



Thirteen Technologies that Transformed Education / Trylika technologijų, kurios pakeitė švietimą

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Introduction

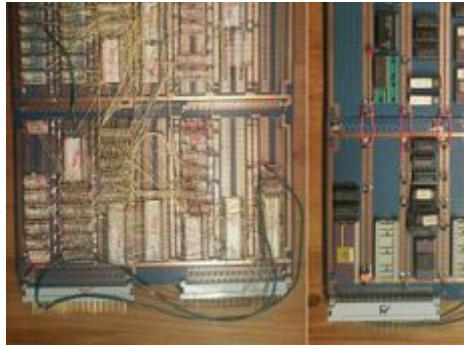
As students in the 1970s we knew that education was provided face-to-face, via correspondence courses and educational broadcasting. The next four decades introduced many new technologies that transformed education. This article recalls some of my early encounters with thirteen of these technologies. Through thirteen selected anecdotes out of the 400 included in [My Online Education World: 1980 – 2020](#). The selected personal anecdotes are related to my work for NKI Distance Education in Norway, the American Centre for the Study of Distance Education, the European Association for Distance Learning (EADL), the Universidade Aberta in Portugal and the International Council for Open and Distance Education (ICDE).

The chosen anecdotes are presented in chronological order with some of my early recollections about these technologies:

- 1980: Microcomputers and PC software
- 1984: Online bulletin boards and modems
- 1986: Learning Management Systems
- 1990: E-mail and Internet services
- 1994: The world wide web
- 1996: Search engines
- 2001: WiFi and laptops
- 2001: Mobile phones
- 2007: Smart phones
- 2011: iPads and apps

2010: Blogs and social media
2014: MOOCs and OERs
2023: Artificial Intelligence
1980: Microcomputers and PC software

Microcomputers and PC software introduced a host of useful new educational tools.



In the fall of 1980, I started working with my master thesis at the Norwegian microcomputer company [Mycron](#). It was headed by the serial entrepreneur [Lars Monrad Krohn](#) who I interviewed for educational TV in 1989.

As part of my thesis work, I designed and built the depicted central processing unit (CPU) for a microcomputer with the Intel 8086 microprocessor and 8087 co-processor. The thesis was written with the very early word processor Mytekst (developed for Mycron by Haakon Wiig) and stored on an eight-inch floppy disk.

Among many successful colleagues in Mycron were Terje Tinglum and Ingar Rune Steinsland who developed CPM 86 together with [Gary Kildall](#). We all expected it would be the operating system for the planned IBM PC. Arild Haraldsen wrote about this in his Norwegian article [Den sanne historien om PCens historie](#) (The true history of the PC).

1984. Online Bulletin Boards and Modems

Modems made it possible to connect PCs to other computers and online bulletin boards via telephone lines.

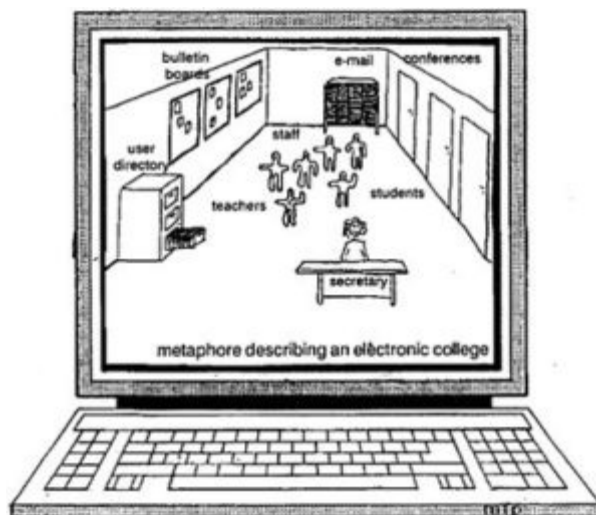
As microcomputers and modems became more available, a few enthusiasts started to set up [Bulletin Board Systems](#) at their private computers, enabled people to dial in with modems, exchange software and take part in online discussion forums. Among the most renown pioneers in Norway were Bergen by Byte and Odd de Presno's Saltrød Horror Show. It was also interesting to follow FidoNet which emerged as an international network of PCs running BBS server software.

I was intrigued by the BBS systems' potential and bought myself a 300 bit per second modem for Christmas. This was a turning point in my career because I understood

that computers and data communication were the future of distance education. I also realized that I could make a difference since I worked at a computer college in a private school with much competence in distance education.

1986. The EKKO Learning Management System

Learning Management Systems made online education available to schools and universities.



Inspired by my experiences with PortaCom and the PC-based Bulletin Board Systems, I suggested in February that NKI should start to offer online education. In April 1986, NKI's board provided funding for the project.

So, I came up with specifications for an electronic college designed for distance education. Termed it EKKO. Meaning echo in Norwegian – an awkward acronym for EleKtronisk KOmbinertundervisning. The figure shows the metaphor I draw to explain the online college concept.

The very first version of EKKO was developed in the spring of 1986 by Bjørn Mobæk and Lars Hornfeldt who were students at the NKI College of Engineering. They developed EKKO in the programming language Pascal on an HP-3000 computer, as part of their final project in the summer of 1986.

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EKKO was first used in addition to ordinary face-to-face teaching by students at Datahøgskolen (the NKI Computer College) in the fall of 1986. I remember I posted the notes from my lectures and the assignments on EKKO's bulletin boards. Urged the students to discuss the assignments in EKKO's discussion forums. Asked them to deliver their assignment work via EKKO's e-mail.

To my delight, it worked, and the students were positive to the experiment.

During the developing process, my research revealed two more intriguing projects. The EIES project lead by Murray Turoff and Starr Roxanne Hilz at New Jersey Institute of Technology and the CoSy project at the University of Guelph in Canada.

1990. DEOS – The Distance Education Online Symposium

E-mail and Internet services provided free access to people and information around the world.

Starting at Penn State University in August 1990, I soon got a graduate assistantship at the American Journal of Distance Education. Appreciated to share offices with Margareth Koble and Melody Thompson. The editor, Michael G. Moore, introduced me to the colourful Toni Garcia and challenged us to establish communication services to support the printed journal.

We sat up and tested a CompuServe account (Compuserve: 76436,350) because it was the major commercial online service provider around. However, we soon realized that academics in our field were hard to reach via CompuServe.

Our supportive professor Peter Cookson recommended us to check the automated mailing list management application Listserve developed by Éric Thomas. An appealing freeware managed completely via e-mail messages. Its potential as an online journal dawned on me as I got my first personal e-mail address (MFP101@PSUVM.PSU.EDU)

along with all students and employees at Penn State. I soon realized that free e-mail services would revolutionize international communication among academics.



So, we started to develop DEOS – the Distance Education Online Symposium. Much more interactive than printed journals. With more frequent publications. Free of charge since we had no printing and shipping cost. Promoting the printed journal and increasing the number of subscriptions.

We approached authors of good contributions that we could not include in the printed journal. Most of them pleased to be published in DEOS. Asked international scholars and pioneers to contribute and received a lot of positive feedback and support.

Wow, I became editor of DEOSNEWS – one of the world’s first online journals. The first issue was published in April 1991. A year later, one of the world’s first electronic journals that obtained an International Standard Serial Number (ISSN: 1062-9416).

1994. The Winter Olympic Games in Lillehammer

The world wide web integrated all the internet services in one user-friendly interface.

Winter sports. Profoundly embedded in Norwegian culture. The 1994 Lillehammer Winter Olympics gave a huge surge in Norway’s national pride. We will never forget the moment Juan Antonio Samaranch, President of the International Olympic Committee, proclaimed it the best Olympics Winter games ever. We still admire the Norwegian athletes who won 26 medals – more than any other nation.

Enthralled by the live news service from Oslonett, Norway’s first commercial web company. With the amazing new graphic browser Mosaic, we could get Olympics results from all events immediately on Oslonett’s webpages. Their service titled “WWW meets the 1994 Olympics” was a major success. The first web page for an international sports event and a kick start for the web in Norway.



MEETS
THE 1994 OLYMPICS

Results from The 1994 Winter Olympics at Lillehammer



For Web users in North America or the Pacific Rim, a [mirrored Olympic Information Server for North America](#) is now available. Please try to use it if you Europe - Thank you.

- [Important Announcement - PLEASE READ THIS](#)
 - [Important Messages from the Server Administrators](#)
 - [The Olympic FAQ - read this before you ask](#)
 - [About this service](#)
 - [Disclaimer](#)
 - [Credits](#)
-
- [Chronological list of all events](#)
 - [Daily lists](#)
 - [Todays events](#)
-

Screen shot of Oslonett's Olympic web page.

We had tickets to two events. Sweden and Slovakia played 4-4 in the Håkons Hall ice hockey rink. Italian cross-country skier Manuela Di Centa won the gold medal in 15 km freestyle.

Lodging was scarce. Fortunately, my childhood friend Atle offered me and six-year-old son Stian to stay two nights in his dental office. An office with a view to the ski jumping hill Lysgårdsbakken – the venue of the opening ceremony. I vividly remember reclining in the dental chair with a glass of wine watching the impressive ceremony on TV. The Norwegian actress Liv Ullmann and adventurer Thor Heyerdahl welcomed the world. Sissel Kyrkebø mesmerized us with the Olympic Hymn. Through the dental window, the fireworks and Stein Gruben with the Olympic torch. Before he brought it safely down the ski jump so that Crown Prince Haakon Magnus could light the Olympic cauldron.

In the same moment, Edvard Munch's iconic painting the scream, was stolen from the Norwegian national museum in Oslo.

1996. Searching for Alta Vista and Cyberius Zip

Search engines allowed students and teachers to find incredible much information on the internet.



I was thrilled by the new opportunities to search the web. My alter ego was as always more sceptical about emerging technology. So, Cyberius Zip wrote a poem about AltaVista. The first online search engine. Launched by Digital Equipment Corporation (DEC) in December 1995.

But there were few online media channels for cyber poets. The first Norwegian online newspapers Brønnøysunds Avis and Dagbladet were launched in March 1995. Only preceded by Dusken.no – the newspaper for students at NTH in Trondheim.

Computerworld Norway launched its website in 1998. So, my poem translated below, was published in the printed version on May 24 under the heading:

Zip up. From Cyberius Zip's collection of hyper poems.

Alta la Vista to Big Brother

Cyberius Zip is scared.

Big brother is paying a visit.

With Alta Vista,

crawling and mapping the web.

While we sleep in the bed.

He discovers files we misplace

and shares them with the world.

From a database somewhere abroad.

Outside the Norwegian Data Inspectorate's jurisdiction.

We are listed and watched –

whether we like it or not...

2001. The ICDE World Conference in Düsseldorf

WiFi and laptops allowed us to work away from our desks.



In April 2001, ICDE's 20th World Conference was hosted in Düsseldorf by the German FernUniversität. Located in the Düsseldorf Congress Centre on the banks of the river Rhine.

My first visit abroad after Norway on March 25 became a member of Schengen. The European legislation making travelling easier to all European countries except from UK, Switzerland and the Balkans. Substituting internal border controls within the Schengen Area with stricter controls at the external borders.

The conference was titled *The Future of Learning- Learning for the Future: Shaping the Transition* and focused on the convergence of open, distance and virtual learning.

1200 participants from 85 countries could choose between 150 conference sessions, accompanying exhibitions and a typical German conference dinner on Rhine River boats. The conference also provided an internet café since Internet access was hard to find in hotels and conference venues. However, something important started to happen after an alliance of vendors in 1999 decided to collaborate on the IEEE802.11 wireless communication standard. A standard they termed WiFi.

I was one of the many members of the International Programme Committee chaired by Helmut Hoyer, Rector of the FernUniversität. Recognized for the first time a presentation about Learning Objects and the SCORM e-learning standard that was introduced the year before. Heard about a free online encyclopaedia that was launched in January. Developed by a community of volunteers working for Wikipedia.

Observed that most papers still focused on traditional distance education. Read the collection of nine papers about Student Services at the UK Open University. Written by David Sewart, Mary Thorp, Greville Rumble, and others. Eighty pages including tentative conclusions that "<...> web-based courses have the potential to be more cost

efficient than television-based distance learning courses but are less efficient than radio or print-based courses”.

So, it was nice to be on a discussion panel with representatives of some of the few institutions having extensive experiences with: *Converting Print-based Distance Education Programs to Online Distance Education Programs*.

In the panel, Dominique Abrioux, Peter Cookson, and Alan Davis represented Athabasca University. Jocelyn Calvert from Deakin University and Bruce King from University of South Australia presented Australian experiences. My mentor and supervisor Torstein Rekkedal and I shared our NKI findings. Findings we already had presented in the IRRODL article: [*The NKI Internet College: A Review of 15 Years Delivery of 10,000 Online Courses*](#).



My most memorable conference moment came when Torstein Rekkedal was awarded the ICDE Prize of Excellence for Lifelong Contribution to the field of open learning and distance education. He was the third person in ICDE’s history to receive this prestigious prize. The two previous recipients were Otto Peters and Börje Holmberg and I was able to convene the three of them for a photo session.

2001. M-learning with Ericsson

Mobile phones allowed us to travel with laptops and personal digital assistants and connect to the internet.



NKI started its first mobile learning project in 2001. *From e-Learning to m-Learning*. Funded by the EU Leonardo Project and led by LM Ericsson in Dun Laoghaire, Ireland. The other project members were Distance Education International in Ireland, *Universita degli Studi di Roma III* in Italy, and *FernUniversität* in Germany. During 2001 we studied international experiences with m-learning, analysed technological solutions and pedagogical needs.

In the spring, we chose to build a learning environment around PDAs (Compaq iPAQ 3630 and 3660) and mobile phones (Ericsson T39 and Ericsson R580). As illustrated in the picture, I used these gadgets to demonstrate mobile access to our two online courses Tutor in distance education and Introduction to International Online Education (SPICE 601).

2007. The Mobile EADL conference in Dublin

Smart phones made online learning available in most people's pockets

The EADL conference in Dublin was organized by Kilroy's College and held at the fashionable Westbury Hotel on Grafton Street. Opened on May 23rd, 2007, by Dirk van der Mark, Charles and Patrick Kilroy.

As a member of the program committee, I remember we focused on social media and internet marketing. I'm glad we invited Tony Bates to talk about the impact of web 2.0 on distance learning, Christian Dalsgaard to consider social software in LMS. Desmond Keegan to discuss mobile learning.

I knew that the first-generation iPhone would hit the U.S. market in June 2007. But did not realise how profoundly it would change our lives. Anyway, my presentation

was about mobile technologies and NKI's experiences with mobile learning. Based on our work with the four EU-funded projects:

1. M-learning: From e-learning to m-learning (2001–2002)
2. Mobile Learning: The Next Generation of Learning (2003–2005)
3. Incorporating mobile learning into mainstream education and training (2005–2007)
4. The role of mobile learning in European education (2006–2008)



My favourite conference moment came when I could congratulate my role model Desmond Keegan with EADL's Roll of Honour. Another emotional decision was to withdraw from the EADL R&D Committee due to my growing involvement with EDEN.

The Gala Dinner was held at the magnificent Powerscourt House and Gardens. I remember the impressive river dance performance and good conversations with Michael Lammersdorf, Bernd Schachtsiek, Torunn Gjelsvik, John Trasler and Kees Veen.

2010. Transparent teaching and learning on an open MPeL stage

Blogs and social media gave us new ways to share knowledge

In May 2010, I wrote the blogpost [E-viva em Portugal](#) about my Portuguese teaching experiences at UAb's master program [Mestrado em Pedagogia do Elearning](#). Embedding and linking to a variety of examples of the students' coursework.

The following is an abridged version which I wrote as I prepare for a virtual Keynote for 15th anniversary of MPeL's pedagogical model for online education. A shortened version which excludes defunct links and embeds. Making me realize that digital information could be volatile. And that it was wise to inscribe the ten commandments in stone tablets.

I was responsible for both development and implementation of a 16-week online course with about 20 students in both fall and spring semester. The course had 8 ECTS credits and students were expected to study about 8 hours a week. Before the course started, I had to create a learning contract describing learning goals, content, implementation,

and evaluation. The teaching should be conducted in Moodle, but with the active use of Web 2.0 services. I was also told that all students had their own blogs on open sites such as www.blogspot.com and www.wordpress.com



The picture was taken with the students who were present at my presentation [Co-operative Freedom and Transparency in Online Education](#) at the Futuralia Convention Center in Lisboa.

It was mostly up to me to choose the course content, but we agreed that I should make four study units around my presentations and publications on the three themes: The Theory of Cooperative Freedom, Online Teaching Techniques and Transparency in Online Education. Important parts of the content were discussed in my book [Online Education and Learning Management Systems](#) and article [Transparency in Cooperative Online Education](#). I also wanted to demonstrate what I mean by cooperative freedom and transparency with these four week-long tasks in the three first course units:

Task 1 – Find, study and share materials related to the theme in a blog-based annotated bibliography

Task 2 – produce a learning object related to the theme and publish it somewhere

Task 3 – write reviews in the forum on one annotated bibliography and one learning object published by colleagues

Task 4 – take part in a structured discussion on issues related to the theme

It was probably an unpleasant surprise for some of the students that the course was taught in English. They were used to read articles in English, but writing English was a serious additional challenge for several of them. Therefore, I recommended them to cooperate on the written assignments and to develop learning objects in web2.0 services such as www.youtube.com, www.slideshare.com and www.toonlet.com. Services that focus less on the written language. I further invited the students to develop bibliographies which included references to multimedia elements as shown in Juliana's bibliography on [Online Teaching Techniques](#).

The students published their bibliographies, their learning objects and various reflections and comments about the course activities in their blogs so that their work was available for everyone on the internet. This extreme transparency resulted in

feedback not only from classmates but also from other colleagues and experts. In this way, the students had much freedom to learn in a network – without being dependent on each other. This very open and transparent learning environment was probably as daunting and stimulating for the students as it was for me as the tutor. Since much of the students' coursework would be available online for many years.

In the spring course, Maria João established an index of the course work made by both classes in a wiki at <http://ppel4.pbworks.com>. In the fall course, Paulo and José made a Diigo group <http://groups.diigo.com/group/uab-mpel3> including bookmarks for nearly 200 references the students made during the course. Sandra and Mónica initiated the open Facebook group [Online Teaching](#) in which the students' course work and reflections were published. The group soon attracted 500 members. Many of the students also used Twitter and Facebook actively in their learning process. I decided to accept invitations to become Facebook friends with the students and I found it fascinating to follow the [Twitter-messages from Paulo](#).

It was interesting to see that the students were able to involve people from outside the class. Paulo and José, for example, made this interactive [VoiceTread presentation](#) about cooperative learning which includes both text and audio comments from several participants outside our class. In our structured discussions we arranged role plays about online workload, debates on transparency and one-question-interviews with online education experts like [Terry Anderson on Cooperative Freedom](#) and [Stephen Downs on Collaboration vs. Cooperation](#).

In the last unit, the students were asked to write final reports in which they should compile and improve their work, develop reflection papers and evaluate their work. Even though these are quite personal documents, several students chose to publish them on the internet. Sónia, for example, made her [final report in Issuu](#) and Eduarda published her [Compilation of personal work](#) in Issuu.

Several of the web2.0 services were new to me, and I was impressed by the student achievements. So, impressed that I later included this slide in several PowerPoint presentations.

Example learning objects made by the students

<http://ppe14.pbworks.com/PPEL+Learning+Objects+X+Tools>

	http://issuu.com/svalente/docs/learning_objects
	http://issuu.com/eduardarondao/docs/ppe1/16
	http://toonlet.com/creator/monicayelos
	http://voicethread.com/#q.b700875.i3706622
	http://animoto.com/play/mcWwvwlchUW7kikfkDg?autoplay=true
	http://lenita.edu.glogster.com/learn/whenstudentsbecometeachers/
	http://content.yudu.com/Library/A1mvs/TransparencynOnline/resources/index.htm
	http://goanimate.com/movie/Dt_WqQCzr6m8
	http://goanimate.com/movie/0H5CTHKr18U
	http://prezi.com/jtuyqqux9uoe/cooperativedom/
	http://prezi.com/vrphgc8096jy/cooperativedom/
	http://www.xtranormal.com/watch/6292799/
	http://www.scribd.com/doc/28688394/Cooperativedomin-NKI
	http://www.youtube.com/Morte nEPw/f/3/g6063W
	http://www.slideshare.net/nms0/learnobjecttheorycooperativedom
	http://groups.diigo.com/group/wabe13
	http://www.facebook.com/profile.php?id=100000775922345#/group.php?gid=2065339/
	http://atividade2.wikispaces.com/

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It was interesting, but work intensive, to follow the students' work because they were published in several different web2.0 services at various blogs and webpages. It was also thought-provoking that everyone can observe what the students produce in my course. Neither teachers nor students are always doing good work, and in such transparent environments low quality work is easy to spot. However, maybe we therefore struggle a little harder to do our best?

2011. The NKIpad and course catalogue app

iPads and apps introduced new ways to learn.



Steve Jobs introduced the iPad in January 2010, and I soon realized that the new tablets could be an important tool for online educators. I adamantly argued that my colleagues should learn more about the new platform.



In January 2011, NKI arranged an internal seminar focusing on iPads and online education. The attendance was high because many foresaw that the trendy tablets would change the behaviour of online teachers and students. The enthusiasm increased as more educational opportunities were revealed. Peaked when 60 surprised employees received iPads as their new work devices.

Reception of the NKiPads was linked to an obligatory internal online course about NKI's strategy and quality work. This created a collective enthusiasm and curiosity which led to increased communication between colleagues and departments. But also exposed digital resistance and internal tension. The course forum provided everyone with more insight in work-related opportunities and challenges.

In June, I wrote an internal analysis of all posts in the course forums. All together 175 pages with comments. The kind of qualitative analysis I enjoyed because it gave so much insight. And an excellent opportunity to conclude and make recommendations for improvements.

After six months of extensive use, the iPad had changed the way I worked and connected with colleagues. Realized that tablets with WiFi would accelerate the development of online education. Affordable prices would make them common and strengthen the most competitive advantage of online education – the opportunity to study independent of time and place.

At the cursor moment, I realize that the iPad also increased the digital gap and blurred the borders between work and family time.

Every year NKI printed thousands of glossy and comprehensive course catalogues. Mailed them to prospective students all around the country. Threw away a lot when next year's catalogue was printed. Expensive and not friendly to the environment. Especially since the same information was available at NKI's website.

App Store was opened on July 10, 2008, with an initial 500 applications available. The number of available apps grew rapidly.

So, in March 2011, NKI's printed catalogue with 400 online courses was launched as an iPad app. An innovation I expected other course providers would follow. In my view, the design of the NKI App was professional, the navigation elegant and the video with world champion Ole Einar Bjørndalen made it more vivid than the printed catalogue. It was however frustrating to realize that Apple needed 75 days to accept it for distribution via App Store. It turned out that NKI's webpages were much more dynamic, the app was never updated, and the printed course catalogue was history.

2014. MOOCs of Norway

MOOCs and OERs provided free online learning opportunities to millions.

MOOCs for Norway

New digital learning methods in higher education



On 21 June 2013, Norway appointed a government commission to examine the potential of massive open online courses (MOOCs). As far as I know, the first country to do so.

On June 16, 2014, the official report was released as [NOU 2014: 5. MOOC for Norway. New digital learning methods in higher education.](#)

The commission stated that the report was «hairy». Others probably looked at it as hair in the soup. The report suggested governmental measures that required NOK 130-380 (Euro 16-48) million in yearly investments.

I was ambivalent about the hype. Welcomed a debate about all good online education initiatives. And how we could improve future online education.

Feared a wave of unsustainable offers with inferior student support. More focus on individual courses than complete programs and degrees. Less emphasis on the flexibility, systems and efficiency provided by open universities and online schools around the world. And worried more governmental funding would be steered towards traditional universities. Making it harder for private online schools to compete.

Wrote a blog post abridged in the following.

MOOCs are prized for being free and open for everyone. At the same time, criticised for disturbingly high dropout rates, insufficient student support and lacking business models. Arguments that were used in the heyday of educational broadcasting.

Both educational broadcasting and MOOCs need sustainable financial models to succeed. It is thought-provoking that universities start to provide free online courses

as newspapers build pay walls. MOOC-providers struggle to find sustainable business models. They test the opportunities to charge for access to teachers, technical support, student support services, exams, certificates and additional content. These services are often lacking or insufficient in MOOCs. But standard services from open universities and online schools.

We need online courses for SMEs. Courses with flexible start-up and progression. Providers that handle a broader range of services that online students, teachers, and staff need. So, here are three questions to MOOC-advocates:

1. People often have busy lives with job- and family responsibilities that require flexible start-up and progression plans. NooA and some other providers specialise in this. So, I wonder if the MOOCs represent a setback regarding this flexibility?
2. Why should universities and colleges provide open online courses to everyone? Shouldn't they focus on providing a wide range of good online services to their own students? And not only individual MOOC courses, but complete Bachelor, Master, and Doctoral programmes?
3. SMEs have countless training and learning needs that are well suited for online courses, but not for MOOCs. One example is the course *Spanish for adopting parents* which NooA provided to about 50 Norwegians. Even for such small groups, online courses can be flexible, cost effective and good. So, why don't we focus more on flexible online courses that are not so massive and open as MOOCs?

At the cursor moment, many Norwegians have experiences with MOOCs. Often from international MOOC platforms such as Coursera, Khan Academy, edX, Udacity, FutureLearn and Udemy. So, MOOCs have increased globalisation of online courses.

But there are few MOOCs available from Norwegian providers. Invisible in university strategies. Some have been successful. Just a few sustainable.

Anyway, much credit should go to the Norwegian MOOC pioneers and enthusiasts Arne Krokan, Magnus Nohr and Svend Andreas Horgen. Keep on with your good work.


2023. Artificial intelligence

Artificial intelligence introduced tools that allowed us to generate content.

Wanted to test ChatGPT on a topic I know well

With this interview about my Theory of Cooperative Freedom and Transparency in Online Education.

Morten Flate Paulsen

 OpenAI

[API](#) [RESEARCH](#) [BLOG](#) [ABOUT](#)

ChatGPT: Optimizing Language Models for Dialogue

We've trained a model called ChatGPT which interacts in a conversational way. The dialogue format makes it possible for ChatGPT to answer followup questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests. ChatGPT is a sibling model to InstructGPT, which is trained to follow an instruction in a prompt and provide a detailed response.

In January, I wanted to test if ChatGPT was as revolutionary as people claimed. On a topic I knew well. With this interview about my Theory of Cooperative Freedom and Transparency in Online.

MFP: Explain Morten Flate Paulsen's theory of cooperative freedom and transparency in online education.

ChatGPT: Morten Flate Paulsen is a philosopher and researcher who has written about the role of transparency and cooperation in online education. In his theory of cooperative freedom, Paulsen argues that online education can provide a more open and democratic form of learning compared to traditional, in-person education. This is because online platforms allow for greater transparency and accountability, as well as the ability for students to collaborate and engage in more cooperative forms of learning.

According to Paulsen, transparency is an essential aspect of online education because it allows students to see how their own learning fits into the larger educational context. This can be achieved using open educational resources, open access course materials, and other tools that allow students to see the sources and reasoning behind the information they are learning.

Cooperation, on the other hand, refers to the ability of students to work together and share knowledge and ideas in a collaborative manner. This can be facilitated using online discussion forums, group projects, and other collaborative tools and activities.

Overall, Paulsen's theory suggests that online education can provide a more democratic and open learning environment when it is based on principles of transparency and cooperation. This can help students to feel more engaged and empowered in their own learning and can lead to a more fulfilling and meaningful educational experience.

MFP: But isn't there a difference between cooperation and collaboration according to the theory of cooperative freedom and transparency in online education?

ChatGPT: Yes, cooperation and collaboration are often used interchangeably, but they can have slightly different meanings depending on the context.

Cooperation generally refers to the act of working together and supporting one another, even if each person is working on their own separate tasks or projects. This can involve sharing resources, knowledge, or expertise, and can be motivated by a desire to achieve a common goal or to contribute to the overall success of a group.

Collaboration, on the other hand, often involves a more active and direct form of working together. This can involve jointly developing and sharing ideas, problem-solving together, or working on a shared project or task. Collaboration requires a greater degree of communication and coordination, and often involves a more equal distribution of roles and responsibilities within a group.

In the context of online education, both cooperation and collaboration can be important for facilitating a more open and democratic learning environment. Cooperation can help to create a sense of community and support among students, while collaboration can encourage active engagement and the sharing of knowledge and ideas.

Conclusion

MFP: How can we combine individual flexibility with cooperation in online education?

ChatGPT: Online education can provide both individual flexibility and the opportunity for cooperation, as long as it is designed and facilitated in the right way. Here are a few strategies that can help to combine individual flexibility with cooperation in online education:

1. Use a variety of learning resources and activities: By providing a range of different materials and activities, teachers can give students the opportunity to learn in a way that is most suited to their own needs and preferences. This might include videos, readings, interactive exercises, and other resources.

2. Encourage self-directed learning: By giving students the freedom to choose their own learning path and to set their own goals, teachers can help to foster a sense of individual flexibility. This can be supported using open educational resources, self-guided projects, and other self-directed learning activities.

3. Create opportunities for collaboration: While online education can be more individually flexible than traditional, in-person education, it can also provide opportunities for students to collaborate and work together. This can be facilitated using online discussion forums, group projects, and other collaborative tools and activities.

4. Encourage reflective practice: By giving students the opportunity to reflect on their own learning and progress, and to receive feedback on their work, teachers can help to create a more cooperative learning environment. This can be achieved using self-assessment tools, peer feedback, and other reflective practices.

Overall, the key is to find a balance between individual flexibility and cooperation, and to create a learning environment that supports both.

MFP: How can we best balance transparency and privacy to develop a cooperative and safe learning environment for online students and teachers?

ChatGPT: Balancing transparency and privacy is an important issue to consider when developing a cooperative and safe learning environment for online students and teachers.

One way to balance these two concerns is to be clear about what information will be shared with the class or with individual students, and to give students and teachers the option to opt-out of sharing certain types of information if they prefer. For example, a teacher might ask students to share their names and email addresses to facilitate communication and collaboration but might also allow students to use a pseudonym if they prefer to keep their personal information private.

Another important factor to consider is the use of secure and private channels for communication and collaboration. This might involve using encrypted messaging tools or creating private groups or forums that are only accessible to certain members of the class.

It can also be helpful to have clear policies and guidelines in place that outline the expectations for privacy and transparency within the online learning environment. This can help to ensure that students and teachers understand their rights and responsibilities when it comes to sharing information and can help to create a sense of trust and respect within the class.

Ultimately, the key is to find a balance between the need for transparency and the importance of protecting privacy, and to be mindful of the different concerns and needs of students and teachers.