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Higher Education during COVID-19 and Future Competences

Camilla Wikstrom Grotell (red.) & Nathalie Hyde-Clarke (Ed.)

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EDITORIAL FOREWORD

This publication presents thoughts, concerns and suggestions based on the rapid changes universities faced with the arrival of the Covid-19 pandemic in early 2020. Arcada University of Applied Sciences, like many other universities, had to move its entire operation online within a few days. A process that, in the end and as a whole, went well, despite the fact that constant problem solving became a part of daily life. For a university, it is extremely important to learn from these experiences, and more so, to do it through conversation with each other. In this book, we thus look both backwards and forwards. We are working in a situation where some form of crisis management is the 'new normal'.

This volume covers a range of topics, starting with strategic overviews of leadership and internationalisation during lockdown and limited travel possibilities. It then presents findings from a survey conducted with students about their perceptions of the new education environment online and what this means for future digital education. Coaching is one way to maintain close contact despite the physical distance, and participants in an innovative learning spaces share their experiences and results. This is followed by a collective auto-ethnography from staff. 'Voices' is a departure from more traditional academic writing that allows individual thoughts to flow freely across the page. Offering glimpses into new potential technologies for sustainability and as a means to assist the elderly, authors share how Arcada is positioning itself to be a clear contributor to future competences that will be needed in a transformed society. The closing papers examine issues related to inherent discourses and ideological tensions in higher education, and why the impact on mental health is of greater concern given the current working and living conditions. All offer interesting insights into a changing world.

We wish to express our thanks to all the people who have contributed to this volume. It has been an important undertaking at a critical time in history, and we know the ideas gathered here will have relevance for many well into the future.

Sincerely,
Camilla Wikstrom-Grotell and Nathalie Hyde-Clarke

Framtidens arbete i ljuset av practice-teori

Henrika Franck[1]

Abstract

Arcadas strategi tar avstamp i uppdraget att vara en professionshögskola som bedriver samhällsrelevant utbildning och forskning för ett mångkulturellt Finland. Det betyder att vi måste bereda studenterna och personalen för framtidens arbete. För att vi ska kunna göra det, måste vi skapa dagliga praktiker och handlingar som stöder de långsiktiga strategiska målen. Detta kapitel betraktar framtidens arbete ur en Practice-teori-lins, och speglar Arcadas strategi mot sju arbetslivstrender, genom att analysera dem via de teoretiska begreppen practitioners, practices och praxis. Till slut diskuteras praktikernas betydelse för Arcadas kärnfunktioner undervisning och forskning.

Nyckelord: strategi; arbetssätt; arbetslivstrend; utbildning

INTRODUKTION

Covid 19 –pandemin har redan förändrat sättet vi arbetar på och kommer att vara en vändpunkt på många sätt inom arbetslivet och i sättet vi arbetar inom organisationer. I detta kapitel betraktar jag framtidens arbete ur en Practice-teori-lins, och spanar i framtidens arbete och arbetsliv. Jag speglar Arcadas strategi mot sju arbetslivstrender och analyserar dem via de teoretiska begreppen practitioners, practices och praxis. Sedan sammanfattar jag vad de betyder för Arcadas kärnfunktioner undervisning och forskning.

Grunden till practice-teorier kan hittas hos Wittgenstein (1953) och Heidegger (1992), men under de senaste decennierna har vi sett en koncentration och mycket större fokus på practice-teorier, man kan allmänt tala om en ”Practice-vändning” i de sociala vetenskaperna (Reckwitz, 2002; Rouse, 2007; Schatzki, 2001). Vändningen innefattar viktiga kontributioner av filosofer (Foucault, 1980), sociologer (de Certau, 1984; Giddens, 1984), antropologer (Bourdieu, 1990), etnologer (Garfinkel, 1967), aktivitetsteoretiker (Engeström, Miettinen & Punamäki, 1999), diskursanalytiker (Fairclough, 2003) och många andra. Practice teorier kan sägas beskriva individens aktivitet inbäddad i institutionella

[1] Arcada University of Applied Sciences, Helsinki, Finland

strukturer. Det är en strävan att ifrågasätta dikotomin mellan agens och struktur genom att analysera individen och strukturen tillsammans genom det som kan kallas praktiker. I korthet är practice-teorier sådana som betraktar vad människor *gör* inte vad som *är* eller borde vara. Teorierna betraktar människan i strukturen och försöker förstå hur det individen gör beror på och/eller påverkar strukturen kring individen.

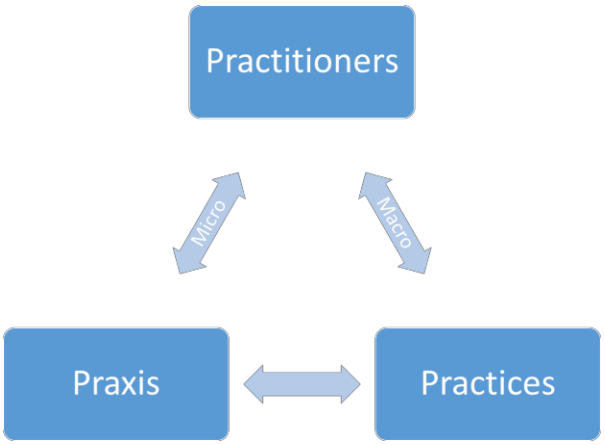
Practice-teorierna lutar mot den pragmatiska traditionen som också fokuserar på aktivitet, men sätter en större tyngd på relationen mellan dessa aktiviteter och det större sociala systemet eller de strukturer i vilka de försiggår. Tillsammans erbjuder de inte något teoretiskt ”system” utan snarare erbjuder deras arbete en möjlighet att analysera språk och skapa ramverk som en grund för forskning i människors praktiska aktivitet och förnuft (Giddens 1984; Reckwitz, 2002). De olika practice-perspektiven skiljer sig i betoningar, men man kan se två kärnteman i teorierna.

För det första befattar sig practice-perspektiven med aktivitet av alla slag – inte bara det stora och extraordinära, utan också de små rutinerna. Fokuset på det som verkar nästan alltför banalt för att titta på återfinns bland annat hos de Certeaus (1984) vardagssociologi och Giddens (1987) idé om att göra det icke-anmärkningsvärda anmärkningsvärt. De Certeau betraktar bland annat detaljerna i att laga mat eller att shoppa och sätter fokus på de aktiviteter som vanligtvis tas för givna (1984, 1998).

För det andra placerar practice-perspektivet aktiviteterna i ett större socialt sammanhang, där individer stöder sig på delade uppfattningar, kunskaper, språk och teknologier. Det här ser vi bland annat i Bourdieus idé om habitus (1990) och Foucaults (1977) diskurser som förändrar samhället. Detta motarbetar den gamla divisionen mellan å ena sidan en reduktionistisk syn på individen och individens aktiviteter, och å andra sidan tron på abstrakta sociala strukturer och system (Schatzki, 2005). Practice-teorier beaktar både micro-aktiviteter och macro-kontext. De här teorierna på praktik fokuserar alltså på det ömsesidiga beroendet mellan lokal aktivitet och större strukturer.

Inom strategiforskningen har Whittington (2006) definierat tre parametrar som kan användas för att tillämpa practice-teorier i empiriska studier: Practitioners, practices och praxis[2]. *Practitioners* syftar på de individer som gör arbetet, de som skapar aktiviteter genom vem de är, hur de agerar och hurudana resurser de använder. Det är en vid definition, men det inkluderar både dem som är på samma arbetsplats och dem som påverkar

via nätverk. *Practices* är de aktiviteter som individerna gör med hjälp av sociala, symboliska och materiella artefakt. Det inkluderar individuella kompetenser så som kunskap, färdigheter och förhållningssätt. Det är viktigt att förstå vilka practices som möjliggör och vilka som hindrar organisationen från att nå sina målsättningar. *Praxis* är flödet av aktiviteter där arbetet förverkligas (Jarzabkowski 2005; et al. 2007; Johnson et al. 2007; Whittington 2006). Praxis är de kognitiva och fysiska beteendena kombinerade och koordinerade så att många individer gör samma. Det refererar alltså till den ström av aktiviteter där arbete görs över tid. Reckwitz (2002) och Sztompka (1991) definierar praxis som de aktiviteter som kopplar individers micro-aktiviteter med grupper och den bredare institutionen där aktiviteten är lokaliserad och till vilken den bidrar. Definitionen är nyttig, eftersom den kopplar *micro* och *macro*. Den indikerar att praxis är både en aktivitet som är innesluten i det institutionella, men den är också en dynamisk och flytande aktivitet mellan olika nivåer av praktiker. I lekmanstermer kan man tala om organisationskultur med dess normer, värderingar och trosuppfattningar. Jag kommer att tillämpa dessa interrelaterade koncept som en lins för att förstå framtidens arbete i förhållande till Arcadas strategi.



Figur 1. Förhållandet mellan practitioners, practices och praxis (Whittington, 2006)

[2] Jag använder den engelska terminologin eftersom den blir klumpig i översättning och de engelska orden är förståeliga på svenska

1 ARCADAS STRATEGI OCH FRAMTIDENS ARBETE I LJUSET AV PRACTICE-TEORIN

Arcadas strategi tar avstamp i uppdraget att vara en professionshögskola som bedriver samhällsrelevant utbildning och forskning för ett mångkulturellt Finland. Arcada erbjuder professionsinriktad examensutbildning samt utbildning som stöder individens kontinuerliga lärande och livslånga karriärutveckling. Arcada bedriver också samhällsrelevant och tillämpbar forsknings- och utvecklingsverksamhet, samt kulturell verksamhet i stark växelverkan med utbildningen och intressegrupper. Detta ska leda till visionen att vara en globalt relevant och drivande svenskspråkig bildningsaktör i Helsingfors. Genom utbildning, forskning och nordiskt samarbete vill Arcada skapa smarta lösningar för ett dynamiskt arbetsliv och en levande svenskspråkig kultur, och erbjuder livslångt karriärstöd för ett givande och hållbart liv. Figur 2 illustrerar hur strategin är uppbyggd. På bottnen av pyramiden finns det dagliga arbetet och aktiviteterna. Det är dem jag kommer att fokusera på för att förstå hur Arcada kan uppnå sitt mål om att vara en globalt relevant och drivande svenskspråkig bildningsaktör i Helsingfors.

Figur 2. Från mission till dagliga aktiviteter

1.1 DET DAGLIGA ARBETET OCH AKTIVITETERNA

Det är viktigt att komma ihåg att Arcadas personal inte arbetar för sig själva i första hand, utan för Arcadas större mål. Därför är det viktigt att – i enlighet med practice-teorierna – betrakta vad människor gör dagligen för att uppnå målen. För att förstå vad det innebär att vara en samhällsaktör som skapar ett givande och hållbart arbetsliv, har jag studerat trender i arbetslivet som har blivit aktuella i synnerhet i och med Covid 19-pandemin. I september 2020 (Alarotu et al) kom tre ledande företag på sina egna branscher, Miltton, Microsoft och YIT ut med en pamflett där de beskrev sju trender som kommer att förändra det finländska arbetslivet. Trots att det inte är en vetenskaplig studie, fungerar den bra för att spegla Arcadas strategiska målsättningar och dagliga aktiviteter. De sju trenderna är: distansarbete, utrymme, digitalisering, välmående, tid, mänsklighet och kreativitet.

1.1.1 Distansarbete

Den kanske största positiva överraskningen under pandemin var hur fort kunskapsarbetare kom in i att distansarbeta. När man var tvungen att lära sig de virtuella arbetssätten och själv ta ansvar för att de fungerade, gick det mesta smidigt. Med ens var inte förmannen där och såg vad du gjorde, men ändå blev jobbet gjort. På en kort tid har distansarbetet satt nya krav på vårt sätt att relatera till andra människor. Distansarbete har kommit för att stanna, men människor behöver varandra fortfarande – hur ska vi hitta en balans? När vi ser på det ur ett micro-perspektiv dvs practices, är det viktigt att vi lär oss att inkludera människor, att vara närvarande, att lyssna, och att lita på det vi inte ser. Ur ett mer strukturerat praxis-perspektiv måste vi skapa gemensamma spelregler, och att våga utmana ledarskapet. När vi relaterar utmaningarna med distansarbete till Arcadas vision att skapa ett dynamiskt arbetsliv för ett givande och hållbart liv, är det just det dynamiska arbetslivet som måste betonas. Vi och våra studenter ska kunna leva och arbeta på distans både nationellt och globalt och ändå känna att de är inkluderade och sedda.

1.1.2 Utrymmen

Arcada har redan inlett arbetet med att skapa utrymmen där man gör det som är bäst just för den aktivitet man utför i den stunden, så kallat aktivitetsbaserat arbete. Pandemin har ökat förståelsen för att utrymmen och lokaler måste skapas för specifika ändamål. Redan nu och sannolikt också efter pandemin kommer människor att komma in till kontoret bara när de verkligen behöver vara någonstans och arbeta. Då blir det allt viktigare att upp-

skatta människors närvaro och tid. På en praxis-nivå bör vi skapa utrymmen dit man vill komma, det krävs mer av kontorsutrymmen i framtiden, utrymmet måste ha en mening, och i bästa fall reflektera kultur och sätt att arbeta. Ur practices-perspektivet kommer det att leda till att människor dagligen byter plats när de byter aktivitet. De dagliga praktikerna kring utrymmet kommer att påverka hur vi jobbar mot att erbjuda ett givande och hållbart liv. Till exempel genom att ”ta naturen in” i kontoret, kan vi skapa miljöer när människor trivs bättre och skapar något nytt varje dag.

1.1.3 Digitalisering

Arbete i nätverk blir allt vanligare, och det är viktigt att värna om samarbete över organisationsgränser, också mellan konkurrenter. Digitalisering inbegriper så mycket att det är svårt att skriva bara några rader om det. När det digitala utvecklas planerat och långsiktigt, ökar mångfalden och förståelsen av andra människor. Det möjliggörs när man noggrant överväger vad som helt kan digitaliseras var det verkligen behövs fysisk närvaro och satsningar på människor. Tack vare teknologi och digitaliseringen kommer det att bli vanligare att arbeta i nätverk. På en micro-nivå kan vi dagligen skapa bryggor över såväl organisations-silon som till andra organisationer på ett sätt som inte har varit möjlig tidigare. På en praxis –nivå kan vi skapa långsiktiga planer om behoven av digitalisering och om behoven av fysisk närvaro och analog kontakt. Digitaliseringen med allt det innebär, är en av de största drivkrafterna i Arcadas vision och strategi, när vi är medvetna om det i det vardagliga arbetet, har vi en möjlighet att skapa smarta lösningar för ett dynamiskt arbetsliv.

1.1.4 Välmående

Känslan av kontroll är ett centralt element i att må bra. Av alla framtidstrender är välmående kanske den som är mest avgörande när det kommer till dagliga aktiviteter. Det gäller allt från fysisk aktivitet till att våga lita på det du inte ser, och att satsa på att lära känna människor som individer. Distansarbete och digitalisering kan i värsta fall skapa stora avstånd mellan människor och därför minska välmåendet. Därför är det av yttersta vikt att man genom micro-aktiviteter så som informella diskussioner, uppmuntrande ord och aktiviteter som ökar tilliten till den andra, skapa en omgivning där människor vågar ta

hela sin personlighet till arbetet. Oberoende om det är på distans eller på plats. Det vardagliga välmåendet är nyckeln till ett givande och hållbart liv, och en förutsättning för att vi och våra studenter ska kunna arbeta både produktivt och hållbart under hela sin arbetskarriär.

1.1.5 Tid

Självledarskap och distansarbete kan lätt orsaka oklarhet och kaos, så det är av största vikt att skapa gemensamma spelregler och tydliga målsättningar för arbetet. Som bäst är tiden vår vän och danspartner, men som värst är den vår fiende och piska. I bästa fall ökar kreativiteten och produktiviteten när man får göra sitt arbete på en tid och plats som man själv väljer. På en praxis-nivå måste vi skapa förutsättningar att utföra olika jobb på optimal tid och plats, men också sätta gränser på arbetstiden, sätta in dagliga pauser. I framtiden måste var och en allt mer skapa sin egen arbetstid, och då är två element viktiga; att sätta gränser och platser för sitt eget arbete och att beakta också andras arbete i de egna planerna. Tidsanvändningen är speciellt beroende av växelverkan mellan micro och macro, eftersom den så tydligt är beroende såväl av de egna som andras val. Dessa dagliga val skapar det dynamiska och hållbara arbetslivet som Arcadas vision strävar efter.

1.1.6 Mänsklighet

Hur mäter vi sådant som inte kan sättas i en excel? För att få utrymme för det som kan kallas mänsklighet, måste vi bli bättre på att förstå hur olika mänskliga attribut hänger ihop. Vi kan ta vår värdegrund som ledstjärna och försöka förstå vad vi gör i vårt dagliga arbete för att leva ut den. Vad betyder det i det dagliga arbetet att vara respektfull och ambitiös (practices)? Hur kan vi bidra till en inkluderande och uppmuntrande arbetsmiljö (praxis)? Hur arbetar vi dagligen människonära och agilt? Vi kan skapa verktyg för att mäta stämningen på arbetsplatsen och göra den till en förutsättning för att ha lyckats med arbetet. Ju mer digitaliserad världen blir, desto mänskligare måste vi bli.

1.1.7 Kreativitet

Idéer föds långsammare när man sitter stilla. Kreativitet kräver slumpmässighet, växel-

verkan och ett samspel mellan kropp och sinne. Också kunskapsarbetare måste använda sin kroppsliga vishet. Arbetsutrymmena har stor betydelse för kreativitet och för det helhetsmässiga välmåendet. När vi arbetar på distans, krävs det både intention, tålamod, och försök-och-misstag, för att odla miljöer där vi kan vara kreativa. Hur kan vi skapa slumpmässiga möten i vardagen? Hur kan vi använda vår kroppsliga vishet när vi sitter vid datorn. Det här är stora men samtidigt spännande utmaningar som vi måste arbeta på varje dag för att uppnå målet att skapa förutsättningar för ett givande och hållbart liv. Tabell 1 sammanfattar de tre practice-teori attributen practitioners, practices och praxis i förhållande till de sju arbetslivstrenderna.

Tabell 1. Sju arbetslivstrender och det praktiska arbetet

	Practitioners	**Practices**	**Praxis**
Distansarbete	Personalen, studenter, samarbetsparter	Vi inkluderar människor, vi litar på det vi inte ser , vi är närvarande, vi lyssnar.	Fungerande teknologi, gemensamma spelregler.
Utrymmen	Personalen, studenter	Vi byter plats när vi byter arbetsuppgift, vi respekterar människors tid och närvaro.	Aktivitetsbaserat arbetssätt, fungerande och lockande utrymmen. utrymmen med specifika syften, utrymmen som speglar Arcadas kultur.
Digitalisering	Personalen, studenter	Vi skapar dagligen bryggor över organisationella gränser, både interna och externa, vi satsar på människor.	Vi flyttar allt det som är möjligt till nätet. Vi vet var fysisk närvaro verkligen behövs.
Välmående	Personalen, studenter	Vi litar på det vi inte ser, vi lär känna våra kolleger och studenter som individer.	Vi skapar förutsättningar för individer att ha en känsla av kontroll.
Tid	Personalen, studenter, samarbetsparter	Vi har pauser, vi uppmuntrar andra att ha pauser.	Vi har tydliga spelregler och målsättningar för distansarbete. Vi skapar förutsättningar att utföra jobbet på optimal tid och plats.
Mänsklighet	Personalen, studenter, samarbetsparter	Vi använder våra värderingar medvetet i vårt vardagliga arbete.	Vi har en ledarskapskultur där tillit, nyfikenhet och medkänsla är det viktigaste. Vi skapar mätverktyg för att mäta stämning.
Kreativitet	Personalen, studenter	Vi söker aktivt tillfällen för slumpmässiga möten och interaktion.	Vi skapar utrymme för slumpmässig interaktion, både virtuellt och fysiskt.

2 FRAMTIDENS UNDERVISNING OCH FORSKNING

Arcada påverkar samhället och arbetslivet mest via sina kärnfunktioner undervisning och forskning. När man betraktar de sju arbetslivstrenderna genom practice-teorier, är det i synnerhet distansarbete och utrymmen som blir viktiga för att de andra fem ska förverkligas på ett hållbart sätt.

Distansstudier är en form av distansarbete som hela världen med ens var tvungen att lära sig våren 2020. Vad betyder det för framtidens lärande? En studie i World Economic Forums regi (Li and Lalani, 2020) förutspår att de förändringar i undervisningen som har kommit med pandemin är här för att stanna. Nackdelar som den snabba övergången till digitala plattformar och distansundervisning har fört med sig är bland annat att den undervisande personalen inte var så förberedd som den kunde, att det kräver en god internetanslutning och att studenterna känner sig isolerade. Fördelar är bland annat att man kan utföra sina studier var som helst och ofta också när som helst. Möjligheten för människor att ta kurser över lands- och kontinentgränser växer och kommer att leda till att utbildningsmarknaden förändras och blir ännu mer global.

På Arcada var den undervisande personalen bättre förberedd på distansundervisning våren 2020 än många andra högskolor, eftersom det hade satsats på det digitala i undervisningen redan tidigare. Internetanslutningarna är inte ett stort problem i Finland, men däremot är isoleringen av studenter en viktig fråga för framtiden. Vi måste hitta strukturer för studenterna att träffas och att känna samhörighet trots att man kanske inte ses. Den fysiska och tidsmässiga separationen mellan lärare och student, och mellan studenter, har inte bara lett till isolering, utan också en avsaknad av konstruktivistiskt lärande, där inlärningen sker i samverkan med andra i samma tid och rum. Croft, Dalton och Grant (2010) har forskat i hur distanslärandet kunde göras mer interaktivt och inkluderande, och kom fram till några praktiker som kan användas. Förutom att skapa virtuella studentgrupper som kan träffas i samma tid, och mentorer som man regelbundet kan träffa on-line, rekommenderar de att man ”humaniserar” alla genom bilder och personliga beskrivningar, att man ger personlig respons på såväl uppgifter som andra frågor, att man skapar tydliga och personliga mellanetapper i kursen, och att man bereder möjlighet för varje student att träffas också fysiskt på campus eller någon annanstans. I framtiden kommer studenterna sannolikt att välja att komma till campus bara om de vet att det ger något

mervärde, antingen socialt eller som omgivning. Därför blir det allt viktigare att skapa utrymmen som sporrar till både koncentration och kreativitet. Det aktivitetsbaserade arbetssättet blir naturligt och för studier, och utrymmet kommer att styra studenternas dagliga praktiker. Arcada kan skapa dessa varierande utrymmen att vara meningsfulla för studenternas inlärning.

Forskningen, utvecklingen och innovationen på Arcada är tätt kopplade till undervisningen, och påverkas också av det förändringar som den nya situationen för med sig. Den stora frågan att tackla är hur vi kan vända den nya situationen till en fördel, och forska i fenomen och ämnen som hjälper det framtida samhället. I denna text behandlar jag inte teman för forskning, utan praktiker som möjliggör en hållbar forskning. Hur ska vi skapa och upprätthålla praktiker som guidar oss att prioritera rätt i val av forskningsfokus? Ett sätt är att vända på det etablerade sättet att närma sig forskning. Traditionellt kommer forskningsansatsen från forskarens intresse och kunskap, och man inleder forskningsprocessen därifrån. Men genom att vända på processen och starta forskningen från omgivningens behov, kan resultaten också bli mer långsiktiga och viktiga för samhället. Här är – förutom distansarbete och utrymme – också digitaliseringen en viktig nyckel till praktikerna. Genom att kartlägga organisationens eget och nätverkens behov och kunnande via digitala kanaler, öppnar vi stigar för innovationer och forskning som annars inte skulle skapas. Det konkreta Praxisen skulle bli att alltid kartlägga behovet och kunskapen i omgivningen först. Eftersom praxis definieras som de kognitiva och fysiska beteendena kombinerade och koordinerade så att många individer gör samma, kan en sådan ny praktik leda till en modigare kultur, en kultur där risktagning är tillåtet och där vi aktivt skapar och deltar i nätverk av innovation och forskning. När en aktivitet samtidigt är innesluten i det institutionella, och är en dynamisk och flytande aktivitet, den kopplar individers micro-aktiviteter med större grupper och den bredare institutionen där aktiviteten är lo- kaliserad och till vilken den bidrar. Forsknings-, utvecklings- och innovationsverksam- heten på Arcada kan bli en stark generator och katalysator av innovation för ett hållbart arbetsliv.

3 DISKUSSION OCH KONKLUSIONER

Syftet med detta kapitel var att spana i framtidens arbete och Arcadas strategi genom en practice-teori-lins. Genom att förstå hur de dagliga aktiviteterna – praktikerna – påverkar den långsiktiga strategin och visionen, kan vi systematiskt börja arbeta för en kultur där

det dagliga arbetet på Arcada gynnar såväl de anställda, studenterna och samarbetsparter. Practice-teorierna ger oss verktyg att förstå hur det lilla och vardagliga är kopplat till det stora och strukturella – åt båda hållen.

Arbetslivet är i snabb förändring, och ofta när man försöker förstå förändring fokuserar man på processer och på organisations- eller institutionsnivå. Practice-perspektivet däremot är intresserat av de praktiska aktiviteterna av enskilda individer tillsammans. Brown och Duguid (2000:95) skriver att praktik är ”processernas interna liv”. Ur den synvinkeln är det människornas aktivitet i de större processerna som i sista hand betyder något. Också det som räknas som prestation skiljer sig från en traditionell syn, där man ofta mäter hela organisationens prestation, medan practice-perspektivet fokuserar på de individer som organisationen består av – att hjälpa individer prestera är det viktigaste. För Arcada betyder det att det allra viktigaste är att personalen har kompetens (kunskap, färdigheter och förhållningssätt) att föra hela organisationen mot ett givande och hållbart arbetsliv.

Practice-perspektiven beaktar också hela samhällets sociala och ekonomiska kontext, inte bara individens och organisationens. Det ekonomiska och sociala sammanhanget påverkar både hur individerna kan agera och hur de tror att de får agera. Foucault ger som exempel på hur den minsta av aktiviteter, till exempel att soldater marscherar i raka rader, bygger på ett mycket större kontext och av sociala och ekonomiska förutsättningar. Den stora kontexten ligger inte utanför, utan är djupt internaliserad i allt som händer också på micro-nivå. För Arcada betyder det att vi måste fokusera på både aktiviteter och bredare erfarenhet. Vi måste lita på individens agens i hela samhället och erkänna kunskapens roll i denna agens.

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Changing Leadership in Times of Change

Maria Forss[3], Nathalie Hyde-Clarke[4]

Abstract

There is no doubt that the social, political and economic changes and challenges created by the rapid international response to the COVID-19 / Corona crisis will continue to have repercussions. As organisations have had to transform almost overnight from on-site enterprises to remote home-based environments, leadership roles and styles have been held up to greater scrutiny than before. Resilience and trust have become the most advised values and strategies. This paper presents some of the key arguments currently being discussed online and suggests how these may be applied in the post-Covid 'hybrid' working environment.

Keywords: COVID-19; leadership; change; resilience; trust

INTRODUCTION

Spring 2020 will be remembered by all of us, even if for different reasons and in fundamentally different ways. The pandemic meant that many of us had to change the way we worked, with disturbed routines, upended identities and loss of financial security.

In Finland, we went into a lock-down of society after the passing of the Emergency Powers Act in Parliament on 17 March 2020. All workplaces that in any way were able to do remote work were closed. Among these were schools and universities. Interestingly, change expert Kotter (2012) indicates that this type of change usually occurs at a speed of 1-2 years before all the personnel are onboard and have implemented the change. In this instance, and specifically with reference to the digitalisation of education, we had two days to prepare for the whole university to close its doors and stop all our analog and face-to-face activities. In a span of 6 months the personnel in universities have moved from 'on site' to 'remote' to 'hybrid', keeping all the students onboard and educational requirements and standards intact. Even Kotter would have been impressed. At the time of this writing, we have a hybrid model for executing education which means that not all the students will be on campus at the same time and not all the personnel either. In practice,

[3] Arcada University of Applied Sciences, Helsinki, Finland

[4] OsloMet University, Oslo, Norway, and Arcada University of Applied Sciences, Helsinki, Finland

this means that each lecture is given with at least half of its attendees participating online and the rest sitting in class with empty seats between them. This also means personnel meetings with some participating online while others meet physically. The ability to meet physically is often dictated by the number of chairs in the room. In order to maintain the correct social distancing, one can only fill every third seat. In some situations, where a register is not taken and seats assigned in advance, it is possible to be on campus, but still find oneself attending online as the venue itself is full. This raises more questions about physical and online 'presence' and can contribute to more frustration for those who are 'there' but left outside.

Hence, our research question is: what are the key skills and competencies needed for leading the hybrid-team in the pandemic working environment?

1 CHANGE ON EVERY LEVEL

1.1 HISTORIC

Let us recapture what kind of "change" the pandemic really did put in motion. The changes undertaken during the pandemic can be viewed from different perspectives. We have the historic perspective when, for the first time in 30 years, governments were invoking special laws (*undantagslag*) in order to regulate social and business spaces. In Finland, this was a special law created during the post-World War II era. A mood of national survival prevailed in the whole of Finland and a collective "we will get through this together" mindset predominated. In an historical light, these 6 months constitute a small puzzle and have brought up some interesting aspects that can well be recognised in a broader perspective of world changes. A few of these, related to the workplace, are discussed throughout this article.

1.2 EMBODIMENT/ PRESENCE

Another interesting aspect of the change during the pandemic was the sudden awareness of the "human body". Seldom do we see guidelines on how to sneeze or wash your hands from our national health leaders. Organisations have been keen on promoting "healthy bodies" and several "become-a-better-version-of-yourself" campaigns have been launched. While such campaigns have existed in the past, these were notable in terms

of online presence and the extreme focus on the body during the lockdown. We have seen leaders guiding staff and the greater public on how to use face masks correctly, and there has been much media debate on political figures and their own behaviour in this regard. The human body has suddenly become central in organisational planning and is no longer only *a medium for taking the head from one meeting to another* as Sir Ken Robinson so wittingly called it in his famous TED-talk (2006).

1.3 ECONOMIC CONSEQUENCES

Lockdown for many organisations during spring 2020 unfortunately also meant interruption of cashflow with devastating layoffs. Unemployment rates went through the roof and a collective holding of breath while preparing for the worst community scenarios were suddenly discussed everywhere. Even if universities as organisations were lucky in this aspect avoiding any layoffs, every educational unit was affected. For some units it meant students could not complete their practical components in the field, on-campus activities requiring access to special rooms or equipment ceased, and for some, it meant offering hastily put together new digital courses for a totally new type of learner (as we also quickly were able to offer courses for unemployed people).

1.4 POLICY AND POLITICS

All decisions made at the societal level are political. There is expertise to lean on, but when it comes to restrictions and changes in the law, it is politics. Overall responsibilities such as closing certain regional borders or imposing calls or banning/halting activities can only be done by politicians and since the essence of politics is intrinsically about different opinions, how and what should be prioritised is the question. Although the decisions made by the Finnish government received broad popular support, there were also some critical voices. That those decisions are questioned and, in some cases, divided, our worldview can also be traced to our teams in organisations. Among staff, there were also different perspectives on which measures would be necessary and which could be questioned. Colleagues were quick to compare their situation to those in other countries and related industries.

The communication of those policies also become problematic at times. At the start of the lockdown, decisions were being made on little information, or since they were largely

reliant on information coming from the government, were prone to change at a moment's notice or left until the last minute when more information had been received. Whereas in previous times one could simply walk down the corridor and speak to the relevant person to better understand the reasoning or the implementation of the suggested policy, communication was limited to email, phones and online forums. Unsurprisingly, there was the occasional breakdown in clear messages and resulting confusion about the latest approach to be taken. It also was, and still is, unclear how long these new policies will remain in place with official organisations assessing the situation from week to week and month to month, hence, a lot remains 'up in the air'.

1.5 CULTURAL

Few events are of such magnitude that they force us to change our entire cultural landscape. The pandemic was such an event. How we consume and produce culture has taken on completely new forms under Covid19. At its peak, we could no longer meet physically to share an experience together in the same place or to produce it together face-to-face. Instead, we were directed to the digital platform. Suddenly everything happened in only one room, the digital. We created spaces in TEAMS and Zoom, and used WhatsApp and Facebook as backups when needed. All our official meetings and lessons moved online. We created more relaxing coffee meetings online. Some of us created after-work meetings online. In the evening, we continued to entertain ourselves with some Netflix-time, online. This sudden abandonment of all our collective places (library, school, gym, theatre) also created serious mental challenges for many. The feeling of loneliness was more noticeable than ever before. Of course, this also affected many of our co-workers for whom the workplace has long offered a sense of belonging and identity. It is also worth noting that in some cases this loneliness or sense of exclusion gets more noticeable as the crisis continues.

The situation could also become more complicated as entire families found they would have to allocate specific spaces in their homes for 'office' purposes. Not everyone has a separate home office, and those who did, settled relatively faster into new routines. Others had to negotiate on a daily, and even hourly, basis with the rest of their family. So, colleagues joined online from a myriad of places in a variety of positions: on beds; at dining

room tables; perched on cabinets in the kitchen; and even in some cases, hiding in the closet as this was the only ‘quiet’ space away from small children.

What seemed ‘bearable’ and quite exciting in the first three months is perhaps less so as time goes on without any end in sight, and this is what leaders need to consider when adopting new strategies for the work place.

2 METHOD

With this paper we are interested in broadening our understanding of the challenges leaders faced/are still facing due to the pandemic and suggest some learning points as to what leaders are expected to pay attention to and foster, especially during this kind of crisis. For us to be able to answer our research question “what are the new skills and competencies needed for leading the hybrid-team in the pandemic working environment?” we have decided to read and analyse trend reports and articles written during this time (March 2020 onwards). These included blogs, online news reports and personal reviews by leading academics and consultants in the field. After reading through these reports we summarised our own reflections in short notes and compared and discussed the similarities and distinctive characters that were learned during the pandemic. We concluded that two concepts stand out, and they are *resilience* and *trust*. Hence, we continue with our informed reflective result analysis focusing on these two.

3 LEADERSHIP IN A CRISIS REQUIRES RESILIENCE

A simple way of describing resilience is when something bad happens to us, some of us will use all ten minutes out of ten to moan and complain, others will use one minute out of ten to moan and the rest of the time, nine minutes, search for solutions and act upon them. The latter group are the resilient ones.

During the Corona crisis, much emphasis has been placed on resilient leadership. Defined as ’the human capacity to meet adversity, setbacks and trauma, and then recover from them in order to live life fully’ (Kohlreiser et al., 2014), resilience in leadership is understood to be:

The ability to embed rapid and nimble decision-making into company cultures will be equally important through crisis recovery and into the next normal (Rengen, 2020 p.1).

Faced with the possibility that current strategy and policy guidelines may no longer be relevant as teams become fragmented and work remotely, resilient leaders use this opportunity to rapidly create, develop and transform their organisation (Rengen, 2020). It becomes imperative that leaders communicate clearly and often.

It starts with the recognition that team members will react differently in a crisis, and much will be based on their own individual circumstances. Aside from the range of mindsets and coping styles individual members will employ during the crisis (McGuinnes, 2020), there will be new challenges in the work environment as personal and professional quite literally start to occupy the same space for many. This was discussed earlier in the article when we mentioned that colleagues were essentially 'competing' for shared resources (such as Wifi or space) with children, partners or flat mates.

Instead of acknowledging these new pressures and adapting work routines to accommodate those, we know from numerous news articles and our own experiences, many in management chose to create additional online meetings and introduce a system that relied on more worksheets and report-based activities in order to better 'control and monitor' team output. This created more, not less, stress and exhaustion. In contrast, a resilient leader should relieve people of unnecessary work-related tasks (Accenture, 2020). Team members should be given the time and space to adapt to the new working conditions and concentrate on core activities. This does not mean that members should be left entirely to their own devices, but rather that the objectives become more focused and limited in scope in order to facilitate fast results that allow the team to move on to the next step in the process without too much distraction. All efforts should be appreciated and the team thanked when reaching certain milestones. Studies have shown that feeling out of control and unappreciated decreases the level of engagement at work (Wu et al., 2020). If team members feel supported, they too become more resilient.

When it becomes clear that a team member may not be contributing in the most effective manner, McGuinness (2020) recommends that the resilient leader does not avoid a tough discussion, but makes sure to frame it in forward-looking discourse: 'you seem to be

struggling with X, how shall we approach this going forward'. Similarly, there should be a willingness to admit when things are not quite going to plan, or if there has been a poor management decision that needs to be corrected. It is important that the leader does not become punitive or lock into errors or mistakes but rather addresses them in a constructive manner (Reeves et al., 2020), adjusts and moves on. The recommendation is that one looks ahead proactively, and responds instead of reacting (Accenture, 2020).

In 2020, working remotely meant utilising digital tools on a permanent basis. In many organisations, this entailed accelerated programmes to teach and support technological competencies. Studies have shown that less than one-third of the workforce were ready for this transition, as they were not effectively using digital tools in their day-to-day activities (Accenture, 2020). Aside from ensuring that those services and tools were available and functioning, it was also clear that leaders needed to know how to use those tools themselves. There is no doubt that watching a manager who has been advocating the widespread use of digital tools as part of an organisational strategy, struggling with their camera or being unable to share documents on online platforms after two weeks of remote working, affect the credibility of that strategy and staff morale. It is therefore vitally important that leaders themselves are aware of how to be effective online in terms of choice of tool, booking and holding meetings, camera placement, sound, and sharing documents in order to instill confidence in the team around the usage of those tools.

Peer support also improves the resilience of a team and organisation during times of crisis (Wu et al., 2020). Support groups should be created and individuals encouraged to join these whenever possible or when needed. While it does mean there is a possibility that a plethora of groups will spring up at the start, careful identification of those most used and needed should whittle the number down to a manageable and efficient support base in the long run. There are different types of peer support groups such as designated teams that share a common purpose on Teams, mentorship programmes and buddy-systems that rely on phone, emails and online chats, and then informal chat forums open to the entire organisation to share concerns or tips. Knowing that this form of support improves levels of engagement, the resilient leader both develops and encourages their use.

4 LEADERSHIP IN A CRISIS REQUIRES TRUST

The parable of the blind men encountering an elephant and each man interpreting their own designated part – ending up with each man understanding and describing the elephant based on their part in a totally different way, is a good starting point for understanding the need of organisational trust. As pointed out by Edmonson (2017), the poet John Godfrey Saxe summarised this accurately; "each was partly right, and all were in the wrong!" Especially during a disruptive and chaotic work period people will make quite different changes and fixes in order to get the work done. The risk for miscommunication and misunderstanding could not be higher. The leader's forefront task during such a time is to encourage team members to understand, forgive and encourage one another's highly different perspectives and solutions in daily work situations. Some leaders manage this better than others.

Edmonson (2017) and her colleagues investigated, trying to understand why this is so, and conducted research in cross-industry innovation projects. They were especially interested in why project teams were able to generate brilliant innovations even if each team member originated from very different industries with different cultures. After fostering an adaptive vision, Edmonson emphasises the importance for promoting psychological safety. This means creating a work culture in which each feels comfortable speaking up. Admitting mistakes and asking for clarification are other characteristics for this kind of culture. During the pandemic, each worker became highly aware that the work ahead was filled with question marks and experimental in nature. That is why leadership during the pandemic should repeatedly underline that things are not expected to "be perfect" and that no one is expected to solve any challenge alone. Even if we are not in the "same boat" we are in the "same storm". Creating a safe culture, leaders commonly model the desired behavior – being curious, acknowledge uncertainty, while highlighting their own fallibility. These and other tactics that promote trust in teams are especially important. Edmonson (2017, p. 59) frames it well:

> *To guard against anxiety about missteps and to foster inquisitiveness, leaders in successful projects emphasize the novel nature of the work, clarify the protective legal context, and frame the teams' diverse expertise and professional cultures as rich resources to mine together.*

There is an extensive body of literature on trust in organisations. Research demonstrates that trust yields real results in terms of economic growth and shareholder value, increased

innovation, greater community stability and better health outcomes (Rengen, 2020). That said, many theorists, including Dietz and Hartog (2006), point out that despite generous research focused on trust, there still seems to be a fragmented picture of the concept. Hence, their research, for example, zoned in on the measurement tools available for intra-organisational observations. After their analysis they conclude:

> *Finally, the decision to trust is based on a huge amount of often-conflicting evidence. While the majority of the measures focus, reasonably, on the conduct and character of the trustee as being decisive, we would urge researchers to also consider external factors constraining the trustee's behaviour. This is important, since a failure to account for these may lead researchers to assign too great an effect to the input provided by the trustee, and/or to any trust-influencing independent variable (such as an HRM intervention). (Dietz and Hartog, 2006, p. 572)*

What we take with us from this, is the notion of trust being built in a multilayered way. Leadership is trusting, modelling trust and enabling trust among employees. An additional conclusion we draw is that trust can also be seen as being built, being repaired or being preserved (Gustafsson, Gillespie, Searle, Hope & Dietz, 2020).

5 DISCUSSION

No one was prepared for the pandemic and its consequences for every workplace. However soon after lockdowns became widespread all over the world, reports, articles, blog texts and podcasts started focusing on this highly chaotic and unknown new way of arranging work. We as researchers eagerly consumed as much of it as possible. Our ambition as both leaders for teams around 20 people and researchers, sent us out searching for key competencies to foster during this paradoxical time. We found reoccurring inquiry in both academic literature and trend reports for need of resilience and trust during this time. Hence, we have defined the destination (good teamwork) first and worked backwards investigating what was needed during the pandemic to help us as leaders to create a more sustainable leadership style. Building a resilient work culture that does not get para- lysed during crises, demands exceptionally clear and frequent communication. Further, a resilient work culture is not supported by checking individual work contributions but rather by relieving people of unnecessary work-related tasks. This could be described as protecting the team from an additional sense of urgency – and mental exhaustion. The same formula works for building much-needed trust in the organisation during crises. Trust is built by taking it slowly, a quality extremely important to foster especially for

leaders surrounded by constant demands for fast decisions.

At this time, there is no indication to suggest that the situation will return to its pre-pandemic status. In fact, one could convincingly argue that given the fact that (1) digitalisation strategies have finally been realised to a greater extent than ever before, and (2) staff are developing competencies that allow for more off-location and online work, it would be unrealistic to expect that things would ever return back to what was before . We are likely to see hybrid-teams operating in flexible working environments continue well into the future. Trust and resilience are therefore key to leadership in the future.

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Internationalisation in Post-Corona Higher Education: What Will Change

Sandra Slotte[5], Camilla Wikström-Grotell[6]

Abstract

Higher education is generally international by nature, but the view of the function and goals of internationalisation has varied over time. Globalisation, digitalisation, the climate crisis and the ongoing Corona (Covid-19) pandemic with unpredictable consequences will in many ways affect how universities, its management, staff and students will act on the international higher education arena in the future. Universities play a key role in educating people for transformation toward a sustainable future and creating new knowledge for tackling 'wicked problems'. In this paper we will reflect on some of the most crucial future aims for and roles of internationalisation in higher education from a student, staff and societal perspective.

Keywords: Corona pandemic, internationalisation strategies, higher education, sustainable future

INTRODUCTION

The massive changes in the world that were already under way prior to the Corona (Covid-19) pandemic such as globalisation, digitalisation and sustainability, have only increased in speed and impact over the past six months. This has had a tremendous effect on internationalisation of higher education (IHE). All functions and even the purpose of IHE have undergone change and are evolving in a continuously uncertain environment, from education and research to mobility and student services, as well as employability and societal impact. The pandemic has given higher education (HE) a push not only into the digital world, but also an expressed societal need to focus on sustainability and the complex social issues, the so-called 'wicked problems' (Raisio, Puustinen & Vartiainen, 2018) such as financial and health crises, growing income inequality and climate change, both in education and research.

[5] Arcada University of Applied Sciences, Helsinki, Finland

[6] Arcada University of Applied Sciences, Helsinki, Finland

The ongoing global corona pandemic has added new aspects also to the debate on the United Nations Sustainable Development Goals (SDG) dedicated to education. Evaluation of the consequences of the corona crisis has shown that the most vulnerable young people suffer the most (United Nations, 2020). Target 4.3 of SDG4 which aims to ensure equal access for all to affordable and quality education by 2030 (UNESCO, 2015) becomes increasingly important. The social responsibility for HE to address other SDGs related to poverty, health and well-being, gender equality governance, decent work and economic growth, responsible consumption and production, climate change and peace, justice and strong institutions emerges even more clearly than before.

In this paper we will reflect on some of the most crucial future aims for internationalisation of higher education from a societal, student and staff perspective based on a view of education where global competence, a multicultural environment, diversity and strong networks with other universities as well as with different organisations in working life is seen as a prerequisite for success in HE and life. Therefore, internationalisation is about strategic choices and integration of international and intercultural dimensions into all activities at different levels (Opetushallitus, 2020). HE is expected to develop knowledge and innovations to minimise the effects of the pandemic crisis. For Arcada, it is also about supporting the preservation of the Nordic welfare society and its values.

1. AIMS FOR AND ROLES OF INTERNATIONALISATION IN POST-CORONA HIGHER EDUCATION

IHE has always been about increasing the quality of education and research as well as driving innovation and research but now, the urgency for well-functioning structures, processes and collaboration has increased significantly. HE is facing unprecedented global challenges that we need to solve, and IHE plays several important roles in shaping the post-Corona world, from educating future change-agents to collaborating with organisations and cities in regional and global ecosystems for innovation and development (Reichert, 2019, pp.11-13). The concept of citizenship refers to a feeling of belonging, and HEIs need to enable their students and staff to develop a feeling of belonging to the global community. Below we will discuss some of the major changes in IHE that have occurred and in the following section we will present some of the approaches Arcada will

take to address these changes.

1.1 EDUCATION AND RESEARCH

Due to the Covid-19 pandemic, education and pedagogy in higher education (HE) have temporarily moved almost entirely online which has some very positive implications for IHE. It increases accessibility for many more students to international and intercultural experiences since adding this element to education already online is a smaller step than developing the whole concept separately. This move towards blended and hybrid learning models was bound to happen sooner or later as a result of increased digitalisation but the pandemic accelerated this development to a much earlier point in time. This may also aid the addressing of global issues and wicked problems, as the tools and meth- ods for international collaboration have become accessible to more students and staff and we are currently becoming familiar with them. However, the changes are not only posi- tive. Distance education also increases inequalities in the provision of HE since not all students have equal access to e.g. broadband and suitable devices, or even to electricity. The quality of HE delivered almost entirely online may suffer as teachers and students are unfamiliar with the tools and methods suddenly taken into use on a broader scale. Moving online also challenges the social aspect of HE as well as assessment methods and might not be particularly well suited for certain disciplines or subjects. These changes pave the way for Internationalisation at Home (IaH) and Internationalisation of the Cur- riculum (IoC) discussed in the following section, but these need to be strategically imple- mented and managed in the long-term, not merely hastily implemented to fill a temporary gap in IHE (Altbach & de Wit, 2020).

The Covid-19 pandemic has also significantly increased the visibility of research and ex- perts, as news based on data, research reports and expert opinions has become abundant and accessible to all citizens on an almost daily basis. Research cooperation has bloomed with data being openly shared and researchers around the world having found each other and learned how to collaborate online without needing the opportunities and funding to meet in person (Baker, 2020). As the data highlighted by the pandemic has mainly revolved around effects on health, student mobility, well-being etc., there has been a general lift for humanities in contrast to the still recent focus on STEM (science,

technology, engineering and mathematics). There is also a new appreciation for and rise of scholar-practitioners who may be experts in their field but not researchers. The other side of the coin is that there might be a rush to publish and increased competition for visibility, which could have a negative effect on the quality of data and reported results as there may not have been enough time for e.g. peer review or proper processes for inexperienced researchers and practitioners (Grove, 2020).

1.2 MOBILITY AND STUDENT SERVICES

Student mobility is obviously one of the areas of IHE most affected by the pandemic with borders having closed and restrictions having been implemented. Fear for health and safety have increased among HE students as have anxiety and stress (UN News, 2020). This has led many HEIs to explore online opportunities for mobility, as well as for support services such as guidance and counselling. The focus has shifted from internationalisation through mobility of students and staff, to integrating internationalisation into the curriculum, including online opportunities for student and staff exchange. Concepts such as Collaborative Online International Learning (COIL) and VE (Virtual Exchange) are now drawing a lot of attention and many HEIs are looking to explore these as not only temporary replacements for physical mobility, but as sustainable and permanent alternatives which increase accessibility to international and intercultural learning opportunities (Leask & Green, 2020).

International students who are studying abroad and who have not left their host countries due to the Covid-19 pandemic, are facing a lot of insecurity in terms of residence permits and personal economy. Both of these are often heavily affected by the lack of employability and might lead to inability to complete a degree. This in turn can be an enormous setback and financial loss not only for the student, but for the family or community who made the pursuit of an HE degree possible in the first place. Many international students experience a lot of pressure from home while they also feel very lonely, especially if they have been isolated in a foreign country. The effects on their mental health and psychological wellbeing are largely unknown and international students probably struggle more than locals in accessing support and feeling at ease with the particular ways this support

works in a foreign country, language not being the only issue.

However, it is not only students whose wellbeing have been affected by the current changes in the world and in HE, but also staff have reportedly experienced stress and anxiety due to e.g. increased work load in moving education online, concern for their own health and that of their students with which they feel ill prepared to deal. The increased need for support services further highlights the need for a more strategic view of Student Services in HEIs, which thus far have been largely regarded as an add-on service and not a core function. Going forward in a rapidly changing and ambiguous world, the need for support and guidance as well as focus on student and staff wellbeing will only in- crease (Bothwell, 2020).

1.3 EMPLOYABILITY AND SOCIETAL IMPACT

International students have always struggled more than local students to gain employment in the host country and this situation has only escalated during the past year as massive cutbacks and layoffs have affected most countries and the most marginalised groups have become even more marginalised (Nicol, 2020). The aim of an HE degree is to gain employment and the chance of a better life but as these prospects diminish in the wake of the Covid-19 pandemic, so does the influx of a crucial foreign work force especially for small countries with an ageing population such as Finland. However, racism and popu- lism are on the rise in our society and also unconscious bias plays a big role in e.g. hiring practices and career guidance. As globalisation continues to reshape post-Corona socie- ties, we cannot afford to remain static in population composition, economy or societal development. Instead we need to find ways of positive societal impact by the international community that already exists within our borders as well as online, to future-proof our way of living, studying and working. This also involves the co-creation of regional ecosystems where HEIs, employers, organisations and municipalities work together to increase the attraction of the region for foreign talent who are looking for a suitable place not only to study or work, but to live and settle down with their families (Reichert, 2019; Mathies & Karhunen, 2020).

1.4 DISRUPTION, INCREASED COMPETITION AND CONTINUOUS LEARNING

HE has always been about innovation and development but at a slower pace and at a more theoretical level than currently experienced. The global challenges facing us now, have increased the urgency and need for real disruption to the way we live and HE needs to really get down to business and contribute to the rapid but sustainable development of our societies to create real systemic change. The Fourth Generation University collaborates with triple helix partners (academia, industry and government) to address common challenges and enhance innovation. This requires a range of changes in the organisations and the cultures within them towards e.g. increased autonomy, interdisciplinarity and open-mindedness. This broad range of collaboration enables the development of systemic sustainable solutions to societal challenges and gives the HEIs the role of a connector of academic disciplines, industrial sectors and regional needs and potential (Reichert, 2019, pp.12-13).

HEIs face increased competition for students as many external factors come into play such as government policies for immigration and health and safety issues which have significant implications for international student recruitment. Questions around the need to lower tuition fees for online studies have been raised as well as for how much return on investment an HE degree actually is in these times of low employability (Nicol, 2020). Many students have chosen to study for an HE degree precisely because of the lack of employment opportunities and there is an increased interest in continuous learning either in the form of a second full degree or more short-time modules and courses. The online education industry is blooming and there has never been a broader availability of education easily accessible and free of charge. Layoffs and isolation have increased the time people have on their hands, and many choose to spend it on personal and professional development. This has provided a serious boost for an interest in continuous learn- ing which we knew would be a future development for HE, albeit not so soon and so massively as the Covid-19 pandemic has brought with it.

1.5 VALUES AND GLOBAL CITIZENSHIP

The future aims of and roles for IHE is to find new pathways for positive societal devel-

opment locally, regionally and globally by enabling HEIs to be curious, flexible, agile and innovative. This requires data collection, research, education and work to operate in a blended environment (online and offline), focusing on collaboration and application in real world settings. Only then can we tackle global challenges and wicked problems together. However, challenges in possibilities for such collaboration and engagement are caused by e.g. social inequalities and the digital divide which put people in vastly unequal positions to affect change. A major task for HE is to ensure that the post-Covid-19world is based on common values, human rights, inclusion and equity as well as academic freedom (Harkavy et al., 2020).

Educating the future change-agents of the world requires HEIs to go beyond discipline-specific knowledge and ensure that all students have the opportunity to also develop entrepreneurial attitudes and thinking (Reichert, 2019, p.11). This closely connects to the concepts of Global Citizenship and global-mindedness. Global Citizenship has been defined by UNESCO in 2015:

> Global citizenship refers to a sense of belonging to a broader community and common humanity. It emphasizes political, economic, social and cultural interdependency and interconnectedness between the local, the national and the global. (Cotton, et al., 2019, p.348)

According to UNESCO, Global Citizenship Education aims to empower the learners to contribute both locally and globally to more peaceful, inclusive and respectful societies. It consists of global-mindedness, a sense of social responsibility and active engagement for transformation. This means that students are not only aware of global challenges and wicked problems but feel partly responsible for them and have the tools and capabilities to address them both individually and collectively (Fonteijn & Dekker, 2020).

2. INTERNATIONALISATION AS A STRATEGIC CHOICE FOR ARCADA

The challenges facing HE are global and affects the entire field within HE as the Covid-19 pandemic has shown. At Arcada, a roadmap for internationalisation (Arcada, 2020a) prepared in line with the 2030 strategy (Arcada, 2020 b), was implemented in the spring of 2020. The roadmap can be seen as a commitment, confirmed through action, to include international and multicultural perspectives throughout the teaching, research, and service

missions of our higher education. It shapes our institutional ethos and values and touches the entire higher education enterprise. This comprehensive approach is in line with the statements of Hudzik (2011) who points out the importance of comprehensive internationalisation as an institutional imperative supported by institutional leadership to embrace governance, faculty, students, and all academic services and support units.

2.1 INTERNATIONALISATION AT HOME AND OF THE CURRICULUM

Internationalisation at Home (IaH), which was already a rising trend in IHE, has received a lot of attention during the Covid-19 pandemic as borders were closed and physical mobility was severely reduced worldwide. Originally IaH was defined as an internationally oriented activity which was not strictly student or staff mobility but in 2015 Jos Beelen and Elspeth Jones redefined the concept:

> Internationalisation at Home is the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments. (Beelen Jones, 2015, p. 69)

This definition emphasises the importance of purposefully integrating international and intercultural dimensions into curricula to ensure that all students gain access to these learning opportunities. It also reminds us that not all learning takes place within the formal curricula in the classroom but may just as well occur off campus, e.g. in society or in the workplace. However, also that learning needs to be recognised and assessed. This is a new challenge for HEIs as collaboration with other actors in regional and global ecosystems will increase rapidly and learning will become much more agile with multiple stakeholders and settings.

Internationalisation of the Curriculum (IoC) is a very similar concept to IaH, and was developed in Australia by Betty Leask while IaH was developed in Europe. These two research teams started collaborating and there are a lot of overlapping areas. The three main differences are: 1) physical mobility is a part of the formal curriculum and thus also of IoC; 2) IaH not only recognises but places value on the learning that happens outside the formal curriculum, i.e. the informal or co-curriculum; and 3) IoC emphasises the role of also the support services in IHE.

> Internationalisation of the curriculum is the incorporation of international, intercultural and/or global dimensions into the content of the curriculum as well as the learning outcomes, assessment tasks, teaching methods and support services of a programme of study (Leask, 2015, p. 9).

At Arcada, a revision of the study plan is underway, where one of the strategic ideas is to strengthen IoC by clarifying international and intercultural dimensions in the studies and services as well as focusing on global competence in both education and research. We will also explore the many possible external learning environments for students and staff as part of IaH and initiate cooperation with stakeholders in society to co-create collective impact for increased integration, inclusion and employability for our students, staff and graduates. These initiatives include online tools and new hybrid forms of cooperation and learning that enable us to not only bring international and intercultural learning opportunities to everyone within Arcada, but also engage with external stakeholders and to overcome the barriers to meeting in person both nationally and internationally, imposed by restrictions due to the Corona pandemic.

2.2 INTERNATIONALISATION ABROAD

International mobility and exchange collaborations for both students and staff will be important in a post-Corona time, but there is a need to introduce more flexible formats. A major benefit of student mobility is the invaluable exposure it offers to different educational and cultural approaches. However, this depends highly on physical presence and active engagement with fellow students and university faculty. Therefore, sustainable post-Corona internationalisation efforts will need to embrace the potential of digital and blended learning while maintaining the benefits of student mobility.

Preliminary experience shows that interest in studying in another country has not diminished as a consequence of the pandemic. However, despite the HEIs' willingness to support virtual mobility arrangements and successful online learning in the spring semester 2020, there does not seem to be enough time to plan for large-scale virtual mobility during the current academic year. The Finnish HEIs estimate that in the academic year 2020/21 only 5 % of the outgoing Erasmus+ student mobility for studies would be virtual even if mobility funding programmes recommend HEIs to implement blended or

virtual mobility (Finnish Agency for Education, 2020).

Arcada will continue to support students and staff in skills development in genuine environments and cultures abroad. Partnerships with other universities provide many benefits for both education and research and physical meetings will be needed also in the fu- ture. Nevertheless, it often applies that only a small part of the staff and students have the opportunity to actually go abroad for longer periods. It is likely that the current situation will accelerate the adoption of blended learning mobility and other hybrid student mobility concepts more widely. At Arcada we want to actively develop and include new innovative hybrid models and blended learning concepts so that students and staff have more opportunities to participate in international activities in a sustainable way, consider- ing learning, knowledge and competence development as well as ethical dimensions. We also want to take advantage of the fact that Arcada in relation to size, is one of the most international universities in Finland and continues to attract international students to Finland and Arcada.

2.3 INTERNATIONALISATION AT A DISTANCE AND COLLABORATIVE ONLINE INTERNATIONAL LEARNING

As with IaH and IoC, Virtual Exchange (VE) and Collaborative Online International Learning (COIL) have also gained a lot of traction due to the Covid-19 pandemic. There are many terms and definitions for different forms of online international learning, e.g. telecollaboration and virtual mobility. The latter has been criticised for seeming not 'real' (virtual) and for not emphasising a collaborative approach. It is generally held, that the most important aspect of online international learning is co-creation and collaboration. VE is a term used e.g. by the European Erasmus+ program within both formal and informal learning, while COIL was a concept developed in the US (Erasmus+ Virtual Exchange, SUNY Center for Collaborative Online International Learning). The Corona pandemic has stimulated innovative approaches for distance learning in the whole education sector, reminding us of the essential role of e-learning competencies, tools and support services in HE.

At Arcada, academic studies have already included various forms of distance-based

learning before the Corona pandemic based on an e-learning pedagogical policy.

Purposeful investments have been made in digital tools, support functions and teacher competence. Various forms of blended learning and flipped classroom concepts have prepared students for student-centred learning. This meant that Arcada was relatively well prepared for the change process to move all education activities online in March 2020. The process has been evaluated and the results are reported in the paper by Ståhl and Levalahti in this volume. On a general level, both students and staff felt that the process of quickly reorganising all activities went well. However, virtual examination and practically oriented teaching proved to be major challenges. The staff experienced stronger peer support than the students. These experiences form a solid foundation to stand on when Arcada, in the near future, invests in virtual joint courses and degree programmes with partner universities in the Nordic region. The idea is to collaborate to create virtual or blended learning courses and research projects together with partner universities in order to be able to utilise diversity in competence and thereby offer students broader opportunities to develop their competencies and innovation skills.

3. CONCLUSIONS

This article aimed to reflect on some of the most crucial future goals of and roles for internationalisation in higher education from a student, staff and societal perspective and provide examples of how Arcada will adjust to the new circumstances brought on by e.g. globalisation, digitalisation and the Covid-19 pandemic. We presented an overview of some of the major current changes in IHE and what they may entail for HEIs around the world in general, as well as for Arcada in particular.

It is clear that the role of internationalisation in HE has become a crucial one as the nature of the challenges we are facing are international. HEIs need to enable all students to develop global competencies and a sense of responsibility for tackling these challenges that concern us all. This requires an immense amount of collaboration between individuals, institutions, regions and nations in various ecosystems where a multitude of views and approaches can be tested and developed. IHE values diversity, contributes to inclusion and takes a whole-student approach to learning and the use of learning environments. It

makes a case for continuous learning and development, the need for wellbeing and support, and it moves internationalisation of higher education for society (IHES) into focus.

This can be achieved through comprehensive internationalisation and active participation by HEIs and their partners.

The world will continue to change, and IHE will change as a response. The ever-changing world and renewed societies need new kinds of HEIs which actively take societal responsibility and co-create impact regionally, socially and globally. A critical and transdisciplinary approach to knowledge and global competencies among students and staff can be used for making good decisions about the future and creating a better, safer and more democratic world.

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Future Competencies in the Light of the Covid-19 Pandemic

Tore Ståhl[7], Filip Levälahti[8]

Abstract

The outbreak of the pandemic in the spring of 2020 forced all universities to convert all teaching to an online format at short notice. At Arcada, the situation was also seen as a unique opportunity to gather data on a broad front about how the situation was experienced from a student and staff perspective, and how online teaching succeeded. Data was collected through a web-based survey, completed by 1,035 respondents. The answers to the open-ended questions have been examined in terms of content in order to identify different thematic areas emerging from the material. The phenomena that emerged have been interpreted against the "Community of Inquiry" model that has thus come to serve as a post-hoc theoretical frame.

Traditionally, teachers are expected to have substance and pedagogical competence. The substance competence did not emerge from the material, but the pedagogical competence was identified, partly with new aspects. In addition, the need for communicative and technological competence emerged, which applies to teachers as well as other staff and students.

Keywords: education, competence, elearning, communication, technology

INTRODUCTION

During the spring of 2020, the Covid-19 pandemic forced educational institutions at all levels to close their campuses and both students and teachers had to adapt to studying and working at a distance. The end of the semester – from mid-March until the end of May – was an era of exceptional circumstances for all. We realised that the experiences of both students and staff will be exceptional and that the opportunity to collect data regarding these experiences was quite unique. Furthermore, we saw that documenting these experiences will provide a valuable resource for managing similar situations in the future and will also serve to measure Arcada's agility to adapt to unexpected circumstances. Thus, at the end of May we launched a web-based survey among students and staff to collect their experiences on a broad range of topics.

[7] Arcada University of Applied Sciences, Helsinki, Finland

[8] Arcada University of Applied Sciences, Helsinki, Finland

The survey produced a rich material, illustrating a multitude of aspects from both student and staff perspectives. The material turned out to provide insights into some of the competencies required in the future. Thus, in accordance with the title of this volume, we will suggest some future competencies, mostly among teachers but to some extent also among students.

1. THEORETICAL BACKGROUND

1.1 THE COMMUNITY OF INQUIRY MODEL

One of the tasks teachers have is to prepare a context wherein students can learn and develop. The teachers outline the learning objectives, prepare resources and learning activities. In an online context where the preparatory work is even more important, Community of Inquiry (hereafter CoI) can support the process from designing to assessing an online course. CoI provides an overview of the elements needed for "critical thinking, rational judgment, and understanding through engagement of the community" to appear (Vaughan et al., 2013, p 10). A collaborative constructivist educational experience takes place within the interaction of three elements of presence (Figure 1, Table 1). By understanding these elements, teachers can improve the experience of learning (Bush et al., 2010, p. 7; Garrison et al., 1999, p. 88).

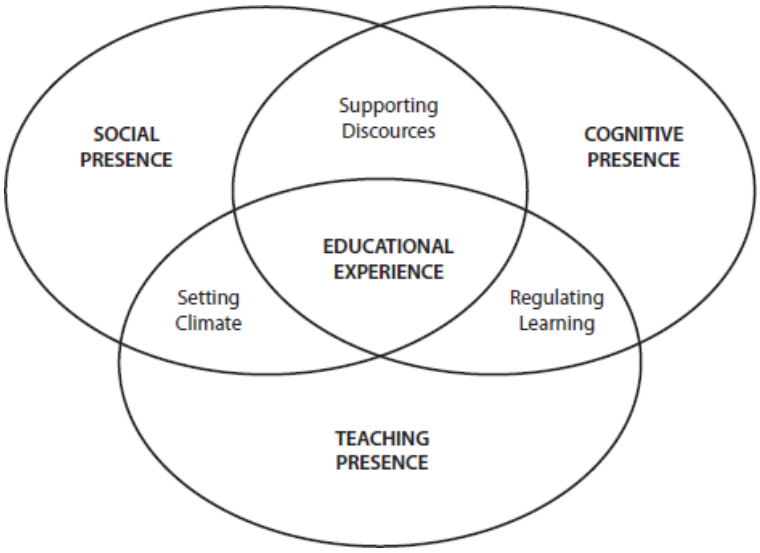

Figure 1. Community of Inquiry (Vaughan et. al, 2013, p. 11).

The elements are dependent on and influenced by each other. For example, the teaching presence creates the climate within social presence. Through teaching presence, learning

objectives are designed, content and activities are selected creating a cognitive presence. The cognitive presence supports and triggers the discourse taking place between social and cognitive.

Table 1. Elements of presence, their categories and indicators (Vaughan et al. 2013, p. 12).

Elements	*Categories*	*Indicators (examples only)*
Social Presence	Personal/Affective	*Self-projection/expressing emotions*
	Open Communication	*Learning climate/risk-free expression*
	Group Cohesion	*Group identity/collaboration*
Cognitive Presence	Triggering Event	Sense of puzzlement
	Exploration	Information exchange
	Integration	Connecting ideas
	Resolution	Applying new ideas
Teaching Presence	Design & Organization	Setting curriculum & methods
	Facilitating Discourse	Shaping constructive exchange
	Direct Instruction	Focusing and resolving issues

1.1.1 Cognitive presence

Cognitive presence is strongly associated with higher education and defined as "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry" (Garrison et al., 1999, p. 11). The process of inquiry starts with a triggering event that should be meaningful, spring from the experience of the group, be accessible and within the conceptual understanding of the students. This could be an opening question or a study case identifying the issue for further research, but also students reflecting and challenging each other (Dron & Anderson, 2014, p. 110). A triggering event is followed by exploration, integration and resolution which is the 'product' of the process (Garrison & Arbaugh, 2007, p. 98). The process is also an interplay between the personal (private world) and the peers (shared world), referred to as a collaborative constructivist perspective (Garrison et al., 1999, p. 92).

1.1.2 Social presence

Social presence is defined as "the ability of participants … to project themselves socially and emotionally, as 'real' people" (Garrison et al., 1999, p. 94). The definition was later expanded to include "a sense of other group members as well as self and common commitment to a task" (Dron & Anderson, 2014, p. 111). It is about creating conditions for open communication, emotional expression and group cohesion. Social presence is, how-

ever, not only about interpersonal relationship but also about recognising the purpose of the social presence, the academic goal (Vaughan et al., 2013, p. 13).

The importance of social presence will probably vary depending on the learning objectives. In pure information acquisition, the social presence may be less important but as the aim moves towards a deeper cognitive presence, the importance of social presence increases. In online learning, social presence has an impact on both learning outcomes and learner's satisfaction. (Garrison & Arbaugh, 2007, p. 159)

1.1.3 Teaching presence

Interaction by itself is not sufficient without direction and guidelines (Garrison & Arbaugh, 2007, p. 163). Teaching presence is defined as "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson et al., 2001, p. 5). It is the unifying force in CoI that "… brings together the social and cognitive processes directed to personally meaningful and educationally worthwhile outcomes" (Vaughan et al., 2013, p. 12).

Since the responsibility can be shared among the participants in a CoI, this element is not called teacher but teaching presence. In the process of creating and obtaining a CoI, teaching presence holds three categories (Anderson et al., 2001, pp. 5-10):
Design and organisation include e.g. designing learning objectives, learning activities, timelines and guidelines for the online community. These are communicated in advance so that the students get the whole picture and can rely on the fact that learning activities will lead them to the objectives. ***Facilitating discourse*** is about keeping up the engagement and interest of the student. This activity is both about encouraging the students to be active in the community (sharing ideas and feedback), and also about focussing on the learning objectives. ***Direct instruction*** is what we usually associate with teaching, but it is definitely not about lecturing but rather about managing learning activities.

1.2 TECHNOLOGICAL CHANGES IN THE EDUCATIONAL CONTEXT

In order to understand the mediated context where teachers suddenly found themselves as the lock-down was carried out, we present a short retrospect at the past decades' tech-

nological development and how it has affected the teachers' working environment.
In the late 1990s or early 2000s, higher education institutions including Arcada started using various net-based learning environments[1], also called Learning Management Systems (LMS) or Virtual Learning Environments (VLE). It soon became apparent that the communication environment started to change (Ståhl, 2013, pp. 57-60). During the first decades of this century and still up until the pandemic, classroom tuition was dominant and the VLE was often merely a distribution channel for electronic materials (Ståhl, 2014, p. 94).

During these decades, various communication tools entered and exited the scene (Skype, later Skype for business, Adobe Connect, Zoom). The same applies for tools for collaboration and sharing (e.g. DropBox, MS-OneDrive and Google Drive) that eventually merged or were extended to offer both communication, collaboration and sharing (e.g. MS-Teams, Google for Education).

Smartphones as we know them today[2] were introduced in 2007 but in Finland, 2010 can be regarded as a milestone as smartphones became available for the broad audience. According to Official Statistics Finland, the number of smartphone owners doubled during 2010-2011[3], which was speeded up by affordable 3G/4G-subscriptions including generous mobile data. By 2018, 99% of the population group aged 16-24 had access to a personal smartphone[4]. It is not an exaggeration to say that the rapid increase of smartphones and their applications has increased the use of internet-based resources exponentially, and also revolutionised the communication climate and practices.

The product scene has been volatile with frequent product extinctions and mergers, updates and product releases. In this restless market it has been challenging for educational institutions to make informed decisions about which products to choose and from a teacher perspective, repeated migrations have been stressful. To a large part, technological development has been run by commercial actors and thus, the starting point has been technocratic and the objective to develop products that sell (cf. Stocchetti in this volume).

[1] For Arcadas part WebCT in 2000 and since 2011 itslearning, https://itslearning.com/fi/
[2] See e.g. https://en.wikipedia.org/wiki/Smartphone
[3] http://www.stat.fi/til/sutivi/2012/sutivi_2012_2012-11-07_kat_003_fi.html
[4] https://www.stat.fi/til/sutivi/2018/sutivi_2018_2018-12-04_tie_001_fi.html

A starting point in pedagogics and research may rarely be discerned, except for VLEs and library resources.

2. DATA COLLECTION

To collect the experiences of both students and staff, we approached the task with a rather wide rake. We noticed that similar surveys were popping up both nationally (e.g. Ikonen, 2020; Ikonen et al., 2020; SAMOK, 2020) and internationally (e.g. Lederman, 2020a; Lederman, 2020b; Veletsianos & Kimmons, 2020) and sought inspiration from them. Apart from those, we included specific questions with our local interests in mind.

2.1 RESPONDENTS AND SURVEY DISTRIBUTION

All degree students and all staff at Arcada formed the target population (Table 2) that was approached by total population sampling. The web-based survey "Corona in the Rear-view Mirror" was set up on Arcada's in-house survey service and distributed as personal invitations by email. For this purpose, the respondents' mail addresses were used together with some background data (study programme, department, etc.) to enable jump patterns and categorising the responses. Each invitation contained a unique link to the respondent's personal web form that could be completed only once. Prior to analyses, the data set was anonymised as declared in The Privacy Notice for Scientific Research[5].

2.2 CORONA IN THE REAR-VIEW MIRROR

The survey contained 48 questions distributed over 17 pages. Twenty-two items were presented on Likert-type disagree-agree scales displayed in arrays, usually containing sub-questions. Seven items were multiple choice items and nineteen items were open-ended questions.

The survey covered a wide range of topics, including e.g.:

- Learning activities; open-ended questions about successful and less successful learning activities.
- Interaction and communication.
- Social aspects.
- Pedagogical readiness and support.

[5] https://www.arcada.fi/en/dataprotection/privacy-notices/scientific-research//postcorona

- Technical readiness and support.

Due to the suddenly emerged circumstances, we were not able to phrase specific research questions nor to apply a theoretical frame. The survey questions were inspired by other surveys, by reports in media and by anecdotal testimonies within the university. The task was rather to collect as broad a description as possible of how the lock-down was managed and of the consequences for teaching, studying and learning. The long-term purpose was to document the experiences to support informed decisions in similar future situations.

2.3 DESCRIPTIVES

The invitations were sent to 2505 respondents out of which 1035 completed the survey. The high response activity among students is very much thanks to the teachers who engaged in encouraging students to respond. Table 2 provides an overall picture and illustrates the variation in response activity.

Table 2. Response activity across departments.

	Students			Staff		
Department	N	n	%	N	n	%
Business Management and Analytics	782	236	30 %	27	17	63 %
Energy and Materials Technology	276	116	42 %	13	8	62 %
Health and Welfare	518	233	45 %	27	21	78 %
Culture and Media	255	105	41 %	21	17	81 %
Healthcare	473	202	43 %	20	13	65 %
Other				93	67	72 %
Overall	2304	892	39 %	201	143	71 %

3. RESULTS

The results we are reporting are mainly based on the responses to two pairs of open-ended items. Both pairs had an introductory text to set the context.

The first pair of questions read:

1. Name a learning activity that was new due to the exceptional circumstances, and that you think was **successful**.
2. Name a learning activity that was new due to the exceptional circumstances, and that you think was **not successful**.

The second pair of questions read:

In the questions below we hope you can describe some examples from situations online.

1. In online situations, other participants have contributed to a **good mood** through the following behaviour.
2. In online situations, other participants have caused a **bad mood** by the following behaviour.

In the following, the phenomena emerging from the responses will be reported "as is". In addition, we will report some of the closed item results, to the extent they connect to the emerging phenomena.

3.1 SUCCESSFUL LEARNING ACTIVITIES

This question pair collected 534 responses describing successful learning activities and 344 examples describing less successful activities. In addition to the themes below, reflection stood out, not as a learning activity but as an overarching and appreciated feature. The responses were categorised in order to discern the emerging themes. Table 3 presents the themes that scored highest among the successful and the less successful activities.

Table 3. Top-five successful and less successful learning activities. The latter turned out not as actual activities but rather, phenomena causing discontent.

Successful learning activities	Count	Less successful activities	Count
Lectures online	161	Group works	54
Seminars, Thesis forum and presentations online	82	Lack of interaction	51
Supervision online	38	Lacking pedagogics	41
Group works, workshops online with breakout rooms	37	Written exams and maturity tests online	32
Written exams and maturity tests online	32	Lack of clarity	24
Discussions online	21	Technical problems, lacking tech competency	23

In the following, we have chosen to present three of the emerging themes.

Online lectures collected by far the most comments. Most students experienced that online lectures increased interactivity since the threshold to ask or comment in the chat was lower than in an auditory setting. A small number of responses did, however, indicate the opposite. Although online lectures were mainly seen as positive, the responses also acknowledged that online communication is tiring and that there is a challenge in main-

taining attention span in online settings. These topics are further reported below (section 3.2).

Group work online was mentioned frequently and using so-called breakout rooms apparently played a crucial role. Forming groups, also during large lectures, is flexible since the teacher can either choose which students to allocate into each group or choose to create randomised groups. Above all, moving between the breakout rooms and the main session is extremely efficient compared to the same manoeuvre in a classroom setting. Further, the teacher can easily supervise the groups by visiting the breakout rooms.
Students appreciated that the breakout rooms were left open after the lecture, allowing them to maintain momentum and continue working on their group assignments or simply to socialise and mingle.

In responses where group work online was mentioned as less successful, the reasons behind them could be traced back to ambiguity in the group assignment, difficulties in finding a common time slot or to uncertainty regarding how to work on the assignment practically.

Clarity of tasks and communication is self-evident and was not mentioned among the successful learning activities but instead, lack of clarity emerged from the comments and identified to occur e.g. in individual and group assignments and in the distribution of information, material and activities.

The expectation for clarity naturally applies to assignments in any setting. The pandemic lock-down may have affected this area by forcing teachers to produce more and new assignments under time pressure, which naturally may lead to assignments being inaccurate or ambiguous.

The move to online teaching and studying required the introduction of new online tools and due to the sudden shift, there was no time for the teachers to get familiar with the new tools, not to mention to make informed choices among the tools. Taken the circumstances, it is understandable that both information, material and activities may have been spread over too many platforms, which confused the students and made it challenging to know

what to do and what to find where.

3.2 BEHAVIOUR IN ONLINE SETTINGS

The questions about contributing with a good mood collected 529 examples of positive online behaviour and 420 examples of negative online behaviour. The most prominent examples of positive and negative behaviour (Table 4) appear as pairs of "behavioural virtues and vices".

Table 4. Virtues and vices in online behaviour.

Positive	Count	Negative	Count
Being active, discussing, showing engagement	141	Being passive, silent, absent and not prepared	164
Being disciplined, polite, and respecting other participants	114	Being talkative and impolite, interrupting and not including other participants	52
Greeting all participants, being concerned, inclusive and encouraging	94		
Using a web camera	59	Not using a web camera	54
Communicating over chat and using emojis	45	Not using microphone appropriately, lacking tech competence expressed in other ways	49
Showing sense of humour	37	Not cooperating, e.g. in group assignments	23
Contributing with informal topics beyond the actual study subject	32	Multitasking	23

Being active, participating in discussions and showing engagement as opposed to being passive, silent, not prepared and signalling absence were the most prominent pairs of virtues and vices emerging from the responses. Closely connected to these is communicating one's active presence by using the webcam in an appropriate way, as opposed to not using a webcam.

The other group of behaviour mentioned in several responses was about ordinary civilised rules of conduct such as observing polite behaviour, respecting the other participants and applying good "meeting culture". Closely related to these, the respondents applauded showing concern and encouragement, including all participants and acknowledging all simply by greeting others by name, at least at the beginning of a session. The corresponding vices were described as being impolite, being overly talkative, interrupting others and ignoring some participants.

3.3 SOME QUANTITATIVE MEASURES

Success factors and behavioural virtues reported in the previous sections were reflected in some of the closed questions about pedagogical and technological readiness, loneliness and support. The results of these items are briefly reported here since they contribute to understanding the discussion regarding the suggested competencies.

Regarding the pedagogical and technological readiness, the respondents were asked for a self-assessment (scale 1.6). In general, and especially among staff, both pedagogical and technical support were applauded. Interestingly, there was a connection between technical skills and access to support such that those with weaker (1-3) technical skills reported significantly lower access to support than those with stronger (4-6) skills.

Among teachers, we found a strongly moderate correlation between pedagogical readiness and perceived technical skills ($r(58)=.625$, $p<.001$) but also between access to pedagogical and technical support ($r(52)=.632$, $p<.001$), and further a moderate correlation between pedagogical readiness and access to pedagogical support ($r(56)=.433$, $p<.001$).

4. DISCUSSION

In this section, we will interpret and discuss how the examples referred to in the results section express the various elements of presence as described in the CoI model.

4.1 COGNITIVE PRESENCE

The students' responses provide insight into the degree of cognitive presence, defined as the extent to which learners are able to construct and confirm meaning. Among the learning activities, online lectures can contribute to cognitive presence especially, or perhaps even provided that they include elements of reflective activities. Considering the fact that online activities are tiring (see e.g. Jiang, 2020), it seems important to reconsider the structure of lectures when moving online.

The discussion regarding the short attention span is part of this challenge. We do not subscribe to generalising utterances about modern students having an attention span of eight or whatever minutes and even suggesting that we should accept a short attention

span as the new normal. This is probably an over-simplification that overlooks the advice by Bligh (2000, p. 61) that (video) lectures should contain some kind of activity to vary stimulation every 20-30 minutes, in order to maintain attention level. Apparently it is not about the lecture length per se but rather about maintaining attention and interest by sequencing and varying the learning activities.

Thus, teachers should include more and various kinds of "interruptive" learning activities into the structure of online lectures. Group work involving reflective discussion stood out as a successful activity and due to the online communication tools, migrating dynamically between the online main session and the breakout rooms is both easy and efficient. When creating reflective activities, we can bear in mind the importance of clarity. The indicators and sub-elements described by Garrison et al. (1999) and Vaughan et al. (2013, pp. 55-60) may support this task: a triggering event (question, statement, scenario, film clip, etc.) can be used to activate the students. The following task or inquiry needs to be purposeful, i.e. connect both to the students' previous knowledge and to the subject topic, thus bridging the private and the shared worlds and advancing the inquiry.

The topmost virtue emerging from behaviour in online settings (section 3.2) is much about social but also about cognitive presence. Being actively present, participating in the discussion and showing engagement can all be regarded as input, feeding the collective reflection process but at the same time they can be seen as an output, as an expression of reflection (and learning) taking place.

4.2 SOCIAL PRESENCE

The most basic and crucial feature in social interaction is the ability to see and hear, perhaps also feel the counterpart and to read their mood and reactions based also on non-verbal cues such as voice and tone, mimic and body language, or "…to project themselves … as ‘real’ people in their full personality" (Garrison et al., 1999, p. 94). This is strongly supported by the "top virtues" (Table 4). Consistently, the responses contain numerous testimonies regarding the opposing vices that is, participants not showing their presence by neither communicating nor using their webcam. Lack of interaction also emerged as one of the phenomena causing discontent (Table 3).

The responses contained comments about online lectures increasing interactivity but as

opposed to this, a number of students experienced that the threshold for asking a question over chat was higher than in a classroom. This indicates a confusing contradiction: on one hand, the students seem to be lonesome and longing for the social network of their study mates but on the other hand, they tend to hide behind their disconnected webcams, also when working in smaller groups. To shed light on this question, our survey material is not sufficient but instead, we would need to explore it e.g. using focus groups.

Still, this phenomenon raises a special concern about students having less opportunities to meet their classmates and teachers and lacking the opportunity to develop a social bond both with the people and the campus. It is important to address the risk for isolation and alienation (cf. Stocchetti, this volume).

4.3 TEACHING PRESENCE

The aim of teaching presence is to reach a "collaborative constructivist educational experience" through 1) design and organisation, 2) facilitating discourse and 3) direct instruction.

Lectures, theses and other seminars and presentations online emerged as successful learning activities. apparently because they were designed and organised so that they maintained the students' interest and the participants were active/activated and included. Group work, often including breakout rooms, also scored high due to clarity in design and task description, probably also since they provided a convenient variation (section 4.1) in activities. Lack of clarity emerged among the less successful activities, appearing as ambiguous assignments and scattered information. The sudden transition to online teaching probably contributed to too many tools and platforms being applied.

Lacking pedagogics emerged from several comments indicating e.g. that the students experienced some assignments as meaningless since they required a considerable amount of writing without promoting reflection.

The behavioural virtues and vices (section 3.2) can be regarded as expressing social presence but stemming from the teaching presence, where the teacher as designer and facilitator prepares the context and the atmosphere.

From a CoI point of view, the examples show that teaching presence often becomes visible through the cognitive and social presence elements, e.g. by organising the communication context in such a way that it supports the other elements of presence (cf. Fig. 1).

4.4 FUTURE COMPETENCIES

In traditional (pre-digital) educational settings, teachers were expected to have a pedagogical competence and knowledge about the subject they were teaching. With the introduction of digital technologies, technological competence has become more prominent. Unfortunately, technological competence has sometimes overshadowed pedagogics and mostly, communicative competence has been totally overlooked.

In current and future (post-digital) educational settings, we propose that the competencies of teachers should cover four areas:

1. Pedagogical competence.
2. Substance competence.
3. Technological competence.
4. Communicative competence.

The responses reflected the competencies as discussed below.

4.4.1 Pedagogical competencies

Choosing the resources and activities that will lead the student from a triggering event, through exploration and integration, to finally end with a resolution is a vital part of the pedagogical competence. Thus, pedagogical competence is indirectly associated with cognitive presence over teaching presence. By utilising the categories within teaching presence; design and organisation, facilitating discourse, and direct instruction, the teacher establishes and sustains the social and cognitive elements of presence. Approaching the competencies from this point of view may help shifting the focus of teaching from content towards student-centredness.

In the cases where our survey responses criticised lectures, it was probably due to the sudden shift forcing teachers to transfer classroom activities into an online setting, without having the time to rethink and adapt the activity into the new format. This highlights the importance of making pedagogically informed choices when to use any learning activity. The pros and cons with lectures are concisely and clearly summarised by Bates

(2019, p. 114, with reference to Bligh):

- Lectures are just as effective as any other methods for transmitting information (and vice versa).
- Lectures are not well suited for promoting thought, for dealing with attitudes or values or for inspiring interest in a subject.
- Lectures are ineffective for teaching behavioural skills.

We mentioned earlier (section 3.1) that reflective learning activities appeared as a common denominator for the successful learning activities, which corroborates the suggestions by Bates.

The use of webcams (next section) is also part of pedagogical competencies. Due to the many aspects and considerations connected to webcam use, we wish to emphasise the importance of anchoring it in pedagogical practice (cf. Marquart & Russell, 2020).

4.4.2 Communicative competencies

As we move from the natural classroom setting to the mediated online setting, communication is affected in a number of ways. Assessing mediated communication by the criteria for natural communication will turn out to be unproductive. In order to assess mediated communication in a productive way, we need to be aware of the constraints and shortcomings caused by the tools, which adds a new aspect to our communicative competence. It is probably helpful to study the asynchronous and synchronous forms of mediated communication separately.

Asynchronous communication covers e.g. communication over email or over bulletins and discussion forums in a VLE. Our material contained some student comments about teachers not responding swiftly to their questions. This frustration is understandable but should be assessed against possibly unrealistic expectations. The students will probably be active almost 24/7 but that does not mean that the teacher should be available around the clock. Thus, for the sake of the teacher's personal coping, it may be motivated to declare a "service level", e.g. that students should primarily check the existing information on the study administrative system and the VLE. If general questions arise, they should post them on the discussion forum. Questions on the discussion forum or by mail will be responded to, not immediately but within a specified time (e.g. 48 hours).

Most teachers have access to a variety of asynchronous communication tools, and part of the "new" communicative competencies is to choose the appropriate tool for each purpose and to inform the students about which "service level" they can expect. One of the main principles should be, by choosing the appropriate tool, not to repeat the same information on several places, since that will increase teacher workload and, sooner or later, lead to the different versions holding conflicting information.

Synchronous communication was the common topic for both successful learning activities and online behaviour. Online communication was described as tiring, and the other participants appearing absent was demotivating. Most of the critique can be traced back to an unpreparedness regarding the sometimes surprising features, and key to coping with these effects is understanding why they occur.

In face-to-face communication, we are used to both verbal and non-verbal cues such as facial expressions and body language. In online settings, the non-verbal cues can be missing or when available, distorted. Therefore, communicating online requires more focus and energy to process the non-verbal cues in addition to the subject at hand (Jiang, 2020). Further, communicating online with someone one has never met is even more challenging since interpreting the non-verbal cues is not supported by the perception one has about the person. As Jiang's experts point out, it is important for both students and teachers to understand the importance of seeing the others but also to understand that webcams do not necessarily need to be active throughout the entire meeting. Thus, turning off the webcams may be a method to reduce the load, but it should be accompanied by an agreement regarding purposeful webcam practice.

In real-life conversations, silence creates a natural rhythm and holds a function in turn-taking behaviour. In online settings, however, silence caused by delay easily creates anxiety about malfunctioning technology. Further, silence can cause us to perceive the other as less friendly or focused. (Jiang, 2020; Schoenenberg et al., 2014)

To conclude, in synchronous online settings, the communicative competencies include the awareness of how online tools may affect how we perceive the others, with or without visual cues. This may also be relevant for the private-public dilemma addressed by

Stocchetti (this volume). Since online communication is energy consuming, we might add a "coping competence" that is, taking time before or after meetings to catch up socially and informally (see Table 4) and also allowing recovery time.

We suggest that the confusing contradiction with loneliness and webcam absence (section 4.2) might be alleviated by improving all users' understanding of the special features of mediated communication.

4.4.3 Technological competencies

In the open-ended responses, technological competence, or rather lack of it, was mentioned but only to a modest extent. This may indicate that the majority of both students and teachers were well prepared, and for the teachers, both pedagogical and technical support was provided in an agile manner.

The correlation between technical skills and access to support indicates that the skilled ones find support when they need it, whereas those with weaker skills do not (know how to) find the support they would need. The phenomenon is familiar from previous studies but is problematic, since it contributes to maintaining a digital divide.

The correlation between pedagogical readiness and technical skills may indicate that technical skills support the pedagogical competence, e.g. by enabling a broader palette of learning activities to choose from. The correlation between access to pedagogical and technical support may be due to dealing with pedagogics and technology in an integrative manner. Thus, when a teacher seeks support for a technical issue, the problem may turn out to be pedagogical or vice versa. As with technical readiness, the moderate correlation between pedagogical readiness and access to pedagogical support may indicate a pedagogical divide that is, those who perceive themselves as "pedagogically aware" will find support when they need it, whereas those whose pedagogical thinking is less consolidated do not know how to find the support they would need, or which questions to ask.

The lesson learned here is twofold. Firstly, we should not ignore the fact that all students are not digitally savvy (cf. Ståhl, 2017) and the same also applies to staff. Secondly, the development of teachers' technological competencies should always have pedagogical and communicative aspects as its starting point.

5. CONCLUSIONS

In this paper, we have suggested teacher competence as consisting of four areas and hopefully illustrated how these competencies are connected to the CoI model and its elements of presence.

Pedagogical competence is still superior to the others and currently shifting its focus from knowledge about teaching towards knowledge about learning. Technological competence is indispensable within all areas and professions in current and future society. It needs to be emphasised that technological competence is not just about knowing how to use gadgets. More importantly, it is about understanding why technology may have negative effects and how to prevent or avoid them. The finding that those with poorer skills do not find their way to support functions, needs to be addressed. Finally, technological competence also includes the ability of choosing not to use technology.

Communicative competence is emerging in various aspects in our material. Currently, we have a multitude of tools that supplement natural communication with various forms of mediated communication. Thus, the communication context has become more complicated and therefore, communication as action is much more challenging. We do not subscribe to Stocchetti's (this volume) stance that mediated communication is equal to absence but rather, presence takes other forms of expression that we need to be aware of. The results confirm our impression that communicative competence should be regarded as an integral part of a teacher's competencies.

The results show that communicative and technological competencies apply to both students and teachers. In the ongoing revision of Arcada's curricula, communicative and technological competencies are foreseen as part of generic competencies, for which the results presented here provide evidence.

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Coaching as a Tool Supports Creativity in Online Interaction

Mervi Hernberg[9], Tove Kietz[10], Tomas Träskman[11]

Abstract

This paper draws from a field study of experiment and innovation processes done online during the Covid-19 lockdown in Finland. The case study contributes to practice by presenting the work involved in turning an open innovation strategy into an actual workable practice in a specific organisational unit. The findings expand on theory suggesting that both the loci of the knowledge and the management of it might be outside of the single organisational unit (Chesbrough, 2003; Chesbrough & Bogers, 2014; Lakhani, et al., 2013; Lakhani, et al., 2013; Vanhaverbeke & Cloodt, 2006), thus supporting Gassmann & Enkel's (2004) claim that the organisation that emulates an Open Innovation (OI) approach has to be prepared to transform its 'solid boundaries into a semi-permeable membrane that enables innovation to move more easily between the external environment and the company's internal innovation process'. One particular contribution of the paper is to argue that someone has to facilitate interaction in this 'membrane', thus the paper contributes to practice by highlighting the role of facilitation and coaching in online environments.

Keywords: creativity, online coaching, SPRINT, online creativity tools, facilitation, innovation

INTRODUCTION

The paper draws from a field study of an experiment and innovation process done online during the Covid-19 lockdown in Finland. The case study contributes to practice by presenting the work involved in turning an open innovation strategy into an actual workable practice in a specific organisational unit. The findings expand on theory suggesting that both the loci of the knowledge and the management of it might be outside of the single organisational unit (Chesbrough, 2003; Chesbrough & Bogers, 2014; Lakhani, et al., 2013; Lakhani, et al., 2013; Vanhaverbeke & Cloodt, 2006), thus supporting Gassmann & Enkel's (2004) claim that the organisation that emulates an open innovation approach has to be prepared to transform its 'solid boundaries into a semi-permeable membrane that enables innovation to move more easily between the external environment and the

[9] Arcada University of Applied Sciences, Helsinki, Finland

[10] Arcada University of Applied Sciences, Helsinki, Finland

[11] Arcada University of Applied Sciences, Helsinki, Finland

company's internal innovation process'. One particular contribution of the paper is to argue that someone has to facilitate interaction in this 'membrane', thus the paper contributes to practice by highlighting the role of facilitation and coaching in online environments.

After explaining the context of the study, the structure of the paper is divided into two sections analysing distributed innovation activities in terms of interface and architectures of participation. This structure is inspired by Martin Kornberger's study on the design of distributed innovation systems, where a key concern is to create "fit" between exogenous forces and what is treated as internal variables such as people, architectures, routines and culture (Roberts, 2004).

1. CONTEXT

In March 2020, a multidisciplinary team consisting of lecturers from Arcada UAS started a course with the name 'My Future Worklife' (15sp). This course was part of a bigger project called The Work-Integrated Pedagogy in Higher Education (WORKPEDA) (https://www.tyopeda.fi/eng) and was based on integrative pedagogy, ecosystems and service design thinking. The focus of the course was on developing theoretical and methodological knowledge that prepare students for real life work experiences in order to strengthen the students´ professional identity and enhance future employability. Learning outcomes include entrepreneurial skills and, for example, the ability to lead, collaborate with others and work effectively in groups as well as being sensitive to others and handling conflict.

The course started on campus but due to Covid 19, and the closing of the Arcada campus, the innovation moved online. Innovation online is not uncommon and studies (e.g. Birgelyte 2019) show a diverse landscape where there is no one-size-fits-all approach to knowledge sharing. In hindsight, some of the outcomes proved timely as students were supposed to "resolve problems" but also challenging as they were to "make informed decisions" in a situation characterised by much uncertainty.

2. FINDINGS

A good outcome from structured creativity is possible to achieve online with a clearly facilitated pedagogical process organised by a multiprofessional teacher team. One needs to build trust among the students that the process will deliver an outcome even if it means that you have to cope with uncertainty during the process.

2.1 INTERFACE

According to Kornberger (2016), when interacting with distributed innovation systems, "the task of design is to facilitate horizontal communication between network actors, including firms, on the one hand, and external producers in distributed innovation systems, on the other". This he calls 'interface' and interfaces can be both online but also take on other forms, as in this study, where a "challenge" had this function.

In distributed innovation, designing good challenges is key and the main challenge design principle should be transparency in terms of ideas, participants and interactions (Birgelyte, 2019). In this case the students were introduced to a challenge formulated as such: Use service design thinking to create a scalable health enhancing (digital) concept that reaches and engages a wide range of employees with extra thought for the ones that need support the most. Two lectures and literature introduced the students to theories of service design thinking. Guided by figure 1. Holistic view of wellbeing, the students were encouraged to approach the problem holistically.

Figure 1. Holistic view of wellbeing (Folke et al. 2016).

A multidisciplinary team of lecturers was used to facilitate interaction on campus and course content was built around student-driven creativity and a problem-solving process. However, when campus closed, the coaching process demanded a totally new agile approach in order to implement it and steer it for the students that were scattered around the world.

Weekly coaching sessions in Zoom with several lecturers participating each time, took place. Students got deadlines according to these coaching sessions but worked online with each other between teacher-sessions.

Interfaces structure the work and decisions of those producing in distributed innovation networks more or less clandestinely (Kornberger, 2016). In this course a tool called Sprint was used to structure the work of the students. As described in figure 2., SPRINT is a five-day process for answering critical business questions through design, prototyping, and testing ideas with customers (GV 2019).

Each day you go through a series of exercises developed to guide you to achieve the main goal for the day. You need the apparatus (mainly post-its, sharpies, a whiteboard and a timer). Then, during the sprint, the facilitator needs to keep an eye on the timer, instruct the team to do the exercises, keep energy levels up, and if the facilitator is experienced enough and feels like it, they can even take part in the sprint. After the sprint, there is detailed reflection on the sprint and analysis of the data collected by the test so the team can learn and plan the next steps. And of course, let’s not forget iteration. You can jump right into an Iteration Sprint which is a sprint where you work on small adjustments to the previous creation in order to retest, if need be.

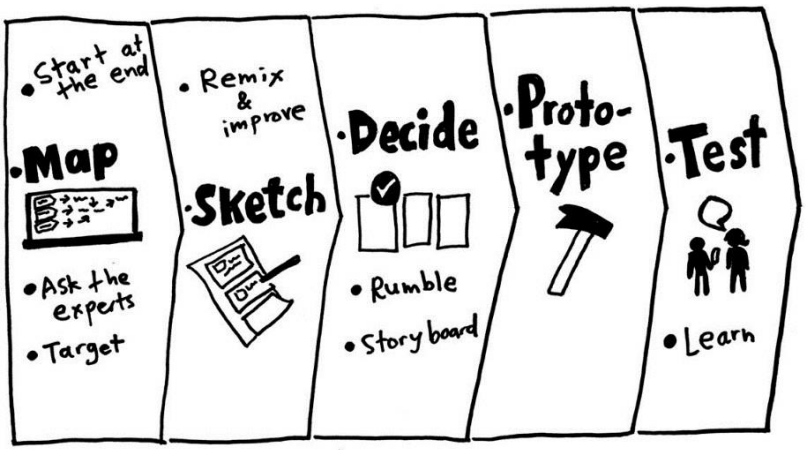

Figure 2. Five-day-process of SPRINT (Roy, 2019)

When the course went online, it was soon identified that on-campus activities lasting a day could not be done online because of fatigue. Hence the sprint was redesigned into less of a sprint and more of a long-distance run. Instead of sitting in the same class with general creativity tools such as whiteboards, post-its, markers, playdough, legos, students and lecturers faced the reality of using creative online tools and links as well as materials the students could find in their homes.

With an open-minded attitude and creativity, lecturers found online tools that corresponded to what would have been used in class but now these were online and working equally well as those in class. Miro[6], a collaborative online whiteboard platform designed for remote and distributed teams and Sutori[7], a collaborative instructional and presentation tool for the classroom, were used. Other tools used were e.g. Persona, Customer Journey, Storyboards, sketching and prototyping. These tools were easy to implement with the students since they were enthusiastic about digital tools and games i.e. quick learners and not afraid to try new things. Students were bold in asking for help and assisting others.

The tools were crucial for creativity. Students were tempted to start finding solutions already at the beginning of the development process but the tools enabled us to encourage

[6] www.miro.com
[7] www.sutori.com

them to take a broader perspective in their thinking when doing some exercises in order to build a foundation and a focus for the development process. Fall in love with the problem! The tools gave coaches a framework for exercises and it was easy to follow them and give structure to the development process. The tools also helped students to develop something that was outside their own target group e.g. interviews gave them important information about target groups and their needs and motivation. Creativity is often a mess but the service design tools brought structure and process into creativity.

The digital tools enabled students living in different cities and countries to participate in the creative process and simultaneously add their input on the common canvas, draw, move sticky notes and sketch together, etc.

2.2 ARCHITECTURES OF PARTICIPATION

Architectures of participation structure the collaboration in distributed innovation systems by designing open production processes. In the course it was however challenging for students to deal with uncertainty about the development process not knowing what the end result would be but they started to trust the process towards the end of the course. Service design is not a work-in-comfort zone, students need to cope with iterative processes which is not so common in education. Even though the outcome in service design is important to try to explain the full process, a holistic picture that this method and process will deliver results in the end might be innovative and surprising. It is, however, important that the lecturers coach, so that the students trust the process and allows it to take them further. A quote from a student illustrates this accurately:

> I realised that I need structure at work and a clear task that we haven't got yet. This uncertainty made me feel a bit nervous.

A simulation workshop about communication and emotional intelligence resulted in enlightening insights, as other quotes from students show:

> If you work and communicate with all team members, you really benefit from each other. But you have to listen carefully to others and be patient sometimes.

> I realised that there is no gold standard how to communicate correctly. It always depends on who are you talking to and the actual situation.

Learnings from the process was that time schedules were followed as planned and the Sprint method can also be implemented as planned and works well in a distance-setting. The coaches need to structure the process step-by-step and which elements are chosen before the beginning of the process. During Covid, everybody was working from home and it was easy to set the dates for our meetings. Quote from students:

> I experienced a new value: respecting each other's time! From now on I want to be more punctual.

To be able to coach creative processes, lecturers needed to be open-minded and creative, also since, on short notice, all digital tools needed to be free to use immediately. The 'feeling' in the coaching meetings was more of an equal discussion between experts and coaches instead of teacher/student interaction and since the normal hierarchy was not there, it was more of a peer-to-peer approach. Lecturers could develop a constructive dialogue among coaches and students which resulted in the latter being open-minded and brave and proactive in front of lecturers.

The design of the pedagogical approach needs to be put in place beforehand but coaches always need to be agile and work iteratively themselves throughout the process. Pedagogical preplanned elements need to be altered when you see where the process takes the students and realise which methods would be better than the pre-planned ones. Students also showed general optimism and willingness in finding potential and new solutions even if it was challenging and frustrating at times. Facilitation and the mindset of the coach is, however, key. Accounts from students express it well:

> What was really striking was the spirit and positive attitude from the coaches.
>
> I realised that I really appreciate the open-mindedness of the lecturers and that there are no wrong ideas and questions. I almost always felt comfortable and this gave us food for thought: working in a trustful atmosphere.
>
> I want to mention the perfect supervision by our lecturers. They were always helpful, friendly and gave our team great support. Without their help we would certainly not have made such good progress. A big thank you to all.

Students could utilise their strengths in working with multiprofessional and international team. The atmosphere was encouraging and students felt equal responsibility and motivation. It was said from the very beginning that this is a student-driven project where they are able to steer the new concept according to their solutions and suggestions. This moti-

vated students and gave them a sense of responsibility. Example quotes included:

> I was really happy about our team and that everyone had his/her own strengths and skills.At the same time I recognised that it is always a challenge to work with other people who I don't know yet and who have other values. That brings up the values again and highlights their importance.
>
> Every team member was very reliable and in this way it was always possible that tasks were completed on time. I really enjoyed the mixture of tasks in the team and individual tasks.

The students learning outcomes came both from using new creative online tools and developing their work life skills, such as critical thinking, resilience, communication, digital skills, teamwork, time management, perseverance. More quotes from students:

> I could learn a lot about my personality and my role in the team.
>
> I learned to live with uncertainty, to be more patient and I reflected on my communication skills and my role in a team. I surely will benefit from the SPRINT method and all the tools we used online.
>
> I improved my digital skills and the handling of different programs like MS Teams, Zoom, Miro and Sutori.

The end-result generated a new concept: Arcada's Wellbeing Project Health Booster that will be developed further by the case owners within the organisation. Another quote:

> When I think back to the beginning of the course, I would never have imagined that we get to this point. Looking back, everything, all the tasks and steps, now make sense and based on all the ideas/thoughts we gathered so far, it wasn't too hard to create a solution sketch.

3. CONCLUSIONS

In terms of distributed innovation, it has been argued (Kornberger, 2016) that intelligent architectures of participation break down complex challenges into tasks that are modular (the problem can be decomposed into small sub-problems), granular (you iterate, you can play once or many times, every input matters), and where integration costs remain low (technology collects and processes gaming results). In the end, the sponsor of the challenge described the process as follows:

> The course helped me to develop my project on a deeper level than I could have imagined. I learned a lot thanks to the innovative ways of working by using the latest methods and digital tools. The students in the course did a marvelous job and helped me to look at my project from a customer's point of view. I have managed to implement to action many of the great learnings, ideas and suggestions I got from the students. It was very fruitful for me and my project to work in a multiprofessional and forward-looking team like this! (Maria Nygård, project manager for the Arcada Sport and Health Booster)

The quote rhymes well with the observation above by Gassmann & Enkel (2004), stating that an organisation that emulates an open innovation approach has to be prepared to transform its 'solid boundaries into a semi-permeable membrane that enables innovation to move more easily between the external environment and the company's internal innovation process'.

For the future, we recognise that there are lots of tools online that can also be transposed to the campus setting, and vice versa. Assessment and evaluation of processes that involve iteration and prototyping is still a challenge since in the end it is many times just the "winner", the end product or the winning concept that attracts attention.

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Voices

Contributors are from the Staff of the Department of Culture and Media
Collected and compiled by
Maria Bäck[14] and Nathalie Hyde-Clarke[15]

Abstract

On 16 March 2020, the Finnish government declared a national state of emergency in the wake of the Corona crisis shutting all places of education immediately in favour of remote learning online. Even though staff in the Department of Culture and Media at Arcada UAS had been preparing for such an eventuality for at least two weeks, the reality of the situation still came as a shock to most who struggled to adapt to the new patterns of engagement with both students and colleagues. We therefore decided to document our experiences in a joint diary as part of a collective autoethnography. Here is our story, told through three key collective personas: Orion (the Hunter: tech-savvy and systematic); Vela (the Sails: slightly artsy and insecure with technology); and Lyra (the Harp: the 'fixer' who is solution-oriented). In recognition of the incredible effort made by all the members of the Department during this time, we have purposely chosen the names of stellar constellations - a group of stars.

Keywords: Collective autoethnography; Corona virus; personal experiences; education

> It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way—in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only (Dickens, A Tale of Two Cities, 1859).

A WORD ABOUT THE METHOD

This paper is a collective autoethnography – an increasingly popular method used by researchers and the public alike to detail the challenging time of social isolation and distancing created by current infection control regulations (Roy & Uekusa, 2020). What is a collective autoethnography? If we understand an autoethnography to be "the study ofthe

[14] Arcada University of Applied Sciences, Helsinki, Finland

[15] OsloMet University, Oslo, Norway and Arcada University of Applied Sciences, Helsinki, Finland

self, writing about individual experiences of life within the context of family, work, schooling and society, and interpreting the meaning of these experiences" (Chang et al. 2013, p.11), then a collective autoethnography is an "ensemble act" of a cultural group. The objective of this research approach is to provide insight into a social and/or cultural event or phenomenon (Olmos-López & Tusting, 2020). It is important to acknowledge that in a collective autoethnography, no one style is deemed superior to any other, and it is accepted that the form of expression will differ between contributors. Collective autoethnography "invites community to investigate shared stories and balances the individual narrative with the greater collective experiences" (Blalock & Akehi, 2018, p. 94). It is therefore acceptable to join and mix these 'voices' for the purposes of creating a cohesive narrative provided one ensures that 'meaning' is not compromised. At this time, we acknowledge that this presents a challenge as a complex, diffuse and ambiguous set of findings become rooted in a constructed shared understanding (Olmos-López & Tusting, 2020, p.281). Given its subject matter, it is not surprising that few autoethnographies and collective autoethnographies are published in traditional academic discourse. Instead, they tend towards the evocative and personal.

The work below is based on a collection of thoughts, perceptions and experiences gathered during the first two months of the lockdown in Finland. There were twelve contributors in total – all of whom were staff in the Department of Culture and Media at Arcada University of Applied Sciences (Finland) at the time. There were twenty staff in the Department, and all were invited to participate in this activity. Participation entailed writing diary or journal entries based on the individual's own reflections on their experience at their 'remote location' (home office). This approach is typical of the autoethnographic process whereby participants:

> ...often start with a journal entry, narrative, poetry, blogs… or other forms of personal writing in which authors explore their experiences with the goal of understanding those experiences (Adams et al., 2015, p. 68 cited in Olmos-López & Tusting, 2020, p. 265).

The frequency of entries was based on the following: Day 1; and once every week thereafter. There was a mutual agreement that as many as possible would participate in the first month – we had only anticipated that the lockdown would last two to three weeks.

When it became clear that we would not be returning to the office after a month, and the lockdown extended into a second month, participants could elect whether or not to continue. This in part explains why the entries decreased after week four and eventually stopped completely in week eight. It was never an obligatory activity; participants could post entries if, and when, they wanted to share. It was possible to join at any time during the first month.

There were no pre-identified themes or topics. Participants could simply write on what they deemed to be of importance that week. They were discouraged from reading each other's work prior to writing their own entries to avoid being influenced by others. This is compatible with the very spirit of autoethnography as described by Wężniejewska et al. (2019, p.341), although it also presents the tension inherent in that space:

> ...autoethnography is also presenting something exclusively from your own point of view, describing some events subjectively. However, our "subjectivity changes" over time, influenced by the objectivity in the evaluation which is gained with time.

Since all are educators, and knowing it was a shared space, it is not surprising that most spoke of the challenges of moving education online. Ellis et al. (2011, p. 276) state that "when researchers do autoethnography, they retrospectively and selectively write about epiphanies that stem from, or are made possible by, being part of a culture and/or by possessing a particular cultural identity". It is important to note that many still spoke of personal issues as the very boundaries between private and public became less clear. This phenomenon is also apparent in students' perceptions of the impact of education 'going digital' overnight (see Peters et al. (2020)) - although one should acknowledge that those who engage in heightened social media activity are more familiar in autoethnography and blurring previous boundaries due to the nature of those platforms (see Ogawa, 2019).

All entries were collected in a common folder in Teams, creating an online archive from which this paper draws its 'voices'. The table below indicates the level of participation until the entries were no longer posted.

Table 1: Frequency of contributions

	D 1	W1	W2	W3	W4	W5	W6	W7	W8	SUM
R1	1	1	1	1	-	-	-	-	-	4
R2	1	1	1	1	-	-	-	-	-	4
R3	1	1	1	1	1	1	-	-	-	6
R4	1	1	1	1	1	1	1	1	-	8
R5	1	-	1	1	-	-	-	-	-	3
R6	1	-	1	-	-	-	-	-	-	2
R7	1	-	-	-	-	-	-	-	-	1
R8	1	1	1	-	-	-	-	-	-	3
R9	-	1	1	1	1	-	-	-	-	4
R10	1	-	1	-	1	-	-	-	-	3
R11	1	1	-	1	1	-	-	-	-	4
R12	1	1	-	1	-	-	-	-	-	3
	11	8	9	8	5	2	1	1	0	45
	3	3	3	3	2	1	1	1	0	

Since entries were originally written in Finnish, Swedish and English (based on the language with which the researcher was most comfortable), entries have been translated into English for the purposes of this paper. Every effort has been taken to ensure that the meaning is translated as accurately as possible.

Once we agreed to publish the entries as part of this volume, contributors were asked whether they preferred to remain anonymous. The understanding was that even if only one requested anonymity, it would apply to all. That was indeed the case. Thus, in order to tell our story, we elected to create three collective personas: Orion (The Hunter) is tech savvy and systematic; Vela (the Sails) is slightly artsy and insecure with technology; and Lyra (the Harp) is the 'fixer' and thus solution oriented. Note that responses, and not participants, have been allocated to those personas as there is a little of all three in us all. When we chose names for the new collective personas so we could share this work, we decided to acknowledge the exceptional hard work and effort that went into teaching and research during the lockdown. The collective personas are therefore named after stellar constellations – a group of stars.

VOICES

DAY ONE: 18 MARCH 2020

1. Orion (the Hunter: tech savvy and systematic)

This is the first day of lockdown. But I feel confident, I'm very used to working from a distance, communicating with students online.

As a child, I often played Novuss with my big brother, the Finnish name for the game is Korona, just like the virus! And I almost always lost. This game of Corona played world-wide we do not want to lose. This is why we have moved our teaching online, to safeguard our students and ourselves.

[Your internet connection is unstable]

What I am still thinking about is whether the students should familiarise themselves with the material in advance or not. This means that the material should be available on Itslearning[3] at least a couple of days before with a video clip supported by a Power- Point presentation. This means certain foresight and planning well in advance of me as a teacher.

[Your internet connection is unstable]

Students are presenting their final projects – pitching their movies. Everything seems to be working, but oh, I do look ten years older and much heavier on the webcam. After two hours my ears start to hurt, but the students' pitches are smooth, like they have never done anything else.

[Your internet connection is unstable]

It takes a lot of concentration to receive the presentation itself, and also keep the technology going. Of course, this is something you can get used to. What I also confirmed is that my beautiful folk chair from the beginning of the 20th century is not the best option to sit on.

I go to Prisma. I buy gaming headphones with a good microphone. I would buy toilet paper, but it's already the end of the third day. There is none.

2. Vela (the Sails: artsy and insecure with technology)

Is this how it feels to be a refugee? I had two hours to pack all essentials to keep me going for a long time and still be able to get the work done. The biggest question of course is about the internet connection.

This would be a good time to put in the new modem, the one with a faster connection. I remove the old and put in the new "better" one, but it does not work. Sure, that was why it was not connected yet, there was something wrong with it. So back to the old again, WHICH DOES NOT WORK. I have a mild (!) nervous breakdown. Luckily, after some soothing R2D2 sounds played from my smartphone to the old modem, it starts working again.

Itslearning is down. I have to ask students to send their assignments by email. If they even read their email. How does gen-Z work?

And now I am alone in my Zoom room because no one wants help with their assignments. In school, telephones, tablets and computers attract more than the actual teaching, but when the teaching is online, there is no interest in communicating via these technical aids. Where is the logic?

The thought of our first team meeting on Zoom resulted in me asking my colleague if I have to have the video on, then asking internally if I have to put on mascara or not. I still haven't figured out this answer for upcoming teaching on Zoom. How to appear to the students?

My first Zoom meeting with students. I am faced with twenty-four black markers as students keep their cameras off and are too nervous to use their mics. The effect is like lecturing to a virtual graveyard. I don't remember the last time I felt so utterly alienated and isolated 'standing' in front of a class.

Am I now a cyborg, educating cyborgs?

3. Lyra (the Harp: the 'fixer' and solution-oriented)

I thought that the first day would largely consist of student contacts: students who do not know what is happening, students who do not know what to do, students who are worried for various reasons. I have already received and responded to such messages for a couple of days before lockdown. But now, now it's really quiet on the student front. Apparently, the messages sent by the university and those responsible for education have been sufficient.

Class: 40 people in the room. Suddenly, one student bursts into laughter. My head tilts to the right. I look at him surprised. My expression :"What the h…ll happened" He looks at me apologetically, puts down his mobile and says: - Sorry, I thought I was alone. I cannot help asking: - you thought you were alone? Whole class starts laughing. I shake my head. The student and I look at each other with bemused smiles. Situation over.

People used to working in teams, used to chatting merrily in the office space and calling to each other across the sea of dividers, are now alone. Most I know will be fine. We have a culture of occasionally working at home, so some will even relish it. Two or three worry me terribly. So 'coffee chats' are put up – just a half hour to see a familiar and friendly face. Four weeks alone is a long time.

Tomorrow again, all day in front of online education.

1 WEEK ONE

1. Orion

I had to do some backup planning as Itslearning went down the first week. I looked at Teams classroom as an alternative and decided to use that for Structuring Information. But Teams does not meet the needs of a structured and logic interface, it feels like a compilation of files and chats. It totally lacks the visual structure of content that Itslearn- ing has. One example is if you are in Teams and need to chat with someone, you are moved away from that Team to the chat and always need to navigate back. Not intuitive at all. With the number of Teams born last week this simple thing already becomes over-

whelmingly difficult.

I am dividing my home into sections I have a workstation in the living room with my laptop, in the other room I have another computer where I take care of my private matters. But despite my best efforts, they mix – sometimes.

2. Vela

This whole Corona is like a nightmare, and it just doesn't wake up. This will be a generational experience for millennials, and for others. Just like our ancestors had the Winter War. We are to save the nation and the world by staying at home.

I am positively surprised that my tiny feeling of awkwardness being online disappeared as soon as the action began. I felt very natural with this group that I know from before and I made it a collective thing, we're all in this together.

The concept of time gets a bit fuzzy – sitting on the sofa with a myriad of post-it stickers around me with different ideas, tasks and notions. Well, after the first mis-sent email to the wrong student I have to really quit work on time (and get up from the sofa).
This first week has felt a bit like living through the phoney war that novels tell us often precedes the real thing.

3. Lyra

In our newly minted routine, I get up at 7:20, the same time as usual, eat breakfast, and then go for a strenuous thirty minute walk. Not only does this provide a necessary break between washing and working, it also ensures that I get dressed. I bear in mind what Karl Lagerfeld allegedly said: "Sweatpants are a sign of defeat. You lost control of your life, so you bought some sweatpants." I come back, sit down, and start working.

During this week we have had time for two coffee meetings, .e. we have met with colleagues just to exchange thoughts. It has been really good and nice to meet over your cup of tea or whatever you now have in the cup. I was very happy when I recognised many points from the Occupational Safety and Health Commission's meeting that came up in the staff meeting, such as the issue of the funding of the university and possible layoffs

(that are not going to happen).

Colleagues continue to amaze. Faced with ever mounting technical challenges, they seem to move almost seamlessly between platforms – and we have even had a miraculous moment: X, a teacher known to be critical of anything online, and who has been reticent to even try distance learning in the past, is on Teams and flourishing! Yes, the team is looking a little tired and all have their own home dynamics playing in the background, but generally, they seem to be holding it together.

A student breaks down in my class. 'What is the point of this?' she asks. 'Why must we continue? It's not like we are coming back to University before summer'. I remind her that some semblance of routine and normalcy is important for our mental health. She tearfully replies 'nothing is normal' before blanking her screen and turning off her mic. I send a message after the class inviting her to speak to me so I can help her manage the workload better. No reply.

2. WEEK TWO

1. Orion

I haven't had to think so much about my routines because I work a lot from home, and I have been doing that since 2001 as a teacher, as well as an entrepreneur. Normally I would be at Arcada for 2-4 days a week, depending on the amount of teaching each period. I sometimes feel guilty working from home as I am distancing myself from the community when not being physically present. When it comes to the amount of work and the focus I get when working from home there really is no need to feel any guilt. I am much more efficient at the home office than in the open office at Arcada.

The second week of collective distance working began with less excitement than the first. Most people, I suspect, have come to terms with the situation in their own ways, and have developed coping strategies; both for organising themselves and dealing with their professional duties. But one observation in the space of supervising thesis work, this takes a longer time when not having the adequate and sufficient tools at home.

For me as a teacher, this really doesn't seem like a vacation. Everything feels very hard.

Normally, you can walk up to a colleague at the workplace office and ask what you need to know. Now you need to send an email or schedule a conference call.
All the students I have been in contact with seem to be fine!

2. Vela

It doesn't show, it doesn't smell, or make a sound. But there it is. Coronavirus. Every person I meet is basically dangerous. When I go shopping. People are really quick to embrace the new norm. Everyone knows how to move in such a way that the dis- tance from other people is always more than a meter, it is like dancing.

The SoMe flow is becoming more and more desperate – more hilarious jokes and videos, and more signals of depression seeping through.

Students and colleagues also say this week is harder. The novelty of being home has worn off and loneliness starts to creep in. Students talk about wanting to walk but having no one to walk with because friends are so far away or want to keep so far away. Seeing faces online helps. In every class, more and more cameras are turned on. Less and less people write in the chat forum, preferring to use their voices and speak instead.

I try not to dwell too much on the fact this will continue for another month … at least. Instead I now look for fun exciting projects that will distract me in between meetings.

3. Lyra

We seem to have realised that in order to survive the long haul we need to set realistic boundaries. I notice almost no emails or messages of any kind are coming in after 17h00. This is a first for me since I joined Arcada, where messages used to flow all hours of the day.

The students usually write to me at night, between 23-03. Then I sleep. But immediately in the morning when I wake up I read the message and can usually respond fairly quickly. Then the students sleep, but the message waits in the inbox until they are ready to deal with the matter again. So that way, there is no need to start any chat service or the like.

But of course, what is missing now, are the spontaneous meetings in the corridor, when the student, so to speak, realises that it was something they wanted to ask, and gets the answer like that on the go. And that's probably the part I miss the most.

What did I learn then? To be careful about taking a break. Feel free to go out in the yard for a couple of minutes, it gives energy. Think carefully about what the online situation looks like from the student's perspective - then maybe you will come up with a new solution. Be brave in testing. Dare to ask your colleague for help, do not be so stubborn to find out everything yourself, it only leads to endless googling that may not give an answer anyway.

With a grateful sigh, I state that "yes, it's Friday again"!

3. WEEK THREE

1. Orion

I had a slew of social meetings on Teams, including one of the Team chat sessions. These all proved more interesting and useful than I expected. It makes a noticeable difference to a morning or afternoon to have twenty minutes in unexpected company, with no specific reason to chat except the desire to do so.

I assessed the assignments from 2 courses and started a new one, thus I have data from pre-corona, start of corona, and ongoing-corona pedagogy. The task took a lot of time and included an assessment of about 300 pages of text, pitches and presentations (online). Funnily enough the pre-corona data comes from a course that was totally online. The course was on trends in arts and culture and one of the learning outcomes was to develop the digital learning competence of the students. In addition to this, the course learning outcomes included ability to: 1) identify the opportunities of technological development and their impact regarding cultural and media productions and work; 2) harness technology and the potential of digitalisation in the arts field.

Video conferencing is starting to run better. I find it interesting how we view image and voice in those meetings. A new code of conduct is emerging. We find it a little rude if someone has poor picture quality or especially poor sound quality. There are already

memes on Facebook about how video conferencing works. Meme repeats pixelated images and chattering sound. And always someone asks if I hear or I don't hear. But we are constantly learning more. And we order new tools and faster connections online.

2. Vela

I have noticed that this social distancing has brought more personal connections between students and myself. Work-me blends in with Personal-me. The meetings are a bit lighter in tone, still with students reporting on their progress and possible problems they are facing, asking for feedback from each other. At one time in the meeting one student begged "show us your dog!" and so I did. Then I asked them if they want to see my tortoise too. And of course, they wanted to. Also, students' pets are taking a role in the meetings once in a while when a cat suddenly walks all over the keyboard or similar. This kind of personal discussion might occur in class, but now the personal space is more present because we have all invited each other to our home.

3. Lyra

Finally, I have developed definite "no digital" strategies. When I "stop work" the computer stays off until I start working again the next morning. I stop work and, weather permitting, go for a long walk, before coming home for a non-digital evening.

I was able to book a Teams meeting because our (everyday) hero from IT who remotely helped me get Teams as an add-in on my Outlook, Mac has its own little quirks. Trying to find a solution to my problem of a bad work station, I did some searching outside the tech sphere, I found a "laptop stand" that is produced for musicians who need to use their laptop, for example on stage. Said and done, I ordered the contraption and a little while later I received a message from Musikhaus Thomann who said something like this: "you have probably been waiting for your order and now we are happy to announce that the package is ready for shipping" Talk about German efficiency!

4. WEEK FOUR

1. Vela

I hear the birds through the open balcony door, despite the fact that the first snow just fell in my neighbourhood early this week. A bit too much a bit too late. But not weirder than

the whole period, thanks to the Corona pandemic. Now it is really bugging me a little, I would like to scream, I would like to cry, I manage to do neither.

I'm worried about the spring entrance exams. How do we make them succeed remotely? The plans are good and probably everything will go well without training. But how do interviews succeed remotely?

And more Zoom and Teams, with some small hiccups from time to time … Like when I was disrupted by the mailman and I had the following feeling "the lecture probably went well anyway, I think". I miss our analog and physical life, I miss Arcada, the building, the people!

2 Lyra

All of the event management course's study visits to various organisations working with events and festivals were cancelled, of course. Luckily enough, the study visits have instead been possible to arrange virtually, by participating in virtual study opportunities on the Zoom platform, it has worked excellently and also smoothly. The visits worked well, the guest had time to answer almost all of the students' 40 questions and when the visit was discussed with the students afterwards, it became clear how much the students learned and took from it.

5. WEEK FIVE

1. Vela

Lockdown did not end, but who really thought that at this stage? But it's tiring! Every day is the same.

How have we changed our thinking? I follow other people with the idea that every individual I encounter is potentially life-threatening - deadly. How long does it take to get rid of this mindset when a pandemic end?

The world is beginning to dismantle restrictions. In Germany, small shops will soon be allowed to open their doors. In Spain, children under the age of fourteen will soon be allowed to go out with one parent. Sure, only for an hour and only a mile from their

homes. Where does it lead? Will the second and third waves of the corona come at some point later?

At this stage of the academic year I usually start my summer course. I don't think I can take that course now, at least not in the spring. It is a pity. Maybe it can be held in the fall - if the university can be open then.

6. WEEK SIX AND SEVEN

1. Vela

It's starting to feel surreal, the weeks go faster and faster, and at the same time get more and more hazy. Tutorials and sessions with students, meetings with colleagues both in the university and outside, planning ahead. Every day is the same but still not, and time literally flies by. But we had some disturbing news, our boss is getting a new job abroad. It will be difficult now during this period to change the constellation of the team, I hope that the department can handle this and can continue its fantastic work. I'm so happy about the colleagues I have, they are both skilled and fantastic people.

Everyone seems to be very generous. I have had guest lecturers joining in over Zoom – even from Parliament talking about financing the creative sector. It gives a sense of belonging and also hope for the future to the students.

I do miss physical meetings and a normal life, but still, on some level I have become accustomed to this and a new question in my mind is, have people and groups become a threat?

7. WEEK EIGHT

And then there was silence.

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Arcada Health Tech Hub – a Place for Creative Learning

Annikki Arola[16], Ira Jeglinsky[17], Joachim Ring[18]

Abstract

Societal changes that have resulted in an increasing number of older people and people with declined work ability, create a challenge regarding societal participation for vulnerable groups. This makes demands on working life, community planning, the development of new services and the utilisation of new health technology. Especially during the COVID-19 pandemic, the need for different digital and technological solutions has proven to be crucial both in keeping in touch and in providing health care support. It is however important to create sustainable solutions where technical and digital systems can be utilised in the dynamic working life of the future. Technological development and digitalisation impose new demands on both employers and employees, thereby affecting the education sector as strongly as the rest of society. Digital competencies are perceived as one of the most important in Europe and major efforts are being made in the digitalisation of social and health care. Educational organisations have a responsibility to enhance and support students' competence development in health technology. The collaboration between different educational areas and the business community are an important factor in competence development. This collaboration contributes to new thinking regarding digital competencies. In this article we will present an environment where students, professional experts and researchers meet for innovation in health technology. In this environment the end user will be placed at the centre and will be a co-developer of tomorrow's health technological solutions. Through this so called Arcada Health Tech Hub, we want to transform the development of health technology - from solutions that are planned separately based on the end-user's needs and then adapted to them, to engage the end-user as a key player of that development.

Keywords: Digital solutions, learning, health promotion, rehabilitation, participatory design

INTRODUCTION

In the European region, people have the highest life expectancies in the world which means that the European countries also have the highest median age in the world. This fact indicates that the group of very old people will increase, and WHO estimates that in 2050 approximately 25 % of the population will be 65 and older (WHO, 2012). Due to higher median ages and longer life, people probably live healthier lives and in better

[16] Arcada UAS, Finland, Department of Health and Welfare, [annikki.arola@arcada.fi]
[17] Arcada UAS, Finland, Department of Health and Welfare, [ira.jeglinsky@arcada.fi]
[18] Arcada UAS, Finland, Department of Health and Welfare, [joachim.ring@arcada.fi]

conditions but on the other hand the group of frail elderly will also increase (WHO, 2012). WHO states that health care services should be created in a way which:

> allows people to realize their potential for physical, social, and mental well-being throughout the life-course and to participate in society, while providing them with adequate protection, security and care when they require assistance (WHO, 2012).

This is in line with the concept of successful ageing. The term is used to describe the approach to strive for services for older adults (55-65 years) and elderly people (65 +) (Cosco et al., 2014). Health, in the sense of promotion instead of disease prevention, seems to be the key for successful ageing (Urtamo et al., 2019). This includes support, activity and participation in everyday life, with high cognitive, mental and physical capacity as well as social engagement.

While we have a higher number of older people, the number of working age citizens will decrease due to smaller age groups. Fewer will then be available in the labour market. This also applies to the social and health care sector and is a concern with an increasing number of people with decreased work ability and a growing number of elderly people with a potential need for care and rehabilitation. This in turn means that working life in social and health care will face major challenges in the next decade. High quality health care services require new ways to deliver the service. New technology and digitalisation have emerged as a way to support health promotion and in that way also support health among older people and other groups with functional limitations. More than 90% of healthcare resources are directed toward treatment of diseases, while only a few percent is spent on promoting health (International Telecommunication Union, 2017). Thus, technology and e-health are becoming increasingly important. There are however challenges. One is the constant development of health technology, which means that professionals within the health care sector need to constantly update their knowledge and skills to be able to use the newest technology. Digital competencies are perceived as one of the most important skills in Europe and e-health has been given high priority and a prominent position by both the European Commission as well as the World Health Organization. Accordingly, the use of new technology and related activities are key interventions to improve professionals' competences in health care. This is expected to lead to decreased costs and decreased needs of health care services (Duplaga et al., 2016).

During 2020 we have faced a completely new situation as the COVID-19 pandemic hit globally. In Finland, elderly and people at most risk were isolated and for several individuals the only contact with family and relatives was through different technological and distance solutions. Additionally, health care professionals had to switch to digital solutions to be in touch with their clients. To date we do not know how this has affected elderly or disabled people. Based on experiences we have faced this year both on a national and global level, we however believe that different technological solutions in social- and healthcare will be even more important in the future. The pandemic has also highlighted the challenge of technologies not developed in conjunction with the so-called end-users.

The developments and innovations are often done in silos without any involvement of the end-users. This creates a mismatch between those who develop digital solutions and those who will use them in practice, the end-users. End-users can be an older person who uses the technology or the professionals who are responsible for introducing or prescribing the technology to such a person. A way to overcome this is to have a participatory research and development approach where the development takes place in close collaboration with the end-users.

Higher education is responsible for educating future experts who can respond to new demands in society and healthcare. Thus, higher education has a responsibility to create learning arenas for students which enable them to acquire competencies related to the use of health technology in the future.

1.1 ARCADA HEALTH TECH HUB AND LEARNING

Arcadas' strategy highlights a goal connected to sustainable solutions where technical and digital systems can be used in the dynamic working life of the future. This means that Arcada is creating learning arenas for students to support their competence development. This will enable students to meet the needs and challenges of future working life. One of these learning arenas is the Arcada Health Tech Hub (AHTH).

The goal for AHTH is to create a learning environment which supports the students' learning process in using health technology in their future work. By doing so, we can encourage and support their experience of trust and confidence in their daily work when using

new health technology. If professionals of the future cannot handle new technology, the use of it will be limited.

At the Department of Health and Welfare, we use activity-based learning environments where students can practice their skills in reality-like situations. An activity-based perspective provides new opportunities to work towards developing students' skills in real environments, e.g. in technology and e-health. In this way, students are prepared to see technology as a natural part of the work in social and health care. AHTH creates the possibility to bring together students from different educational programmes which enhance the experience of working in interprofessional teams to solve technological demands. A learning environment consisting of health technology, with the opportunity to simulate the challenges of different target groups in everyday life, is of great importance in order to be able to acquire future skills.

The development of health technology is increasing which means that professionals need to have the competence to deal with the new technology. Arcada educates professionals in social and health care and should be at the forefront when it comes to the development and implementation of health technology. AHTH is a place where learning processes take place in an inspiring, inclusive and innovative environment. Such an environment enables students, professionals and researchers to meet for innovation and new thinking in health technology. Additionally, Arcada as a university of applied sciences, has a responsibility in developing working life and to support lifelong learning among professionals. Arcada's strong connection with co-partners enables a collaboration between working life, higher education and the students who will be future professionals. AHTH creates conditions for professionals to develop and deepen their competences and skills in mastering health technology that meets the needs of future healthcare. In this way, we create continuity in competence development which is in line with sustainable solutions in working life.

Examples of learning environments in the AHTH

An example of activity-based learning environments is using virtual reality (VR) and augmented reality (AR) as simulation methods. Students learn how people with, for example, vision impairment experience their environment. These kinds of technology provide virtual scenarios to simulate different situations. When learning environments are

created using VR/AR, the experience of learning is enhanced because the brain reacts to the virtual situation as if it was real. However, VR/AR glasses can usually be used by only a few students at a time. In AHTH there will be an immersive room in which we can simulate different environments or challenges in the functioning of individuals that students could face in working life. This gives several students the opportunity to learn together in the same space.

There will be a health technology gym with equipment focusing on rehabilitation and training. Acquisition of such equipment offers tools for evaluating and monitoring functional ability as part of occupational health and for maintaining function in everyday life. The technology system in question automatically provides the user and the supervisor/therapist with tracking information about the progress of training and performance development. It also provides the ability to test and collect big data as well as individual data on training. The equipment automatically documents customer progress and training data enabling individual follow-up and an opportunity to optimise the training load to ensure development. With the hardware connecting to this equipment, the user´s own progress is reflected in his/her profile as visual feedback that can be viewed on a computer, tablet, or smartphone. With cloud-based software, the test results, the exercises and the reports are available regardless of time and place and enable big-data collection. Such comprehensive technical training equipment gives the students the possibility to learn not only the skills needed to plan a rehabilitation programme but also to use data as material progression planning or for research.

Telerehabilitation has during the last years slowly made its way to Finnish rehabilitation services (see e.g. Salminen et al., 2016). With the COVID-19 pandemic, professionals in the rehabilitation sector needed to switch from hands-on therapy to telerehabilitation almost overnight and it is highly likely that it will continue as a way of providing rehabilitation also post COVID. In the same way, other health care professionals too have used different distance solutions to be in contact with individuals. Accordingly, it is of great importance that our students learn how to work through a distance solution and still provide both qualitative rehabilitation and meet the individual in a person-centred way. To meet this challenge, a marker-less computer-vision programme is being/has been developed at Arcada, connected to the AHTH by an interprofessional team including students and teachers (Hellsten et al., 2019).

These kinds of learning activities stimulate learning, increase the student's motivation and enable the creation of learning environments that are not otherwise accessible to everyone. In addition, they enable repetition in a completely different way compared to traditional practical exercises. In this kind of learning environment, students can test their knowledge and skills in safe surroundings and get immediate feedback on the results. This, we expect, can strengthen students' learning.

1.2 AHTH IN RESEARCH AND DEVELOPMENT

AHTH is an integral part of research and development at Arcada. The objective in AHTH is to gain a deeper understanding in how health technology can be used to promote health and wellbeing for different groups in society. When developing health technology, collaboration between developers and end-users is crucial. One important step is to be able to test solutions together with the end-users to see if it works as intended. Based on this, it is possible to create implementation channels through which the product can be used. The core point is that development and testing take place in close collaboration with the groups that will primarily be able to use the product. This creates sustainability in both the development and use of health technology. In AHTH we use a participatory research design to involve end-users in the developing and/or implementation process. In this design, modified by Pihlainen et al. (2017), participatory design and participatory action research processes are integrated to facilitate the process as well as the product. The end-users are empowered to take a central role alongside the researchers, the designers and in our context, also the students and teachers (figure 1).

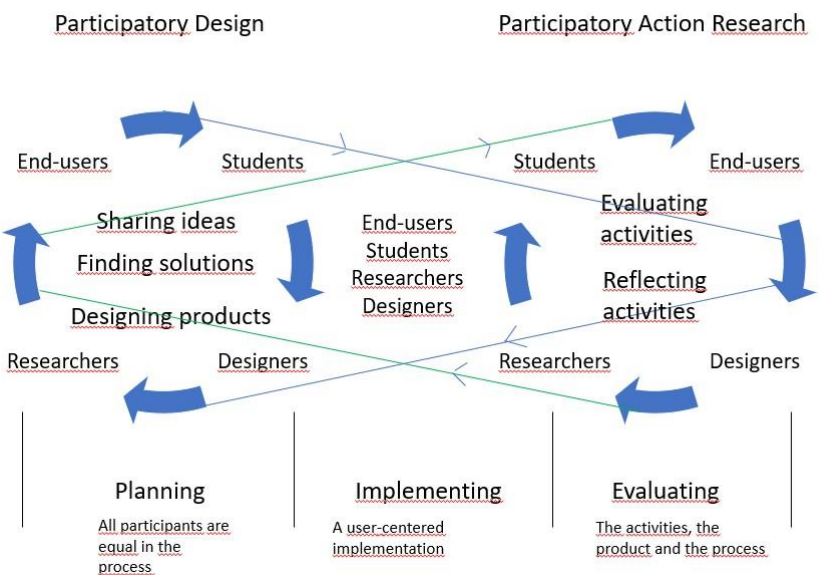

Figure 1. Participatory design and Participatory Action research as an integrated process. (modified from Pihlainen et al., 2017).

The approach in AHTH research and development is person-centred and user-driven. AHTH aims to use health technology, robotics and artificial intelligence (AI)-based applications to promote health and as a support for rehabilitation. The collaboration with end-users can include themes such as analysing practical situations where health technology could be beneficial and based on that, develop the products together. In this way, the participants (end-users and companies) are actively involved in identifying problems, health risks and different motivational factors on how to build a sustainable, successful and healthy life in society by using digital solutions and AI technology. AHTH creates an arena and opportunities for individuals to be part of the development process and by that create more user-friendly, more individually and needs-based digital solutions to promote health and functions. Today, there are different AI-based applications, which can be used to monitor health related issues such as physical activities, nutrition etc. However, the evidence about these applications' effectiveness for end-users is scarce. In addition, we do not know how the consequences of all the distance solutions taken during the COVID-19 pandemic affected people in vulnerable situations, like the elderly and individuals with disabilities. Therefore, AHTH is a significant arena to support evidence-based knowledge, which combines end-users' experiences and the product- and programme development within health technology. Additionally, AHTH has a multidisciplinary

approach and involves not only different study programmes at Arcada but also working life with different professionals (figure 2).

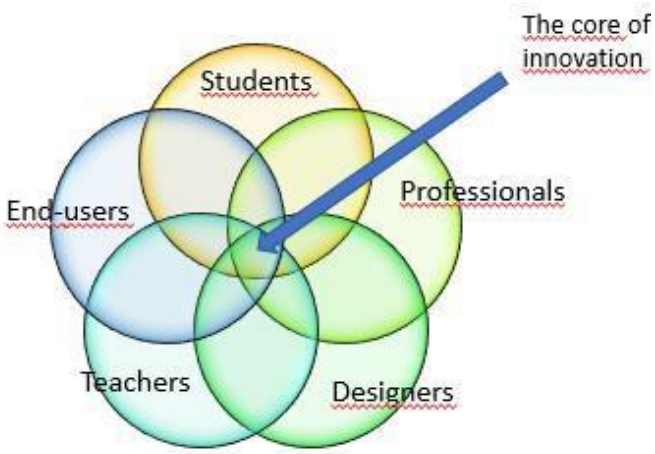

Figure 2. In an interprofessional work culture the best innovations are made.

2 CONCLUSIONS

The need for a learning environment like AHTH is obvious with the rapid pace of health technological development within the social and health care sector. The demands are even greater now during this COVID-19 pandemic as health care professionals as well as older people and others at risk of being affected are having to increasingly rely on digital technologies. Such demands will surely exist even post COVID. AHTH is a space for new innovative solutions for health technology in healthcare and rehabilitation. The philosophy behind AHTH is that the best health tech solutions are created in close collaboration with end-users such as people with functional limitations, professionals working in the healthcare sector today as well as students who are the professionals of tomorrow. Therefore there will be a strong involvement of end-users, who will bring their expertise based on their experience of living with a disability in society. Additionally, it will be a place to strengthen multi professional cooperation between students and professionals from different educational programmes and branches. Professionals from both the public and private sector will be involved through different collaborative projects and events. The arena is meant to be a meeting point for all who are interested in the health tech area

- a place where it is easy and secure to share experiences and competence, to ask questions and in collaboration solve problems and find solutions.

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Towards the dynamic and technologized future - Creating an impact with applied research and technology education to benefit sustainability

Mirja Andersson[i], Stewart Makkonen-Craig[i], Silas Gebrehiwot[i], Faizan Asad[i], Rasmus Björkvall[i]

Abstract

Environmental pollution and climate change are globally shared problems that require international attention and urgent cooperation at all levels. Concurrently, technologization is transforming work and practices in all fields, and during 2020 the COVID-19 pandemic has disrupted business and the routines we have known as normal. Arcada aims to address these issues by influencing sustainable technologization both by developing technology education and by applied research.

This article supports the strategy recently launched by Arcada, reviews past development and discuss our next steps towards the dynamic and uncertain future.

Keywords: technology education, applied research, ecological sustainability, digitalization, technologization, COVID-19, continuous development

INTRODUCTION

Many UN sustainable development goals (SDGs) set for 2030 have been brutally knocked off course by the COVID-19 pandemic: millions pushed back into extreme poverty, half the global workforce made more vulnerable, health services and vaccinations disrupted, and education and housing inequalities exacerbated (UN 2020). Some advocate overhauling the SDGs by decoupling them from economic growth to get us back on track (Nature 2020). If one thing the pandemic has shown us, it is the capacity for nations to make radical changes. Moving in the right direction needs experts, including the modern designs, analyses and implementations by engineers. Even before the current pandemic, the engineering profession was recently evolving its tools, knowledge and paradigms to

[i] Department of Energy and Materials Technology, Arcada University of Applied Sciences, Finland [corresponding author: mirja.andersson@arcada.fi]

create sustainable solutions for whole systems. This meant finding synergies between technical and non-technical factors and adapting them to an infinite-term, global context. COVID-19 increases the urgency among engineers to strive for sustainability as they will be acutely needed in a post-pandemic world. During these exceptional times it is useful to look back on lessons learned with earlier work to analyse the needs for change of direction. In this article we will first focus on reviewing the recent years of development at the Department of Energy and Materials Technology, Arcada, and the central projects that acted as vehicles bringing us to where we are currently. We will also discuss how the COVID-19 pandemic has influenced the development.

1 RECENT PROJECTS TO DEVELOP EDUCATIONS IN TECHNOLOGY

Major trends such as sustainable development, clean technologies, energy efficiency and resource awareness were set as the focal points at the start of the educational development project TEKNETIUM (2016–2020, see Tables 1 and 2). The project was launched in April 2017 with a kick-off seminar on the perspectives of sustainable development and how the engineering study programmes could respond to future demands (Arcada 2017a). The central aim of the TEKNETIUM project was to develop the degree programmes at Arcada in the field of energy and materials technology, and to strengthen an environmentally friendly way of thinking among the future Swedish-speaking engineers. The major trends listed above are still, and even more so than five years ago, on everyones lips. The report by IPCC (2019) states that glaciers are melting rapidly, and significant rising of the sea level during next 100 years appears already unavoidable with the current trend of carbon emissions. Climate change with its consequences requires now urgent international cooperation at all levels of the society. The recent Global Biodiversity Outlook 5 report (UN CBD 2020), published by the UN Convention on Biological Diversity, suggests that countries need to make preserving biodiversity a central priority in all decision making. The international academic community should be there at the forefront preparing for all the sustainability consequences and changes we can only imagine at this moment.

The fourth industrial revolution based on digitalization and IoT (WEF 2016) and the emerging circular economy (EC 2015) were also thematic drivers behind the development of the project TEKNETIUM (see Table 1). The departmental motivation for creating the

project was the gap identified between the expectations for increasing online education and the prevailing practices in classroom lecturing. In addition, the tools for engineering design at local desktops required renewal to be accessible online. In the background of the creation of project TEKNETIUM was also a vision of a global community or network of engineers solving the problems of sustainability for a better future, online. The benefit of community and network is the effective use of the best possible knowledge and skills, since its impossible to recruit expertise from every field to work locally.

Project TEKNETIUM enabled the systematic work to elucidate the needs in developing skills for the future and working life in a global context, and for organizing online- and digi-education for the teaching personnel. Since 2016 Project TEKNETIUM included several trials of new educational tools, practices and contents. Within the education in Department of Energy and Materials Technology, the digitalization work reflected in personnel education for example in 'building information modelling' software. As a new practice in teaching, so called hydrid teaching was piloted during 2018. The hybrid teaching was organised in cooperation with Yrkehögskolan Novia by sharing lectures via a live video connection (Arcada 2018c). Another type of cooperation – an academic partnership with an international logistics network – Seafocus (Arcada 2017b, 2018a), was also initiated in the project to develop the required skills for international working life and the project skills in creative teams (Andersson 2020, Eriksson 2019, 2020). The academic partnership with the Seafocus network, as well as the development of working life skills for future, are to be described in another manuscript accepted for publication (Andersson & Keino 2020).

Table 1. Factsheet on project TEKNETIUM

Financing	Svenska Folkskolans Vänner r.f.
Schedule	2016–2020
Implementor	Arcada / Department of Energy and Materials Technology
Keywords	future, sharing, sustainability, digital, network, global, knowledge, development, skills
Directly benefitting educations (B.Eng.)	Energy and Environmental Technology (in Swedish), Materials Processing Technology (in Swedish and in English)
Cooperation	Nordic and European universities, private companies, cooperational networks
Main activities	'future work', factfinding and benchmarking, education of teachers, softwares and other tools/methods for collaboration/shared education, educational trials and pilots
Educational pilots	virtual and/or collaborative study projects/laboratories, student competitions (hackathons), new forms of educational cooperation and partnerships with private companies/external organisations
Dissemination and publications	*Professional articles/magazines/blogs*: Andersson 2020; Andersson & Keino 2020; Andersson & Virtanen 2019; Andersson et. al. 2018; Kujala 2018; Andersson & Makkonen-Craig 2017. *Conferences/seminars* (not in the list of refs.): Andersson & Virtanen 2019, (Presentation / Ekstruusiopäivät 15.5.2019 / Muoviyhdistys ry, Hämeenlinna); Andersson & Makkonen-Craig 2018 (Poster/ Nordic Chemistry Learning Conference 21–22.11.2018, Jyväskylä); Andersson 2018 (Presentation/The future of learning 12.4.2018 at Arcada, https://www.youtube.com/watch?v=a7agJCiNOV8)

As the possibilities of digitalization and technologization are vast, and the challenges in ecological sustainability are enormous, TEKNETIUM has generated many ideas for new projects for educational development and applied research (see Table 2). One of the results by TEKNETIUM was Arcada joining a national project financed by the Ministry of Education and Culture – Circular Economy Competence to UAS (2018–2020) – together with 18 other UASs in Finland (KiertotalousAMK 2018, EU 2018). The main aim of the project was to improve the circular economy competence and multidisciplinary

collaboration in educational development. The main tasks were to increase the study possibilities in the circular economy, including the sharing economy (Nylund 2018), enhance the circular economy competence of higher education institution staff members, develop and renew teaching methods and to develop the circular economy learning environments as well as to pilot their cooperative utilisation. The final reporting by the consortium will be published during 2020.

Another idea spinning off from TEKNETIUM is DIGIMANU (see Table 2), a development project that is exploring the methods at the intersection between digital and physical manufacturing, aiming to benefit the technologized learning environments at Arcada (Arcada 2018b). A digital model is typically created before a product becomes materialized in its physical form with a selected manufacturing method. Additive manufacturing is a good example of how the virtual and the material come together, resulting in a prototype or a product that can be produced, for example, by a simple desktop 3D printer. Additive manufacturing utilizing the technology of 3D printing for organic polymers was started at Arcada with the arrival of our first printer and thesis projects initiated in 2013. Quite soon the idea emerged of recycling in-house the plastic waste from the printers, which initiated applied research (Kierrätys 3D 2016). A majority of product design work is carried out in the digital world, but the design must also function in the physical world. Both time and materials can be saved, by joining digital and physical manufacturing, which decreases the environmental impact and increases resource efficiency of manufacturing. Another good example of joining digital with material is in robotics. Robots are made of hardware and digital software. These two need to interact properly for a robot to function correctly. Arcada is educating both IT and material specialists, and one aim of this project is to increase the collaboration between these two groups within our technologized learning environments. Hence, strengthening the technology competence of students and staff at Arcada. (Björkvall 2020)

In our previous articles, we have described the global megatrends, such as digitalisation, robotisation and sustainability, as drivers for developing the engineering skills in general and for developing engineering education at Arcada (Andersson and Makkonen-Craig 2017, Andersson et al. 2018). Educating the next generation of engineers at Arcada with the required skillset is realized through matching core engineering competencies with

sustainability principles. They learn how to utilize material and energy resources efficiently and minimize environmental impacts, all within the circular economy framework. Students learn by example from Finnish companies and also directly engage with them to find circular solutions. Such external collaborations are present at the course, thesis project and research levels. Digital tools are now at the forefront of our education in design and analysis, and currently also in content delivery. One example is where we train our students in life cycle assessment (LCA) software to equip engineers as key decision makers in large projects. They must calculate all the material and energy flows and processes, and be able to quantify environmental impacts in order to meet goals such as Finland's carbon neutrality by 2035. It is an incredibly complex task and necessitates using dedicated software with large, high-quality databases, and by engineers who are skilled in modelling. Our renewed bachelor educations in technology will be launched for application starting 2021, with competence-based study plans (Bachmann 2018) and ready for making a sustainability impact (Arcada 2020a, 2020b).

2 INTEGRATION OF APPLIED RESEARCH TO BACHELOR EDUCATION

As described in an earlier article (Andersson et al. 2019), we will continue implementing the departmental policy of involving the engineering students in projects of applied research (Kujala 2018) and to commercial R&D projects (Virtanen 2018). The research plan 2020–2022 for our recently started Business Finland Co-Innovation project, "All in for Plastics Recycling" (see Table 2) with a national consortium (Clic Innovation 2020) includes eight bachelor thesis projects at Arcada.

Over the recent years, several incoming exchange students from Estonia, Spain and Germany have shown interest in performing experimental projects within our applied research with additive manufacturing by 3D printing technology. Some of the exchange students have also utilized the work as final projects to graduate from the sending educational institutions. The most recent project case involved two exchange students from Germany and two persons from Arcada, and resulted in a peer-reviewed publication (Gebrehiwot et al. 2020). The state-of-the-art in additive manufacturing technology is a continuous development until conventional manufacturing systems are largely replaced.

Additive manufacturing is at the core of reviewing generic engineering within sustainability framework. This is due to the advancement in digital manufacturing bringing new dimensions into product development processes. The possibility from design to product has introduced numerous advantages including rapid prototyping, complex geometry part manufacturing and customized products; cutting back on long production process planning. Using this technology, we would take part in designing for an environment that is ecosystem centric. Through continuous research we will investigate the mechanical properties of additive manufactured products for engineering applications. We will study the influences of process parameters on the physical properties of products along with partner universities in Germany and elsewhere. We will also address the least researched area by introducing the use of sustainable materials for 3D printed components. Integrating the additive manufacturing with recent 3D technologies such as scanning and digital image correlations, we will produce components that do not have digital design files by investigating their dimensions and performing contactless deformation measurements.

Rapid technologization and integration of artificial intelligence (AI) are transforming systems and practices at virtually all branches. Projects (see Table 2) including technologies for soft robotics (2016–17) and later also for machine learning with CIRCAI project (2020–22) have widened the departmental research platform. In CIRCAI, AI applications are investigated that will benefit the sorting of plastic waste (EC 2019, Asad & Andersson 2020). The numerous challenges in environmental research could use more help from AI to fight the climate change and preserve biodiversity (WEF 2018), and in general the technologization could benefit the sustainable development goals. AI has helped developing applications that can save human lives and in carrying out the routine critical operation smoothly also during the pandemics (Alimadadi et al. 2020). As there is a clear need for continuous learning and development, we will revise the departmental policy of "involving the students" to "learning with students". That is conveniently implemented within the platform of applied research taking us also closer to the ideal of a "learning community" involving our local partners outside Arcada, as well as aiming for global relevance through European and Nordic networks, as guided by Arcada's recently launched strategy (Arcada 2020c).

Table 2. The project platform integrating sustainability and digitalization/technologization (with applied research and development of technology education)

Project's name Financer	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Educational development										
TEKNETIUM Svenska Folkskolans Vänner rf										
Circular Economy Competence to UAS Ministry of Education and Culture										
Digital manufacturing (DIGIMANU) Stiftelsen Arcada, Lindstedt										
Applied Research										
Material value chains, TEKES, SHOK programme										
3D Printing at Arcada (FUNAT 1&2) Stiftelsen Arcada, TUF										
Soft robotics and sensors at Arcada Stiftelsen Arcada, TUF										
Recycled plastics in 3D Printing - Laboratory for development (3DPlast) TEKES, Innovative Cities programme										
Sustainable plastics (NOWASTE) Stiftelsen Arcada, TUF										
ALL IN for plastic recycling (PLASTIn) Business Finland, Co-Innovation, Bio&Circular Finland programme										
Machine learning for tackling the challenges of circular economy (CIRCAI), Stiftelsen Arcada, TUF										
Commercial R&D										
Thesis reports (Bachelor level)	2	2	5	5	2	4	5	1		
Project reports by exchange students (Bachelor level)				1	1	2	2			

3 THE DYNAMIC AND UNCERTAIN FUTURE

Educational development at our department has already taken the next step by integrating both circular and technologization strategies to the renewed study plans for a dynamic working life, currently transformed by the COVID-19 pandemic (WEF 2020). Competence-based study plans are based on revised module structures that enable student-centered flexibility and increased agility to benefit continuous learning and cooperation in educational organisation. During the pandemic-disrupted spring of 2020, we were suddenly forced to give up the remaining habits of lecturing in classrooms and had to take the final digileap for 100% teaching online. Engineering design tools, analysis methods and data are readily compatible with the digitalized way of working. As a consequence of the COVID-19 pandemic we are currently more accessible for a global, online community to share knowledge and skills with other developers for sustainable and smart solutions. The next step of development will be our local laboratories for teaching and

research transformed into virtual spaces for increased or added accessibility. However, after the pandemic also local services and community may have a rediscovered value.

Keeping in mind the spirit of continuous development and learning within the community, we should first admit that rapid technologization will keep us extremely busy. The role of information systems and their strategic significance has increased considerably due to digitalization and technologization. This has happened also in the areas of business, which have not been traditionally thought as IT-oriented. We can also assume that AI will be more and more involved in our daily lives, maybe as a future coworker or community participant to understand, communicate and cooperate. When our systems become transformed to digital and technologized, we require more rapid management and more proactive leadership. If we instead take the position of waiting and following others, we are too late when the aim is to be at the forefront of change, as the strategic vision by Arcada states.

The life cycle of digital applications is typically shorter than the life cycle of material applications, which makes the development at their interface especially interesting although challenging. Technologization will require the development of project management skills optimized for digital working environments including contingency to the new high frequency of changes. This means also systematized communication on changes, new ways of working and may require new skills for future working life (Andersson 2020). Should we admit that there is no normal to return to, but continuous change ahead, and shift from plan-driven development to change-driven development (Lagstedt 2019)? In a dynamic world, with high frequency of changes, who has time to analyse the systemic consequences of all the new solutions to ensure sustainability? Would thinking in systems (Arnold & Wade 2015, Colchester 2019) and approach with shared disciplinary (Salonen 2020) improve significantly our ability to cocreate with our community, including AI, to make the optimal and most sustainable decisions with complex problems? Are we too late, if we talk about change management? Should we rather talk about proactive leading and steering the change, and stop resisting it? As community we have a great learning challenge ahead to implement technologization at all branches for a sustainable future. That will require systematic learning efforts from all the disciplines. All should evolve with their skills, not only the engineers.

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The Crisis and its Responses in Formal Education: Ambivalence, Ideology and the Suppression of Death

Matteo Stocchetti[19]

Abstract

The response of educational institutions to the pandemic crisis is ambivalent and much depends on the ideological standpoint from which we assess this role. Assessment that fails to see the duality of discourses constituting formal education – administrative and pedagogical – also fail to appreciate the influence of Neoliberalism and its limitations. This analysis suggests that the technological response to the fears associated with the Covid-19 pandemic performs the social suppression of death, increases the influence of the administrative discourse, prioritising 'control and certification', and neglects the importance of pedagogical discourse in addressing those fears. In the conditions of this crisis, pedagogical discourse is suppressed because its functions in relation to the fear of death may lead to a radical problematisation of the influence of Neoliberalism on formal education. Under these circumstances, the revaluation of democratic pedagogical discourse is a form of resistance.

Keywords: formal education, Neoliberalism, pedagogical relationship, distance education, crisis

INTRODUCTION

In the emergency conditions dictated by the Covid-19 pandemic, educational systems in Europe and elsewhere have struggled to 'save' the academic year by a hasty shift to online learning, brushing away in one stroke almost two decades of criticism of these technologies and their impact on education (Selwyn, 1999) (Ferneding, 2003) (Selwyn, 2014) (Stocchetti, 2020). Possibilities and developments that, until recently, were discussed in speculative terms are now deployed as the 'new normal'. To assess the situation, it is important to decide if this 'new normal' can be indulged or should be resisted. To anticipate the main point of this paper, I think the latter is the case and I will explain why.

[19] Arcada UAS, Finland, Department of Culture and Media, Senior Lecturer

Has the response been, so far, a success story or a catastrophe? It all depends on the standpoint. Assuming that we all did our best, I think we must avoid self-congratulatory attitudes and look at what has been lost without losing hope of recovery. As I shall argue, the uncritical shift to distance education may meet administrative needs associated with the credit-based business model of formal education, but it undermines the pedagogical relation and the possibility of trust as fundamental conditions in the formation of individuals.

Ultimately, the impact of the pandemic on formal education is ambivalent because formal education is a social process with two 'souls' that generate very different and often outrightly contradictory discourses. For the sake of clarity and simplicity I will call these 'souls' administrative discourse and pedagogical discourse. To appreciate this duality, it is important to understand the impact of the pandemic and the technological responses on formal education.

The analytical framework I discuss in this essay contains at least four tenets or 'working hypotheses':

- Formal education consists of two discourses, pedagogical and administrative, in a dialectical relationship
- This dialectical relationship is an active element of the socio-political and ideological context. This means that it is influenced by and is influential upon this context. In practice, the control of education can or cannot bring about social change.
- The pandemic crisis occurs in a time when a particular ideology, Neoliberalism, is both dominant and under attack from many directions. The response to the pandemic in formal education reveals this tension and both the influence and the limitations of the influence of this ideology.
- The extent of Neoliberal influence reveals itself in the effort to suppress the fear of death by framing the crisis as a problem of productivity. The fear of death associated with the pandemic, however, creates the need for a pedagogical discourse that challenges this suppression and the influence of Neoliberalism in formal education.

In other words, things are not clear cut. This analytical framework allows for a more sophisticated and ultimately accurate interpretation of the crisis and its response than one simplistically termed as a triumph or a catastrophe. Most importantly, I hope it will facilitate critical understanding of what went right and what went wrong, hence enabling the efforts of those who seek to protect the emancipative potential of critical education in times of crisis.

In the following sections I will: 1) offer a summary description of the two souls of formal education, and the productive effects of discourses they support; 2) describe the role of ideology and the influence of Neoliberalism on these discourses and on the usage of technologies for remote teaching; 3) identify the limitations of this influence and the importance of revitalising the tradition of democratic pedagogy in further dealings with this pandemic in higher education. This revitalisation is fundamental to address the fear of death suppressed by the influence of Neoliberalism on the administrative and pedagogical souls of formal education.

The reader should be aware that the context of my argument is not restricted to higher education in Finland but, more broadly and perhaps generically, to higher education in Western democracies. Thus, the tendencies I describe apply in different measures in different national contexts, with 'particulars' that are not possible to discuss within the framework of this paper.

1 THE TWO DISCOURSES OF FORMAL EDUCATION

If social processes can have a 'soul' – the spirit that keeps the process 'alive' - formal education has at least two: one is administrative; the other pedagogical. These souls feed different representations and different ways of thinking, talking and discussing the problems of formal education. I call these the administrative and the pedagogical discourses. The discourse of formal education – the way we talk, write or even think about formal education -is a social activity in which the important differences between these two souls are usually neglected. At least since the modern era, when education became a matter of public concern and entered the agenda of the new-born modern state, the relationship

between these two souls has always been problematic. To understand why, one has to take a closer look at their features.

1.1 THE PEDAGOGICAL SOUL

The idea that education is first and foremost about the pedagogical relationship between an educator or pedagogue and a learner or disciple, goes back at least to ancient Greece where the term ‘pedagogy’ was used to describe the action of taking a youth to school. In pedagogical discourse, formal education is the process in which a professional educator takes responsibility for the spiritual, intellectual, social and, only to some extent, professional development of the learners assigned to their care. Independent of the variety of opinions concerning the actual content or direction of this development (e.g. compliance with society and citizenship vs. individuality and uniqueness, see e.g. Bertrand Russel for a classic discussion (Russell, 1932)), the focus here is on the so-called ‘pedagogical relationship’: the quality of the connection between educator and learner. The main concern is (mutual) trust because without trust, nothing else counts.

According to Aidan Curzon-Hobson, trust consists in the “student’s sense that his or her projections of potentiality will be both encouraged and rewarded by the teacher” (Curzon-Hobson, 2002, p. 276). This notion is key in critical pedagogy and presents teachers with formidable challenges “not only in terms of what is to be achieved, but also in relation to the broader ideological struggles and accountability mechanisms that underpin tertiary institutions”. (Ibidem)

This notion of pedagogical trust implies at least two ideas: first, the learner’s belief that what the educator does is in her/his interest; second, the educator’s commitment to do what is in the interest of the learner. Because of its immateriality, and the virtual impossibility of reducing it to quantitative indicators, this notion of trust is very difficult to operationalise and therefore, it is usually excluded from the discussion about the efficiency and effectiveness of formal education. Unfortunately, in our times, the funding of educational institutions depends precisely on these discussions.

The fundamental purpose of a pedagogical relationship based on trust is to help the learn-

ers to develop their unique potentialities. Also this outcome, however, is difficult to operationalise, impossible to 'measure', and is therefore excluded from the range of indicators grounding managerial decisions. This exclusion is particularly damaging for democratic society, where the preservation of democracy depends on individuals who can combine social change and continuity by handling uniqueness and therefore diversity within relations of trust. Trust is a social skill and, just like other social skills, it has to be learned.

While difficult to assess, trust is necessary for the formation of unique individuals and for the preservation of what we may describe as the pedagogical conditions of democratic regimes: the inclinations and competencies developed since the early stages of life that makes it possible to handle diversity, dialogue, change and continuity.

1.2 THE ADMINISTRATIVE SOUL

What I call the 'administrative soul' of education is much younger than the pedagogical soul and it was established with the birth of the modern state, conventionally set with the Treaty of Westphalia in 1648. Early forms of administrations were of course present in Greece, Rome and during the Middle Ages, when formal education was delivered mostly in monasteries and early universities and was in large part under the control of the Church.

The interest of the state in education was closely associated with the 'problem' of state sovereignty. Put simply, this problem consists in the fact that the state's claim to national sovereignty depends not only on its military strength but also on a certain degree of legitimacy: the belief that the state's exercise of power is not only effective but also rightful.[20] The interest of the state in promoting formal education has thus always been in what we today call socialisation: the assimilation of ideas, beliefs and knowledge supporting the legitimacy of the state; the loyalty towards its representatives; and in some cases, the idea that the existing social order is the best possible order.

[20] In the tradition of a legal and political theory dating back to Jean Bodin and Thomas Hobbes, the key aspect of state sovereignty is usually expressed in terms of the 'monopoly of legitimate violence'. The meaning of this formulation is not that only the state can use violence but that only state violence is legitimate. The state monopoly ceases to exist, however, not when individuals or groups resort to violence but when a significant number of people do not consider the violence of the state as legitimate anymore. For some recent critiques of this tradition see (Walker, 1992) (Tilly, 1985).

From a historical perspective, thus, the distinctive function of administration is control. In formal education, and independent of political regimes, one may argue that administrative control always has conservative functions to the extent that it seeks to keep the formation of individuals (and the practices that seek to develop their potentials), within the limitations of established ideals, beliefs and knowledge – limits usually sanctioned by law and assisted by the repressive power of the state.

To understand the direction of the ideals inspiring the actual practices of this control (and for example, explain the differences between formal education in democratic and authoritarian states) we need to look into the role of ideology.

2 EDUCATION, IDEOLOGY AND DIGITALISATION

In formal education, pedagogical relationship and control do not happen in a vacuum. As French sociologist Louis Althusser argued discussing the institutions of the Ideological State Apparatus (Althusser, 2008 (1971), p. 17), education occurs within ideological coordinates reflecting the relative influence of social forces in society.
In the last thirty years or so, the most influential ideology, in education and elsewhere, is Neoliberalism: an aggressive form of capitalism that rose from the tatters of the so-called 'post-war consensus'. The core idea of this 'consensus' was to avoid the return of totalitarian ideologies by developing institutions that could mitigate the disruptive effects of capitalism on society.[21] Neoliberalism seeks instead to dismantle these and other institutions that may interfere with the working of the 'market', and enforce the market economy as the fundamental principle of a world-wide socio-political order.

Described by French sociologist Pierre Bourdieu as a 'programme of the methodical destruction of collectives' (Bourdieu, 1998), Neoliberalism thus rejects the 'welfare state' and 'public' education as tools to compensate for the disruptive effects of the market in society, to fight social inequalities, poverty and exclusion, and argues instead for a political economy based on economic freedom and a radical form of individualism.

[21] This idea was supported, although from different perspectives, by the works of Karl Polanyi (Polanyi, 2001 (1944)) and Maynard Keynes (Keynes, 1936).

To understand the scope and intensity of Neoliberalism's influence on the pedagogical and administrative discourse of formal education we have to keep in mind that, like other modern ideologies, Neoliberalism relies on particular ideas concerning a) human nature, or the myth of the so called '*homo economicus*', b) the political economic role of the state especially concerning taxation and public spending and c) the role and myths of technology.

In political economy, the Neoliberalism recipe consists of minimal taxation and public spending, support for the privatisation and managerialism of educational organisations, especially in higher education (colleges, polytechnics, universities), and the commodification of education - its transformation into a (luxury) 'product' accessible to people in direct proportion to their socio-economic conditions.

In the last three decades, the influence of Neoliberalism in education has also been bolstered through the so-called 'digital turn' in education as this 'turn' deployed technologies originally developed and appropriated in association with the interests, and within the myths and ideological coordinates of international capitalism (Schiller, 1980; Traber, 1986; Schiller, 1999; Mosco, 2004; Curran, et al., 2012; McChesney, 2013; Stocchetti, 2020).

Finally, and again like other ideologies, Neoliberal discourse produces social identities compatible with the social order it envisions. The administrative control of the educational process is justified in terms of productivity, professional educators are 'human resources', learners are 'clients' or 'customers', and 'quality' is reduced to its quantitative indicators such as credits or 'employability'. Most importantly however, Neoliberal pedagogy aims at forming the individual with the personality traits necessary for the justification of Neoliberal socio-economic order. In this pedagogy, the main function of formal education is the training of skilled labour and socialisation according to the ideals and values associated with the free market utopia.

The current pandemic is a challenge that can ultimately strengthen or weaken the influence of this ideology. To understand what needs to be done, it is important to look closer at the elements of ambivalence of this crisis in formal education.

3 CRISIS AND AMBIVALENCE

'Crisis' comes from ancient Greek κρίση, a word that means 'turning point', and the verb *κρίνω*, used to mean both 'to separate' or 'to distinguish' but also 'to decide' or to 'judge'. To recall the etymological origins of this term is useful because it opens up interesting interpretative avenues of our present conditions. My suggestion here is that the combined effect of the pandemic and the mainstream usage of digital technologies constitute a turning point in what Henry A. Giroux discussed as the Neoliberal 'war' on higher education (Giroux, 2014).

The scope of this turning point is greater than formal education as it may be argued that the pandemic has brought globalisation to a halt and seriously undermined the credibility of the whole idea of a world united under the free market utopia (economic globalisation). Within the confines of this paper, I will not discuss the issue if this crisis marks the beginning of the end for Neoliberalism. I will instead focus on formal education and argue for the ambivalence of this impact.

3.1 DISTANCE EDUCATION BUILDING THE NEOLIBERAL UTOPIA?

The crisis has offered the opportunity to enforce distance education on a massive scale. According to Tegan Morton, remote education looks fine despite it dehumanising effects because education has already been dehumanised (Morton, 2020). Looked at from the perspective of an *ideologiekritik*, this argument is compatible with the idea that through new technologies of AI, capital is trying to change its environment and the essential nature of humanity in order to make it compatible with the reduction of humanity itself to the status of 'human resource' (Dyer-Witheford, et al., 2019).

Rather than challenging this important point, in the next section I argue that by re-actualising the fear of death, the current crisis opens up a space of resistance against the ideological influence of Neoliberalism that seeks to suppress this fear in the process of dehumanisation. Before that, however, I want to argue that the deployment of digital technologies in distance education may, if not managed properly, have effects compatible with and supportive of the Neoliberal programme.

For the sake of brevity, some of these effects can be summarised as follows:
First, by blurring the distinction between private and public space, these technologies also undermine the rules and the social identities or 'persona' (Goffman, 1959) associated with them. As our functionality in the social world depends on these and other distinctions, rules and identities, one should not underestimate the effects of their dissolution. From the administrative perspective this means that control in 'remote offices/locations' de facto spreads and penetrates spheres, rules and identities which in normal conditions would be out of its reach. This extension is of course the signature of totalitarian regimes and the point is famously described by George Orwell in *1984*. In addition to making the individual more vulnerable to administrative control, this condition is a major source of stress and possibly contractual problems when, for example, the teacher working in a remote location is also a parent and has to prioritise private activities (e.g. attending to a child learning in the same remote location) over professional ones during her public time or the other way around. As many students are also parents, workers, etc. there are reasons to believe the same arguments apply to them, too.

Second, the uncertainty that distance education creates about distinctions, rules and identities, opens up emancipative opportunities and triggers a widespread need of control. Since teachers are concerned about 'losing' their students, and managers about 'losing' their teachers, teachers need to control students (who are also dealing with the effects of this blurring on their self-discipline, motivations, etc.) and managers need to control teachers.

Third, in distance education interaction is no longer with people but with a machine (our laptop) and with the technological infrastructure that supports the functionalities of our machines. Tech enthusiasts take special pleasure in minimising the impact of the medium in interpersonal relations or in construing this impact as an 'enhancement' of reality. The notions of 'co-presence', 'virtual cocoon', 'virtual community' etc. hide the essential condition of absence or, more precisely, the fundamental fact that the use of media does not eliminate absence but only compensates for its detrimental effects in communication. Mediated presence, in other words, is not a form of presence but a form of absence (Villi & Stocchetti, 2011). The misleading semantics rests on an ideological standpoint that

seeks to misconstrue ‘virtual’ reality as reality.

Fourth, for the reasons above, the conditions of distance education support forms of what Gregory Bateson called ‘deutero-learning’ (Visser, 2003) that are favourable to alienation[22] and the form of tragic individualism that Zygmunt Bauman associates with the conditions of uncertainty and insecurity of the ‘liquid society’ (Bauman, 2004 (2001)) (Bauman, 2006). By enforcing distance education in response to the pandemic crisis, what is learned and taught above all is the imperative of productivity: to perform as ‘human resource’ despite (or perhaps because of) fundamental impairments in our human nature. We teach and learn to endure alienation as an essential condition of labour and life itself in capitalism regimes. In the pedagogical relationship, alienation manifests itself as a radical substitution in the nature and ends of this relationship: from trust to control; from open ended potentialities to pre-established professional profiles. From the perspective of a Neoliberal pedagogy, alienation is not ‘collateral damage’ but a structural condition of capitalist society to which students, as ‘workers in the making’, must adapt.

In capitalism, the isolation of the individual from his/her fellow humans and, therefore, from his/her social world has productive functions in at least two fundamental senses. First, isolation makes collective, unsupervised action virtually impossible and by isolating individuals, one suppresses the possibility of ‘revolutionary’ action. Second, isolation makes individuals more vulnerable to fear and hierarchical control more cost-effective. The rationale for isolation is conventionally expressed in Latin with the maxim *divide et impera*. But in our time, the digital version of this maxim offers unprecedented opportunity because individuals are isolated from other individuals, but not from their administrative controllers. In this way, one may argue that alienation and isolation are not detrimental at all if one recalls that, as Bourdieu pointed out, the Neoliberal programme is in essence ‘a programme of the methodical destruction of collectives’ (Bourdieu, 1998). The productive enforcement of alienation and individualism serves the purpose of this destruction.

[22] Karl Marx discussed four forms of alienation: “(1) estrangement from the products direct producers create; (2) estrangement in the processes of production; (3) estrangement from our species-being (our control over human sociality); and our (4) estrangement from one another”. (Marx 1992:23-334) quoted in (Greaves, 2016, pp. 50-51).

By experiencing education primarily through the interaction with terminals rather than in relation to educators, the pedagogical effect of distance education is to form pupils who experience doubts, concerns, curiosities, ambitions and even fears *in isolation,* and they thus rely on the technological infrastructure as the only 'tool' to reduce negative emotions (insecurity, frustration, apprehension, etc.) and maximise their chances of positive feedback (satisfaction, gratification, self-esteem, etc.). In other words, through this kind of digitalisation, we teach people to live alone and to be dependent on a technological infrastructure whose affordances, in our age, are established by the commercial interests of a few large companies (Stahl & Levälahti in this volume).

From the point of view of those who seek to enforce the Neoliberal programme, alienation and individualism appear not as 'collateral' damage' of distance education but core pedagogical objectives in the formation of identities, compatible with the reproduction of capital and the emasculation of education of its potential for social change.

3.2 THE PANDEMIC CRISIS AND THE RETURN OF THE SUPPRESSED

The ideological influence of Neoliberalism spreads the belief that youths need higher education to find a job and that its main social function is to create the skilled labour necessary for the reproduction of capital in 'post-industrial' societies. By disrupting the global economic system and re-actualising the fear of death, the current crisis challenges this belief and offers the opportunity to refocus the purpose of higher education, in Finland and elsewhere.

One of the fundamental pedagogical principles of the democratic tradition, at least since Socrates, is that people should be educated to think of themselves not as 'tools' but as 'ends'. Active participation in society requires the acquisition of a wide range of skills and competencies including those necessary for the performance of economic activities. It is only recently, in the last thirty years or so, that the acquisition of these competencies has acquired undue prominence in the curricula of higher education.

For an influential tradition that runs throughout most of the documented history of pedagogical debates, education is for life and death or, more precisely, to equip individuals and especially younger generations with the intellectual tools and the ethical inclination

to conduct a 'good' life (whatever 'good' means at a particular time and for a particular culture) and to prepare for the only inescapable experience that is common to all humans, irrespectively of how 'good' or 'bad' our lives are. From this perspective, formal education is the process through which humans learn to give meaning to, and to interpret the fantastic variety of meanings associated with, human life. Without formal education, this 'knowledge' would remain restricted to the narrow boundaries of personal experience, informal education and social origins, confining our lives in a world that would appear far more incomprehensible and threatening.

The pedagogical interest in the meaning of life and death is not exclusive of democratic education but common to other traditions inspired by religious or political beliefs, to the extent that these traditions acknowledge the distinctive problem that the experience of death poses to the relationship between the individual and society. The essence of this problem consists in the possibility for the individual to tackle the fear of death through participation in society, rather than escaping from it. The Capitalism solution, instead, is to simply suppress the fear of death through capital accumulation.[23]

Capitalist pedagogy hides the reality of death through the metaphorical assimilation of the life of humans with the life of capital. This 'trick' ultimately allows an absurd idea to appear reasonable: 'we live as long as the capital grows'. In response to the pandemic, the social suppression of death occurs through isolation and reliance on digital technology to avoid the disruption of production. In the process, however, the shortcomings of this approach become all the more evident. In the conditions of forced isolation, students and teachers alike, experience 'the growing winter of a wasted world, a vapid monoculture of nothingness', that brings about what Peter Fleming recently (and somehow prophetically) called the death sentence for the 'homo economicus'. (Fleming, 2017, p. 268)

[23] French philosopher Jean Baudrillard is perhaps the author that, in our time, argued more explicitly about the idea that capitalism performs the social suppression of death through the reduction of life to a system of exchange based on equivalence that removes the possibility of death through accumulation (Baudrillard, 1993 (1976)).

The crisis, in other words, exceeds the limitations of ideological responses and leads to restoration of the 'worldliness of the world' including the role of death vs. capital accumulation as a source of meaning. (Dean, 2003, p. 166). If capitalism replaced 'the human need of human beings' with 'the human use of human beings' (Dean, 2003, p. 84), in the pandemic conditions of social distance and remote productivity, we are all re-discovering the importance of the former while feeling the pangs that come with the awareness of the latter.

4 CONCLUSIONS

The main point of the arguments in this paper is that the evaluation of the educational response to the crisis triggered by the current pandemic is a complex endeavour. This complexity exists because the crisis itself has many dimensions, because the role of technology is ambivalent, and because the influence of a dominant ideology affects the social representations of what formal education is about, the way available technologies are used and crucially the standpoint of evaluation itself.

The pandemic emergency and schools' responses is a success story only for those who construe education as an administrative process for the production of credits. Conversely, I suggest that the main lesson to learn from the response to the pandemic crisis is not primarily that digital technology is useful but rather that nothing can compensate for the loss of pedagogical trust if and when this is impaired or lost in distance education.

The influence of Neoliberalism and its pedagogy based on managerialism and individualism, support false interpretations of the social functions of formal education. In the discussions about the role of new technologies, we should identify and oppose these interpretations. To oppose the influence of Neoliberalism we need to acknowledge that a) the social meaning of this crisis is primarily about death, rather than 'productivity', b) the role of technological solutions must be assessed in relation to the requirements of a pedagogy inspired by democratic ideals rather than Neoliberal ideology and c) the movement towards a critical digital pedagogy that can discern ideological influences also requires that we stop praising technology for what it can do and rather examine it carefully and appreciate the importance of what it cannot do.

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Covid-19 and Mental Health

Jukka Pippo[24]

Abstract

It seems obvious that the pandemic has influenced citizens all around the world in many different ways. Isolation of individuals has its effects even if isolation of different groups has been seen as being of importance to hinder transmission of the virus. Domestic violence has increased and is connected to the phenomenon of isolation. However, it seems as if alcohol abuse has not increased during the time of Covid-19 in Finland. This article aims to highlight the importance of education within the area of mental health from a psychological balance perspective. It is based on investigation of strategically chosen written documents and reports concerning the Covid-19 pandemic's effects on individuals' mental health, also on students in higher education. Teachers and students within HE are encouraged to actively engage and learn from experiences of Covid-19 at a local level among communities' inhabitants.

Keywords: Covid-19, mental health, effects

INTRODUCTION

According to the World Health Organization (WHO, 2004), mental health is 'a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community'. Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others and make choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood. Keyes (2014) has identified three components of mental health: emotional well-being, psychological well-being and social well-being. Emotional well-being includes happiness, interest in life, and satisfaction. Psychological well-being includes liking most parts of one's own personality, being good at managing the responsibilities of daily life, having good relationships with others, and being satisfied with one's own life. Social well-being refers to positive

[24] Arcada University of Applied Sciences, Helsinki, Finland

functioning and involves having something to contribute to society (social contribution), feeling part of a community (social integration), believing that society is becoming a better place for all people (social actualisation), and that the way society works makes sense to them (social coherence). Galderisi et al. (2015) propose a definition of mental health as follows:

> 'Mental health is a dynamic state of internal equilibrium which enables individuals to use their abilities in harmony with universal values of society. Basic cognitive and social skills; ability to recognise, express and modulate one's own emotions, as well as empathise with others; flexibility and ability to cope with adverse life events and function in social roles; and a harmonious relationship between body and mind represent important components of mental health which contribute, to varying degrees, to the state of internal equilibrium'.

This article aims to highlight the importance of education within the area of mental health and the effects of the Corona pandemic crisis from a psychological balance perspective which is suitable for reflecting on the complex consequences of the Corona pandemic, in contrast to a mere disease-oriented approach.

1. EFFECTS OF COVID-19 ON MENTAL HEALTH

As the coronavirus pandemic rapidly sweeps across the world, it is inducing a considerable degree of fear, worry and concern in the population at large and among certain groups in particular, such as older adults, care providers and people with underlying health conditions. In public mental health terms, the main psychological impact to date is elevated rates of stress or anxiety. However, as new measures and impacts are introduced – especially quarantine and its effects on many people's usual activities, routines or livelihoods – levels of loneliness, depression, harmful alcohol and drug use, and self-harm or suicidal behaviour are also expected to rise. In populations already heavily affected, such as Lombardy in Italy, issues of service access and continuity for people with developing or existing mental health conditions are also now a major concern, along with the mental health and well-being of frontline workers. As part of its public health response, WHO has worked with partners to develop a set of new materials on the mental health and psychosocial support aspects of Covid-19. (WHO, 2020). The material has been developed to support the work of particularly vulnerable groups such as children and patients in long-stay mental health care institutions and how to cope with stress during Covid-19 in different contexts.

1.1 ISOLATION

While social isolation and loneliness were prevalent in the population prior to Covid-19, efforts to reduce the virus' spread via stay-at-home orders, quarantine, and social distancing recommendations, have exacerbated an already serious problem. Regardless of living situation, interactions with anyone outside the home have been severely restricted for a large part of the population in different countries around the world. Preliminary surveys conducted in the USA suggest that within the first month of Covid-19, loneliness increased by 20 to 30 percent and emotional distress tripled (Holt-Lunstad, 2020). While several investigations are still ongoing to capture the full extent of the problem, current evidence suggests the pre-existing public health crisis of social isolation and loneliness may be far more widespread than previously estimated.

Many countries are affected by Covid-19 with the result that the elderly population (aged >70) was recommended to self-isolate for quite a long time. However, it is well known that social isolation among older adults can be regarded as a serious public health concern because of their heightened risk of cardiovascular, autoimmune, neurocognitive, and mental health problems (Gerst-Emerson & Jayawardhana, 2015). Santini et al. (2020) recently demonstrated that social disconnection puts older adults at greater risk of depression and anxiety.

Self-isolation will disproportionately affect elderly individuals whose only social contact is outside of the home, such as at health care day venues, community centres, and places of worship. Those who do not have close family or friends and rely on the support of voluntary services or social care, could be placed at additional risk, along with those who are already lonely, isolated or secluded.

Not only elderly people suffer from isolation. Many people around the world have lost their usual social contacts with their social networks including colleagues, friends, hobbies, etc. and are missing the important social interaction which is regarded as being of importance to positive mental health.

The Independent (12 August 2020) writes as follows:

> If you take away that social element, the social support networks that people have, homes become very different places and sadly many of the callers to our helpline have been telling us that the current situation in care homes is now very much like a prison.

Older people in particular have been affected by a clear decline in functional ability and mental health with long-term consequences.

However, isolation might reduce transmission which is most important in delaying a peak in cases and minimising the spread especially to high-risk groups and adherence to isolation strategies is likely to decrease over time. Such mitigation measures should be effectively timed to prevent transmission but avoid increasing the morbidity of Covid-19 associated with affective disorders. This effect probably and mostly influences disadvantaged and marginalised populations which should be urgently targeted for the implementation of preventive strategies.

1.2 DOMESTIC VIOLENCE

The unprecedented increase in domestic violence across the world since the onset of the Covid-19 pandemic (UN Women, 2020) marks an urgent call for action for the private sector to leverage their existing resources and influence to keep women safe at home and safe at work. Domestic violence is about power and control, it deprives survivors of their agency and confidence, often making it difficult to report. Being confined and isolated during a lockdown, along with added stresses, tension and financial insecurity, may exacerbate existing abuse and control or it may occur for the first time.

Given what we know about the heightened risk of domestic violence and the increasing reported numbers of survivors seeking help during the COVID-19 pandemic, it is likely that substantial numbers of women who are working remotely are experiencing domestic violence. In particular, the Covid -19 pandemic adds greater health and safety risks for an employee working from home during a lockdown. These are relevant issues for the immediate future as lockdowns are lifted and in the longer term where remote working is likely to be a more common feature of the future world of work.

In Finland, reports during springtime 2020 showed an increase in home-related incidents according to the police. In addition, Statistics Finland (Haapakangas, 2020) revealed a similar picture of the Corona situation since about 7 300 beatings known by the Polis were recorded since the beginning of 2020. This is the highest number after 2012. When viewing it closely, the records show that beatings in private homes escalated compared to

earlier years with an increase of 10 % compared to 2019. The number of violent acts committed by housemates was about 1 140 which is 67 % higher than January-June 2019. A little less than 80% of victims are female. Violence by male housemates increased by 69 % and violence by females 62 %, mostly during April – June. From the beginning of 2020 (January – June), 21 % more parental violent acts came to light. There were 860 incidents which is 150 more than the year before. One can only speculate what effect distance teaching has had.

It is impossible not to notice that domestic violence has increased during the pandemic. In China, it has tripled, in Finland it has increased by 14 %, in the United States 22%, in Spain 20% and in France and Singapore 33% (UNRIC, 2020).

Phumzile Mlambo-Ngcuka, leader of UN Women, states ‘When a human being is locked in his/her home, already existing security-, health- and financial problems and tension between persons increase’.

1.3 ALCOHOL

During the Corona spring, Finns increased their purchases by 20 % from Alko. It sounds bad but in fact, alcohol use has probably decreased even if in April sales in grocery stores increased by 5%. One explanation of that might be travel restrictions. Finnish people have had limited possibilities to buy alcohol products from countries where prices of alcohol are often much cheaper than in Finland (such as Estonia or Latvia). The proportion of alcohol sold in Alko and grocery stores in Finland is about 70 % and it increased in April by about 13 %. However, other consumption, mostly importation from abroad and in restaurant sales almost totally collapsed from April – May. However, the increase of sales in grocery stores and ALKO did not fully compensate for the drop in consumption from other sources. According to this information consumption of alcohol decreased by 15% (Kurronen, 2020).

1.4 PSYCHOLOGICAL LOAD

Corona-19 and restrictive measures connected to it, seem to be so that psychological load such as stress and anxiety has not increased among the working age population. The Finnish Institute for Health and Welfare has sorted out psychological load among the working

age population. Every tenth of the working age population has experienced psychological load during Corona spring when part of them two years ago was higher at 12 % (THL, 2020 a).

Even if load among the working age population can be somewhat decreased, the pandemic could have increased psychological load among elderly people and children. In spite of that, elderly people belong to the risk-group but according to EVA:s Value- and Attitude investigation, the population over 65 years experienced less anxiety and fear of corona-virus than any other age groups (Metelinen, 2020).

2. SIGNIFICANCE IN EDUCATION

Coronavirus disease (Covid-19) can affect young adults directly and indirectly. Beyond getting sick, many young adults' social, emotional and mental well-being has been impacted by the pandemic. Trauma faced at this developmental stage may have long-term consequences across their lifespan even though physical or social distancing is one of the best tools we have to avoid exposure and slow its spread. However, having to physically distance yourself from someone you love like friends, family, co-workers or your worship community can be hard. Young adults may also struggle adapting to new social routines from choosing to skip in-person gatherings, to consistently wearing masks in public. It is important to support young adults in taking personal responsibility to protect themselves and their loved ones (CDC, 2020).

Many higher education institutions temporarily transitioned to only virtual courses to help stop the spread of Covid-19. This included the temporary closing of college campuses, prompting the suspension of many work-study opportunities and campus housing services. Many young adults also lost their internships or practicums and needed to juggle moving to a new place, spending long hours online completing coursework, and job seeking without the in-person support from peers which could be overwhelming for many young adults. It is important for young adults to acknowledge that these extraordinary circumstances may have an effect on their socioemotional well-being, continuity of learning and professional development. Therefore, it is crucial that higher education provides study services and support for well-being. College and university students must have the possibility to reach out to their institutions' career development, learning and counselling services teams for support, when needed. (CDC, 2020).

Education in mental health and psychiatry is often too directed towards disease, not on factors which are of importance for individuals to maintain their psychological balance. According to Caring Science (Hummelvoll & Barbosa da Silva, 1994), a human being consists of biological, psychological, social and spiritual dimensions. Therefore, in mental health education, all these dimensions should be emphasised equally. As shown earlier, the Corona-19 pandemic influences all the dimensions of a human being and that is one of the reasons why educational programmes within mental health should be broadened, not only to deal with the individual´s dimensions but also include the importance of individuals' families and social networks.

3. DISCUSSION

Mental health can be regarded as a recourse, part of health and of importance to an individual's well-being and functioning. Mental health depends on an individual's inner aspects but also on aspects 'outside' the individual, especially social relations, communication with others, experiencing oneself as part of a community. Most people work and relations with colleagues and management are of importance for mental health. Social relations can also imply strong social capital, which is known as a factor increasing public health (Hyyppä, 2011) and a significant factor supporting positive mental health. Isolation during Covid-19 seems to have affected individuals in different ways and individuals have created new kinds of interaction during isolation, as shown in the media.

An aspect that is connected to mental health is resilience. Resilience can be defined as: ´The ability to adapt to difficult situation´. When stress, adversity or trauma strikes, you still experience anger, grief and pain, but you're able to keep functioning — both physically and psychologically. It can be thought that quite a few people all around the world have strong resilience which supports an individual's mental health (Davydov et al., 2010). Resilience is explored in more depth in the paper written by Forss and Hyde-Clarke (in this volume).

Mental health can be promoted in different ways and on different levels of society (THL, 2020 b). On the individual level, promotion of mental health means strengthening self-esteem and life-management. Governments in Europe, and also other parts of the world, have strived to find ways to promote the individual's life situation and mental well-being

by different actions. On the community level, promotion means strengthening social support and participation but also safety and amenity of vicinity. On the structural level, promotion means a secure economic livelihood and by making social decisions which decrease discrimination and inequality.

In Finland the government has strived to correspond to individual, community and structural needs to maintain citizens mental health. However, the Covid-19 pandemic makes the situation very difficult and decisions of a different kind must be made to secure the stability of society. Decisions made are not always popular with citizens since they can limit their ordinary activities and lifestyle.

At Universities of Applied Sciences (UAS) such as Arcada, teachers and students could create an educational programme directed to strengthen and increase local communities' social capital and resilience among individuals to support inhabitants' mental conditions in local communities. This could be based on retrospective studies within local communities concerning issues connected to mental health during the Covid-19 pandemic with the intention of being prepared if and when a new epidemic caused by a virus comes along.

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