LEVERHULME TRUST

New Practices: What individual and institutional practices can support the transition to and from PCE and from PCE to employment?

Dr. Björn Fisseler, FernUniversität in Hagen, Germany

Mail: bjoern.fisseler@fernuni-hagen.de
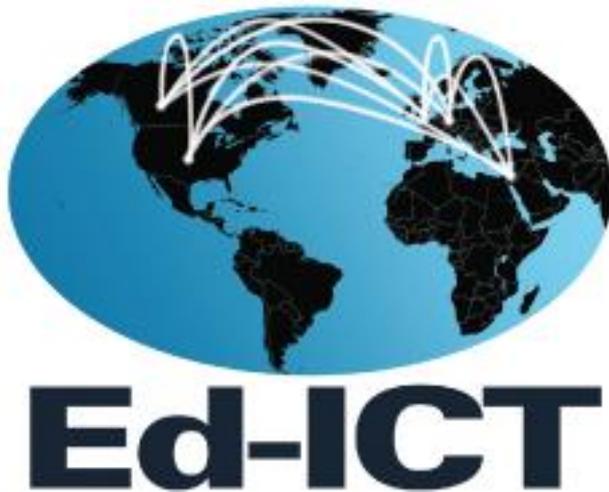
Introduction

This paper aims to define the field for discussion and exchange during the fourth symposium. The network has funding to run five international symposia that explore four interconnected themes of: Models, Stakeholders, Design, and Practice. The first symposium was held in Seattle and focused on examining models, frameworks and approaches that might transform accessibility practices. The second symposium was held in Montreal, and focused on examining how different stakeholders can and should contribute and collaborate to ensure the accessibility of ICT in PSE. The third symposium, held in Tel Aviv, examined the extent to which lack of access to supportive ICTs or inaccessible ICTs can be solved by new or better ICT designs.

The goal of the fourth symposium, held in Hagen, is to identify, criticize, discuss, and develop ideas for effective practices on the question:

What individual and institutional practices can support the transition to and from PCE and from PCE to employment?

This question is a really broad one, as it leaves much to everybody's imagination what might be important, what is already there, and what should be developed and implemented. To make things easier for the reader – but also for me as the author – I decided trying to give a glimpse of an answer to the following questions:

- What practices of designing transition for people with disabilities can be observed, and how successful are these practices?
- What are models and considerations that underlie these practices?
- What is the role of technology for successful transition, and how does the role of technology change?

I assume that every network partner would answer these questions differently. Therefore, this paper represents my very personal approach to these questions. As I have worked in the field of higher education during the last 12 years, this perspective shines through in this paper.

There are a few abbreviations used within this paper:

- PCE: post-compulsory education; this is everything that happens after formal education; often it is called post-secondary education and sometimes it is also called tertiary education.
- PCI: post-compulsory education institution; the institution(s), in which PCE is provided.

This paper is also far from being complete. It represents a working status based on the results of an extensive, but not complete, literature review. There probably are a lot of papers, articles, and books that should have been included in the review process. And it was interesting to realize that specially in the last five years many books have been published on the topic of this paper.

Transition Theories

Kurt Lewin is credited with the quote "there is nothing so practical as a good theory", so what theories are there that might help us with understanding transition processes? We can think of whole post-compulsory education as a series of transitions (Kraus, 2012):

- Moving from secondary to post-compulsory institution
- Moving within institutional structures, e.g. from a residence hall to an apartment, advancing from class to class, transition from bachelor to master studies
- Moving from PCE to employment.

Nancy Schlossberg's Transition Theory (Evans, Forney, Guido, Patton, & Renn, 2010) defines transition as "any event or non-event that results in change relationships, routines, assumptions, and roles". An event can either be anticipated, for example applying for college and attending college, or unanticipated, e.g. when your medical condition gets worse before actually attending college; a non-event is an event that is anticipated, but doesn't occur. Schlossberg further looks at the context of the transition, and at the level of impact the transition makes on the individual's life and the lives of other persons indirectly involved. The question is, what does this have to do with technology and new practices?

How an individual is coping with transition revolves around the elements of the 4S model: situation, self, support, and strategies. Professionals can work on and with these four elements in order to help the individual with transition. E.g. when a student with a disability moves into post-compulsory education, that could mean for example:

- Situation: How does the role of the student change, e.g. in relation to taking care of assistive technology or learning about new technologies? What are current sources of stress and what does technology have to do with this?
- Self: Personal and demographic characteristics affect how an individual views life as well as her or his current situation. Developing "self-resources" like self-determination or self-advocacy might help to cope with transition.
- Social support: The more social support an individual gets, the better the transition can be cope with. This means for example assessing the institutions and stakeholders that can provide support for certain technical problems.
- Strategies: These might (1) modify the situation, (2) control the meaning of the problem, or (3) aid in managing the stress in the aftermath.

The Individual Transition

Potential Resources - 4S's
assets / liabilities

Approaching
Transitions

• type

• impact

• context

situation ⟷ support

self ⟷ strategies

Changed

• behaviour

• role

• learning

• perceptions

The Transition Process
changing reactions over time

Adapted from: Schlossberg (1995)
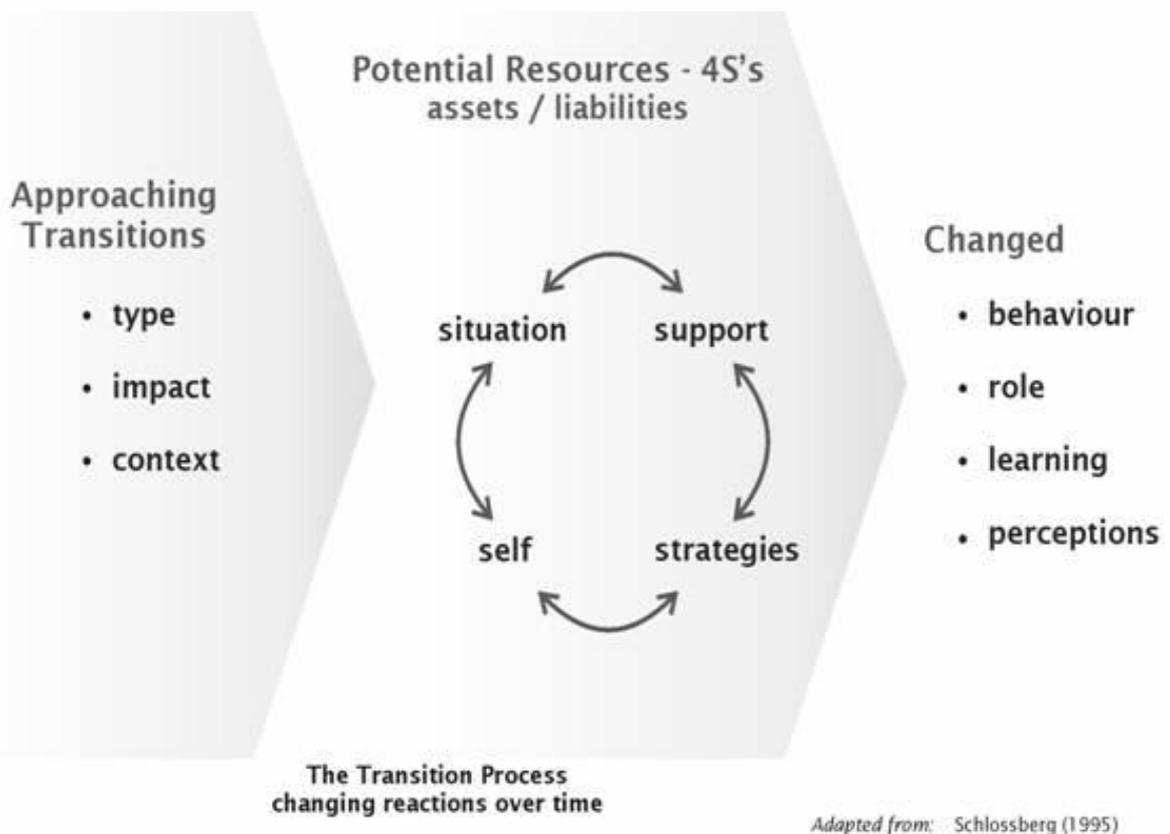
Abbildung 1: Schlossberg's Transition Theory

Technology can be seen as a potential resource that helps in coping with a transition, thus consultants can take the 4S as a model to integrate technology into the transition process and use it for a positive outcome. On the other hand, technology can also be a barrier, in which case the 4S-model can help in assessing the situation and identifying possible support and strategies.

Technology and transition

In their article on "Transition to Postsecondary Education" in the "Handbook of Special Education", Madaus, Banerjee, & Merchant (2011) argue, that "technology skills are a critical component of preparation for a knowledge-based, digital society" (p. 578). In the past that meant for people with disabilities, that they focused on learning how to operate and work with their personal assistive technology. But todays reality is far more complex, as for example in higher education all students "need technology to participate in the learning process, engage in social networking, expand their knowledge base and understanding, and extend their individual capabilities as learners" (p. 578).

For students with disabilities transitioning to college, the focus has traditionally been on assistive technology (AT). But Madaus, Banerjee, & Merchant (2011) state that "AT alone is no longer sufficient, fluency with broader learning technologies is now an essential element of college survival".

One could go even further and say that a general fluency with digital technologies is essential not only for surviving college or post-compulsory education, but also for vocational training and preparation for the labor market.

Madaus, Banerjee, & Merchant (2011) emphasize the different reading skills necessary for using the internet for learning. They refer to Leu et al. (2007), who identify five skills that are unique to learning environments:

1. identifying a question or search query that starts the reading process,
2. navigating and locating information to read,
3. critically evaluating the information,
4. synthesizing information (through the choices made about sites to visit and links to follow), and
5. communicating the information.

The implications for students are that special technology competency skills are required for entry into and graduation from college. The students should be encouraged to discuss these and the implications with secondary personnel during college search process as part of the transition planning process. And the secondary personnel should also consider evaluating the students' ability to learn and read in open learning environments.

Technology seems to be relevant both as an individual support in the form of assistive technology and also as a larger design consideration (Kimball, Wells, Ostiguy, Manly, & Lauterbach, 2016, p. 113). Assistive technology is essential for many students with disabilities in PCE, and there is evidence that students sometimes even report a higher use of AT in PCE than in secondary education. But the question remains how students with disabilities optimally learn how to use AT, how to assess the students' needs and skills, and how to integrate technology into their PCE pathway.

Despite the necessity of a general technological fluency, David Parker and Manju Banerjee (2007) found significant differences between the technology needs, preferences, and fluency of undergraduates with and without disabilities. They asked 142 students with and without disabilities to indicate their comfort with learning technologies as well as their fluency with core and supplementary technology skills. Not surprising students with disabilities declared

being far less comfortable with general learning technologies, and also less fluent in technology skills. Parker & Banerjee (2007) explain that for example with a communication mode that relies on visual processing and written language skills, which form a barrier for certain students.

The implications for practice from this study are:

- Students with disabilities who want to move into PCE should receive assessment and training in the use of various learning technologies. This learning process should be person-centered, as students must be their own advocates, and identify their individual needs, strengths, preferences, and interests (see: Being one's own advocate).
- School psychologists and secondary-level special education teachers should assess the students' technology needs and skills.

The question is what and how students should learn about technologies and how to operate the technologies required to persist in PCE. How can PCI inform students about the technology standards that have to be met prior to graduation? How can PCI as well as schools prepare students – whether disabled or not – for these technology standards and requirements? What could a technology curriculum look like, and would it include the same topics for all students?

Especially students with disabilities face multiple challenges when making the transition to PCE (S. B. Asselin, 2014). The responsibilities for learning shift from the educators and parents to the students, who are now responsible for time management, social skills, and using learning tools and strategies. The students need to know how their disabilities impact their learning and their independence, their individual strengths and needs. And students have to realize that the accessibility (of general tools) is more important than simply focusing on receiving accommodations, as these are more likely to be cut back.

The problem is that in PCE about half of the students who requested and received support services were not even identified as disabled during secondary education, and also half of students who were in special education during high school didn't consider themselves as disabled, so they didn't disclose their disabilities to avoid stigma and make a fresh start.

Asselin (2014) recommends to focus on self-awareness, self-advocacy, and decision-making as critical skills for successful transition to PCE. These skills are critical to securing accommodations and assistive technologies. Students can secure access to appropriate accommodations, assistive technology, and information technology in PCE with self-awareness as the foundation. The individual needs for assistive technologies can be anticipated through understanding the individual skills, and by anticipating what technology and accommodations can best support the academic, cognitive, and functional areas for success in PCE.

Mull & Sitlington (2003) asked what the role of technology in the transition to post-compulsory education is, and did a literature review to answer this question. They focused on assistive technology and identified different areas of disability, for which recommendations were made for certain types of technology. Though technology not only

makes things easier, but also introduces problems. Mull & Sitlington (2003, p. 30) found that:

- Assistive technology is sometimes used in the role of "cognitive prosthesis", as it corrects one or more specific impairments, versus "cognitive partner", that supports the student's efforts to accomplish a certain task;
- Assistive technology often costs a lot of money, which can be a financial burden to the students and/or the institutions; the question is how far that's still a problem when access technologies are either integrated into mainstream software, or are available as open-source software;
- Abandonment by students of purchased assistive technology can be problematic; this is often the result of student indecision whether the tool helps or even creates more work.
- Training needs related to the use of technology is often underestimated, but training is critical for preventing abandonment; but not only the students with disabilities need training, but also the teachers and other professionals at both secondary and post-compulsory levels.
- Eligibility questions may arise once the students leave secondary education; now the students have to be more active, apply for an assessment of their individual needs, and for assistive technology devices and reasonable accommodations.

Practices Supporting Transition

In their extensive overview article Kimball et al. (2016) list several problems during the transition to PCE for students with disabilities:

- They often face unique challenges resulting from the interaction between the environment of the institution and the nature of their disabilities.
- The services that the institutions provide to students with disabilities vary in their effectiveness and usage.
- Hence students with disabilities might choose not to request these services, though higher levels of self-advocacy seem to be predictive of the decision to apply for such services.

Madaus et al. (2011) argue that "students with disabilities transitioning to college must be prepared for a postsecondary environment that is rapidly changing because of the influence of technology in education" (p. 580). To do so, "transition plans should include goals and objectives related to technology" (p. 580).

In some countries such transition plans are legally required, for example the Individualized Education Program (IEP) in the United States, which is required for every student with a disability. This IEP has to include for example accommodations to be provided to the students, present levels of academic and functional performance, and measurable annual goals. When the student is sixteen years of age, the IEP also has to include a statement of post-secondary goals and the transition services needed to achieve these goals. The IEP must be formulated by a team of expert, and these experts shall also consider whether the child needs assistive technology devices and services. The IDEA also requires that the child has to be informed about her or his rights under the Title 33, the Education of Individuals with Disabilities Act.

In another review, Lindsay et al. (2018) tried to identify best practices and components of post-secondary transition programs for students with disabilities. All of the programs they included in their review reported an improvement in one of three components: post-secondary enrollment, self-determination, and transition skills. They highlight several results of their review:

- Different types of transition programs can be used to positively influence transition outcomes. These programs can instructor-led and group-based, or self-direct in various settings including online.
- Also, the format of successful programs varies, e.g. the can include curriculum, online, self-directed or multi-component based.
- Young people with disabilities often have fewer opportunities to develop self-determination skills. Improving self-determination, self-efficacy, and other skills related to transition are therefore important, as these skills are associated with graduation and academic outcomes.

Despite these results, the authors recommend to further explore the types of programs and interventions that work best for whom, and the optimal delivery format (Lindsay et al., 2018).

An example of a transition model for students with disabilities is the Four-Cornerstone-Model (Naugle, Campbell, & Gray, 2010). In this model, the school counselor provides different areas of emphasis to the students:

- Knowledge of Disability Legislation
- Promoting Self-Advocacy
- Collaboration with parents, peers, and professionals
- Use of Resources and Programs.

The school counselor has the role of a facilitator and coordinator along the four cornerstones mentioned. It is interesting to note that technology seems to play no role in this model.

So how can technology be made an integral part of the transition planning? Mull & Sitlington (2003) make recommendations for this, which should be implemented while the student is still in secondary education:

- Identifying funding source for assistive technology must be included in the transition planning process, as AT devices are often expensive and both individuals and institutions face challenges in obtaining funding.
- The student's needs and the demands of the post-compulsory environment must constitute the basis of the decision for certain types of assistive technology. The assessment should be conducted before the transition to PCE, and should include the student as well as secondary- and post-compulsory-level professionals.
- Before the students move to post-secondary education, they should be trained in the use of the assistive technology. The goals are to use the technologies for their academic success and to decrease the level of abandonment of the devices.

Another framework for understanding the transition to post-compulsory education comes from Garrison-Wade & Lehmann (2009). They wanted to find out what works in transition and developed their framework based on a mixed-method study involving 100 college students with disabilities and 10 disability resource counselors. The framework they developed consists of three parts:

- High quality preparation in secondary education, which involves
  - self-advocacy development, combined with a raised awareness for self-advocacy,
  - training on self-advocacy, and
  - PCE visits and orientation activities.
- Planning for transition, a mix of ongoing communication between high school and post-compulsory institution
- Access and accommodations in PCE,
  - Instructor awareness and sensitivity
  - Financial aid opportunities to foster social support networks
  - Mentoring support
  - Formulation of goals for future employment.

An essential aspect of the model developed by Garrison-Wade & Lehmann (2009) is the communication between the different institutions, e.g. high school and post-compulsory institution. Students need information about the institutions entrance standards, their legal rights and responsibilities, but also about the services that the PCI offers or doesn't offer. Parties involved here are counselors, teachers, family members, and also the students themselves. They also argue that planning is vital for students with disabilities (Garrison-Wade & Lehmann, 2009, p. 436); besides an ongoing communication this includes goals for high school students and goals for the PCI experience and a future career. Students might

also benefit from a social support network with other students with disabilities with whom they could interact.

The authors conclude their paper with recommendations for different stakeholders. PCI leaders should conduct a needs assessment about the services they provide or should provide to students with disabilities. Practitioners from PCI should identify ways for disability resource coordinators and lecturers to work together on a regular basis, and they should establish student networks for student-led support and advocacy.

Collaboration between different stakeholders might be one of the key strategies of accessible and inclusive transition strategies (Korbel, Lucia, Wenzel, & Anderson, 2011). Especially student affairs practitioners such as DSOs have a key role to play in initiating and sustaining collaborations within PCI as well as external outreach initiatives. The later might be vitally important to students with disabilities, as they need to be aware of the programs and services offered at a given institution, and they also need to understand the differences between high school and post-compulsory education. Respective initiatives should be addressed at prospective students while still in high school, their parents, and also at key stakeholders in secondary education involved in transition planning.

Differences between Secondary Education and PCE

Kupferman (2016, p. 186 pp.) highlights the differences in expectations between secondary schools and post-compulsory education. Some of these are:

- Motivation to learn: Students in PCE have to be self-motivated.
- Self-determination: In PCE, students have to demonstrate self-determination (e.g. self-advocacy, self-disclosure, self-assertion), but they can learn these skills.
- Identification, documentation, and disclosure of the disability: Students are responsible to disclose their disability and the accommodations they need, they need to know how disability affects their performance, and have to be able to communicate this to other stakeholders.
- Knowledge of needs for reasonable accommodations, access, and modifications: The students in PCE need to know and be able to communicate their needs for reasonable accommodations, access, and modifications.

These observations can also be extended to the field of technology. Self-determination for example is important to be able to communicate one's needs to others, e.g. the need for a certain type of assistive technology to a stakeholder of the PCI. The students also need to know not only about the reasonable accommodations from which they benefit, but they also need knowledge about assistive technology. What assistive technology exists, what is the optimal application of a certain type or product, what are the limits of assistive technology, and so on. Such knowledge is all the more essential to be successful, as – like Madaus et al. (2011, p. 580) state that "postsecondary environment that is rapidly changing because of the influence of technology in education". But who is responsible to teach the students about this, what do the students need to learn, and how can they learn about all this?

How can students learn about technology?

Hamblet (2014) recommends to teach students to use assistive technology as one key strategy to improve college transition plans. She argues that students with disabilities will find that they need to function independently on a variety of academic tasks, such as note taking, reading, writing, studying, and organization and time management. In order to

complete these various tasks, students will need to use various technologies. Teaching students to use technology in high school might improve the chances that they also use these technologies in post-compulsory education.

Best would be to align different academic skills with technological solutions that can help. E.g. when the area of difficulty is reading, technological solutions might include to teach the student how to use appropriate text-to-speech software. Or when the student has problems with note taking, digital recording devices or digital templates to organize notes could be the technological solution. The probem with this is, that the solutions only focus on assistive technology, but as Madaus et al. (2011, p. 578) state, "fluency with broader learning technologies is now an essential element of college survival".

This could be what Korbel et al. (2011) call "technological preparedness", meaning that many PCI have "technology-competency requirements" that students must meet for graduation. They argue that students today must not only know how to operate a computer, but how to use instructional and learning technologies for studying and communicating. The demands on students with disabilities are increasing, as they no longer have to learn how to operate their specialized AT, such as a reader, but how work with more generic technology like text-to-speech software. So, in the transition planning process, students with disabilities should be prepared for the technology-based types of accommodations they will receive in PCE.

An example of what such a plan might look like comes from Newton & Dell (2010); they define four AT skills for an independent AT user:

1. Operational Skills: These involve knowledge of how to use certain technology tools and the mastery of technical skills for operating it. These skills have to be updated when the AT user moves from one environment to another. This for example include identifying new tasks that the student will be required to do.
2. Functional Skills: Involve the proficiency in the specific knowledge and abilities for which the device was select, for example writing, reading, or planning.
3. Strategic Skills: This means the ability to decide which tool or strategy is helpful for a particular activity. These skills are most important when entering a new environment, so they could be essential for successful transitions.
4. Social Skills. These skills involve the ability to use technology appropriately with and around other people.

While this skill set can easily be assessed and taught in secondary education, as there are enough teachers, special education personnel, etc., it is worth to think about who can help students with such an ambitious plan in post-compulsory education. Only few PCI have the resources (personnel, time, money) to implement such an ambitious plan.

Additional examples are the three initiatives EnvisionIT, Ohio's STEM Ability Alliance, and Transition Options in Postsecondary Settings (Izzo, Murray, Buck, Johnson, & Jimenez, 2015). All these three initiatives focus on teaching students 21st century skills, which include:

- Academic subject knowledge (e.g., reading, writing, arithmetic)
- Learning and innovation skills (e.g., critical thinking, collaboration, creativity)
- Life and career skills (e.g., self-direction, accountability, leadership)
- Information, media, and technology skills.

The EnvisionIT transition curriculum for example is a 12-unit curriculum, intended to facilitate the transition planning process. The goal is to teach high school students 21st

century skills that are essential to functioning in modern society. It was developed as most people develop these skills through their own personal experiences and hands-on learning (A. Lombardi et al., 2017). The curriculum is aligned with several US national and state-wide standards, and comes with many resources for teacher and students, course modules, as well as sample transition portfolios. The accompanying research shows that the curriculum is successful at what it is supposed to teach.

These initiatives not necessarily focus on all students with disabilities, but on students with intellectual and developmental disabilities. Nonetheless these projects have successfully proven that online transition programs can help developing transition skills in students with disabilities (A. R. Lombardi et al., 2017; Vreeburg Izzo, Yurick, Nagaraja, & Novak, 2010). These projects also demonstrate that such skills can be developed using online programs.

Nonetheless there is room for improvement:

- There is a lack of research on whether or not completing the EnvisionIT curriculum actually improves transition rates of students with disabilities, or if students move on to post-compulsory education without taking some time off after graduating from high school.
- Despite focusing on computer- and IT literacy, the curriculum seems to lack resources on AT literacy. Adding this aspect would help facilitating the use of AT, and solving the problems associated with AT during transition to PCE.

The role of Disability Service Offices

The most common practice to support transition on the part of the HEI are Disability Service Offices, also called Disability Resource Centers, Centers for Disability Services, or Offices for Students with Disabilities. These offices are responsible for conducting assessment and for providing reasonable accommodations for students with disabilities. The students must initiate the request for an accommodation, and therefore often has to disclose a disability (Kupferman, 2016, p. 180). After an assessment, DSO and the student decide on suitable measures and what kind of accommodations are necessary. At the end, the student normally is provided with a letter, which the student has to deliver to the lecturers and who else might need to know.

But the times of a DSO as a one-stop-shop might come to an end, due to a more diverse and growing population of students with disabilities (Korbel, McGuire, et al., 2011). DSOs are advised to cooperate with other campus functions in order to promote student development and preparation for employment. Collaboration between several stakeholders and functional areas across campus seems to be the "cornerstone of accessible and inclusive transition strategies", with the DSO in the center (Korbel, Lucia, et al., 2011, p. 23).

Korbel, McGuire, et al. (2011, p. 43) describe a "*transition services continuum* as a planning tool to initiate a collaborative and systematic approach to inclusive transition strategies". This model consists of three complementary parts:

- Preadmission Strategies: A significant part of the process starts before the students apply for a particular institution; they check the websites and information provided by the institutions and try to get an impression of the campus climate and the services for students with disabilities. A non-accessible website doesn't make a good first impression.
  And technology is an important aspect of this. Institutions should not only inform

students about the technology competencies required to study, but also about assistive technologies and commonly used learning technologies.

- Strategies During Enrollment: Using technology to communicate differently with students, to empower them, and promote autonomy and self-determination is the core strategy during enrollment. This includes extended or virtual office hours for the delivery of student services, e.g. via social media or online services. This can also provide equal access for students with hearing or visual impairments, as well as non-traditional students.
  Self-determination and autonomy can also be promoted using technology. For example, self-help scanning stations allow students to create text in an alternative format that best suits them. The same applies to public computers in the library and elsewhere across campus that also include a standardized set of assistive technologies. This approach also follows the concept of Universal Design.
- Transition Exit Strategies: Leaving PCE also requires planning, as well as interaction and cooperation of several service stakeholders. Students should now be familiar with the process of requesting accommodations, which should benefit them when applying and taking required entrance exams for graduate and professional studies. Self-awareness is critical when transitioning to employment, and can help students when requesting and negotiating workplace accommodations.

DSO are often the first point of contact for students with disabilities, so students should learn about these services in time (Reed & Curtis, 2011, p. 558). But there are also factors situated within the

Preparing for PCE

Students should get prepared for by considering what to expect in PCE. As the services in PCI often differ from those the students receive when in secondary education, it is often essential to slowly prepare them for PCE (Reed & Curtis, 2011). This means for example to coordinate accommodations between secondary and post-compulsory education. If these are comparable, students are expected to enter PCE with more confidence. Another important aspect is to turn students into independent learners. Students cannot expect to receive the same intensive services in PCE like they did in secondary education. So, helping to get more self-supporting learners will enable them to do better in PCE.

Technology has at least two roles in preparing students for PCE:

1. Technology can be an enabler, and support students in getting more independent learners. This is the case, for example, for software that helps students to organize their learning, to take notes, and in general to support them in their learning experience. Coordinating accommodations can also mean to teach students how to use certain assistive technologies for learning, but also how to deal with non-optimal solutions, e.g. when services in PCE are sub-optimal.
2. But technology can also be a barrier, when the technology students are expected to use in PCE is absolutely in-accessible for students with disabilities, and there are no services and reasonable accommodations available to students helping them with such situations.

What can post-compulsory institutions do?

Edyburn (2011) criticizes that PCI currently ignore the diversity of the student body and often perceive it as a flaw. Also, the institutions often devote a significant amount of resources to provide remedial support services and individual disability accommodations.

He argues to see diversity as a characteristic, and to invest into technology only when the diverse student body, especially students with disabilities, benefit from these technologies. Technology, investments and the development of technological innovations in PCE must be committed to the academic success of the diverse student body, otherwise these investments should be rejected by the administrators.

Edyburn asks PCI administrators to consider top-down, bottom-up, and policy change strategies that align technology with institutional initiatives for enhancing the academic success of diverse learners. Top-down strategies and policy changes can be used as change-management-tools. E.g. students with disabilities can be enabled to use their own accessibility software, when the USB drives on campus computers are no longer locked. Students who need specialized technology tools should be able to access free assistive technology. Also as many PCI expand their online course offerings, the campus support services should be improved and strengthen their online support offerings.

Being one's own advocate

The concept of self-determination and self-advocacy is central to many concepts especially in North America, and many researchers see it at the heart of successful transition for students with disabilities (Skinner, 1998; Korbel, McGuire, et al., 2011; Roberts, Ju, & Zhang, 2014; Stamp, Banerjee, & Brown, 2014). Often enough, the students who lack self-esteem and confidence because they are dependent on others don't apply for PCE (Reed & Curtis, 2011, p. 554).

Skinner (1998) defines students as self-advocates when they

a) demonstrate an understanding of their own disability
b) are aware of your legal rights
c) demonstrate competence in communicating rights and needs to those in authority positions.

In his article he continues to describe model programs of preparing students with learning disabilities for transition to post-secondary education. The interesting part is that he seems to consider it only as support for the application of accommodations, because he doesn't mention assistive technology nor accessibility of technology for students with disabilities.

Korbel et al…

The question is whether self-determination and self-advocacy are two different traits or part of the same skill set, as "due to the widespread usage of the term, it has lost its original meaning and is now a source of confusion if not well defined" (Kimball et al., 2016, p. 105). The positive effects of self-advocacy are undisputed (e.g.), there are also programs to learn how to be a successful self-advocate (), however there seems to be a widespread dissatisfaction with the way that students with disabilities are prepared to be successful PCE students. The problem seems to worsen, as sometimes students with disabilities don't immediately enroll in PCE, but take time off. When they then enroll in PCE, they often do so without any advising (Kimball et al., 2016, p. 106).

Conclusion

The main objective of this paper is to provide some ideas and input about what to consider during the discussions and presentations of the fourth Ed-ICT symposium on the topic of new practices. While there is a lot of literature especially on the suject of transitioin to post-compulsory / post-secondary education, there's enough left to discuss:

- What importance to digital media have in secondary education, post-compulsory education, and in employment?
- Transitioning from secondary to post-compulsory education can be supported through corresponding transition plans. How should technology be integrated into these plans?
- What does digital literacy mean? How can it be integrated in the curriculum and/or job training?
- If technology is part of the problem, can it also be part of the solution? E.g. by delivering an web-based training on digital literacy? Would there be one training for all, or would it have to be specific for different types of impairment?
- What are specific barriers of transitioning to employment?

There is enough to think about during the two-day symposium, and I hope that we will come up with some new questions, some new ideas, and also some new solutions for new practices.

References

Asselin, S. B. (2014). Learning and assistive technologies for college transition. *Journal of Vocational Rehabilitation*, *40*(3), 223–230. https://doi.org/10.3233/JVR-140687

Edyburn, D. (2011). Harnessing the potential of technology to support the academic success of diverse students. *New Directions for Higher Education*, *2011*(154), 37–44. https://doi.org/10.1002/he.432

Evans, N. J., Forney, D. S., Guido, F. M., Patton, L. D., & Renn, K. A. (2010). *Student Development in College: Theory, Research, and Practice* (2nd ed.). San Francisco: Jossey-Bass Inc.,U.S.

Garrison-Wade, D. F., & Lehmann, J. P. (2009). A Conceptual Framework for Understanding Students' with Disabilities Transition to Community College. *Community College Journal of Research and Practice*, *33*(5), 415–443. https://doi.org/10.1080/10668920802640079

Hamblet, E. C. (2014). Nine Strategies to Improve College Transition Planning for Students with Disabilities. *TEACHING Exceptional Children*, *46*(3), 53–59. https://doi.org/10.1177/004005991404600306

Izzo, M., Murray, A., Buck, A., Johnson, V., & Jimenez, E. (2015). Preparing All Students for 21st Century College and Careers. In M. Antona & C. Stephanidis (Eds.), *Universal Access in Human-Computer Interaction. Access to Learning, Health and Well-Being* (pp. 109–119). Springer International Publishing.

Kimball, E. W., Wells, R. S., Ostiguy, B. J., Manly, C. A., & Lauterbach, A. A. (2016). Students with Disabilities in Higher Education: A Review of the Literature and an Agenda for Future Research. In *Higher Education: Handbook of Theory and Research* (pp. 91–156). Springer, Cham.

Korbel, D. M., Lucia, J. H., Wenzel, C. M., & Anderson, B. G. (2011). Collaboration strategies to facilitate successful transition of students with disabilities in a changing higher education environment. *New Directions for Higher Education*, *2011*(154), 17–25. https://doi.org/10.1002/he.430

Korbel, D. M., McGuire, J. M., Banerjee, M., & Saunders, S. A. (2011). Transition strategies to ensure active student engagement. *New Directions for Student Services*, *2011*(134), 35–46. https://doi.org/10.1002/ss.393

Kraus, A. (2012). Engaging theories and models to inform practice. *New Directions for Student Services*, *2012*(138), 13–27. https://doi.org/10.1002/ss.20003

Kupferman, S. (2016). Transition to Postsecondary Education. In R. L. Morgan & T. J. Riesen (Eds.), *Promoting successful transition to adulthood for students with disabilities* (pp. 177–199). New York: The Guilford Press.

Leu, D., Zawilinski, L., Castek, J., Banerjee, M., Housand, B., & Liu, Y. (2007). What is new about the new literacies of online reading comprehension? *Secondary School Literacy: What Research Reveals for Classroom Practices*, 37–68.

Lindsay, S., Lamptey, D.-L., Cagliostro, E., Srikanthan, D., Mortaji, N., & Karon, L. (2018). A systematic review of post-secondary transition interventions for youth with disabilities. *Disability and Rehabilitation*, 1–14. https://doi.org/10.1080/09638288.2018.1470260

Lombardi, A., Izzo, M. V., Gelbar, N., Murray, A., Buck, A., Johnson, V., … Kowitt, J. (2017).

Leveraging Information Technology Literacy to Enhance College and Career Readiness for Secondary Students with Disabilities. *Journal of Vocational Rehabilitation*, *46*(3), 389–397. https://doi.org/10.3233/JVR-170875

Lombardi, A. R., Izzo, M. V., Rifenbark, G. G., Murray, A., Buck, A., & Johnson, V. (2017). A Preliminary Psychometric Analysis of a Measure of Information Technology Literacy Skills. *Career Development and Transition for Exceptional Individuals*, *40*(4), 235–243. https://doi.org/10.1177/2165143416682476

Madaus, J. W., Banerjee, M., & Merchant, D. (2011). Transition to Postsecondary Education. In J. M. Kauffman & D. P. Hallahan (Eds.), *Handbook of special education* (pp. 571–583). New York: Routledge.

Mull, C. A., & Sitlington, P. L. (2003). The Role of Technology in the Transition to Postsecondary Education of Students with Learning Disabilities. A Review of the Literature. *The Journal of Special Education*, *37*(1), 26–32. https://doi.org/10.1177/00224669030370010301

Naugle, K., Campbell, T. A., & Gray, N. D. (2010). Post-Secondary Transition Model for Students with Disabilities. *Journal of School Counseling*, *8*(40).

Newton, D. A., & Dell, A. G. (2010). Assistive Technology. *Journal of Special Education Technology*, *25*(1), 57–62. https://doi.org/10.1177/016264341002500104

Parker, D. R., & Banerjee, M. (2007). Leveling the Digital Playing Field: Assessing the Learning Technology Needs of College-Bound Students With LD and/or ADHD. *Assessment for Effective Intervention*, *33*(1), 5–14. https://doi.org/10.1177/15345084070330010201

Reed, M., & Curtis, K. (2011). High School Teachers' Perspectives on Supporting Students with Visual Impairments toward Higher Education: Access, Barriers, and Success. *Journal of Visual Impairment & Blindness*, *105*(9), 548–559.

Roberts, E. L., Ju, S., & Zhang, D. (2014). Review of Practices That Promote Self-Advocacy for Students With Disabilities. *Journal of Disability Policy Studies*, 1044207314540213. https://doi.org/10.1177/1044207314540213

Skinner, M. E. (1998). Promoting Self-Advocacy Among College Students with Learning Disabilities. *Intervention in School and Clinic*, *33*(5), 278–283. https://doi.org/10.1177/105345129803300504

Stamp, L., Banerjee, M., & Brown, F. C. (2014). Self-Advocacy and Perceptions of College Readiness among Students with ADHD. *Journal of Postsecondary Education and Disability*, *27*(2), 139–160.

Vreeburg Izzo, M., Yurick, A., Nagaraja, H. N., & Novak, J. A. (2010). Effects of a 21st-Century Curriculum on Students' Information Technology and Transition Skills. *Career Development for Exceptional Individuals*, *33*(2), 95–105. https://doi.org/10.1177/0885728810369348