# **Transskribering af podcast-serie fra Nordisk kongres i synspædagogik**

Vi har transskriberet de tre podcasts i dette dokument. Der er lyde og musik undervejs. Det beskrives i med: [beskrivelse]. Studieværten taler dansk og der er oplæg på engelsk og et på norsk. Transskriberingen er på de sprog, der bliver talt i podcastene.

## **PODCAST 1**

### **Intro podcast 1**

[Intromusik og fuglelyd]

**Studievært:**

Hej, kender du iPadens hemmelige funktioner? Kan man sætte sig bag rattet i en bil, når man har en alvorlig synsnedsættelse? Hvad betyder et synshandicap for unges sociale kompetencer? Hvordan kan man lære hjernen at se, når øjnene ikke kan? Og hvordan kan universelt design bidrage til at ingen udelades fra fællesskabet?

Det er den 7. september og mit navn er Julie Giese. Og du er taget med en tur til Legoland i Billund.

[Lyd fra Legoland og forlystelser og fuglelyd]

Og her er alt hvad hjertet begærer af LEGO: Alt fra Ninjago og drager til prinsesser. Men i disse dage er her også alt, hvad hjertet begærer, hvis du arbejder med syn. For de næste to dage samles over 250 synsprofessionelle fra hele Norden. For Legoland Hotel & Konference sætter scenen for Nordisk kongres i synspædagogik.

Mennesker med synsnedsættelse og blindhed skal have mulighed for at leve så selvstændigt som muligt. På lige fod med alle andre. Og det kan synsprofessionelle bidrage til. Synspædagogik er et tværfagligt vidensområde. Og Nordisk kongres i synspædagogik skal være med til at skabe et rum for erfaringsudveksling og vidensdeling mellem fagpersoner fra de nordiske lande. Både ved forelæsninger, posters, workshops og netværk. Og det gør vi hvert tredje år.

I år er helt særligt. Nordisk synskongres har nemlig jubilæum. Det fejrer vi med at invitere jer alle med til kongressen i en podcast-serie, hvor du får spændende udpluk fra de tre dage. Så velkommen til den 10. Nordiske Kongres i Synspædagogik. Du lytter til den første ud af tre podcasts. God fornøjelse.

### **Udpluk fra dag 1**

**Studievært:**

[Musik og fuglelyd]

Dagens program byder på mange spændende emner. Denne podcast dykker ned i en forelæsning om universelt design. Universelt design tager afsæt i tanken om at inkludere og sikre alle lige adgang og deltagelse i det offentlige liv og det offentlige rum. Og det ved forskningsdirektør hos Bevica Fonden, Camilla Ryhl, noget om.

### **Camilla Ryhl, forskningsdirektør hos Bevica Fonden**

### As I was just introduced. I'm the research director at the foundation. We are a small foundation based in Copenhagen. And through all these years, we worked for equal opportunities for people with disabilities. And within the last ten years, mainly five, we've adopted the principle of universal design as our main agenda. We work with universal design as a value-based principle, with the potential of working as a lever to enhance and increase the lives of people with disabilities, as well as assure that we meet the pledge to leave no one behind as we work with the UN Sustainability Development Goals.

### I'm going to talk about universal design, mainly with an offset in the Danish context. Acknowledging and knowing that the concept is used and defined and interpreted differently in the different Nordic countries. The UN General Secretary said this very recently in March. I think, he said looking ahead to 2030 agenda together with the Convention on the Rights of People with Disabilities. Remain our compass towards an inclusive recovery. So, matching the different conventions, the SDGs with the COPD is not something we made up in our small, tiny foundation. It is also one of the goals and ambitions of the UN. But in our foundation, we have established a knowledge hub. We call it the Universal Design Hub. You can find it on [www.designhub.dk](http://www.designhub.dk).

And we work with these four main concepts, and we relate them to each other. So, they coexist, and they are not opposing of each other, but they are, in our understanding, related and work to enhance each other.

We can't talk about universal design without talking about accessibility. And when we talk about accessibility, what we really mean is accessibility for people with disabilities. We talk about it, we practice it, we understand it as something mainly based or related to a legislative approach. It represents minimum requirements in various building regulations or other legislations, and it often becomes a debate about or focus of whether we are talking about something prescriptive, or performance based. What we also do, intentionally or unintentionally when we talk about accessibility, is that we focus very much on the assistive device: on the wheelchair or the white cane or the tactile lead markings or whatever. But it's often that the offset is within the assistive device and not the body, the human being, the person. We also, whether we want it or not, we talk about accessibility as a measure or an aspect of design and planning that is related to a minority group. We have this a minority understanding. So, when working with accessibility, we make special solutions for special user groups. We make the extra, we design the extra, we invent, or we plan the extra solutions. So, it often becomes in in our practice, a minority versus majority understanding of what the solution might be or what the approach might be. And in this mostly, almost always unintentionally, we end up making solutions that become or are experienced by the users as stigmatizing and exposing. Even if it's never really the intention.

So, we still end up with a practice and understanding and interpretation and a culture that works with accessibility as something that's minority based. And we use legislation as sort of the minimum. The offset. This legislative minimum requirement approach is an important thing to have, but it's not nearly enough to assure an inclusive society. Statistics show that this whole understanding of minority majority is maybe not so relevant if we start counting. Because 1.3 billion, some say even more, humans on the planet live with a disability. And we know from Danish statistics that that 30% of the population self-report living with a disability that affects their daily lives. So, this means that if it's not us, then it's someone we know. So, it's not a minority question, and it is not a question of them and us. It's only a question of us. It is about everyone. And this is where the concept of universal design stems from.

Ronald Mace was an architect, he was a teacher, he was a disability rights advocate, and he was a wheelchair user himself. And he has a reaction to the same understanding or the situation, as we have here now, in the US back in the eighties, and it has sort of defined universal design as a principle that would insist on the fact that there is no them and us. That there is only us. That the one thing we share as human beings is that we will all live with different and changing abilities throughout a lifetime. That disability is something that matters for all of us. So, he wanted to define or introduce, bring to the world a principle that we could work with in design and architecture, because that's where he came from. A principle that could acknowledge this fact that it is about all of us. Usable by all.

This quote is from one of his very last speeches where he sort of emphasizes this fact that universal design broadly defines the user. Its focus is not on people with disability, but all people. It assumes the idea that everybody has a disability. This is also one of the reasons “the child” was given this name, Universal Design, which is often criticized or discussed. And what does it mean and is it even possible and so forth. What did he want with using the word ‘universal’ was not saying that it had to be one solution for all. He meant the one thing we have in common. The universality of living in bodies that we all share this thing of having bodies that will change. Our abilities will change. That's the thing that is the universal part of it. So that's an important thing to know also.

But if you take one thing away with you from this afternoon, please let it be that the whole core of universal design is his intention to bring a principle and understanding of the one thing we share that it is about all of us, and it is about the way we understand being human.

So, universal design represents a view of human beings that insists on we are all in the same boat together in this. So, we should stop making special solutions for special user groups and approaching disability as a minority issue. That's the potential of universal design. And that is why it is so incredibly important that we don't use, practice, interpret and disseminate universal design as accessibility, because they are two different concepts. Because universal design includes everyone. So that means everyone. We should look at the things we share. We must consider the entire body, our entire physiology. Maybe not so much the assistive devices, but more the bodies, the things we share, our physical and sensory and cognitive abilities. So, that also means that that we need to consider not only functionality, not only level free access and elevators and reaching heights and all these prescriptive and measurable standards, but also the experience of a space or the experience of a program, for instance. It's not a question of whether you can get into the room. It's just as important that you can stay in the room, stay for the entire event, stay for the entire vacation or the entire speech. That you cannot only sit where you sit, but you can stand here and be the one who speaks. That you can participate. And that's not only a question of level free access, but it’s also just good acoustics, good daylight, spatial proportions, relation to the inside, outside the connecting context and so forth. It, of course, gets very complicated when we expand to all the senses and the entire physiology, but that's still the potential of universal design.

So, universal design also has the potential of not only talking about, as I said, the assistive devices, but also tactile guidelines, for instance. Planners and architects must design the spaces from the very beginning so, the least number of assistive devices or special solutions or extra technology is needed. But it's again, not only about functionality, but just as much about the experience of space. So, universal design, as opposed to accessibility, also offers this understanding of ability being as important as disability. So, let's not only focus on what is the disabled sense, but just as much as the able sense. So instead of only looking at what is not there, universal design gives us the opportunity to talk about what is able as much as talking about stimulating, not only compensating. So, we stimulate the senses that are there. Everyone needs to be stimulated and not only compensated. And that's the last point that we, through universal design, can also talk about experiences, quality of experiences, access to experiences and not only functionality.

So back to it's not enough to be in the room. You must be able to stay there. This room from here, it's nice. I can see all of you, even if there are a lot of you, it feels intimate. The sound appears to be nice. The light is okay. But if I was in a wheelchair, I wouldn't be able to be here as a participant. I could only be at the very top. So, it's not enough. It's never enough to only be able to get into the room. You must be able to be everywhere in the room, have all the roles, be able to sit there, stand there. But also, regardless of your abilities or disabilities, you must be able to hear and listen whatever your needs are. There are multiple ways of designing the event, the space, the program, and that all falls under the understanding of universal design.

And that brings us to talking about the users. Who are they and besides their disabilities? And how can we, through our view of human beings, through discussing our understanding of being human, maybe also change the rhetoric’s, the approach, the understanding, and in the long run, the solutions to how we accommodate for the disability or diversity that is human beings. So that's another important aspect that universal design also brings to the table. That when we talk about users, users are not their assistive device, they are not the wheelchair. They are persons with everything it entails of a life lived. And this diversity, this extreme diversity in the human population requires diversity and solutions. And that's the other important takeaway today. This is what universal design offers to. It is not about the same solutions for all. Quite the contrary. In the cases where we are not paying the price of quality, where we're not finding the lowest denominator for everyone, then one solution for all that you can walk together all the way to wherever you're going. That's the best solution. But that is rarely the case. So instead, to acknowledge and recognize this extreme span diversity in user needs, we can meet it with diversity and solutions. So sometimes the universal design solution is one solution for all, but most often the universal design solution is a catalog of solutions. That there is more than one way to get to enter the building. But the other way is besides the main entrance. It's not in the back. Not through all the garbage bins or through the kitchen and so forth. That's also a dignified entrance. That there is more than one main entrance.

I brought a picture from the Danish Organization for People with Disabilities. Their headquarters. One of the things they did there, is acknowledging the extreme span of user needs. Because there were several disability organizations who were moving together in one headquarter. So, they have seven different toilets or bathrooms in the office building. So that you can find your favorite one. Whether you transfer from the right or from the left, or you need extra equipment or you need a really narrow one because you are visually impaired or you need a big one because you always have a helper, it's there. Instead of finding the common sort of the lowest common denominator. That doesn't really work for anyone in this office building. They have seven different ones. That's also a universal design. The seven bathrooms together is a universal design solution.

So now I have talked about how we can interpret universal design as a solution. But mainly we need to sort of understand that universal design is not only about solutions. Universal design is also a value-based principle that represents a specific understanding of being human, that living with different disabilities and changing abilities throughout a lifetime is something that we share. So, it's a principle that anyone can build their projects on, whether it's an architectural project or it's service program or it's a teaching program. It's it can be sort of a core value-based principle that you work from. That you that you base everything you do on. It can also be something that we discuss as a process. What knowledge do we need to bring into the process? Who do we need to acquire the knowledge from? How do we need to work more interdisciplinary or in different ways, in different ways together? What we know from the few universal design projects that exist in the Nordic setting is that the process is quite crucial for getting the interesting and useable and high-quality solutions in the end. And then there are solutions like I just talked about. But most importantly, Universal Design represents this paradigm shift in how we understand being human. What it means to be human. That there is no dimness. There is only in us, but there are people who have worked with tools to enhance the practice of universal design and Maze first defined. He started talking about and developing the idea of universal design in the eighties, defined it in the nineties and sat down an interdisciplinary expert group that developed the seven universal Design principles. They are like a checklist or a guideline, a set of guidelines to remember assuring that we have included as many needs, user needs, as possible.

One of the American professors that were part of the expert group, that defined the seven principles, has kept researching and teaching universal design at the Idea Center at Buffalo State University at Steinfeld. Together with his colleagues, he has defined, sort of developed, eight goals of universal design. And as you might see, the first four of these goals are about body. Comfort, awareness and understanding its physiological sort of offset. And then they move up to wellness. It's also a physiological aspect, but it's also about health in general. And then there is social integration, personalization, and cultural appropriateness. But they are the first sort of attempt to say, let's bring universal design into a different context. Also, let's work with it, interpret it, practice it as more than something that's just about body. It's still about body, but it's also acknowledging this idea that it's not enough that the solution allows us to be in the room. But how can we be assured to be part of the social integration? How can universal design accommodate for social inclusion and cultural appropriateness? So, they expand the understanding of universal design to something that's not only physical and that is not only just about architecture and design anymore. Even if they are working in an architecture program and they've also come up with a new definition, it's a supplement, it's a further elaboration or development of the original concept and definition. They insist that it is a process and they do not define it as being something specific. It's a process that enables and empowers a diverse population, and by doing so, it improves human performance, health, wellness, and social participation. So, they are more focused on the process, and they are less focused on an on a specific solution. But it is a principle that empowers and enables aspect of wholly, fully life lived that also includes human performance, health, wellness, and social participation.

This somehow is very parallel to some of the key aspects of the UN sustainability development goals. The idea of assuring social participation, wellness, health, not only for the for Earth, which comes first, but for all of us. You all know, I'm sure, these 17 goals. We know that Denmark is one of the countries in the world that has the highest knowledge and recognition of the UN sustainability goals. Most of us work with them somehow. They are closely interrelated to each other. Everything we do in one is reflected on the other. In the Danish context, again, I can only talk about that, there is this secret principle of leave no one behind. Not a whole lot of people know about it. And about 20% of the Danish population has ever heard about leave no one behind. And of those 20%, almost 80% of them are under the age of 25. But it is a core and basic principle of the UN SDGs. We need to make sure that we leave no one behind. It is written into the SDG document as a pledge. So, every country that and that is every country that has pledged to work with the SDGs has also pledged to make sure that on the sustainable journey and in everything we do as a country, as a nation, as a society, we make sure that no one is left behind on the journey. And even more so, we have pledged to endeavor to reach the furthest behind first, and this is to be understood relatively to every national context.

So, in my country, in Denmark, we need to look at who is being left behind and who is being left furthest behind. Sadly, the statistics shows that people with disability is one of the biggest groups in this process. People with disabilities, even in our wealthy country, are left behind in almost all of the key aspects of a daily life. They are left behind when it comes to access to public buildings, when it comes to access to nature, and hence also use of nature and green areas, when it comes to education, when it comes to the labor market and even health clinics. We have a very sad statistic here in the Danish context. It says that only 44% of our health clinics in Denmark are accessible. So, people with disabilities are left behind.

We need to bring people with disabilities into the general agenda of society, which is the sustainability goals. Not much of a surprise at this point. Most probably is that universal design might be the answer because of the way the principle or the human view that it represents. The UN Convention on the Rights of People with Disabilities, the CLP, has also written universal design into its sort of core definitions and goals. So, we have pledged to make sure that we work with universal design in development and research and teaching. In everything we do as a nation. They are using the original Mace definition. Except that they have expanded the focus to include programs and services. In Mace's original definition, it was only products and environment. So back to where I started and reminding you that even the UN General Secretary sees this potential of bringing the UN SDG and the 2030 agenda and the leave no one behind pledge together with the CPD and Universal Design could be the lever to secure that.

So, summing up. Universal Design offers a new view of human beings based on dignity and equality, but also reality. Because ability is only temporary and it brings human beings back into planning and design not only of architecture, but also of social services and programs and everything we do. And it invites, it offers. It might even require interdisciplinary collaboration because the lives that we do live, they span across sectors and disciplines. So, if we are to get this right, we need to work across disciplines. And then it's a value-based principle. So, it's not about legislation or minimum requirements or prescriptive measurements. It's about values. We can understand it as a value, as a process tool or as a solution. It can be understood as one solution or a catalogue of solutions. But it is a tool to secure social sustainability and for the pledge to leave no one behind.

You can find a lot more information in our hub. We also facilitate research, knowledge, education on these aspects and as an upcoming event. For those of you who are either teaching or know students, we are launching a scholarship program in November with the focus on this agenda that is interdisciplinary. So, keep an eye on that because you might just want to join it. So, I'm just leaving you with the with the four core concepts that I've talked you through. Thank you.

### **Afslutning podcast 1**

[Musik og fuglelyd]

Det var alt jeg havde til dig i den første podcast. Jeg håber, du synes det var spændende at være med til den første dag på Nordisk kongres i synspædagogik. En podcast, der er produceret af Instituttet for Blinde og svagsynede. Lyt med i podcast to, hvor vi dykker ned i sociale kompetencer og teknologiske hjælpemidler. Tak fordi du lytter med.

## **PODCAST 2**

### **Intro podcast 2**

[Intromusik og fuglelyd]

**Studievært:**

Hej, det er den 8. september. Anden dag på Nordisk kongres i synspædagogik. Et samlingssted for synsprofessionelle i Norden. Mit navn er Julie Giese. Velkommen og god fornøjelse.

[Musik og fuglelyd]

### **Udpluk fra dag 2**

**Studievært:**

[Musik og fuglelyd]

Vi mennesker bruger vores sociale kompetencer i al social interaktion. Hele tiden. Hvad betyder det, når man har et synshandicap? Instituttet for blinde og svagsynedes psykolog Anne-Sofie Jensen Zastruzny er en af dagens hovedforelæsere. Og hun fortæller om sociale kompetencer hos unge med synsnedsættelse – og de udfordringer, det kan medføre.

### **Anne-Sofie Jensen Zastruzny, psykolog på IBOS**

Speaker2: Thank you. And thank you, Lasse. My name is Anne-Sofie Jensen Zastruzny and I'm an authorized psychologist.

Even though you think you have a good set of social competencies, sometimes you can't follow a script. When you have a visual impairment it gets even more difficult. And that is why I'm here to talk about social competencies with visual impairment today.

The first question we might ask is why do we even need social skills? Well, evolutionarily speaking, it has been necessary for our survival to be in a group. Look at the mammoth. Our ancestors did not stand a chance to hunt this thing alone. It was important for them to organize in groups for survival. Not just fir hunting for dinner, also for protection, shelter, everything. Actually, we evolved to live in a group for our survival. Without being in a group we don't survive, and we need social skills and social competence to adjust to each other and to be able to live in a group.

Well, some could argue that today we are not directly reliant on social groups for survival. Especially, I think, during the Corona pandemic, it was quite obvious that we could stay at home alone and still get different kinds of food delivered. We could call each other. We could pay our bills. So we don't rely directly on a group to survive. The thing is, nobody told our brains that. So our brain is still that same brain in many ways that developed years and years ago. And our brain thinks that if we are not part of a group, we will die.

Every now and again, at least in Denmark, research shows growing loneliness among older and also among young people. Loneliness has a big impact on our psychological well-being. In fact, it's not just our psychological well-being, it's also our physical health. Some studies have been done showing that if you're lonely, you have a higher mortality rate. That is, you die sooner than people who are not lonely. So these studies also find a clear correlation between loneliness and social competencies. That is, if you have a lack or poor social skills and competencies, it is more likely that you are lonely. I'm guessing this is not a big surprise to a lot of us. There are a number of other reasons. Well, the associations here are a bit complex. Let me elaborate on that. So if we have a good set of social skills, it is more likely that we also have a good social network. And what we know from a lot of research in various kinds of trauma - and all other things actually - is that a good network it is a good buffer for not developing depression, anxiety and all other kinds of mental disorders. And it's also more likely that with a good set of social skills, we can reach into this network and get help whenever we need it. The opposite is, of course, also true that if we have a poor set of social skills and social competencies, it is likely that we don't have a buffer, that we don't have someone who can help us whenever we need it.

It is also more likely that if we have poor social skills that we are more likely to end up in stressful situations. I have an example to illustrate this. Last week I went to this fun run in Copenhagen with some colleagues. When I arrived, I was screamed at by one of the officials because I was parking my bike at the wrong spot. I was a bit startled because I'm not used to getting screamed at by strangers. But as soon as my initial shock left me, I came to think that her life couldn’t be easy if this is her typical first interaction with a stranger. If the first thing she does when someone misunderstands her is to scream at them, then I'm guessing that a lot of people will either scream back or somehow get into altercations. Maybe even get physical. Of course, I don't know anything about this woman, this young girl. So it could be that she was just stressed out. But let's say that her social skills were all in all poor. It is then likely that she doesn't have a good social network. That when she comes home day after day and says ‘Someone new screamed at me today’ that no one is there to help her. So in that way she's kind of double exposed to different kinds of psychological distress than if she had a good set of social skills. So to avoid being this double exposed, we need to have social skills and social competencies. That leads us to the next question. How are social competencies developed?

Well, to know something about social competencies we need to visit The American Researcher in Psychology who is called Albert Bandura and look at his Bobo doll experiments. Maybe some of you have heard about it. A Bobo doll is an inflated doll that is weighted in the bottom, so if I tip it over, it will automatically pivot right back up. Albert Bandura did some studies with this doll in the sixties. He took the doll and took an adult interacting with the doll and had small kids look at the interaction. In some cases, the adult would have some kind of aggressive behavior. It could be hitting, it could be kicking, and it could be throwing the doll around. And what he saw was that if a child had observed the aggressive behavior, he or she was more likely to also show aggressive behavior when interacting with the doll. And I know that might not be a big wow to a lot of you, but that was actually a big deal in the sixties, where the general idea was the opposite, that if we saw someone being aggressive, we were more likely to be non aggressive. So based on these experiments, he created his social learning theory. According to this, learning of certain social behaviors is a dynamic process. It is based on observation of others. It's combined with our own expectations, our knowledge, our expectations and the feedback that we get from our surroundings. So once again, let's elaborate.

So if we look at the building blocks of social skills, we see first and foremost that we have observation. Observation can be both direct. A direct observation is, well, you might have guessed it, it's I'm seeing something directly and learning from it. It could be that I do something or I witness someone else doing something. The other thing is symbolic observation. That is, if I read about it in a book or I see something in the movies or in a TV show. It's symbolic of someone else doing it. And the last one is abstract observation. Abstract is more a combination of me puzzling together, different kinds of previous knowledge. And then my expectation - I build sort of a script of what will happen. Well, to illustrate this, we've all started working at a new workplace, and every time you go to a new workplace, there are of course, different kinds of subcultures and some things are okay to do, some things are not okay to do. So if we're interested on what the rules are about being late for a meeting, we could use direct, symbolic or abstract behavior to find out.

We could either try and be late for a meeting and see how everyone reacts. We could also observe someone else being late for a meeting and see how people react. Symbolic? Well, I could ask a co-worker. And the last thing, abstract, I could dig into my brain, and figure out from previous workplaces what the rules are about being late. Besides observation we also have feedback. I mentioned it earlier. So feedback or reinforcement is either nonverbal or verbal and that is when I do something, people will react on what I do. If I work at a workplace where being late is frowned upon, well, people will do exactly this when I'm late. They will frown, or they might even just stop the meeting and turn directly towards me and say that is not okay. It could also be that they smile like, ‘Oh, it's okay that you're late.’ So these small verbal and non-verbal gestures they serve to reinforce or to change our behavior. It could also be just a normal conversation. If we sit around the table tonight and someone tells a funny story, probably the others will smile and nod and say, Go on. Or what happened? Or if I was telling the story, I've noticed people gasping or doing something. And that could also kind of adjust my behavior. And of course, last but not least, we both have practice. I need to do this again and again and again, because maybe the people I was talking to just didn't have a sense of humor and then have tried again and again and again and no one laughs. And maybe my bad jokes about something very inappropriate. Maybe it's me and not them that's something's wrong with. So I have to practice and I have to adjust. The last one was expectations.

What are social competencies? On the screen you see the American Psychological Associations definition of social competencies. It involves the ability to evaluate social situations and determine what is expected or required to recognize the feelings and intentions of others and to select social behaviors that are most appropriate for that given context. It is important to note, however, that what is required and is appropriate for effective social functioning is likely to vary across settings. We need to know that what is expected is different from one context to another context and with different people. So when we tonight go to dinner, my guess is that the conversations around the tables will be different from when we have food and wine with our best friends.

There's also actually a distinction between social competencies and social skills, and in my talk I am afraid I might use them interchangeably. But they are two different things because social skills are defined as socially acceptable. Learned behaviors that enable a person to interact with others in ways that elicit positive responses and assist in avoiding negative responses. So social skills are a part of social competence, but it's not the same. It is often also social skills that we can directly train from this general focus on social skills and social competencies.

We are most often working with visually impaired people. So we've established that it is important to develop learning through a dynamic process of observation, of expectations, of feedback and reinforcement, and of course of training. When you have a visual impairment, some of these functions become difficult, if not even impossible. For instance, direct observation. Well, it's quite clear that I can't just visually see what someone else from the other side of the room is doing. And I know that we all know that, but sometimes we as fully sighted, tend to forget how much information is actually being given through our eyes, through our vision, information and communication as well. For instance, if someone would walk in from the back right now, I would direct him or her to this an open seat without words. I could smile and give nonverbal signals.

For instance, smiling give us some kind of reward. It is in fact true that if I smile to someone, then they will feel this immediate sense of well-being. And it's a part of connecting with someone. It's a part of making this social alliance. And it happens on this instinctive level. It's where our brain is still that ‘mammoth hunting ancestor’ from years and years ago. So these rewards is difficult to get If you have a visual impairment. Of course you can get other kinds of rewards for example when someone laughs at your joke or someone pats you on the back. But they are cut off from some of these gifts. We could think about Zoom meetings. I don't miss them at all. But let's just think about them. Often we did what we had to do in Zoom meetings, but sometimes the screen was frozen or the video feed was delayed or someone just turned the camera off. And all of this gave the Zoom meetings a kind of unsatisfying element. Some of them might have been quite all right, but this social engagement and social level, it was very unsatisfying. And that can happen when we don't get this visual feedback from each other, the eye contact, and the acknowledgment of the other person. So one thing is the positive feedback or the positive reinforcement. The other thing that I'm lacking, if I have a visual impairment, is the corrective feedback. And by corrective feedback I mean the look that someone gave me if I step out of line. For instance I've noticed that Lasse kind of stands up in his seat a little bit if someone is close to being over time. It's not much. It's just a signal. Like ‘Wrap it up’. So it is these small signals. We use them to adjust each other's behavior. And visual corrective feedback is, of course, not alone. You train yourself to be aware of auditory feedback. That is when someone is fidgeting with something or there is this awkward pause if you step out of line, there will be this awkward pause and you need to train how to decode and interpret this. Believe me, I met a lot of people without any vision who is very good at interpreting all of this. Once I met a young girl, who said, ‘Well, of course I can hear in the in their tone when they've lost interest in me or when someone when, when their phone is showing something interesting, I can just hear that they have a shift in attention. So it's something that you can train to hear, but you need to be aware of this.

So another thing is that having a visual impairment also gives you some practical difficulties. It might be difficult to find your peers and your classmates in the lunchroom or in the in the schoolyard. And as a result, a lot of children and young people, they don't want to use all that energy, just locating their classmates and they end up spending maybe the break alone. This, of course, makes it even more difficult to train social competencies, and it is especially important to train them in in our teen years because that is when our social interactions become more complex. They go from being quite direct, quite verbal in childhood and becoming more complex and nonverbal in adulthood or in teen years.

So let's look at some of the research that's been done with young people with visual impairment and their psychological well-being. And older Finnish study, they did a study with 14 year olds, interviewed them about different aspects of psychological well-being, of loneliness, etc. They found that when they compared a group of visually impaired young people with fully sighted peers, there was no difference in terms of depression and stress systems and mental well-being. All in all, what they did find was that the group of visually impaired people tended to have a smaller group of friends, and they also reported fewer dating experiences and more difficulties in making friends. So they might not have felt that was a problem, but it could be the beginning of a problem if we don't get out and make friends.

Research like this has been found since that in several groups that young people tend with a visual impairment, tend to have fewer friends, and less experience in social interactions. And more recent study, a Dutch study, looked into different kind of factors among teenagers that could predict loneliness later in life. So they interviewed a group of teenagers when they were around 17, and then they interviewed them six years later. Again, what they found was that social common sense has played a big part in predicting loneliness in the twenties. So it has focused a lot on social support from peers, that is, from friends and classmates. Other studies have also looked in family ties, actually also the first study. And in general it is reported that if you have a visual impairment, it is more likely that you have a good strong bond with your parents and your siblings. The thing is, if we look into how much that predicts loneliness, we find - and this is a third Dutch study, they found that parental support, that is support from parents, had nothing to say about loneliness later in life. What it did have something to say about was peer support. That is, if you had friends, if you had a big group of friends that could predict loneliness later in life. And this was done over a 20-year study, this could be explained by the fact that when we grow up, when we leave our childhood, become teenager and strive to be adults, our social focus change. We leave our family, our safety there, and we look for a new kind of family in our friends. So a lot of people search outside the family for a new social network, which is good. But if you are having difficulties in forming these bonds, this makes this period even more fragile. So the general conclusions are that if you have a visual impairment, it is more likely that you have a small group of friends and you have less experience in forming different kinds of social relations. So this leads us to the final point of my talk today. How can we as professionals working with the visually impaired young people, help in the development of social competencies?

Well, the first one is knowledge, both of why and of how. So young people with a visual impairment, of course, needs to know why it's important and the parents needs to know this as well. It's also, of course, in this area that we could be aware of the signals that we are sending out. For example If we don't look at the people that we are talking to, and this is true for some people who don't have any vision because they use the primary sensory organ, which is their ears, so they turn their ears so they can hear you talk, which is actually quite polite, but when we are fully sighted, we feel rejected. And that is rooted deeply within us. We can't change that. So young people and adults with visual impairments need to know basic social interaction skills. They need to know about the signals they're sending out.

Secondly, the how, is that we need to be able to know how we can train this. How do we develop social competencies? For some, it might be relatively straightforward also to know the structured rules in school, for instance, like turn taking. You raise your hand if you want to say something. This could be a good place to start.

What are more complex are the unstructured settings. By this I mean breaks in school or the time around when we get off our jobs or school and we want to do something. This is unstructured and this can be difficult to decode. I've heard of some young people with visual impairment say, ‘I don't want to do what they want to do. I don't want to go to the movies. I don't want to go to a football match because I can't see. Because I cannot see the screen, and I cannot see the field. So I don't know who's scoring or whatever.’ And this is true. Of course it's true. But the thing is, they don't go to a football match or to the movies to actually see the movie. They go and we go to be part of the group. We go to be part of this social community. And if you miss out on that, you also miss out on the conversation the next day when the rest of your classmates come back and say, ‘Oh, he almost caught the ball or something big happened’, or you could miss out on just a normal conversation happening in the movies or around the movies buying popcorn. So it's not for the activity that we participate. It's for the community. Studies of how friendships are formed are quite interesting. They found that friendships are formed out of proximity. Someone's looked at friends from college and they found that if you had friends after college, it was most likely the girl or guy living next door to you in the dormitory instead of the ones living at a different floor. That is, if we just spend enough time together we tend to form friendships no matter if we have the same interests to begin with. So of course there's this practical skills training, which is it's important. If they want to join the others at a football match, or join them just walking from school to the mall or to a movie theatre. It's important that they know their mobility skills. It's important that they master a certain kind of normal daily living skills.

This brings us to the notion about misconstrued intentions and misconstrued intentions in Danish I would call ‘misforstået hensyn.’ Misconstrued intentions is when you do something with the intention of helping, but you end up either not helping at all or actually making things worse. I'm guessing I'm not the only one who's met parents who insisted on driving their children to and from school every day and to and from every football game or judo class or whatever they needed to go to. The thing is, if we do this, we don't help our teenagers become independent and being able to find their way to and from things by themselves. And it's not just parents, it's teachers, and it's support assistants. It's people like us. It's psychologists. We all have. This tendency to do what we think is best, but not what actually is best. What we should do is say, ‘What can I do to ensure that this person can function when I'm not around?’ So the next notion I've talked about this several times today, observation is part of developing social competencies.

Direct observation is, of course difficult if you can't see. So we need to have a focus on symbolic observation, read about it in the books, watching television, observing people in the street. Let's say I saw two people interact, and one of them was like taking a step back and I could address this to the young person and say, Well, I noticed that person took a step back from person B. This could be because person B hasn't brushed his teeth, he hasn't showered, or maybe he just invaded the personal space. This could, of course, give opportunities to talk more broadly about all these factors. A lot of our social rules are implicit, but when we work with visual impaired people, we need to make them explicit. We need to tell them that you can't show up for a job interview with a big ketchup stain on your blouse because that's just not appropriate. And you can't see if someone is taking a step back because maybe you smell a little bit. So we just need to learn rules like shower every day, brush your teeth every day. We might laugh about it here, but how have we learned all that? Isn't that because sometimes we were sitting with someone and they looked funny at us, and when we found a restroom in the end of the day, we saw we had spinach in the teeth? So we've learned all this because people look funny at us and we adjust our behavior. We need to be explicit what people without vision can't see. Feedback and reinforcement. This is again, feedback, verbal, nonverbal. There are different kinds of ways that we can give feedback. Usually adults, parents, teachers, and support assistants give feedback. And when this is given, of course we need to be aware of how we give it. Well, if we only focus on negative feedback, that is, you should do better on this and this, we might end up taking the encouragement and the motivation away from the children and the young people, and then they certainly don't want to work on their social skills. We could also have a focus just on reinforcing good behavior, like, yes, that was good and that was good, but it might not be enough. So we need to find a balance where we can talk about when we step out of line and what we can do to avoid this, but also what is good. Another approach is peer feedback. That is when your classmates give you feedback. The thing about this is it's a huge engagement for them so we can't really force them to do that.

The last thing is self-evaluation, self-feedback. By this I mean we could instruct a young person or a child to evaluate how well they do a certain kind of behavior. Last but not least, is of course, training. If we want to do something, we want to be good at anything training is necessary. And with social competence it's not just training. It's also well, its not training new things. It's also maintaining. Yes. And one size does not fit all. We are individual beings. We are all different. We're different when it comes to abilities and disabilities. When we talk about formal experiences, expectations, personality traits, strengths, weaknesses, fears and dreams and wishes. So we need to take all this into account. And unfortunately, I can't give you the Holy Grail. I can't give you ‘this is how you train social skills,’ but hopefully you can take some from all of this I've said today and help the young people.

I'll leave you with this notion that being human is being social, and the fact that you have a visual impairment does not change this, but it can make development of social competence and social skills even more difficult. So it's important that we as vision professionals give attention to social skills and social competencies because then we can help prevent different kinds of psychological distress and help with inclusion and also more independence.

**Studievært:**

[Musik og fuglelyd]

Så hopper vi videre til en workshop med Inger Lene Hustuft, der er seniorrådgiver og synspædagog. Hun gør os klogere på iPadens ’hemmelige’ funktioner.’

**Inger Lene Hustuft, synspædagog**

Jeg heter Inger Lene Hustuft. Jeg er visjon pedagog. Hva tenker dere, hvis jeg sier, at det er mulig å skrive en tekstmelding, mens du kjører bil uten å bryte loven? I Norge, så er det hvert fall mange 1000 kroner i bot for å fikle med telefonen, mens du kjører bil.

Det er tre ting, som jeg tenker, at det dere skal lære i dag, og det er, at det er kjempeenkelt å få telefonen til å lese opp for dere eller iPaden. Nå sier jeg iPad eller telefonen litt sånn om hverandre. Og så skal jeg lære dere, hvordan der enkelt å bli kvitt all reklame i nettavisene, og at du da kan skrive en tekstmelding, mens du kjører bil. Man er det ikke sikkert alt det her er hemmeligheter på iPaden for dere. Men kanskje noe av det er det.

Og da begynner vi rett og slett på opplest tekst og talesyntese. Det er en funksjon på iPaden som gjør, at du kan lese teksten opp eller til den at det iPaden leser opp teksten, som du har på skjermen, og du kan variere tempo. Og du kan selvfølgelig lyttet til så mange ganger, som du trenger, og få veldig mange som kan det her være nyttig. Men for noen så er det helt nødvendig.

Og så er det sånn at kjært barn har jo mange navn så opplest. Talesyntese. Tekst i tale er ulike navn på nettopp den funksjonen, at teksten leses opp. Og så er det litt sånn. Noen ganger så er det sånn, ja. Men er ikke det juks da? Å få teksten lest opp, Kanskje særlig i skolen, at det møter de holdningene noen ganger? Det er juks å få teksten lest opp, men det er det jo ikke. For hvert fall internasjonalt, så blir det ofte snakk om tekst, forståelse og ikke akkurat den leser forståelsen. Og fordi elevene som vi jobber med, så er det en opplesning og helt nødvendig, hvis ikke det skal være opplæring i å lære å lese, så følgelig da blir det annerledes. Så da skal vi rett og slett begynne med å gå inn i tilgjengelighet menyen, og da er det innstillinger appen under tilgjengelighet og opplest innhold. Og her er vi inne i menyen for opplest innhold. Og da tar jeg opp mine innstillinger Tilgjengelighet, opplest innhold her og så skal de to første være grønne. De skal være huke av sånn at det av iPaden leser opp markering og at den leser opp skjerm. Hvis da går jeg inn på notater appen mine nå når vi har satt på, les opp markering å lese opp skjerm, så gjør den akkurat det. Hvis jeg markerer en tekst, da holder jeg fingeren inne på et ord og så marker. Og så dra jeg videre håndtaket for å markere. Og nå har jeg markert han kan ta med den første der og kanskje gå og se der. Nå har jeg markert. I dag har det vært regnvær og det som skjedde når jeg huke av får lest opp markering. Det var jo at i den menyen som dukker opp når jeg markerer tekst, så står det nå lest opp. Og hva tenker dere skjer da, hvis jeg trykker på den?

Skal vi prøve? Så det er jo en måte å gjøre det på. Det å markere tekst, det krev jo at du ser den teksten du skal markere, så det er det ikke alle så får til. Men vi har også huke av for les opp skjerm og det jeg da gjør da finner fram to fingre, og så begynner jeg på utsida skjermen. Jeg begynner rett over der skjermen begynner, og så dra jeg de to fingrene nedover.

[Siri]Har det vært regnvær i Danmark.

Og da leser hun opp det som er på skjermen. To fingre. Og så begynner jeg. Hvis jeg nå rekker ikke opp der. Men jeg begynner et på Utsida skjermen og drar de to fingrene ned og inn på skjermen. Men da og når jeg setter i gang talen, så får jeg også opp en meny hvis jeg trykker på den pila som er helt til venstre der. Den går også inn av seg sjøl. Så så flytter, flytter den. Da blir bare et lite ikon. Hvis den er i veien. Men her kan jeg også stille på hastigheten. En og en halv gang, to ganger og en halv gang. Så hvis jeg setter en prøve på to, da. Og så ta en gang til.

Så bra da. En hemmelighet avslørt. Med den neste er det kanskje færre som kjenner til, så nå er begynner vi å komme over litt på hemmelighetene. Og den funksjonen henter tekst i objektivet, og den ligger ikke i tilgjengelighet menyen. Men den ligger under generelt og språk og område og tekst i objektivet. Da er vi inne på generelt, og så må vi gå ned på språk og område, og da ser vi at nederst her ligger det som tekst i objektivet, og nå skal den være grønn på den. Eller live tekst, det er det samme. Så det jeg skal gjøre nå, det at jeg skal åpne kameraet mitt, vanlig kamera. Og så har jeg med meg et hefte med tekst her. Så stiller jeg kamera inn på den teksten. Og hvis dere ser nå øverst til høyre, så er det kommet det som skanne symbol. Det er det live, tekst eller tekst i objektivet symbolet. Så når dere peker kamera mot en tekst, så vil da den funksjonen kjenne igjen den teksten. Det vi kan gjøre nå er at vi kan markere den teksten, og så kan vi kopiere når limen inn i et dokument. Jeg tar bare å trykke på det skanne symbolet, og det er ikke det samme som å ta bilde. Og nå skal vi igjen bruke de to fingrene. For hvis jeg nå drar to fingre fra toppen av skjermen og ned.

Over veldig fort, da.Så da, hvis du har med deg telefonen i lomma, så kan du holde telefonen foran en tekst, og så kan du få den lest opp der og da. Med å bruke Les opp skjerm funksjonen. Den fungerer også på håndskrift. Og så er det når dere når dere bruker tekst i objektivet på norsk og dansk og svensk. Så er det sånn at den klar ikke er å, så da blir det ekstra at en leser litt annerledes når det er æ, ø og å, men det er allikevel nok på måte til at det kan være bli forståelig.

Og så kan man også bruke den her funksjonen i Notater appen. Så da finner vi frem notater og så trykker på med kamera symbolet øverst der. Da får jeg opp noen valg og det jeg skal velge nå. Det er saken tekst. Da dukker det opp et kamera nederst, og så er fortsatt notater appen øverst. Så holder jeg den over teksten her, og da kommer scanna symbolet opp. Jeg trykker det, og så setter den teksten rett inn i notater appen. Men her ser dere jo da ikke at det er æ, ø, å, så da må du inn å rette den teksten og så med en funksjon her. Det stopper ikke der. Nå er jeg inne på kamerarullen min. Og så har jeg tatt litt sand, bilder av det som har skjedd i dag, og der er det jo ofte teksta på de bildene, så da velger jeg meg det bildet her fra han Morten i går. Men på minn av iPad også er det det scanna symbolet. Det er nederst her. Når jeg trykker på det. Jeg kan skanne symbolet. Men da ble all den teksten markert og så og så to fingre. Lese opp skjerm.

Hvis den funksjonen finner tekst i bildet, så kommer det skanne symbolet opp. Hvis en ikke klarer å finne noe tekst i bildet, så kommer ikke det symbolet opp. Du kan markere all teksten som den finner i bildet og kopiere det over, for da kan man kopiere teksten. Og så kan jeg gå inn i notater og lim inn.

Da går vi videre, og nå skal vi tilpasse teksten litteraene. Og da skal vi se på, leser visning eller vis, leser i Safari og så i nettleseren på iPaden. Og så skal vi sette på større tekst. Det er også i tilgjengelighet menyen. Går inn i tilgjengelighet, skjerm og tekst, størrelse og større tekst. Her kan vi da justere størrelsen på teksten. Det er jo et smart tips.

Bokstavene der blir større. Hvis vi går inn i notater appen igjen, så har det blitt større der også, så det fungerer på alle de appene som støtter dynamisk skrift. Men så skal vi gå over på det som heter leser visning. Nå er jeg i Safari appen og så er inne på en side som heter Forskning.no. Og her er det mange som henter informasjon. Nå er jeg inne på forsida. Den fungerer ikke på den sida her, fordi det her er en forside med lenke til mange ulike artikler. Så her vil du ikke få lesarar visning. Den er grå. Det betyr at den ikke er tilgjengelig, men da går jeg inn på en artikkel. Her er det reklame oppe nede til høyre til venstre, og så ser vi et bilde. Vi ser fortsatt ingenting av teksten på artikkelen. Hvis jeg velger leser visning eller vis leser som om de har nylig endra navn på det på norsk ved å trykke på stor og liten a. Så trykke på vis leser, så er det som skjer da, det er jo at overskriften kommer øverst. De relevante bildene blir tatt med. Og ellers så er det bare teksten i artikkelen. Reklamen er helt borte. Hvis jeg nå slår av den, leser visninger også for denne artikkelen, ønsker jeg å lese opp nå.

Jeg har det litt smart, så jeg setter på, leser visning, og så gjør jeg det en gang til. Les opp skjerm. Og det er leserne og artikkelen som følgelig. Så hvis man skal bruke nettbrettet eller telefonen til å lese opp artikler, så er det her to funksjoner som er kjempefine å bruke sammen.

Da går vi videre til diktering, og det er en måte å produsere tekst på. Når du dikterer, så skriver jo iPaden det du sier, og da trenger du ikke å bruke hånda. De trenger ikke å bruke tastaturet. Også er det mange navn og kjært barn og mange navn. Stemmestyrt skriving, talte tekst, talestyrt skriving, diktafon. Er det noen som kaller det diktering. Men det er jo det samme at det er stemmen som skriver. Og når en person skal diktere, så er det viktig med opplæring i hvordan man dikterer. For det er jo da jo ikke det samme som å snakke. Og hvis man skulle diktert alt det jeg sier, så hadde jo blitt en helt sånn uforståelig tekst. Man må lære seg å diktere. Man må lære seg å formulere seg skriftlig muntlig. Det er kjempeviktig del av det å diktere. Men det finner vi da heller ikke i tilgjengelighet menyen. Men det er under generelt og tastatur. Så da går vi inn på innstillingsmenyen igjen. Og så er vi inne på generelt, og så ligger tastatur her nede der.

Diktering. Aktiver diktering. Den må være grønn. Så da går vi tilbake. Vi kan jo bare åpne et nytt notat. For jeg hadde aktivert diktering, men hvert fall det symbol som kom ekstra det er den mikrofonen der. Og hvis jeg setter på mitt eksterne tastatur, så er til du et mikrofonen fortsatt som et symbol der. Så da er det jo det symbolet jeg skal trykke på for å diktere.

Så jeg har prøvd meg på det nå, ’I dag er det meldt mye regn i Billund. Punktum.’ Så da, nå ble det overskrift og store bokstaver. Det er fint. Og den er jo ganske god på å skrive akkurat det jeg sier. Og så kan man også si punktum, utropstegn, spørsmålstegn, kolon, sånne ting. Og jeg skriver den da som tegn og ikke som bokstaver. Og her er vi og da inne på den tekstmeldinga. Men du kan. Og så, hvis jeg nå slukker skjermen min helt, ’Hei Siri! Kan du skrive et notat på meg?’

[Siri svarer].

**’**Det blir fint med tur i Legoland.’Greit. Det her er jo det jeg akkurat dikterte til Siri, egentlig. Det har hun lagd nå et notat. Og det er sånn.

Man kan også lage en tekstmelding mens man kjører bil. Hvis man er utvalgt på forhånd.

Men det er tre ting som jeg håpe at du vil vise til en venn og det er hvor enkelt det faktisk er å få telefon til å lese og for deg. Og så er det hvordan du blir kvitt reklame i nettavisene. Og den tredje tingen er jo da at du faktisk kan skrive en tekstmelding helt uten å åpne telefonen.

### **Afslutning podcast 2**

**Studievært:**

[Musik og fuglelyd]

Det var alt, jeg havde til dig i den anden podcast. Jeg håber, du synes, det var spændende at være med til den anden dag på Nordisk kongres i synspædagogik. Lyt med i næste – og sidste - afsnit, hvor du møder den amerikanske forsker Daniel Kish, der beskæftiger sig med, hvordan lærer man hjernen at se, når øjnene ikke kan. Og den svenske forsker Krister Inde, der fortæller om at få kørekort med en synsnedsættelse.

Podcasten er produceret af Instituttet for Blinde og svagsynede. Tak fordi du lytter med.

## **PODCAST 3**

### **Intro podcast 3**

**Studievært:**

[Intromusik og fuglelyd]

Hej, det er den 9. september - sidste dag på Nordisk kongres i synspædagogik. Et samlingssted for synsprofessionelle i Norden. Mit navn er Julie Giese. Velkommen og god fornøjelse.

### **Udpluk fra dag 3**

**Studievært:**

[Musik og fuglelyd]

Vi ser med øjnene. Næh. Faktisk er det man ser i virkeligheden hjernens bedste gæt på, hvad det er, man kigger på. Hjernen kombinerer informationen, den får fra øjnene, med de erfaringer den har lagret i sine komplicerede netværk mellem milliarder af nerveceller. Så det visuelle system giver os informationer, som gør det muligt for hjernen at komme med et kvalificeret gæt på, hvad der er i omgivelserne.

Daniel Kish kan ikke se. Han er en amerikansk forsker og han beskæftiger neuroplasticitet. Og han interesserer sig for: Hvordan kan man lære hjernen at se, når øjnene ikke kan? Her får du et par smagsprøver fra hans forelæsning.

### **Daniel Kish, formand for World Access for the Blind**

It is such an incredible honor to be here. I became aware yesterday that you don't usually have people from other countries outside the Nordic region, particularly so far across the pond and even further across. I come from California, so I came 7000 miles to be here with you. And I'm very pleased. Thank you so much.

I am an orientation and mobility specialist. I am certified and I am totally blind. And I've been totally blind since I was about a year old. And my vision was pretty rubbish prior to that. So, you know, I have no visual memories and no one has any idea what I was able to see before. I truly couldn't see anything.

What I'd like to do is really just start with a video. It's part one of what we affectionately call ‘take charge.’ It shows a little bit of how this sonar vision concept works. And I'll talk more of, of course, about sonar vision and what it means and what it is and so forth. So let me let's get started.

**Studievært:**

[Musik og fuglelyd]

I videoen ser man Daniel Kish – og en anden underviser, Brian, der ikke kan se - undervise mennesker uden syn i Sonarvision, også kaldet ekkolokation. De skal fx finde vej, cykle og beskrive omgivelserne ved hjælp af ekkolokation. Nu står Daniel Kish sammen med en kvinde foran en bil. Helt tæt på den. Dog uden at røre den. Mens kvinden klikker, peger hun langs bilens omrids. Som tegnede hun bilen. Naturligvis helt uden at røre den.

**Daniel Kish**

She can see the car. We are all capable of so much more than we previously thought.

**Studievært:**

[Musik og fuglelyd]

Underviseren Brian afslutter videoen.

**Daniel Kish**

He says, ‘I already can see.’ This is coming from someone who did see before he lost his vision. There is a myth out there that you have to be congenitally blind in order to learn echolocation, or you have to have learned it early in life, or you have to be naturally gifted and talented. And yes, there are people who are naturally gifted and talented at learning echolocation or using echolocation. Just as there are people who are gifted and talented at music, or sports or what have you. But that doesn't preclude or exclude other people from learning to do those things to a functionally useful degree.

So if someone were able to learn to echolocate, let's just say for the sake of argument, half as well as I can do, for example, they're already way ahead.

So what does he mean by, ‘I can already see’? Well, seeing is interesting. Seeing is really a thing of the mind as much as it is a thing of the body. And I conceptualize I have an acronym, SEE, which stands for Security, Effectiveness and Equality. So if we were secure, if we are safe, physically safe, such as I would be walking toward the edge of a stage here. Right. There are no issues with me walking to the edge of the stage. So if you're safe, if you feel secure, if you feel secure, as well as being physically secure. Right. Emotional security. Many of us feel more insecure than we actually are insecure. But you want security, physical and emotional, and you want other people around you to feel secure about you, which mean conducting yourself in a confident way with a sense of competence. Because very few of you in this audience actually believe I'm going to fall over the edge of the stage, right? Surely. So you probably, for the most part, feel pretty secure about me being up here playing with the edge of the stage. So security has to be balanced with self-efficacy. We have to be able to actually do stuff well, do stuff successfully, achieve what we set out to achieve in a manner that's useful.

So often we tend to over balance safety and security. We make sure our students are safe. We know there are lots of things that we do to keep our students safe, to ensure that they're safe. You know, saying that you shouldn't cross this road or you should go this way and not that way or that way is dangerous. I never use the terms danger, hazard or risk unless I want to make fun of those things. Because we tend to use those things just willy nilly without thinking anxiety. There's nothing that puts more anxiety into a blind person than to say, ‘Don't go that way it's dangerous.’ If someone tells me, don't go that way, it's dangerous the first thing I want to do is to go that way to find out what is so dangerous. Danger, hazard risk is relative to ones skill level. There is nothing inherently dangerous or hazardous or risky about the environment. The environment should be conceptualized as friendly, as informative, and I would hope that we would develop a good natured, friendly relationship with our environment. It's hard to do if you are brought up or if it is inculcated into you about all the risks and hazards and dangers that can beset a blind person. So the focus is on capacity to address the environment.

If you have the capacity to address your environment, then the danger isn't a danger. The hazard isn't a hazard. The risk isn't a risk. It's simply there. And it's up to us to utilize the information about those risks and hazards, hazards and dangers. It doesn't mean that we don't inform a blind person, for example, that, okay, there's a set of stairs here, there's no railing and there's a considerable drop off. Right. But we don't have to get anxious about it. We don't have to get uptight about it. The information is there and they should have found it with their cane anyway. Right. In fact, I might just say, ‘You know what? Have a look with your cane to your.’ Right. ‘Have a look and see what you find.’ Oh, look at that. There's a drop off. Now you know, don't go there unless you want to. And if you want to, then make sure you can do it safely. Please. So let's eliminate or at least reduce from our vocabulary all this stuff about danger, risk and hazard. Equitably, that sense of feeling equal to others, that sense of being regarded by others as equal to them. Is also that sense of inclusion, that sense of belonging. Equality. We feel like we belong and we feel like we belong in a manner that's equitable to others. So in my mind, these three things security, effectiveness and equality have to balance. One can't overdo the other.

And one way of doing that is in our vision. Because sonar vision helps you to become more aware of what is around you so that you can be more effective, so that you can feel more secure, and so that you can conduct yourself in a manner that is regarded as equal to others and equal by others. I want to do a little demonstration here. I'm going to ask everyone to close your eyes. Many of you have seen this. Many have heard this. But just close your eyes, if you would. And I have here a panel. You can kind of hear my voice change as I move the panel toward me and away from me. Right.

**Studievært:**

[Musik og fuglelyd]

Daniel Kish tager et ark op foran sit ansigt – og bevæger det frem og tilbage. Altså enten tættere på eller længere væk fra sit ansigt.

**Daniel Kish**

So how is an echo locator able to do the things in echo locator is able to do? I'm going to make a sound and you keep your eyes closed. You will hear the sound change as I move this panel toward me and away from me. So just listen. Right. Could you all hear that? Okay, let's test. Let's test that. So I'm going to walk toward this wall here, and you are going to keep your eyes closed. Please. It's going to sound like this. But here's the thing I want you to tell me to stop before I plant my face into this wall. Someone's going to have to clean up the mess if enough people don't say ‘Stop.‘ Now I'm going to move. So you have to listen carefully to the change in the sound, which tells you that I'm moving toward the wall. Eyes closed. Okay. Thank you.

**Studievært:**

[Musik og fuglelyd, grin fra salen]

Som grinene antyder, står Daniel Kish nu med næsetippen helt inde mod væggen.

**Daniel Kish**

Open your eyes. It was awfully close. You had me worried there. Let's do that one more time. Close your eyes, please. Close your eyes. Confidence.

[Publikum siger stop]

Good. Okay. That was better. That was better. All right, you get the idea.

All right, so if a person's riding a bicycle and they're coming up quickly against a wall or a car or whatever, that's essentially the effect that they get. But they're clicking. They're clicking instead of making the shushing sound. Because, well, the click puts out so much more energy, so much more energy. So a proficient echo locator can learn to detect things for dozens of meters or even hundreds of meters. The other thing that echolocation training can provide individuals is the ability to hear things that are very, very quiet in the environment. Essentially to extract very quiet sounds from noise because echo locaters, that's all we do is we extract very quiet sounds from noise. For example electric cars. Research actually shows that an echo locator is roughly ten times more efficient, I guess, or proficient at extracting signals from noise like that. So consequently, quiet sounds don't tend to surprise us very much.

What’s really going on neurologically is the visual brain, if you will, to allow for the imaging of one's surroundings, the imaging of one's surroundings in much the way that a sighted person's visual cortex does. Studies tell us this. So a boy basically said to me that before I began working with him, before I taught him, what space was, he really had no idea that there was such a thing as space. That there were surroundings that he could actually develop his own relationship with. He was assisted everywhere. He could get lost in his own living room. So kind of an extreme example. But this is a boy who had no neurological issues whatsoever. In fact, he's top of his class at school, really a self-starter, highly self initiated, but could barely find his way out of a of a shoebox and had no inkling that there really even was a shoebox that one could find one's way out of. So, you know, for him to be able to do that is really pretty miraculous. And so that visual cortex comes into play to allow for imaging of information, basically through the auditory cortex, into the visual cortex, where the brain is actually seeing sound. And I want to play another video. Let's pull this up.

**Studievært:**

[Musik og fuglelyd]

Videoen illustrerer, hvordan Daniel Kish kan beskrive sine omgivelser ved at bruge ekkolokation. Og han laver en helt korrekt beskrivelse 99 % af gangene.

**Daniel Kish**

Our version of echolocation… Well, flash sonar means that a flash of sound in our case with a flash of energy, is used to solicit echoes from the environment that are then used for navigation.

**Studievært:**

[Musik og fuglelyd]

I en anden video ser vi, hvordan Daniel Kish, ved hjælp af ekkolokation, kan beskrive sine omgivelser så præcist, at han kan tegne et kort over den park, han netop har besøgt for første gang. Træer, store sten, et overdækket område med bænke. Han tegner alt. Alle detaljer. Selv afstandene mellem store sten langs stien.

**Daniel Kish**

My visual cortex is responding in a way a visual cortex does when presented with information from which it can extract from image. It's doing its job.

It's doing its job. So I've often described what I perceive in imaging terms, visual terms, if you will, in terms of shape, in terms of distance, in terms of angle, and often using visual terms like bright, for example, or dull or dark. And when we work with people and that imaging system sort of comes online or develops, we often hear them start to use visual imagery to describe their experiences, to describe what they hear.

Two takeaways here. One is, as a profession, as a profession of orientation and mobility specialist, we really need to get behind the science. There's a whole lot of science happening that's moving very fast and way ahead, way ahead of where we are as a profession. We have some catching up to do because that leads me to my second takeaway, which is artificial vision isn't for everybody. In fact, artificial vision isn't for a lot of people. And it's not going to be for a lot of people for a long time. Yet this whole five-year, they say five years, five years. My colleague, Doug Baldwin, is something of an expert in this. How long have they been saying five years? Yeah, for about 50 years. So it's going to take time for artificial vision to catch up. And folks like me, you know, might never qualify for artificial vision in the traditional sense. In fact, there are a lot of folks like me who might never qualify. So echolocation, the way you've seen it today, I name it Sonar Vision. I'm not being hyperbolic here. I'm not kidding. I'm not joking. I'm not exaggerating. It is a way to see. That is based in neurobiology. It's based in brain development, and it is a way to see.

Thank you.

**Studievært:**

[Musik og fuglelyd]

Forstil dig: Du har en synsnedsættelse og du sætter dig ind i din bil. Tænder motoren og kører. Hvad tænker du, når du hører det? Vi hopper videre til en workshop med den svenske forsker Krister Inde.

### **Krister Inde, Ph.d. og synspædagog**

I am a low vision teacher.

The SMS project was started in Denmark at IBOS. One is called SOS and the other SMS. So we started out in Sweden, with some nice people from the vision division and from the stroke division. And as we heard yesterday, there are lots of activities for stroke patients, for making them walk and talk and so on, but not vision. So we tried to introduce the SMS team into stroke rehabilitation and divide the training into six different areas. We asked the patients, ‘What is the most interesting thing that you cannot do?’ And everyone wrote ‘driving a car.’ So that's why we started the project, which was very disliked by the Swedish Transportation Agency.

The transport agency said, ‘don’t you care about that? This is our rules and this is how we do it.’ So that was challenging. Then we started to do the things we wanted to do. So we wanted to introduce a new field in vision rehabilitation.

I have a visual problem. I can’t drive a car, but I can use my bicycle. If I look up, I see everything down there. It's not clear, but I can see the obstacles and I have survived so far.

A role model is the Dutch, because they have been doing this for a long time. There was a pioneer who said, we have to have our own methods according to the EU directive. And the EU Directive says that access to driving should involve a vision examination and a practical fitness to drive test. A great researcher says it's impossible to estimate whether a person can drive or not only from a visual field diagram called Esterman or Humphrey or whatever you call it. It doesn't say a thing about if you can drive or not, but it's the thing we use in Sweden to revoke a license. So we revoke like more than 1000 driving licenses just because of this in our country.

It affects a person's integrity, their identity, and they are doomed. They have a punishment without going to court. Of course, you can go to court. But it's very hard to get the right thing. So in Holland, they first started the program. In Nashville, Tennessee, they have been driving with the Bioptic Telescopic System that is mounted in the best eye and in the upper part of the frame. And when you use that, you can get the magnification in the monocular. That makes 1.16 with four times it's more than 1.5, which is the visual acuity. You must have to be able to drive. If you have two eyes with one eye, it's 0.6. So they made a program where they had an assessment day where they were fitted the beats with an optometrist when they made orientation mobility training. You know, see your spatial capacities, how to use a GPS and so on. And then you had driving lessons and practical fitness to drive test. It's a test called Golden Standard, which is done during 45 to 60 minutes. And you drive with a driving inspector and an occupational therapist and they will independently judge how well the driver is doing.

**Studievært:**

[Musik og fuglelyd]

Nu viser Krister Inde et billede i sin præsentation. Et billede af en kvinde, der sidder i en bil med BTS. Altså kører hun bil med Bioptic Telescopic Spectacles. Som Krister Inde fortalte om for lidt siden.

**Krister Inde**

And here is the lady who is a pioneer in Sweden. I will talk more about her later. She is using a biotech produced by Multi Lens in Sweden where we cannot use them yet. But she does.

**Studievært:**

[Musik og fuglelyd]

Krister Inde fortæller videre om projektet i Holland.

**Krister Inde**

And they then started to lobby to see if they could change their rules. So they are like ten years ahead of us when it comes to this. To be able to get a driving license, you must do a driving test, an ordinary driving test. If you see 0.4, almost 0.5, then you should do a test. Because you can be a good driver if you have 0.4. It depends on who you are, your cognitive abilities, your awareness and your background. This is in the Netherlands. If you have a more than a 0.5 then you should do a golden standard test. And they have also included the visual field defects. So if you have 120 degrees, there is no problem. You do a driving test. But if you have a lower, a visual field defect, then you must train in the centers called fitness to drive centers with occupational therapists. You learn how to move the head down to the blind side. In our country, this would be impossible. And here you see the organization that is available in Netherlands with 17.5 million people. They've divided the country into four areas where they have 12 driving examiners. So this is quite an organization. It's been running now for more than ten years. And the evaluation is that there is only one crash in a parking lot from one of the patients who are driving with BTS and visual field effects. On the poster there, I wrote from a Finnish investigation about deadly accidents. How many of them were caused by vision problems? The number is 1.3%.

**Studievært:**

[Musik og fuglelyd]

Krister Inde vender tilbage til Skandinavien.

**Krister Inde**

So then the SMS and the CTD in Canada, and of course, we had all these Norwegian teachers from the SBS project and a Swedish research Centre for driving or transportation in lean shipping - So the professor there, he was a member of the team and you can see on the website there are like two films and lots of other material coming up because after the this project, the Swedish Glaucoma Association took over the website and of course we had the Stroke Association in Sweden and the Diabetes Association with us because they are the three groups that are most interested or their members are most interested in this field. And the book CTD is available from me or from the Federation of the Visually Impaired. And the book was not liked at the transport agency because they think they are ruling. But it's interesting to make them change. And how do you do that? Well, you go to the parliament of Sweden and say, ‘are you deciding what's happening in our country or not?’ So we went to the traffic division of the Parliament and had a webinar and said that this situation is awful. But we were able to make the government say that the rules for driving with visual field effects should be changed in June 2020. And then after like more than one year, the Minister of Transportation gave decision to make new simulation tests.

If you don't have a license, you cannot make a road-driving test, but then you can make a test in a simulator. We had a simulator project going and 340 persons were driving in the simulator and 200 of them passed and got their license back. But then the transportation agency said, ‘oh, they have too big visual field defects. We have to stop this, which means that you can compensate for quite big visual field defects. So now on September 22, which is soon, the transport agency will come to us and say that they have started and almost completed new regulations, which states how many missed points you can have and a Humphrey test in order to be able to drive or not. So this new the oldest rule was from 2010 and it's interesting that they invite the glaucoma association and us to join them to see whether they are right or not. And we have also on the individual side kept on going. So I just want to show you two cases because it is possible to get a dispensation from the medical demands if you can prove that you are a safe driver. So in many cases, I've asked the patients to make a driving test with a good driving instructor before their driving license is revoked.

Your doctor can forbid you to drive and when the driving license is not revoked, it's not illegal to drive anyway, but you have to take your own risk. But then you can make a driving test beforehand and then when the driving license is revoked, you can show that driving test as one of the proofs.

These two role models was a part of the CTD project. The man, Magnus, has been a pilot for 30 years for Norwegian Airlines, and he was going through the training of this of CTD, which included explorative psychology training with visual coach, and he was the second best student. And we can prove from the documentation of the coach that he has normal eye movements and the detection in the visual field of 30 degrees. We went to the first court with him to tell the judge and the laymen that he was a very good driver. I always said that I would let my kids go in his car. He is a safe driver and we can prove it. Because we sent him to Holland, and he made a perfect driving test. The layman said to the judge, ‘We believe them,’ but the judge did not. So it was a layman decision on his favor. But then the Transport Agency appealed to go to a higher court. So all this took four years. But then they said, ‘well, it's obvious you can drive. Your driving test is perfect from Holland.‘ So he is now driving and he calls me every now and then and he says, Thank you.

The lady is a very special woman because she wanted to be a medical doctor and she had measles when she was a kid. She couldn't be a medical doctor in Sweden because we don't like those with so bad vision at Karolinska Institute. So she went to the Netherlands because she was admitted there, learned to speak Dutch, and then she started at the driving school. She had problems in the beginning. She had never been driving. Of course, the other thing was with Magnus, you know, he had been driving for so long, so he just wanted to prolong his driving license. But she was a beginner with a congenital vision problem. But she made it. And then she and her husband moved back to Sweden, and now she's a neurologist, driving to her job every day. Not in the winter, because she cannot drive at nighttime. And the interesting thing is that she has a driving license with the Swedish flag, with the EU code for BTS, because EU has a EU code for this. And the Swedish Transport Agency allowed her to use that. So she's the first person in Scandinavia, I think, to drive legally.

We would have the old awful regulations from 2010 changed. It will take until 2024, until it's taken as a law. But until then, we must thank an eye doctor from San Francisco who said something smart. He said there is a big difference in vision, function and functional vision. And then a thing I hate with the United States is that they call me blind. I'm legally blind because I'm below 0.1. So I call myself illegally sighted because it depends on if I look directly at you. Then I don't see you. But if I don't look at you, but look up, I see you better. So with eccentric viewing, you can be a functionally good person in traffic and adjust your speed to the situation. And I learned from the driving professional friends that driving concerns, maneuvering the vehicle, you know, to park it and so on. And the second thing is the traffic rules. The third thing is risk analysis. You know, to be able to make decisions in relation to risk, to lower your speed and so on. And the fourth is adjustment to the situation, adjustment of speed and adjustment of how you enter approaching cars and so on. And the fifth is scanning. And if we can match or measure these five parameters, then we can measure driving in relation to functional vision. You know, a static visual field diagram says nothing about ability to drive.

People should have a fair chance to show if they can drive or not. Because to have your driving license revoked just from a test for 4 minutes with an angry eye doctor, then I say to them, ‘Go to another eye clinic when they are friendly.’ Well, one nurse in one place said during the estimate test to a person. ‘Okay, there was your license revoked,’ but some people are more empathic than others. And, you know, if you make like three or four tests after each other, they are not the same. It’s not an absolute science, but we have to have them anyway. We should combine them with a practical fitness to drive test. So we will see in the future, if we could combine driving schools, the guys would test the drivers and vision rehabilitation professionals together with eye doctors and optometrists so we could create a team.

We have today Sweden institutions called Traffic Medicine, where they judge whether persons can drive or not. But they are just testing. They are not making fair resolution if it's possible or not. And they revoke more licenses than they assist the patients. So we have lots of things to learn from the Netherlands and from why we have other regulations with the same EU directive as a country like the Netherlands and Belgium is now also starting up.

In other cases, I would help people to write an application for a dispensation to see how far we can go. The problem is when you talk to the guys at Transportation. They can only read the rules. Now, I talked to one and I asked him what is the measurement of the sensitivity of the retina? What? What do you mean? He said, you know, ‘What is the measurement?’ And he didn't know. So I said, ‘It's Decibel.’ And he said, ‘Well, no, that's about hearing.’ So that's the level of people’s knowledge we talk to. They just read the rules. So sometimes when people call me, I call their eye doctor and I say, ‘don't revoke, don't report this person. Let him drive with a medical restriction or forbid him to drive in the journal so he can make a test with a driving school. So he has some sort of evidence if he's going to apply for a dispensation.’

I think this is a danger to society to revoke more than 700 or 800 licenses in an unfair way in Sweden each year. Because you lose your job, you lose your belief in authorities. They don't believe in transport agency and they don't believe in any authorities. They are enemies of the society. When people are unfairly treated, it's dangerous. So we have to change this.

When people call me, my wife says, ‘Oh, it was the 75 year old guy with no license that called you again.’ And I say, ‘Yes.’ And she says, ‘you promised me not to work with that anymore?’ And I say, ‘But no, because, you know, there are cases that that are so unfairly done.’ And there are no organizations to help out for these patients because eye doctors don't have time. They have four patients each 15 minutes.

So the next step is to build up an organization. So we have the parliament behind us. So I would, with this small talk, say that this is my last lecture, except for the one I'm having in next week. And I would like you to take over this interesting work within vision rehabilitation, to work with scanning, training and to train people with their spatial capacities and see if they can use an electric bicycle or a slow motor vehicle.

So that also is an advice you can give to people. There is in Holland now research in slow motor vehicle driving. So go into the project auto and mobility and see what they are doing. It's great fun. And if you go to the next vision meeting, you will also see that the Dutch researchers are in the majority of all presentations today in relation to the other countries in Europe. And they're friendly, and share with you. And for exceptions they take people from other countries to make driving tests to prove to the court that they can drive. And if the court says no, then that's it. And if you say, No, I don't want to listen to this guy anymore, you can just walk out. But I would like to inspire you because there are much more to do in vision rehabilitation to meet the needs of the patients.

Thank you so much.

### **Afslutning podcast 3**

**Studievært:**

[Musik og fuglelyd]

Det var alt, jeg havde til dig i den sidste podcast. Jeg håber, du synes, det har været spændende at være med til Nordisk kongres i synspædagogik i denne podcast-serie.

Podcasten er produceret af Instituttet for Blinde og Svagsynede. Tak fordi du lytter med.