ethnographic Method." *Sociological Methods and Research* 20 (2):187–217.

Axinn, (2006) Mixed method data collection strategies

[https://books.google.fi/books?hl=en&lr=&id=uZbjHzUaMhAC&oi=fnd&pg=PR1&dq=Axinn,+ \(2006\)+Mixed+method+data+collection+strategies&ots=05zSQs5faK&sig=Cdw2PKq5Sgvq5zw6CUPVq7SKcho&redir_esc=y#v=onepage&q=Axinn%2C%20\(2006\)%20Mixed%20method%20data%20collection%20strategies&f=false](https://books.google.fi/books?hl=en&lr=&id=uZbjHzUaMhAC&oi=fnd&pg=PR1&dq=Axinn,+ (2006)+Mixed+method+data+collection+strategies&ots=05zSQs5faK&sig=Cdw2PKq5Sgvq5zw6CUPVq7SKcho&redir_esc=y#v=onepage&q=Axinn%2C%20(2006)%20Mixed%20method%20data%20collection%20strategies&f=false) read 8/8/20

Deloitte, 2017 Global Human Capital Trends: Rewriting the rules for the digital age. Pdf [online] read 8/11/2020

<https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/human-capital/lu-hc-2017-global-human-capital-trends-gx.pdf>

Foodrisc resource centre, 2020. Mixed method research. Read 5/7/2020

[http://resourcecentre.foodrisc.org/mixed-methods-research_185.html#:~:text=Mixed%20methods%20research%20is%20a,focus%20groups%2C%20interviews\)%20research.](http://resourcecentre.foodrisc.org/mixed-methods-research_185.html#:~:text=Mixed%20methods%20research%20is%20a,focus%20groups%2C%20interviews)%20research.)

Fricke, Tom. (1997). "Culture Theory and Demographic Process: Toward a Thicker Demography." In David I. Kertzer and Tom Fricke (eds.), *Anthropological Demography: Toward a New Synthesis*, pp. 248–278. Chicago: University of Chicago Press.

Gadjo Sevilla, (2020). Zoom vs Microsoft Teams vs Google Meet: How do they compare? [Online] read 6/6/2020 <https://uk.pcmag.com/how-to-work-from->

[home/125661/zoom-vs-microsoft-teams-vs-google-meet-a-videoconferencing-face-off](#)

Harvard, (2020). Communication strategies, Presenting with impact [online] accessed 8/21/2020 <https://www.extension.harvard.edu/professional-development/programs/communication-strategies-presenting-impact>

[Indian J Anaesth](#). (2016) legal and ethical issues in research 60(9): 684–688.

IHE, (2020) More Universities announce online plans. Article <https://www.insidehighered.com/news/2020/07/07/coronavirus-roundup-more-universities-announce-plans-largely-online-fall-terms> [Read 5/8/2020]

Jeremy Bailenson, (2019). How virtual reality can teach us how to die well. [Online] accessed 8/19/2020 https://www.youtube.com/watch?v=onUIh_NjULo

Juha Saarinen,(2020) Microsoft EEG studies show video meeting stress people out [article] accessed 8/19/2020 <https://www.itnews.com.au/news/microsoft-eeeg-studies-show-video-meetings-stress-people-out-550248>

Kertzner, David I.(1997). “Qualitative and Quantitative Approaches to Historical Demog-raphy.”Population and Development Review23(4): 839–846.

Mckinsey and Company, (2017). How to create an agile organization [online] read 8/11/2020 <https://www.mckinsey.com/business-functions/organization/our-insights/how-to-create-an-agile-organization#>

Microsoft 365, (2020). Brain activity suggest together mode in microsoft teams may reduce meeting fatigue. [microsot tweet] accessed 8/20/2020 <https://twitter.com/microsoft365/status/1283808621370003456>

Micheal W. (2017) How to thrive in a VUCA world [article] <https://www.psychologytoday.com/us/blog/spotting-opportunity/201707/how-thrive-in-vuca-world> [read 23/07/2020]

OECD,(2020). Educational response to Covid-19; Embracing digital learning and online collaboration. Accessed 8/8/2020 [https://read.oecd-ilibrary.org/view/?ref=120_120544-8ksud7oaj2&title=Education responses to Covid-19 Embracing digital learning and online collaboration](https://read.oecd-ilibrary.org/view/?ref=120_120544-8ksud7oaj2&title=Education_responses_to_Covid-19_Embracing_digital_learning_and_online_collaboration)

Owen Hughes, (2020). Zoom, Microsoft teams, Google meet. How do they compare? [Online] read 8/8/20 <https://www.techrepublic.com/article/zoom-vs-microsoft-teams-vs-google-meet-how-do-they-compare/>

Paul Allsopp, (2020) Agile Working – the Strategic Imperative? Read 22/07/2020 [Online] read <https://derivsource.com/2020/05/07/agile-working-the-strategic-imperative/>

Pearce, Lisa D. (2002). “Integrating Survey and Ethnographic Methods for Systematic Anomalous Case Analysis. “Sociological Methodology32 (1): 103–132.

Sarah Newey et al,(2020) What is Corona Virus, How did it start, and how big can it get ? <https://www.telegraph.co.uk/news/2020/07/16/what-covid-19-spread-coronavirus-pandemic-when-start-uk/>

Study International, (2020). Canadian Universities going online in fall . <https://www.studyinternational.com/news/canadian-universities-going-online-fall-2020/> Read 5/7/2020

TAMK, (2020) Comprehensive updates on corona situation on school web site <https://intra.tuni.fi/en/content/news/12678> [Read 8/8/20]

TAMK , (2020) <https://www.tuni.fi/en/about-us/tamk> (accessed 9/1/2020)

TAMK, (2020) Tampere Universities: Fact and Figures <https://www.tuni.fi/en/news/facts-and-figures> (accessed 9/1/2020)

The World University Ranking, (2020) . Asian Universities move online quickly, Now what ? <https://www.timeshighereducation.com/opinion/podcast-asian-universities-moved-online-quickly-now-what> [Read 5/5/2020]

Thornton, Arland. (1991). "Influence of Parents' Marital History on the Marital and Cohabitation Experiences of Children. "American Journal of Sociology 96(4):868–894.

Susanna Ray (2020). Video fatigue and late night host with no audience inspire a new way to help people feel together, remotely [online] accessed 8/19/2020 <https://news.microsoft.com/innovation-stories/microsoft-teams-together-mode/>

Radina G. Jacqueline H., (2020) [CNN Journal online] we are facing a 'generational catastrophe in education' UN warns: read 8/12/2020 <https://edition.cnn.com/2020/08/04/world/school-closures-catastrophe-un-covid-19-intl/index.html>

