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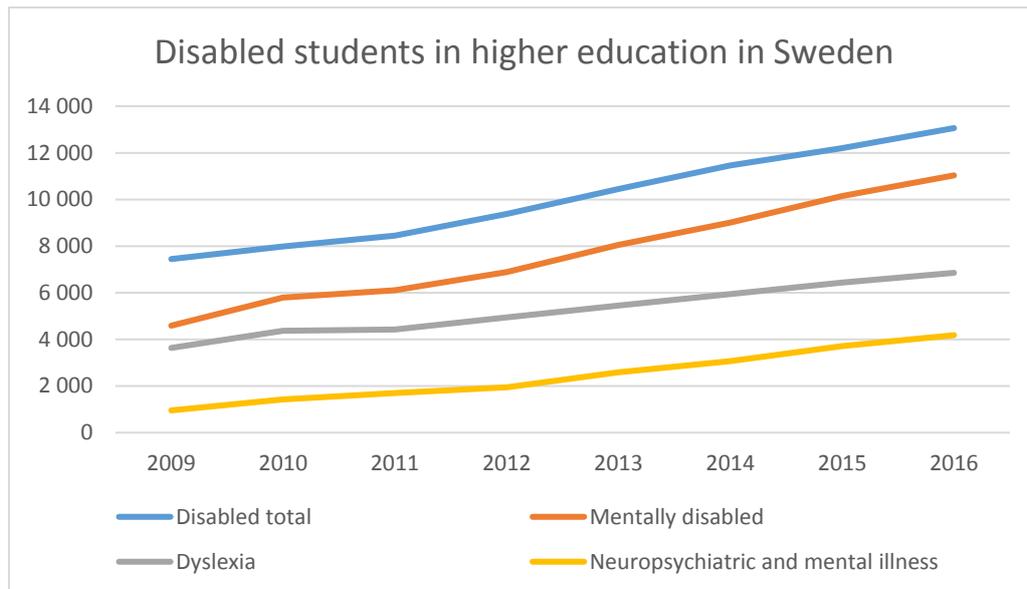


Figure 1 Number of students with disabilities in higher education in Sweden (Stockholm University, 2017)

Disabled students are more inclined to cancel their higher education studies than average students. Reasons for this vary from practical problems like access to premises to more subtle problems like attitudinal barriers (Paul, 2000; Getzel, 2008). It is easy to understand that distance learning offers opportunities to students with physical disabilities as well as to other students who have problems going to the university on regular basis. As for students with mental disabilities eLearning can offer both opportunities and challenges depending on what kind of disability the student encounter.

The research setting is the eService development program at Dalarna University in Sweden. The program is run using a flexible study pace distant approach (FreeStartFreePace), which means that students can start the courses in the program when they like and they can keep the pace they prefer. If a student takes the course at normal full time pace she/he will take fifteen courses in two years. Flexible study pace distant courses provide extended opportunities for students with disabilities to attend courses in higher educations as opposed to campus courses with fixed schedules. This study investigates how mentally disabled students perceive taking courses with flexible pace and also how their teachers perceive opportunities and challenges.

The research question of this study is: **What opportunities and challenges for mentally disabled students are perceived by students and teachers regarding distant courses with flexible study pace (FreeStartFreePace)?**

This question implies whether a lack of flexibility in regular courses is a problem to students with mental disabilities.

## Theory

Functional disability is in Sweden defined as a limitation caused by a functional impairment (The National Board of Health and Welfare, 2016). This implies that a functional disability shows *only* in a certain situation as an effect of a person having a functional impairment. Examples of limitations are problems to carry out daily life, deficient participation in working life, social relations, cultural activities, education or democratic processes. The point here is that the reasons are mostly lack of or deficient accessibility, which implies that the functional disability might disappear in spite of the functional impairment if accessibility is granted. Accordingly there is a difference between functional disability and functional impairment, whereas a functional impairment always is there while the

disability is to a large extent dependent on accessibility (The National Board of Welfare and Health, 2016).

Hence access to higher education is to a large extent a matter of accessibility. In order to improve accessibility there are rules for Swedish higher education to facilitate education for students with disabilities (MFD, 2017). For example students with dyslexia are allowed to write written exams on a computer provided by the university. Still the traditions and settings in higher education pose a number of obstacles for students with certain disabilities. eLearning can remove obstacles not just to students with mobility problems but to all students who cannot travel to the university for various reasons. Notable here is that measures that facilitate for disabled students in general also is relevant to a number of other students. This goal also for the FreeStartFreePace courses where adult students with jobs and families can select time to study and take exams.

“Universal design for learning” (UDL) is the label of a set of guidelines for accessibility to learning in general but is of course specifically relevant to learning for persons with functional disabilities. The guidelines are mainly targeting instructors and course designers. The guidelines include three main “key concepts” (Brokop, 2008), which are:

1. Presenting ideas and information in multiple ways
  - a. Variety in presentation formats
  - b. Organization and goals of instructional materials
  - c. Accessibility of instructional materials
  - d. Access for varying cognitive and intellectual abilities
  - e. Response to unique individual needs
2. Providing students with multiple ways to express their understanding
  - a. Varying formats for student response
  - b. Suitability of types of test items
  - c. Flexibility in time limits
  - d. Maintaining standards
3. Motivating students by building on their interests and creating appropriate challenges
  - a. Relevance to student lives and aspirations

The eLearning format of the eService program meets several of the UDL-headings.

Below we elaborate some of these headings that are specifically relevant to the FreeStartFreePace courses. This guidelines are relevant to mentally disabled students who might need more time to accomplish tasks or who might be affected by their disorder in periods. The guidelines in general also provide incentives for alternative educational approaches which can benefit not just disabled student but many others as well.

*Heading 1.e Response to unique individual needs* is elaborated: “make courses both accessible to a broad audience, but to build in the ability to appeal to personal, oftentimes necessary, individual preferences” (Brokop, 2006, p 9)

*Heading 2 c Flexibility in time limits* is elaborated: “Individual students may also require more time to do exams and assignments than would customarily be allowed. Students with chronic health conditions, language processing challenges, and mobility impairments often benefit from flexible time limits.” (Brokop, 2006, p 10)

*Heading 3 a Relevance to student lives and aspirations* is elaborated: "They respond to a welcoming environment where their individuality is respected and nurtured." (Brokop, 2006, p 11)

Mentally disabled students in higher education face a number of challenges. According to Tinklin et al (2005) the very nature of higher education exacerbates or even creates difficulties for students with mental health problems. "Lack of understanding among lecturers, a culture in which it was difficult to admit to having difficulties, a lack of support for learning and badly designed learning experiences had all contributed to the students' distress." (Tinklin et al, 2005, p 510). The remedy suggested to meet these major problems is individual and environmental support targeting the students' needs. Today students at Dalarna University receive the following support:

- Support with note taking
- Support with commenting on texts
- Interpretation
- Transport assistance
- Individually adapted examination
- Supervision/support
- Certain technical support such as computer support, special chairs and other relevant equipment

## Method

The study is based on a qualitative case study approach aiming at a holistic view on how eLearning with FreeStartFreePace affect students with mental disabilities. The case instance is the FreeStartFreePace approach of the eLearning based program for eService development at Dalarna University in Sweden.

Data collection was carried out with questionnaires addressing students with functional disabilities and teachers in the eService program with experience of students with functional disabilities. Additionally the program manager was interviewed with the answers of the students and teachers as point of departure.

The students were asked questions mainly about opportunities and challenges regarding their experiences of the FreeStartFreePace program. In order to stimulate elaboration of the answers we also asked them to relate to what support they had received and Campus experiences if any. The questions were:

1. What functional disability do you have?
2. How long have you been a student in the eService development program?
3. Do you keep your planned study pace?
4. If the answer of question 3 was No, What is the reason you haven't kept the pace?
5. Have you studied on Campus at any time?
6. If the answer of question 5 was Yes, how did you find the Campus studies in comparison to the eService program studies?
7. Regarding the present courses (in the eService program) are you offered the support you need regarding your functional disability in order to succeed with your studies?
8. If the answer of question 7 was No, What kind of help do you miss?

9. In the eService development program, what works well for you with regards to your disability?
10. In the eService development program, what challenges do you encounter with regards to your disability?
11. Please feel free to add anything you find relevant to your experiences of the program with regards to your disability.

The teachers were asked questions about opportunities and challenges regarding the FreeStartFreePace approach:

1. What functional disabilities have you encountered in your courses? (E.g. ADHD, Dyslexia, neuropsychiatric disorder)
2. What opportunities can you see with FreeStartFreePace distance courses with regards to mentally disabled students?
3. What challenges can you see with FreeStartFreePace distance courses with regards to mentally disabled students?
4. What differences can you see for mentally disabled students when comparing regular campus courses and FreeStartFreePace distance courses?
5. In the eService development program, how have you had to adjust teaching and examination in order to provide mentally disabled students with the support the need?
6. Please describe more about how you perceive how mentally disabled students deal with FreeStartFreePace distance studies.

The program manager was asked the following questions:

1. What opportunities does the program offer to mentally disabled students from your point of view?
2. What are the effects of the students' disabilities with regards to their chances to complete courses in the program?
3. Do the mentally disabled students differ from other students with regards to performance?
4. What assistance does the university offer in order to support students with dyslexia, mental and neuropsychiatric disorder?
5. How does the nature of the academic culture affect these students?

The answers have been analyzed qualitatively by categorizing the answers firstly in groups of challenges and opportunities and further on in sub categories. After the analysis of students and teachers answers, we interviewed the program manager. We showed her our analysis and asked her to comment from a program design perspective how she perceived the answers from students and teacher about opportunities and challenges.

Finally we summarized the answers from the three parties in order to answer the research question and related them to the relevant parts of guidelines for universal design for learning.

## Results

In this section we present the results of a questionnaire to mentally disabled students, a questionnaire to teachers teaching at the eService development program and an interview with the program manager.

### **The students' answers.**

The students had Dyslexia, Asperger's syndrome, ADHD, ME/CFS<sup>1</sup>, and posttraumatic stress syndrome. They had taken various numbers of program courses. The students who couldn't keep their planned pace said it was because of the disability (ME/CFS, Dyslexia, Asperger's). None of them had taken campus based courses prior to the FreeStartFreePace program, but one of them said it wouldn't be possible anyway due to the ME/CFS.

When asked about whether they got relevant support, they said they did. One student commented though that recorded material from seminars and books was hard to get and that the persons who read the texts had an accent that was slightly hard to understand alternatively they read with odd emphasis.

In all they were very pleased with the FreeStartFreePace approach since it provided an opportunity to study in higher education. Still there were challenges or annoying aspects like lack of possibilities to communicate with other students or problems to reach the goals set up by themselves. In addition one student with ME/CFS and dyslexia was very pleased to be one of the first in a family without a study tradition to study at a university. This was a major shift in attitude to studying that was expressed as follows:

“Thank you for the opportunity to be able to take this course. To be one of the few in my family to deal with university studies is not just a matter of my family's opportunities/genetics/intelligence to do... But has today (as I see it) more to do with the opportunities offered in e.g. this distance program with free pace. My experience that the traditional way to study does not work for me has changed and for the first time I think that being a student is fun/rewarding/important etc.”.

### **The teachers' answers**

The teachers' answers concerned how they have perceived the situation for the mentally disabled students taking courses in the eService development program. The disabilities experienced were neuropsychiatric variations (such as Asperger's syndrome, autism, adhd/add, Tourette's syndrome), mental disorder (such as depression, social phobia, anxiety) and dyslexia.

The opportunities proposed were easier adaption in general to the students' needs than in traditional campus courses, and specifically if the disorder affected the student in periods creating a need to vary the study pace. On teacher wrote:

“It is easier to adapt the studies towards specific disabilities that demands support for the student. The possibilities for variation of the studies are simply more extensive”

Comments on challenges proposed were that challenges are mainly the same as in regular courses, but also that the free format of FreeStartFreePace distance courses made it necessary to practice a disciplined approach which might be not so easy for these students. Another challenge mentioned was lack of knowledge on how to best meet students with mental disabilities.

As for the comparison regarding the differences for students to study on campus and to study with FreeStartFreePace teachers commented both for and against the alternatives. On campus there are established and experienced support functions, whereas the knowledge on this specific program and

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<sup>1</sup> Myalgic Encephalomyelitis/Chronic Fatigue Syndrome

its students are less comprehensive. But mostly the possibility to adapt to the students need for adapted pace was mentioned as the major advantage.

The consequences for teachers were mostly that they had allowed more time for examination to the mentally disabled students on these courses, e.g. double the answering time for computer supported multiple choice exams.

As for what kind of disabled students that benefitted most of the FreeStartFreePace format one teacher said that it was most suitable for students with social phobia. The teacher claimed that students with dyslexia, adhd and some variations of Asperger's syndrome there would be no specific problems to study on campus.

### **The program manager**

The program manager's answers concerned mostly the study conditions in general for the mentally disabled students. She said that the format of the program was suitable for students who were disabled in such a way that they could adjust their studies at times when their disabilities affected their possibilities to study. The main problem for these students was actually financial. In Sweden 70 % of all students take loans from the Swedish Financial Aides for studies (in Swedish: CSN). The dependency of CSN deletes some of the positive aspects of FreePace, since students have to keep up with the pace that is in relation to the loans received. If a student e.g. takes a loan corresponding to a 50 % study pace the student must present a corresponding result with respect to the credits taken. The program manager said: "If it wasn't for the CSN, it would work much better. FreePace is only free if you are not dependent on CSN."

The program manager pointed out that very few students, if any, with mental disabilities managed to complete the program with its 15 courses. The reasons for this was partly because of the programming courses which were considered very difficult, and partly the reason was the disabilities together with the CSN problems mentioned above. The program manager could see differences between different kinds of disabilities though. "We can see from statistics that students with adhd are more successful than students with e.g. Asperger's syndrome".

The FreePace dimension is most useful for mentally disabled students where the disorder affects the students at times. Such disorders are depression and ME/CFS. Since students can book examination with the teachers, this opportunity can be used to adapt studies to the periodic effects of the disorder.

Not all of the students applies for support due to their disabilities. The program manager pointed out that there might be students with disabilities that are unknown to the university until they apply for support and provide a medical certificate showing a diagnose issued by a doctor. Some students might not apply for support at all and are thereby more or less unknown to the teachers and can't therefor receive any support. Still they can benefit from the FreeStartFreePace format of the courses. It works like a kind of support since the students can adapt their study pace with regards to their disability. It could on the other hand become a problem for students with certain disabilities if they e.g. interpret instructions in a way not intended. One reason that students do not apply for support could be that they are not aware that it exists.

The university provides various kinds of support. Students with Asperger's syndrome can benefit from a mentor, who is a student that is experienced of the student situation and who can guide the disabled student when necessary. According to the program manager the mentor system is

successful. As an example she knows about an Asperger's student who did well until the mentor left the university. After that the student had problems to structure the study activities.

As for some of the disabilities e.g. adhd a clear study structure is important. One way to support students with structure is the mentor system, another is clear study guides. All students must design such an individual yearly study plan before they are allowed to start their studies. The study plan states what courses to take, in what order and what pace is planned. Included here are planned deadlines, which can be changed, but still are planned to certain dates. The general course study guide which is available for all courses is also a support for the students since it provides overview, structure and order for what is supposed to be achieved in each course.

There are of course problems with the approach too. Except for the financial aspect mentioned above, isolation from other students is not what most students appreciate. When every student keep their own pace they end up in their own little bubble, with no other student colleague to share the same course, task, problem or joy.

Notable here is that even if few students completed the entire program, and even if some students completed only few if any courses, the program manager could see that the possibility to study for these students meant a lot to them. The alternative would often be to be more isolated and to lack the stimulus provided by the FreeStartFreePace distance courses. The final exam is not always the ultimate goal. Students with mental disabilities could enter the program with low self-confidence and low self-esteem. It can be important and very positive for these students to be able to study in higher education at all. One has to accept that it takes more time and that is an opportunity offered by this program. The chance to succeed increases the earlier the mentally disabled student asks for support for their disability. The program manager: "One has to accept that it takes more time for these students."

## Discussion and conclusion

In this paper we seek the answer to the question **What opportunities and challenges for mentally disabled students are perceived by students and teachers regarding eLearning courses with flexible study pace (FreeStartFreePace)?**

In the beginning of this paper we claimed that what is useful for disabled people is also useful most other people. First of all there are very few people who are not impaired in any way throughout their lives. We don't hear and see perfectly. We can concentrate more or less in stressed situations. We don't move very smoothly as we grow older. Besides our social situation implies obstacles for education among other things. Therefore it is fair to say that an educational program with free start and free pace is useful to many people even if they don't have a diagnosis of mental disorder. But for mentally disabled students the option of a FreeStartFreePace distance course can be crucial and actually the only option.

According to our study the opportunities for mentally disabled students are:

- The FreeStartFreePace approach is useful since it offers an opportunity to adapt the study pace to the life situation caused by the disability.
- Students can benefit from university support and allocate time for seminars and examination with regards to the disability.
- This approach could to some students be the only way to take part in higher education.

Challenges for mentally disabled students are:

- Coping with CSN, the study loan institute, since the loan regulations stipulate that the study pace must match the loan conditions.
- Isolation. Students cannot be part of the student community since they have their own individual study pace.

We can conclude that mentally disabled student could have major problems studying in regular campus courses due to their disabilities even when the university would provide support. The flexible study pace approach (FreeStartFreePace) provides opportunities for students with mental disabilities who could have a problem adapting to schedules and conforming procedures. It is important though to provide necessary support related to the kind of disability. The FreeStartFreePace is also an opportunity for any student with non-linear situation/work that varies over time in intensity. Problems for the disabled students are the lack of social connections to other students and the tempting possibility to postpone studies when there are flexible deadlines.

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