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## CHARACTER STRENGTHS IN HIGHER EDUCATION: INTRODUCING A STRENGTHS-BASED FUTURE GUIDANCE (SBFG) MODEL BASED ON AN EDUCATIONAL DESIGN RESEARCH IN TWO NORTHERN FINNISH UNIVERSITIES

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### *Abstract*

*The purpose of this research project was to pilot strengths-based guidance in higher education and construct a research-based model to be applied in higher education settings. The research question set for this study was as follows: How can strengths-based guidance be developed and implemented in higher education? This research followed the model of educational design research (EDR). In this article, we report the overall progress of EDR and the pilot models (n=14) developed by 20 teachers and counselors. Based on the findings, a strengths-based future guidance (SBFG) model for higher education was developed. It is based on the profound understanding, recognition, and use of strengths so that the student can analyze and make future-oriented choices.*

Keywords: strengths; higher education; student; guidance; educational design research

### **Introduction**

According to the Finnish Ministry of Education and Culture (2021), education is one of the cornerstones of a welfare society as the purpose is to offer equal education opportunities for all, free of charge from pre-primary to higher education (Ministry of Education and Culture, 2021). The Finnish higher

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education system comprises universities and universities of applied sciences. The mission of universities is to conduct scientific research and provide research-based education. Universities of applied sciences provide more practical education that aims to respond to the needs of the labor market and focus on applied research (Ministry of Education and Culture, 2021; *see also* Aarrevaara, Wahlfors, & Dobson, 2018).

Research implies that university students need increasingly support during their demanding studies (Zhang, 2016) and also with regard to their abilities to employ their skills, life-long learning, and strengths in the future (*e.g.*, Hyvärinen et al., 2022). According to Saari, Mikkonen, and Vieno (2013), students of higher education are not very optimistic about their future employment opportunities or success in life in general, despite the fact that at least Finnish higher education graduates become employed extremely well (*e.g.*, Hujala, Knutas, & Hynninen, 2020). However, higher education institutions have a significant role in how they boost optimism in their students and support them in making self-appreciative, positive choices during their studies and after graduation.

In this article, we present findings from a project that aimed to develop strengths-based guidance among university students. Ultimately, it can be considered being about the moral objectives of education in how to raise good character in students (*see* Damon, 2010; Kohlberg & Mayer, 1972; Uusiautti & Määttä, 2012) in a way that appreciates their own well-being and simultaneously teaches about how to notice and care for others (*see also* Keefer, 1996; Norrish et al., 2013; Leskisenoja & Uusiautti, 2019). For this purpose, we leaned on Seligman et al.'s (2005) classification of universal character virtues and strengths. The fundamental idea is that the character is morally valued and that one can find true happiness and well-being through using one's character strengths. Similarly, according to Damon (2010), "character education needs to engage students in activities that help them acquire regular habits of virtuous behavior" (p. 39). While "character" is understood here as the moral and mental qualities of a person, "strengths" and "character strengths" refer to the positive qualities that—when identified and used actively—can lead to self-fulfillment and also morally balanced development of a character.

Strengths can be defined as positive features that are recognizable, learnable, and available to everyone (Quinlan, Swain, & Vella-Brodrick, 2014). Every human being has their unique set of strengths, some strengths being stronger than others. By recognizing and using one's personal strengths, one can attain well-being when it is defined as a sense of the meaningfulness of one's life (Seligman, 2011). In addition, using one's strengths provides an opportunity for positive agency in various areas of life, such as in work, studies, leisure, or relationships (Donaldson, Csikszentmihalyi, & Nakamura, 2011). The daily use of strengths is found to be connected with happiness, well-being, and satisfaction with life in general (Seligman, 2011).

Since the development of the psychology of human strengths (*e.g.*, Aspinwall & Staudinger, 2002), numerous strengths-based interventions have taken place mostly in workplaces and organizations (*e.g.*, Bouskila-Yam & Kluger, 2011; van Woerkom & Meyers, 2019) and in educational contexts (*e.g.*, Duan, Ho, Tang, Li, & Zang, 2014; Katajisto et al., 2021; Leskisenoja & Uusiautti, 2019). From the perspective of this research, the latter is especially interesting. Namely, strengths-based implementations at the level of higher education have been scarce, not to mention student-guidance-oriented ones (*e.g.*, Duan et al., 2014; Krutkowski, 2017). However, those that have been conducted have also proved useful in many ways. For example, Soria and Stubblefield's (2016) research among 1,421 first-year-students in a university showed a positive connection between strengths awareness and students' opinions that strengths-based practices on campus increased their sense of belonging. This showed as better engagement and retention to studies when the target group proceeded to its second year of studies. Or, Greenberger, and Milliken's (2021) study also provides an interesting perspective for examining character strengths: they investigated the relationships between character strengths and ethical engagement in online faculty. Through correlational analyses researchers found out that interpersonal and emotional character strengths were positively and moderately related to engagement. Studies like this provide important, targeted information about leveraging character strengths in higher education.

The aims of strengths-based interventions in education can vary (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). Often, the awareness of strengths is linked with the objective of better performance or identifying abilities systematically (*e.g.*, Linley, Nielsen, Gillett, & Biswas-Diener, 2010; Louis, 2011). Some strengths-based interventions aspire merely toward having a positive impact on social relationships and study atmospheres (*e.g.*, Quinlan et al., 2014). Indeed, school-based strengths interventions usually have "positive side effects" even if the focus is on individual well-being (Quinlan et al., 2014). Still, many interventions include dimensions that notice group dynamics, safety, and positive interaction (*e.g.*, Huusko, Äärelä, & Uusiautti, 2022; Leskisenoja & Uusiautti, 2019). In addition, what constitutes as a strengths-based intervention can be critically analyzed: while some interventions follow the idea of positive psychology intervention with signature strengths (Proyer, Gander, Wellenzhon, & Ruch, 2015; Wood et al., 2011), others pursue a more general understanding and use of strengths that can be seen as merely resources or talents (Clifton & Harter, 2003). For instance, Bowers and Lopez (2010) called college students who were talented or excellent in using their strengths as "the capitalizers".

Despite all of the benefits and positive outcomes of strengths interventions, reviews on them have noted that more research on the mediating mechanisms that explain the effectiveness of strengths interventions should be conducted (*e.g.*, Ghielen, van Woerkom, & Meyers, 2018). However, the positive impact on both well-being and personal growth as well as on group

dynamics encourages developing strengths-based interventions for various purposes.

## **Objective**

This article reports findings from a project called VAHTO - Developing Strength-Based Future Guidance that started in the fall of 2019. The project ended by the end of 2021. The main objective of our project was to develop a strengths-based future guidance model in collaboration between the University of Lapland and the Lapland University of Applied Sciences in Rovaniemi, Finland. The purpose of this research project was to pilot strengths-based guidance in higher education and construct a research-based model to be applied in higher education settings. The research question set for this study was as follows: How can strengths-based guidance be developed and implemented in higher education?

By student guidance, we refer to all guiding practices that happen in higher education, from study counseling, career counseling, and student health services to the teaching and supervision of theses, and so on. Our starting point is that the strengths-based approach can be adopted to any situation when dealing with students. The broad definition of guidance also serves the empirical implementation of the research in which the objective was to invite and engage different kinds of teachers and counselors working in higher education in this project without excluding anyone.

## **Method**

### *Participants and measures*

This research followed the model of educational design research (EDR) (Amiel & Reeves, 2008; Anderson & Shattuck, 2012). The need to develop guidance and produce theoretical and practical models to teachers and counselors supported the selection of the research approach (Barab & Squire, 2004). In this article, we report the overall progress of EDR and the pilot models (n=14) developed by 20 teachers and counselors. It is noteworthy that during the process, many other pilots started and finished but were not reported officially. Some teachers and counselors only wanted to learn about the strengths-based approach and test it as a part of their work but did not find time or were not interested in producing a written report of their pilots. In this article, we have used only those pilots whose data were reported. Altogether, the pilots reached dozens of students or customers during the piloting phase.

The pilots (*see* for details in Table 1) could be categorized into the following three themes:

- a) Pilots focusing on the time before choosing a study program and when planning studies at the beginning of education:
  - o Optional paths of education based on strengths;

- o The strengths-based test for choosing a study program;
  - o Personal values and strengths as the foundation for ethical action in nursing education;
  - o Students' own cultural strengths as a part of studying nursing.
- b) Pilots focusing on strengths as a part of higher education studies:
- o Recognizing and using strengths in the studies of a forestry engineer program;
  - o Visualizing one's professional, multidisciplinary career through in-depth guidance;
  - o Interdisciplinary peer-learning as tool for recognizing strengths;
  - o The library as a learning environment for students;
  - o Strengths in network leadership;
- c) Pilots focusing on the future and careers after studies:
- o Strengths as a part of career planning;
  - o Strengths-spotting in students' personal meetings;
  - o Strengths providing power to studies and work;
  - o Developing with strengths into a master and a developer of work;
  - o Strengths for the future.

Table 1. Summary of pilots, participants, and methods tested in the pilots

The category of the pilot	The name of the pilot	The focus group (FC) and number of participants (P) participating in the pilot	The purpose of the pilot	The main method of the pilot	The tools used in the pilot
<b>Pilots focusing on the time before choosing a study program and when planning studies at the beginning of education</b>	1.Optional paths of education based on strengths	FC: Everyone interested in higher education studies  P: Two career counseling groups with altogether 13 participants Individual counseling sessions with six participants	The purpose was to provide information about and clarify career options but introducing education opportunities from the viewpoint of strengths.	Individual and group counseling	A strengths-based educational choice test designed for the pilot
	2.The strengths-based test for choosing a study program	FC: Everyone interested in applying as a student via the Open University path  P: app. 2,000 test-takers	The purpose was to create a tool that would help the user to recognize his or her strengths and would provide suggestions for suitable Open University paths to university study programs.	Independent test taking.	A strengths-based test designed for the pilot.
	3.Personal values and strengths as the foundation for ethical action in nursing education:	FC: First-year nursing students  P: 50 students	The purpose was to introduce strengths-based thinking and guide to recognize one's own strengths as a part of ethics studies in nursing and analyze values and strengths as a foundation of ethical nursing action.	Online teachings, small-group working, a workshop	Strengths Cards, Value-Spotting Tool
	4.Students' own cultural strengths as a part of studying nursing	FC: First-year international nursing students	The purpose was to guide international students to recognize their cultural strengths at the beginning of the study program and to guide students to analyze their own strengths and usage of strengths in studying nursing and working as a nurse.	Small-group working	A strengths survey designed to help listing and analyzing strengths as their special skills or abilities
<b>Pilots focusing on strengths as a part of higher education studies</b>	5.Recognizing and using strengths in the studies of a forestry engineer program	FC: First-year students in forestry engineer program  P: 60 forestry engineer program students	The purpose was to help the new student to recognize and use his or her strengths right at the beginning of studies, and to provide individualized guidance and support for studies.	Group counseling, individual practices. Students' reflective diaries.	VIA test Strengths Diary about how to use strengths in various studies.

	6. Visualizing one's professional, multidisciplinary career through in-depth guidance	FC: First-year students in the Master's program for tourism research P: 5 students	The purpose was to help students recognize their strengths and find new viewpoints to life, studies, and work, to identify future career opportunities, and to boost study motivation.	Personal guidance, online survey, feedback conversation	Strengths Cards Strengths Lists A Pyramid of the Features of Work Future Analysis My strengths in life and at work (conversation guide)
	7. Interdisciplinary peer-learning as tool for recognizing strengths	FC: Students working with their Bachelor's and Master's theses P: 20 students	The purpose was to discuss the significance of work-based experience for recognizing one's strengths, finding potential career paths.	Group counseling in workshops, advance tasks, independent working	VIA test, My Strengths practice designed for this pilot
	8. The library as a learning environment for students	FC: Students of the University of Lapland and Lapland University of Applied Sciences P: Student feedback data from 2019	The purpose was to analyze how the library can be seen as a strengths-based learning environment.	Analyses of customer feedback data from 2019 Meetings and discussions with the student union representatives.	The pilot focused on customer feedback and its analysis about the library premises, students' needs, and necessary development.
	9. Strengths in network leadership	FC: Students of the Master School in the Well-being Leadership Education Program P: 25 students.	The purpose was to employ strengths-based guidance among Master School students as a part of their network leadership course.	Advance tasks, online small-group working	VIA test, Virtues and Strengths table, With Strengths to the Future table
<b>Pilots focusing on the future and careers after studies</b>	10. Strengths as a part of career planning	FC: Students planning to apply to higher education, e.g., students at the upper secondary education, Career counseling groups, students of Open Vocational School P: Ftf group with 13 participants, online group with 21 participants	The purpose was to support participants to recognize and develop their strengths and analyze their career plans.	Group counseling.	VIA test, I as the Future Expert practice, Future Career Planning practice, Strengths Table tasks
	11. Strengths-spotting in students' personal meetings	FC: Students starting and finishing the business accounting and international business education programs P: 350 students	The purpose was to help students to recognize their strengths and reflect how to use them in studies and career planning. In addition, the purpose was to find ways to support students' well-being.	Student guidance, discussions	Character Strengths tool



12.Strengths providing power to studies and work	FC: Students at an educational psychology course  P: 130	The purpose was to test strengths-based guidance at a mass course and to teach about how to use theoretical knowledge about strengths in various areas of life, especially in studies and work.	Guidance as a part of a mass lecture, advance tasks, independent working, small-group working and a common discussion with the mass	VIA test
13.Developing with strengths into a master and a developer of work	FC: Students at the Master School program for Knowledge-based Management  P: A group of students (N=12) building their personal study plans, a group of students doing their theses (N=7)	The purpose was to introduce strengths-based thinking and strengths usage to the students, and to help them recognize their strengths and implement them when planning their studies and conducting their theses, and later in life when employed and working in work-based development tasks.	Personal online guidance	Personal Study Plan form, VIA test, Virtues and Strengths table, What Went Well practice, Dialogic and Reflective Strengths conversation
14.Strengths for the future	FC: Students at the Lapland University of Applied Sciences  P: 13 students	The purpose was to familiarize with strengths and test strengths-based guidance approach, and to provide students with wide study skills and well-being skills by reflecting their own strengths.	Online group guidance, small-group working, individual working.	Strengths tables, VIA test, Mentimeter, Padlet, an expert lecture about strengths

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### *Procedure and data analysis*

The pilot models were designed based on practice-oriented needs and theoretical and research-based information about strengths-based interventions (Cobb et al., 2003). Each pilot was conducted by the teacher or counselor among their students or customers at different phases and contexts of higher education (*see* Table 1). The Table 1 includes also information about the purpose of each pilot and the focus group, participants, guidance practices and strengths-based tools used in the pilot. The teachers and counselors implementing the pilots recruited the participants from their own study groups (excluding Pilot 2 and Pilot 8, *see* Table 1). While the pilots and their manner of implementation were unique, the reporting and analysis of the pilot data were the same for all pilots.

To observe the usability of pilots, student/customer feedback and piloting diaries (self-evaluation) were conducted throughout the process (*see e.g.*, Nieveen & Folmer, 2013; Pietrzak & Paliszkiwicz, 2015). The feedback asked from students consisted of questions about how the strengths-based guidance has met their needs, how the methods and tools used appeared, what and how they have learned about their strengths, and how the strengths-based guidance has differed from traditional guidance. The pilot experience and feedback were analyzed with qualitative content analysis (*see* Hsieh & Shannon, 2005). The framework for analysis focused on the following themes: the background and purpose of the pilot, the implementation of the pilot (evaluation of the usability of methods and tools), successes, development ideas and needs, and personal insights (for further implementation). After that, all pilots were discussed and analyzed, and based on the findings, a holistic strengths-based future guidance model was created.

## **Results**

### *The EDR cycle in this project*

According to Nieveen and Folmer (2013), EDR projects usually follow a path from a preliminary research phase (including an analysis of needs and context) to the prototyping or development phase, and finally to the complete intervention and set of final design principles. These guidelines were followed in this research as well. In detail, the EDR cycle followed the following phases: (1) familiarizing the teachers and counselors with the idea of the psychology of human strengths and strengths-based approaches; (2) identifying the needs in one's own student/customer groups; (3) designing one's own strengths-based guidance application; (4) testing the pilot and giving and receiving feedback from other pilots; (5) revising the pilot; (6) implementing the pilot in practice; and (7) reporting the findings by using the joint report format.

The project started with the research project team's initial data collection and benchmarking work. For example, a questionnaire was sent to graduates to inquire about their understanding about their strengths and experiences during and after their studies (Hyvärinen et al., 2022). In addition, benchmarking to other Finnish universities guidance models was made alongside a scientific exploration of various strengths-based interventions. This led to the development

of a six-phased workshop series among teachers and counselors, who were the target group of the project.

The first workshop focused on developing a shared understanding about what kind of guidance was needed and what was meant by the strengths-based approach. The participants also learned about their own strengths, which was considered a crucial step toward developing the strengths-based guidance of others.

In the second workshop, guided by expert lecturers, the participants received deeper information about strengths intervention, the connection between strengths awareness and future planning, and reflection and dialogue in the relationship between teachers and students. The participants were also prompted to think about ideas for their own strengths-based pilots. The third workshop focused on spotting suitable strengths-based tools for the participants' own pilots and commenting on other pilot ideas. The purpose was to develop plans so that everyone could start testing their pilots.

In the fourth workshop, the participants reported the findings of their test period and revised their pilots. They could also comment on others' pilots. In fifth workshop, the participants reported the main successes and other outcomes of their piloting, and in the last workshop, the purpose was to develop a draft of the shared model for guidance that would be based on the pilots.

After the piloting and workshop phase, the participants were to report the details of their pilots, highlight their successes, and offer tips for other teachers and counselors. This information was collected, shared, and used as the basis for designing the strengths-based future guidance model for higher education. The process ended with a four-phased series of webinars that were free to all and advertised across Finland, followed by open-access materials and a research report published on the project's web-page.

### *The pilots*

The pilots were targeted at different phases of the study program (at the beginning, during, and at the end of the studies), at different situations during the studies (*e.g.*, when writing a thesis or when studies became prolonged), as well as among different kinds of student groups (varying from individual guidance to mass lectures). Therefore, the pilots provided interesting information about the adaptability and functionality of SBFG. Here are practical examples of the pilots listed in the Method section.

A pilot developing an online test for choosing an education program based on one's strengths was conducted by the study and career services unit. The test was aimed at everyone interested in higher education and was to provide strengths-based viewpoints to choosing a study program. The pilot also included both personal and group guidance.

An example of a pilot that focused on beginning students was one tested among the first-year nursing students during their course for nursing ethics. The purpose was to familiarize the students with strengths-based thinking and recognize their own strengths as future nurses. The guidance included online

teaching, small group working, and a workshop in which they used strengths cards. Another pilot for first-year students was implemented among forest engineering students.

An example of a pilot that focused on a specific situation during higher education studies was conducted by library personnel. They analyzed the university library as a strengths-based learning environment and how students could be served in a strengths-based manner.

One of the pilots focused on leadership students' personal study plans and the supervision of theses. The purpose was to support students through reflective dialogue to design their study plans based on their own strengths and through identifying how they could use their strengths during the process of writing a Master's thesis. They were guided by counselors via Teams and Adobe Connect in personal guidance sessions. Several tools were used during the pilot, varying between the VIA strengths test, the What Went Well practice, and other forms for supervision and guidance discussions.

Some pilots focused more closely on the future and how one's strengths could be best applied at work and when seeking employment. The purpose was to help students recognize their strengths with tools such as strengths cards and tables, the VIA test, Mentimeter and Padlet surveys, etc. They were also guided to make strengths-based career plans.

The teachers and counselors appeared very enthusiastic and motivated to adopt the strengths-based approach in their work. However, it seemed that they were not used to the working method of creating the pilot themselves based on the materials and short expert and inspirational talks in the workshops; instead, they had expected that they would be given the tools and told how to apply them. Afterwards, they described how the development process through the various phases was filled with insights:

*“Working with the tool provided positive surprises to me, all the time. - - The final version of the text was formed and changed during the various phases of working and based on new thoughts and insights, until the final idea of the current form of my tool started to look like a good and realistic option.”*

As the process continued, they also started to understand the value of planning and creating their pilots themselves, as they were the ones who knew their students the best and what they could do in their work. They also took ownership of the pilots and tools they invented or adjusted, as they reported about their experiences of using the tools and putting the pilot in action.

*“I piloted the test with a few career groups and in personal counseling meetings. I also asked student counselors from the guidance and well-being team and other project workers to test and give feedback about my test.”*

The best reward during the process for the teachers and counselors was two-fold. On the one hand, they learned how to perceive students and their work from a strengths-based perspective, meaning that they started to pay increasingly more attention to positive elements and to express this as a part of their activities. On the other hand, the students' successes and inspirations were the ultimate

results that were witnessed during the process. For example, a student participating in the pilot in nursing education context said, *“I think that this was a really good thing. First, it was difficult to start thinking about it, but when you could write down your strengths on paper, you noticed that you really have them. At times, it is good to bring them up if you take them for granted, and usually you don’t point out your strengths.”*

## **Discussion**

Based on the findings, we developed a strengths-based future guidance (SBFG) model for higher education. It is based on the profound understanding, recognition, and use of strengths in a way that the student can analyze and make future-oriented choices. This means that strengths are put in use especially from the perspective of future careers and continuous learning (*see also* Tanius, 2012).

In Figure 1, we illustrate the core of SBFG. Its heart is the student-centered approach, as all guidance should start and be based on the customer’s needs and current state. This means that guidance begins with the analysis of the starting point from the student’s perspective, especially his or her level of self-awareness of their strengths. It is also important to discover the student’s needs versus their goals. The guidance then becomes materialized through a reflective dialogue between the student and the teacher or counselor providing guidance (*see also* Ng & Tan, 2009).

The strengths-focused dialogue starts from the recognition of strengths. At this point, the role of the teacher or counselor is crucial. It is important to help the student understand what is meant by strengths and perceive those in himself or herself. Various tools (such as tests, tasks, guidance meetings) that were tested in the pilots in this research can be used for learning about one’s strengths, also considering one’s previous knowledge of strengths and his or her goals for supervision. Only after that is it possible to proceed toward using one’s strengths.

The phase “using strengths” provides the person with a concrete grasp of how strengths materialize and appear in various situations. This information lays the foundation for developing and strengthening strengths. Throughout this process, the role of the student becomes increasingly more active and important because only they can do the work of applying and developing their strengths. The teacher or counselor provides feedback, helps analyze the experiences, and identifies successes along the way.

The fourth phase is to direct strengths toward the future and imagine ways of leading life through one’s signature strengths. The future orientation is the main goal of strengths-based guidance, as-based on numerous studies also listed in the Introduction-the assumption is that, through the awareness of strengths, one can boost well-being and make better choices in life. The goal is to achieve a sense of meaningfulness and purpose in life and find ways of using one’s potential.

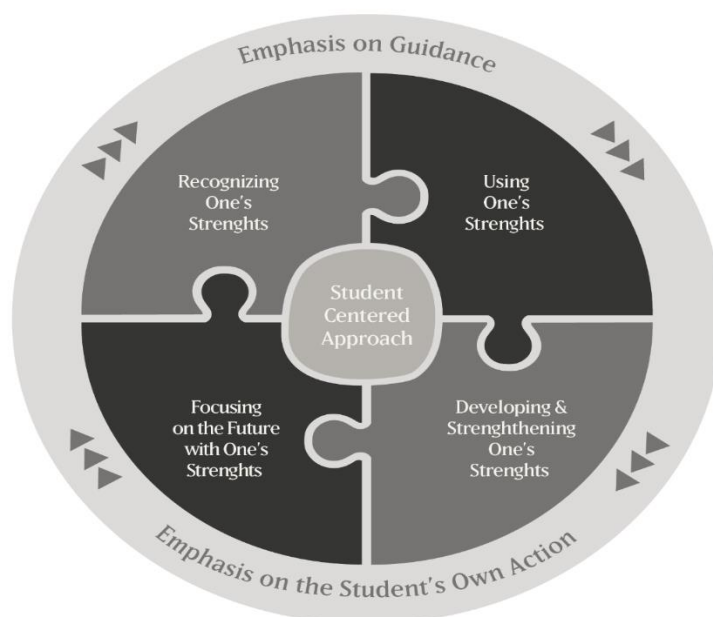


Figure 1. The core of SBFG

Figure 2 illustrates how SBFG can take place at any point in the study process. In addition to various phases, it is possible to apply SBFG in small everyday encounters with students or as a larger approach that is implemented in a long-term process. Our pilots illustrated well that the opportunities to implement SBFG are wide and not limited to any specific phase or guidance situation. The core of SBFG allows various students with various levels of previous knowledge about strengths and their teachers or counselors to determine the goals and objectives of the guidance relationship. In short-term meetings—even in an encounter happening just once—the success of guidance is probably merely about the way the teacher shows interest in and encounters the student. In a long-term guidance relationship, it is possible to build on more systematic phases of recognizing, using, and developing one's strengths and turning one's direction toward the future.

Fortunately, no action is considered too small for directing the student's future for the better. Even the smallest guidance sessions and activities can become crucial turning points for better understanding one's own potential, acquiring insights into what to do and how to do it, and becoming optimistic about one's future (*see also* Määttä & Uusiautti, 2018).

The ultimate implication of the research was that SBFG is seen as merely a fundamental approach to guidance, studies, and life in general. The research projects and pilots implemented during the project also tested already known and developed some new strengths-based tools that can be used in various situations. These tools are concrete practices or advice for guidance aiming at increasing knowledge about one's strengths and imagining a possible future.

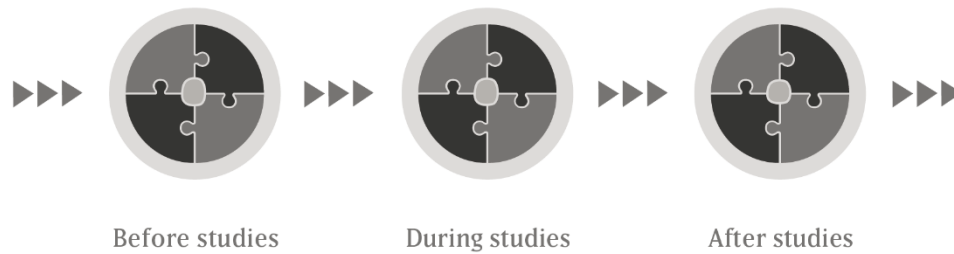


Figure 2. SBFG during studies

## Conclusions

### *Theoretical and practical implications*

This research offers both theoretical and practical contributions. Regarding practice, the strengths-based future guidance model can be implemented widely. At its best, university students will gain a profound understanding about the connection between their strengths, the choices they make, and their future orientation in life. In our research work, we paid attention to the international, national, and regional policies and strategies that underpin strengths-based future guidance, such as the European Lifelong Guidance Policy Network (2016) and Development of Continuous Learning (Ministry of Education and Culture, 2019). In addition, the model can be copied to other settings and levels of education not only in Finland but even internationally.

The model covers the whole study path and is accompanied with a practical toolkit to be used in practice. This is called the Workbook of Strengths-based Future Guidance (open access at <https://blogi.eoppimispalvelut.fi/vahto/en/home/>). When analyzing the applicability in other universities in Finland and abroad, it can be considered an advantage that the outcome is based on multiple pilots among a variety of students and student groups. Furthermore, the pilots were conducted by teachers and counselors. Therefore, the model can be easily applied in different contexts by selecting the tools and viewpoints that suit the new context the best. The model itself provides a theoretical foundation for further implementation and development of tools. However, it should be noted that the wider international application of the model requires further research and review.

The scientific contribution is in this study's documentation of strengths-based practices and methods tested during the research process in various settings. The findings increase understanding about how strengths-based approaches can be implemented in higher education.

Eventually, the research has provided an opportunity to create a new research-based model for university student guidance that helps teachers, professors, and other staff working with students to perceive the role of strengths

as the way to orient them toward future employment and well-being in life in general.

The core of the strengths-based approach is that students are perceived as individuals, and their characteristic strengths are highlighted and utilized so that their studies provide them with inspiration and insights about their own abilities, opportunities, and identities as learners, students, and members of higher education communities (Carman, 2005; Linkins et al., 2014; Soria & Stubblefield, 2016; Stebleton, Soria, & Albecker, 2012). It is also important to show students how strengths are adjustable, learnable, and available to all (Salmela et al., 2018; Tough, 2012; Yeager et al., 2011).

The main contribution of this research compared to earlier strengths-based interventions is that it provides a widely-tested and developed model for higher education. As mentioned in the Introduction, this kind of a wholistic strengths-based and student-centered approach has been limited in higher education (e.g., Duan et al., 2014; Krutkowski, 2017). In addition, our model aspires to help finding meaningful study experiences and career decisions by familiarizing with one's strengths, while earlier interventions have had more specific foci, for example to improve social relationships or well-being during studies (e.g., Quinlan et al., 2014; Wood et al., 2011). The emphasis on developing student guidance with a strengths-based approach can be considered an important new contribution of our research.

#### *Limitations and future research directions*

The reliability of this EDR was ensured by the collaborative and peer-review practices throughout the process as well as constant feedback collected from students and customers of guidance. In addition, self-evaluation reports were filled after the piloting phase. The research group also analyzed the overall success of the process after receiving reports from the pilots.

In EDR research, reliability can be viewed from the perspective of several criteria (Nieveen & Folmer, 2013). First, it is important to show the relevance of the research. In this case, we spotted a gap in strengths awareness and strengths-based guidance in higher education. While other education levels seemingly have numerous strengths-based tools, students in higher education lack such support and help for identifying and developing their signature strengths. According to Nieveen and Folmer (2013), consistency refers to the way the EDR is designed. In this research report, we have described how the process progressed from the initial benchmarking and state analysis toward the planning of interventions and their analyses. The process was critically analyzed constantly to make sure each phase was well-documented and progressing consistently.

Another reliability criterion comprises the practical side of EDR: we had to ensure the intervention was expected to be usable and that the pilots were actually usable in the higher education setting. The most important aspect to evaluate EDR as presented by Nieveen and Folmer (2013) is to analyze EDR's



effectiveness. This means that the intervention would possibly result in actual desired outcomes.

The model presented in this article appears as a long-awaited tool to be used in higher education settings. For example, Walker's (2014) research about the state of higher education students' future orientations and abilities to make career-related decisions supports our notion that students increasingly need strengths-based guidance. Teachers' and counselors' awareness of how to support the recognition and use of strengths in practice is therefore valuable, as is the importance of educating teachers and counselors about the role and meaning of strengths in people's lives in general. Future research directions include that the model is further tested and analyzed in different levels of education and learning environments. In addition, longitudinal research approaches would provide more profound understanding about the impact of strengths-based guidance in students' lives.

*Ethics statement*

Not applicable.

*Conflicts of interest*

The authors declare no conflict of interest.

*Author contributions*

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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