MASTER THESIS

FORMATIVE EVALUATION OF AN ADVANCED PROFESSIONAL DEVELOPMENT PROGRAMME FOR UNIVERSITY TEACHERS

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Nikos Basbas
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Summary

Teaching quality assurance has recently received attention from higher education institutions around the world (Jacob, Xion, & Ye, 2015), including a research-led university in the Netherlands. One of the university initiatives for improving teaching quality has been development and implementation of a unique advanced professional development programme for teaching staff called Senior University Teaching Qualification (SUTQ). The goal of this study was to formatively evaluate SUTQ, identify potential areas for further growth and development and propose both theoretical and practical suggestions for improvement of the programme. The focus of the evaluation was the programme alignment with the institutional context and participants' needs. A case study employing multiple qualitative research methods including document analysis, interviews and a focus group session was conducted. The investigation identified potential for improvement in the following five areas: curriculum, instruction, delivery, community formation and feedback. The main contribution of this study are theoretical suggestions for improvement in each of the identified areas and a modified model of SUTQ that integrates these theoretical suggestions and applies them to the SUTQ case.

Keywords

Teacher professional development, higher education, development programme, scholarship of teaching and learning

1. Introduction

What are characteristics of an excellent professional development (PD) programme? First, it should be *relevant*, i.e. the goals of the PD programme are set in response to current learning needs of learners and current context and second, it should be *effective*, which means that the goals of the programme are attained (Desimone, 2009). For example, although a training in welding may be effective, it will be irrelevant to a social science university teacher. Similarly, a training on teacher collaboration may be very relevant, but if it will come as an asynchronous online course, its effectiveness may be contested (in comparison with e.g. on-site training).

Additionally, there is consensus that creating an excellent PD programme requires an iterative process of designing, testing and adjusting the programme based on evidence about its success (e.g. Seel, Lehmann, Blumschein, & Podolskiy, 2017; McKenney & Reeves, 2012; Reigeluth & Carr-Chellman, 2009). It means that evidence about the programme relevance and effectiveness should be actively sought from an early stage in the implementation process and used for improving the programme. Currently at a university in the Netherlands, an advanced teacher PD programme called Senior University Teaching Qualification (SUTQ) is being implemented and the team in charge of the programme (in this report they will be referred to as *programme administrators*) is seeking feedback from different stakeholders in order to improve the programme. The improvement of the SUTQ programme is the focus of this study.

There is a variety of reasons on all levels - micro (personal), meso (organizational) and macro (educational system) - why it is important to keep improving teacher professional development programmes including SUTQ. On the personal level, the reason to keep improving a PD programme is to ensure that it responds to participants' current learning needs and stays relevant in the context of today's fast changing world. Carefully attending to learners' needs leads to improved learning outcomes, but also to learners' satisfaction with the learning experience (McKenney & Reeves, 2012; Guskey, 2000). Quality PD interventions allow participants to broaden their skill set and increase their market value (Phuong, Cole, & Zarestky, 2018). From the organizational perspective, quality PD programmes contribute to institutional ability to undergo change and significantly improve the quality of offered education (Phuong, Cole, & Zarestky, 2018; Coe, Aloisi, Higgins, & Major, 2014; Desimone, 2009). Improving the quality of education has recently been high on the agenda of universities around the world (Jacob, Xion, & Ye, 2015; Teräs, 2014). Apart from introducing standalone development programmes, universities (including the one in the current study) move on to integrate different

teacher professionalization initiatives into coherent development and career paths that recognize and reward teaching excellence (Cashmore, Cane, & Cane, 2013; Hitch, Mahoney, & Macfarlane, 2017; Teräs, 2014). And finally, from the macro perspective, improving pedagogical competencies of teachers is important, because teaching quality is an important facilitator of student learning (Timperley, 2008) and learning and education is often cited as the key to human relevance in the forthcoming age of automation (Frey & Osborne, 2013).

The purpose of this study was to help improve the SUTQ programme and bring it closer to professional development excellence. The lead research question guiding this study was:

How can the teacher professional development programme SUTQ be improved?

To answer this question, selected aspects of the programme were evaluated formatively. More specifically, this study focused on the programme matching the institutional context and learners' needs. Several areas of potential improvement were identified, the materiality of the findings was discussed, and eventually scholarly literature was searched for relevant improvement strategies. The culmination of this study are suggestions of selected theoretical strategies for improvement and a draft of a modified SUTQ design that integrates the theoretical suggestions. This study thus hopes to contribute to the theoretical body of literature on the design of advanced university teacher professional development programmes and give practical tips for improving SUTQ.

2. Theoretical Framework

2.1 Review of professional development literature in higher education

To set SUTQ into a broader context of professional development in higher education, a brief academic literature review of contemporary PD trends was performed. First, it resulted in a finding that names *academic development*, *faculty development*, or *educational development* are all used to refer to PD of teachers in higher education (Gosling, 2009). Second, relevant literature is found in domain-specific journals, journals generally pertaining to issues in higher education as well as journals specifically focusing on professional development in higher education (Amundsen & Wilson, 2012). It is also noteworthy that the teacher PD literature has developed in three relatively isolated subdomains - teacher PD in the medical higher education,

PD in tertiary education in general and PD of teachers in primary and secondary education (Amundsen & Wilson, 2012). In this report, the term professional development in higher education will be used.

PD in higher education may be categorized in three basic forms: self-directed learning activities, formal professional development programmes and organizational development strategies (Caffarella & Zinn, 1999). Most learning happens through self-directed activities, which are any job-related activities such as preparation of class materials, teaching classes, course design, etc. Formal PD programmes, of which SUTQ is an example, prepare academics for one of the three typical roles they assume in their careers: teacher and educator, researcher and scholar, and manager and leader (Steinert, 2014). As mentioned above, SUTQ aims at developing competencies pertaining to the teacher and educator role. The last PD form, organizational development strategies, are interventions aiming at an organizational change, such as quality management procedures, change of institutional atmosphere and culture, organizational restructuring or career policies (Caffarella & Zinn, 1999). Examples of higher education career policies are the Career Framework by Graham (2018), the UK Professional Standards Framework by Higher Education Academy (HEA, 2011) or the one by Fraser, Greenfield, Pancini (2017). The common denominator of the three career frameworks is the incremental progression from novice to expert to scholarly teacher, followed by an educational leader. However, the scholarly step is not included in all frameworks, but there is some evidence that the ability to research educational practice in a scholarly manner may be an important part of a skill set of an educational leader (Fields, Kenny, & Mueller, 2019).

In line with the conceptual distinctions above, Amundsen and Wilson (2012) clustered the curricula of PD programmes into the following categories: (1) *skill*, in which participants acquire a particular teaching skill (e.g. presentation skills), (2) *method*, focused on a particular pedagogical method (problem-based learning), (3) *reflection*, focused on changing teachers' conceptions of teaching through reflection, (4) *disciplinary focus*, in which participants learn discipline-specific teaching strategies, reflecting the specific structure of knowledge in the discipline, and (5) *action research or inquiry*, which includes formal inquiry methods for investigating instructional interventions. The SUTQ curriculum resembles the most programmes the fifth category *action research or inquiry*.

Typical learning activities of PD interventions in higher education are peer observation, mentoring, portfolios and lectures that may be part of larger courses of programs (Gast, Schildkamp, & van der Veen, 2017). Although most PD interventions focus on development of the individual, literature about development of teams of academics is growing (Gast,

Schildkamp, & van der Veen, 2017). The predominant delivery format is face-to-face, although online and blended courses are being introduced, too (Hitch, Mahoney, & Macfarlane, 2018).

A recent study that tried to summarize research into PD interventions in higher education listed characteristics that seem to contribute to effectiveness of those interventions: evidence-informed educational design, relevant content, experiential learning, feedback and reflection, educational projects, intentional community building, longitudinal program design, and institutional support (Steinert et al., 2016). Another study offers ten recommendations for university PD centres based on a review PD systems at ten world-class universities: (1) provide excellent administrative support to PD centres, (2) focus on consultative and collaborative leadership style of professional developers, (3) pay attention to the needs of individual faculty members, (4) foster communities of practice of two to five members with the same instructional needs, (5) establish a strong link between PD centres and libraries, (6) base instructional decisions on data and evidence, (7) diversify the delivery forms of PD interventions, (8) avoid technology-driven interventions, (9) become instructional technology hubs, and (10) develop a meaningful reward systems for all invested stakeholders.

Against this literature review of the global professional development in higher education, the purpose, curriculum and delivery form of the SUTQ will be described.

2.2 SUTQ description

The Senior University Teaching Qualification (SUTQ) constitutes one of the many university initiatives for achieving teaching excellence (University of Twente, 2018a). It is a behaviour change programme focused on improving teaching practise of more senior, experienced teachers. To achieve this goal, the chosen approach was to strengthen teachers' research competencies in the domain of educational sciences, so they are better able to assess the success of their own innovative teaching interventions using evidence collected by a scientific method. Successful candidates are also expected to share their findings with the local and wider academic community.

The SUTQ spans over approximately one year; the current implementation started on May 16, 2018 and ends on April 18, 2019. Before the actual start of the programme, fifteen participants were selected from a pool of applicants. There were three main eligibility prerequisites: (i) high motivation to improve one's teaching, (ii) having an idea for an innovative teaching intervention and (iii) possession of the University Teaching Qualification certificate (i.e. a basic university teaching certificate). At the beginning of SUTQ, participants were introduced to a research approach called Scholarship of Teaching and Learning (SoTL), which can be

described as an activity of, first, methodical investigation of questions related to student learning and, second, making the results of the inquiry public in order to advance improvement of teaching practice outside one's own classroom (Hutchings & Shulman, 1999; Kern, Mettetal, Dixson, & Morgan, 2015). In the two subsequent months participants had to write a proposal for a research project they would like to conduct later on. The purpose of the research proposal was to help participants plan their project, to provide them with feedback, and to perform an additional selection of participants eligible for continuing in the programme. The rationale for the additional selection was that if a participant is unable to finish the proposal in time, (s)he in unlikely to finish the main project in time. In the next phase of the programme participants worked on their individual research projects. They had an option to choose between descriptive and design-based methodology to research an innovative pedagogical intervention which they planned to implement in their own teaching (preferably). At the time of writing this report, participants are finalizing their projects, so the following description is how the programme is planned to continue. Results of the research are to be delivered in any form of participants' choice, e.g. a poster, a paper, etc. These deliverables together with a reflection report will be assessed by a review committee, who will decide if participants are eligible for the SUTQ certificate. Total time investment is projected to 160 hours. A more comprehensive description of the programme can be found in Appendix A.

2.3 Formative evaluation and evaluands

To find out how SUTQ can be improved, the programme must be evaluated first. The definition of evaluation adopted in this study is the following: "Evaluation is the systematic assessment of the design (...) of a program, compared to a set of implicit or explicit standards" (Weiss, 1998, p.4). Scriven (1991) used an analogy to make a distinction between two types of evaluation depending on its purpose: "When the cook tastes the soup, that's formative evaluation; when the guest tastes it, that's summative evaluation" (p.19). In other words, the cook tastes the soup in order to test and improve the taste, the guest to make a decision about whether he likes it or not. In the context of programme evaluation, formative evaluation is performed in order to identify areas for improvement (Weiss, 1998).

Objects of evaluation are typically referred to as evaluands. The prime evaluand of this study was the programme design. In this study, programme design is understood as all features that have been given to SUTQ by the programme administrators, including content, delivery, timeline and venue. An important distinction is between *design as planned* and *design as implemented*. The former is the work output of programme designers, usually in a form of a

document, whereas the latter is the design that is enacted in the real world. Notwithstanding the importance of careful planning of educational interventions, participants typically have knowledge of and experience only how the design is enacted, which is the reason why this study was focused on the *design as implemented*.

One of the two primary goals of a programme design (see opening of this report) is to be relevant to participants' learning needs by utilizing resources bounded by the context (McKenney & Reeves, 2012). Therefore, the focus of this study was the alignment of SUTQ with its context and learners' needs, which is captured in the following research sub-questions:

RSQ1: How can SUTQ be improved to better reflect the programme context?
RSQ2: How can SUTQ be improved to better respond to learners' needs?

2.4 Evaluating alignment with programme context

McKenney & Reeves (2012) list characteristics that are in the instructional design discipline considered relevant context: vested stakeholders, target group, physical context, organizational or policy context, educational context and organizational viability. In relation with the scope and the focus of this study, the main contextual foci of this study are the target group (in relation with sub-question RSQ2), and organizational context and policy, and educational context. Select target group characteristics of relevance in the current study are years of teaching experience, career level and professional background. Relevant aspects of an organization are its structure, mission, budget for professional development, and type of business (McKenney & Reeves, 2012). The focus on the organizational level also encompasses current policies, human resources (HR) and otherwise, which assign power and responsibility to individual stakeholders and organizational units, or in case of HR policies define career paths and promotion criteria (McKenney & Reeves, 2012). The last aspect of context typically relevant to programme designers is educational, which in the current case includes other professional development initiatives, the relations between them, content, delivery mode, whether they are compulsory to participate in, and general attitude of stakeholders toward those initiatives.

Aligning the programme design with context is important, because it seems to be one of the preconditions for programme success (Branch & Kopcha, 2014). Learning needs typically stem from the demands of the context, whether it is external (changes in the field), organizational (a change in the institutional structure), or personal (a promotion requiring an advanced skill set). Context helps designers understand the learning needs of the target group

and at the same time bounds the space and resources that may be used by the programme to meet the learning needs (Branch & Kopcha, 2014).

In order to evaluate alignment of the programme design with the local context, both the design and context must be analysed first. McKenney & Reeves (2012) propose four general research strategies for such an analysis: policy synthesis, perception poll, field portrait and SWOT analysis, of which the former two were selected. *Policy synthesis* pertains to a review of current policies and organizational routines, which typically includes document analyses of relevant documentation. *Perception poll* refers to interviews and focus groups that try to capture stakeholders' perceptions of the policies and tap into routines that are not necessarily codified and exist only as procedural knowledge of individuals or teams. In addition, perception polls scan stakeholders' beliefs, feelings or attitudes. An overview of the selected policies may be seen in Figure 1.

2.5 Evaluating alignment with learners' needs

Learners may have a wide variety of needs. The goal of PD programmes is to primarily satisfy programme participants' learning needs. Learning needs may be conceptualized as gaps between what is known to a learner and what needs to be known (Pilcher, 2016). However, biological or emotional needs such as physical discomfort, hunger, eye fatigue or psychological stress are also relevant to programme designers, because they may interfere with learning process and influence the success of a programme (Guskey, 2000). A related construct to learners' needs is learners' wishes. A wish has been defined as a preferred way how a particular need is satisfied (Edvardsson & Olsson, 1996). In general, not responding to learners' needs and wishes has also been identified as one of the common causes of failure of PD programmes (Loucks-Horsley, Love, Stiles, Mundry, & Hewson, 2009).

Typically, evaluating if and to what extent a PD programme addresses participants' needs and wishes is done by eliciting participant reactions to the programme (Trigwell, Rodriguez & Han, 2012). A commonly used framework for PD evaluation by Guskey (2000) advises to elicit participant reactions in areas of programme content, organization and context. Questions about the *content* attempt to elicit participants' opinions on relevance, utility, level and practicality of the subject matter taught in relation to the goal of the programme and to perceived learning needs. In the current case, questions about content focused on the SUTQ curriculum, which consisted of research methodology used in educational and learning sciences and new or trending teaching practices. Questions about *organization* touch topics such as learning activities, form of instruction, content delivery, etc. The particular focus in SUTQ was on the

length of the programme, the number and frequency of meetings, preferred types of learning activities and particularities of delivery. Lastly, questions about *context* attend to biological needs like timing of coffee breaks, room temperature, or catering, because these too have an influence of the success of the programme. In the current study, questions are focused on the venue, time of the day when meetings took place or opinions about catering.

3. Method

3.1 Research Design

The goal of this study was to provide suggestions for improvement of the SUTQ design based on formative evaluation of programme alignment with the context and participants' needs. To achieve this goal, a qualitative case study was conducted. The qualitative nature was determined by the need to gain in-depth understanding of the current programme design, context and stakeholder opinions. The research methods below were applied to conduct an analysis of the programme design and to answer the research questions of this study. An overview of research strategies, methods and respondents can be found in Figure 1.

Document analysis. A large proportion of relevant data was available through various documents ranging from university websites that informed potential SUTQ candidates about the programme to university HR policy documents (more details about the documents analysed can be found in the Procedure section). This method, falling under the policy synthesis research strategy (McKenney & Reeves, 2012), was used to collect data for the analysis of the programme design and context. Moreover, this method was used to extract demographic information about programme participants to help answer sub-question 2.

Interviews. Interviews were used to (i) collect information about the programme design that was not obtainable from documents, (ii) to elicit perceptions from programme administrators about initial findings of sub-question 1 emerging from the document analysis, and (iii) to obtain data for answering sub-question 2. Two interviews were conducted, and both took place online.

Focus groups. The current evaluation aimed at providing in-depth insights into participants' opinions of the programme, so a focus group method was selected. The reason was that this method may generate a wealth of information (Vaughn, Schumm, & Sinagub,

1996), because focus group members usually engage in interaction with each other which may generate associations in participants' thoughts that would have not been triggered only by interviewer's questions (Liamputtong, 2011). This method was used to collect data about how well the programme responds to participants' needs (sub-question 2).

3.2 Respondents

Programme coordinator. The first interview respondent was the programme coordinator, who is formally responsible for the programme. The coordinator could provide information about the programme design that was not possible to obtain from the document analysis and clarify initial findings from the document analysis.

Programme instructor. The second person interviewed was one of the two programme instructors. The instructor could provide insights into the programme design, his/her experience with teaching the programme and clarify initial findings from the document analysis.

Programme participants. Programme participants were experienced university teachers who have not only completed the more basic University Teaching Qualification (UTQ) or received an exemption from it but are considered forerunners in their department in terms of teaching. They were selected to the programme based on their curiosity and ambition to improve education and have ideas about innovative pedagogical interventions, or who are or want to be an example for their fellow teachers and want to pursue a teaching career besides a research career. Faculty of Behavioural, Management and Social Sciences (1), Faculty of Engineering Technology (2), Faculty of Electrical Engineering, Mathematics and Computer Science (1), Faculty of Geo-Information Science and Earth Observation (2). On average, participants had 13.5 years of teaching experience in higher education, with the shortest of 4 years and longest of 23 years. The career levels represented were: full professor (1), assistant professor (4) and lecturer (1).

Figure 1 lists this study's sub-questions and links them to individual data collection methods and respondents. The grey cells show which strategies were used to answer which sub-question. Data from three different sources were used for answering each sub-question in order to achieve triangulation.

Research strategy	Policy synthesis	Perception poll		
Research method	Document analysis	Interview	Interview	Focus group
Respondents	Not applicable	Programme coordinator (n=1)	Programme instructor (n=1)	Programme participants (n=6)
Programme analysis	■	■	■	
RSQ1: Does the programme goal reflect the programme context?	■	■	■	
RSQ2: Is the programme goal set in response to learners' needs?	■		■	■

Figure 1. An overview of research questions, methods, and respondents.

3.3 Instrumentation

Interview instruments. The interview schemes were similar for both interviewees. First, questions falling under the research strategy *policy synthesis* were asked to gather missing information about the programme content, delivery and timeline, for example "Can you tell me more about the reflection report?". Then, *perception poll* questions aimed at explanations of preliminary findings from the document analysis, for example "How are participants expected to behave after completing SUTQ? Do research? And what to do with the research? Publish?" In addition, the instructor was asked about his/her perceptions of the programme content, organization and context were asked (Guskey, 2000), like "Should you be asked to redesign the SUTQ, what would you change and what would you keep? Let us go over content, organization and context in turn." Moreover, the instructor was asked questions related to participants' needs, like "How was it like to work with such a prior knowledge-wise diverse group?" The interview scheme development was guided by principles of Bryman (2016). The schemes were consulted with the principal investigator's supervisor, which lead to adjustments in phrasing and formulation of questions. Interview schemes for programme coordinator and instructor can be found in Appendix D and Appendix E, respectively.

Complementary interview slides. To clarify the questions asked, to cue interviewees' recall of past events or materials used in the programme, and to use a mutually shared vocabulary, complementary slides were prepared to aid the interviews. For example, when the principal investigator asked the question "Could you please help me understand the Final Competencies and Qualifications Matrix?", a slide was presented that contained a snippet of the matrix. Other slides contained e.g. the SUTQ timeline, assessment forms or quotes from policy documents. The slides can be found in Appendix F.

Focus groups instrument. This instrument contained a description of the focus group session procedure and a list of questions. The procedure was described from the step one, collecting a recording device from the university research equipment department to the last step, transferring the audio data from the recording device to the principal investigator's computer. More information on the procedure can be found in Section 3.4. The focus group aimed at collecting participants' experience with the programme. Questions were grouped into three categories following Guskey (2000). First, the opening questions group were phrased so that participants express the level of a match between their expectations and the actual programme. In addition, their overall liking of the programme was surveyed. Example questions were "Does the actual programme meet your initial expectations of the programme?" and "What did you like the best about the course?". Then, questions focused on the programme *content*, i.e. the activities and materials. For example, "What is your opinion on the ERD workshops?". *Organization* questions pertained to the sequence of learning activities, timeline or administrators-participants communication, for example "What do you think about the amount of time you had for the research proposal and for the project?". Lastly, questions about the *context*, like adherence to human biological needs like nourishment, rest or room temperature were prepared. An example question was "Workshops usually ended around 7 or 8 pm. Did this schedule suit you?". The instrument can be found in Appendix G.

3.4 Procedure

Before collecting any data from human respondents, a permission from the Ethics Committee was asked. The granted permission can be found in Appendix H.

Document analysis. To conduct the document analysis, relevant documents were first gathered. University websites for potential SUTQ candidates were downloaded, the SUTQ

folder in the university learning management system was accessed to download materials including the Participant's Manual or lecture slides, programme administrators were contacted with a request for any relevant internal materials (different manuals, filled-out application forms, guides and review forms), the spokesperson of the university Executive Board and one of the student political parties were contacted for HR policy documents, and other materials related to the HR policy were obtained from a representative of the Centre of Engineering Education (4TU.CEE). In total, 24 documents were reviewed. These documents were coded and used for creating a major part of the case description. The case description was sent to the programme coordinator who reviewed it for correctness and completeness. Coordinator's comments were incorporated to improve the case description.

Interviews. Interviewees were contacted via e-mail by the principal investigator and asked for an interview. After setting a time and date, the interviews took place via Skype for Business and were recorded by the built-in recording tool.

Focus groups. The data collection date was set to take advantage of the fact that on the same day there was a mandatory SUTQ workshop scheduled and most participants were present at the meeting. The programme administrators changed the agenda of the workshop so that the last part of the meeting was dedicated to the focus group (FG) session. One week before the meeting, participants received an email from the programme coordinator with the new agenda and an invitation to the FG session written by the principal investigator. The invitation stated that although attendance of the FG session was not mandatory, it would be highly appreciated.

At the beginning of the SUTQ workshop, the principal investigator again invited the participants to the session. During a dinner that followed the end of the workshop, the principal investigator prepared the venue for data collection. Eventually, six participants participated. At the beginning of the FG, respondents were given consent forms (Appendix I) and asked to read and sign them. Then, the FG session started and was recorded using an audio recorder.

3.5 Data Analysis

All data from document analysis, interviews and focus groups are qualitative in nature. First, audio files were transcribed verbatim. Then, all documents were coded using ATLAS.ti software (version 8), which allowed for export of codebooks and calculation of inter-rater coding reliability.

Codebook 1 (Appendix B) was developed to analyze data for answering sub-question 1, which included available policy and other documents, the programme coordinator interview

transcript and the first part of the programme instructor interview transcript. The codebook was developed by a combination of inductive and deductive approaches, creating groups based on the theoretical framework as well as creating codes reflecting the programme structure. This resulted in code groups “context” and “design product”. Examples of codes for the “context” group were: "career policy" or "programme participants" and examples from group “design product” were "timeline" or "purpose and goals of SUTQ". More information on the codes in available in the codebook.

To estimate inter-rater reliability, Hodson’s (1999) advice to recode 10% of the data was followed. Data for recoding was selected purposefully, because the principal investigator does not speak Dutch and some of the documents were written in Dutch. The principal investigator used an online translation tool and his limited knowledge of Dutch to translate the documents into English and code the documents. Therefore, the to-be-recoded data was selected to be representative of the proportion of English and Dutch language in all documents. The second coder was a native Dutch speaker. Before the second coder began working, codes were removed from quotations. After the second coder finished coding, inter-rater reliability was computed using ATLAS.ti. After adjustments of the codebook including renaming codes, clarifying code descriptions and adjusting quotations, Krippendorff’s $_{Cu}\alpha$ was .87. Krippendorf (2018) recommends aiming at values of $_{Cu}\alpha$ larger than .8, but values above .667 are acceptable. This means that the degree to which coders identify reliably all semantic domain is acceptable (Krippendorff, 2018). Note that the inter-rater agreement was calculated of a previous version of the codebook that contained more semantic domains. After all documents and interview transcripts had been coded, for each code, all quotations relating to that code were summarized.

To answer sub-question two, Codebook 2 (Appendix C) was developed. This codebook was applied to focus group and part of instructor interview data. It was, too, developed by a combination of inductive and deductive approaches, with the emphasis on the latter. The coding process started by annotating utterances (uninterrupted speech of one respondent) to capture the topic the respondents were talking about. After several rounds of improving the codes, the following codes capturing significant themes were developed: "research aspect", "feasibility", "community", "prior knowledge", "feedback". Next, codebook 1 was applied to link participants’ opinions to particular aspects of the programme (for example, linking appraisal (opinion) of supervision (learning activity)). It was noted how many respondents expressed themselves to individual discussion topics, so the counts could be later used in assigning weight to the themes. The codings were then transferred to ATLAS.ti, where quotations were created, and

codes were assigned to them. By the same procedure of estimating inter-rater reliability, Krippendorf's $_{Cu}\alpha$ was .73, so the inter-coder reliability of Codebook 2 is acceptable. After all documents and interview transcripts had been coded, for each code, all quotations relating to that code were gathered and summarized. The summary process included cross-checking of the content of the quotations to compare how aligned or contradicting the views among respondents were. Contradicting findings were elaborated on in the discussion section. Themes that were discussed by more than two respondents were included in the Results section.

4. Results

4.1 Sub-question 1: How can SUTQ be improved to better reflect the programme context?

To answer this sub-question, an analysis of documents pertaining to the programme context was performed first. The analysis yielded preliminary findings which were subsequently validated during interviews with the programme instructor and coordinator. Description of the programme context may be found in Appendix A. In this Results section, misalignments between the programme and its context are presented.

Programme curriculum

The major component of the programme context is the university human resources (HR) policy. Among others, it describes the possible career paths of academic staff and defines criteria for promotion. Recently (in October 2018), a new HR policy was adopted with the purpose to recognize and reward teaching achievement (Oosterhuis-Geers, 2018). It is one of the initiatives aimed at improving teaching quality at the current university. The policy is based on the Teaching Framework, which is a "framework for evaluation of teaching achievement during academic appointment, promotion and professional development" developed by Ruth Graham (Graham, 2018, p.4). The HR policy describes four levels of teaching achievement called *effective teacher* (level 1), *skilled and collegial teacher* (level 2), *institutional leader in teaching and learning* and *scholarly teacher* (both level 3) and *national or global leader in teaching and learning* (level 4). For each level, promotion criteria are defined in terms of teaching competencies and their component skills and attitudes. This framework effectively allows universities to develop professional development (PD) interventions that prepare staff for

a particular teaching level and help advance their careers as well as contribute to improving teaching quality across the institution.

SUTQ is explicitly described as a programme aiming at developing participants to the level of skilled and collegial teacher (University of Twente, 2018b). The skilled and collegial teacher (SCT) is defined as someone whose work impacts their students and academic colleagues and who

> *takes an evidence-informed approach to developing and improving their teaching practice over time. They also provide leadership and mentorship to peers to help nurture a collective and collegial culture of excellence in teaching and learning across their group or discipline* (Graham, 2018, p.26; Oosterhuis-Geers, 2018, p.7).

Table 1

Competencies of a SCT as Defined by the University HR Policy

Number	**Skills**
1	offers students a holistic view of their programme and discipline
2	demonstrates skill, experience and creativity with a range of pedagogies
3	demonstrates the appropriate use of evidence-informed approaches to enhance student learning
4	delivers successful innovations in course design, delivery and/or content
	Collaborative behaviour
1	is interested and supports colleagues within the same discipline and professional field with all kinds of materials
2	contributes to a collegial and collaborative educational culture across departmental teaching staff, for example, through leadership of peer support activities or support for curricular reform activities
3	participates in an exchange of teaching experiences and ideas with

	colleagues and the wider higher education community
4	proactively monitors the student teaching and learning experience and responds in a timely and professional manner to concerns about course design, content and delivery (at programme, year or module level)

Table 1 shows the competency profile of a SCT as defined by the HR policy (Oosterhuis-Geers, 2018). The competencies are split into two categories; the first category *skills* requires of a teacher to use a variety of evidence-based pedagogies, innovate their teaching and have comprehensive knowledge of their field. The second category *collaborative behaviour* describes how SCTs within and outside their department proactively help each other by sharing materials, experience, experiences, ideas and contribute to changes in education in response to feedback.

Table 2

Competency Profile of a Participant Upon Completion of the SUTQ Programme

Upon completion of SUTQ, a teacher will:	
1	be able to address a current and relevant educational question
2	have an innovative and/or creative approach to stimulating and enhancing student learning
3	where and when applicable, will use the following general educational principles: ● Reflect relevant aspects of educational context ● Align constructively learning objectives, instructional methods and assessment ● Formulate concrete and measurable learning objectives ● Observe quality criteria / requirements of assessment: validity, reliability and transparency
4	be able to conduct scholarly research about his/her teaching interventions by using descriptive or design-based methodology

5	share the research findings with the departmental and/or institutional teacher community or even publishes them in an academic journal
6	form a habit reflecting on the impact of their teaching

Table 2 is a summary of the competency profile of a teacher who successfully completed SUTQ. The profile was constructed by taking a competency profile outlined in one of the documents available to SUTQ participants (Participant's Manual; Ten Voorde - Ter Braack, 2018) and adjusting it based on the conducted interviews to better reflect the current SUTQ programme. In conclusion, a teacher who completes the SUTQ programme should be able to answer a current educational question by researching an innovative pedagogical intervention using descriptive or design-based methodology. The teacher shares the findings with the local or wider local community and regularly reflects on his or her teaching.

A comparison of the two competency profiles shows that they match well in the core ideas of innovation, evidence-based approach and community orientation, but the latter two seem to be interpreted in some measure differently in each profile. The competencies of the SCT are phrased in terms of using evidence-based interventions, not necessarily producing evidence to research an intervention. In contrast, a major part of learning activities in SUTQ train participants for conducting descriptive and design-based research, in order to produce evidence for answering an educational question. This difference is accentuated when the SUTQ competency profile is compared with level 3 teacher in the HR policy, the *scholarly teacher*, which is defined as:

> *The scholarly teacher makes a significant contribution to pedagogical knowledge by engaging with a scholarly approach to their teaching practice and contributing to the scholarly research literature. Successful candidates would influence educational practice as well as educational knowledge. Scholarly teachers are grounded in a student-centred perspective and share their findings with institutional colleagues, promoting communities of practice around their educational research* (Graham, 2018, p.27; Oosterhuis-Geers, 2018, p.7).

The scholarly approach to one's teaching practice, sharing research results with institutional colleagues and possibly adding to scholarly literature are activities of the *scholarly teacher* that

bear strong resemblance with the behaviour expected of teachers who complete SUTQ (see also section 2.1 and Appendix A for an overview of the SUTQ curriculum and learning activities). Although difficult to quantify, it may be asserted that the SUTQ interpretation of the term 'evidence-based' is closer to the *scholarly teacher* than to the *skilled and collegial teacher*. The other difference between the SUTQ and SCT competency profiles is in the interpretation of collaboration. While at least three out of eight SCT competencies are strictly collaborative and include proactive supporting colleagues with a variety of materials, experiences and ideas, the SUTQ curriculum seems to limit the development of collaborative skills to peer feedback and to presenting the research results to others at the end of the programme.

To conclude, there is evidence that the SUTQ curriculum may not correspond to the competencies of the *skilled and collegial teacher* as described by the university HR policy.

Programme capacity

There is evidence suggesting that the current programme capacity of 15 participants may be insufficient under the new university HR policy. The policy makes it compulsory for all academic staff at the level of Lecturer 2 and higher (Assistant Professors, Associate Professors and Full Professors) to update their teaching skills to the level of the SCT (Oosterhuis-Geers, 2018). Table 3 shows the numbers of current academic staff who will be required to attain their competencies to the level of the SCT.

To obtain an estimate of how many teachers may apply for SUTQ and what the capacity of SUTQ would have to be to accommodate all eligible applicants, the following calculation may be performed. Because an SUTQ certificate is neither required nor it guarantees becoming an SCT, it may be arbitrarily assumed that half of all affected teachers will decide to pursue the SUTQ certificate. By the end of the current SUTQ, 30 teachers will have received the SUTQ certificate. This calculation yields a number of 315 teachers who may potentially apply for SUTQ in the upcoming years. With the current capacity of 15 participants per year, it would take at least 21 years for all applicants to obtain the SUTQ certification, which is perhaps too long. However, this estimate depends heavily on the assumption of how many teachers may want to take SUTQ.

Table 3

Numbers of Academic Staff in December 2018 Who Will Be Required to Become SCTs

Function	Number of employees

Full Professor	169
Associate Professor	158
Assistant Professor	311
Lecturer 2 (estimated)	52
Total	**690**

4.2 Sub-question 2: How can SUTQ be improved to better respond to learners' needs?

This section contains themes that came up in programme instructor's and focus group respondents' answers. Five such themes were identified, while three of them were found in both the interview as well as focus group data, the remaining two came from the focus group discussion. The five findings described below may be interpreted as issues that relate to learners' needs that have not yet been met after three quarters of the programme had passed.

4.2.1 Programme content

Research approach of SUTQ

Responses to the research aspect of the SUTQ curriculum were ambivalent across the focus group respondents. Three respondents reported discontent with the research component by saying, e.g. "some of the meetings (...) are too much focused on how you do research", "it's too much research for me" and "it was for me another field of research, (...), but I could have done also research in any other direction, I don't feel that my passion for education is reflected in what I am doing now" (participants 1, 2 and 3, respectively). Two respondents seemed to be indifferent about the research approach of SUTQ by saying "it's not bad, but it's different [from what I expected]" and "I do not have a problem with this research based [approach]". The sixth respondent said that the research approach is legit, because what distinguishes universities from other types of higher education institutions in the Netherlands is conducting research. Moreover, this participant knew that the research component was to be expected in SUTQ, because it was in his/her opinion well communicated prior to the beginning of the programme. Although the respondent was not sure if educational research is the only or the most effective way how to develop teachers at their career development stage, (s)he "really liked it".

Four respondents seemed to have expectations of the programme that were different from the actual SUTQ curriculum. One out of six respondents hoped to learn competencies that would make the respondent a “person who can judge the education regulations, exam regulations, be involved in accreditation issues”. Three respondents agreed that they expected to improve their teaching by mastering the competencies learned in previous professional development programmes (like the preceding University Teaching Qualification) and learn about current pedagogical developments. In response, one respondent added "I hoped I could more grip on how can I develop my education more and how can I make better use of the developments going on". This interest in pedagogical trends may explain the success of seminars, which are "bonus" inspirational sessions, in which guest speakers present trending pedagogical topics such as new forms of assessment or the role of reflection in education. Seminars were mentioned by four out of six respondents as the aspect of SUTQ they liked the most.

Differences in prior knowledge

One focus group respondent in particular brought up the issue of differing prior knowledge of programme participants repeatedly. (S)he and two other respondents asserted that the general principles of social science research may be known to some, but not so much to others. It is noteworthy that (s)he had a background in social sciences. However, answers to a question about their experience with learning about social science research were quite similar for both groups of respondents; i.e. those who had had knowledge of principles of social science research and those who hadn’t had. Respondents with previous formal training in social science research perceived it as useful, because “it’s another interpretation, another point of view [on what I already know]”. Respondents without formal training in social science research also perceived it as useful. Both groups acknowledged the novelty (for them) of design-based research and its application in educational science. No respondents without formal social science training spontaneously reported any major difficulties in understanding the principles of social science research in relation to their lacking prior knowledge. When prompted, two respondents replied with “we also know something about social research”. Such replies contradict the repeated pinpointing of differences in prior knowledge by one participant and the observation of the programme instructor. When inquired about the amount of variety in participants’ prior knowledge of the social science discipline, the instructor replied “Yes. A lot.” The differences in prior knowledge may be related to the programme openness to applicants with broad levels of teaching experience and background. In an interview, the SUTQ coordinator

responded to a question about the number of teachers who are currently potentially eligible for entering SUTQ as “There are a lot, because almost every teacher with UTQ is in our target group.” The openness and related unpredictability of the characteristics of eventual programme participants was confirmed by the programme instructor saying “...in the first year [of SUTQ] it was of course a bit of a search, what kind of people are going to apply.” The instructor explained that the issue of varying prior knowledge was tackled by grouping learners in peer feedback session to take the advantage of the differences, opening instructional sessions with a plenary discussion where teaching examples from different fields were presented and including interactive moments where participants could discuss their own projects with peers and instructors.

4.2.2 Programme organization

Feasibility

There was an agreement among all respondents that it is not easily feasible to finish their projects as planned in time. The perceived cause was that the current programme schedule does not allow all participants to collect data on their own intervention, because some of them teach in periods outside the SUTQ schedule. One participant reported that although (s)he teaches from September till November, which is a period of time when SUTQ participants are supposed to work on their projects, is was not feasible for him/her to prepare the intervention sufficiently, implement it in his/her teaching and conduct research about it. More implicitly, it seemed that participants think the programme is too short for the amount of work to be done. Five out of six respondents agreed that extending the programme duration to 1.5 or 2 years would solve both problems. A variety of other suggestions have been proposed ranging from changing the start date, to making SUTQ a continuous, open programme where participants could opt in and out at their convenience. The idea was supported with the argument that it would be “real student-driven learning”. One participant objected to extending the programme to 1.5 years or more, because then it would “be too long”.

There is evidence that not only focus group respondents, but also other programme participants may have experienced the feasibility issue. One respondent said, “also a lot of people who are not present right now I know that they have difficulties to test the thing that they want to test, because their teaching period is outside the [SUTQ] period”. The programme instructor also said, “there are also people who are really having a hard time to actually do what they planned to do in their proposal.”.

Community building

The interviewed programme instructor and most of focus group respondents reported that the intended community feeling among programme participants is not yet present. The instructor mentioned that it may be due to the fact that participants work on their own individual projects. This reason was also mentioned by some of the focus group respondents. One said that "[it is] not driven on the (...) expectation that you want in the long run, or short term even, the community of researchers reflecting on their teaching". Other suggested cause was the short duration of the programme. It was proposed to extend the duration in such a way that it overlaps with a previous and/or following cohort of SUTQ participants, which would lead to greater peer learning and community formation.

Not all focus group respondents identified themselves with the idea that a community has not been built. One participant said that the programme has brought him/her added value: "[it is helpful] that I know you all and that you are also busy with teaching and interested in that and hear your stories and that you read also the other people's research things. That really helps." The respondent was however open to the possibility of strengthening the community feeling. One respondent did not comment on the issue of community.

Feedback

In this finding, participants' perceptions on all the feedback channels designed into SUTQ are presented. Based on participants' responses, feedback was divided between *outcome feedback* and *cognitive feedback*. *Outcome feedback* provides information on actual performance in relation to desired performance (Molloy & Boud, 2014). Cognitive feedback provides information on actual knowledge, typically in form of cognitive strategies and mental models, in relation to desired quality and amount of knowledge (Merriënboer & Kirschner, 2018; Butler & Winne, 1995). In relation to outcome feedback, there were multiple peer review sessions in the course of SUTQ which were appreciated by the focus group respondents. However, there has been agreement among participants that they see room for improvement in the case of performance feedback on the proposal, which was part of the the application procedure (will be called *pre-proposal*) and in case of the research proposal on which the GO/NO GO decision was based (will be called *proposal*). Two respondents reported they missed a session when their *pre-proposals* would be discussed in order for them to know if their research ideas match the expectations of the programme. In relation to the *proposal*, the majority of respondents wished the feedback was more explanatory. One participant said, "I got

lot of let's say comments on the proposal like this is weak, but then [the feedback givers] did not explain why".

Cognitive feedback was provided by experts (instructors, supervisors and faculty educational advisors) and peers. Respondents showed unanimous appreciation of the access and variation of expert feedback. Respondents especially appreciated that there were many people with different perspectives whom they could approach for advice or discuss ideas, the accessibility and willingness to help and the possibility to choose one's supervisor. On the account of all the support, one participant said, "That was real support." and another added "The triangulation that you had so many to consult, that's really nice. That's a really luxurious thing."

4.2.3 Programme context

Time, venue and catering

Focus group respondents agreed that the time of SUTQ meetings, which often took place in the afternoons and evenings, suited them. The most often mentioned reason was that had the meetings been scheduled earlier during the day, they would have likely interfered with other responsibilities of the participants. Much appreciated was also the availability of the planning of the SUTQ meetings before the commencement of the programme, so participants could have checked their agendas for potential clashes with other activities and possibly put the SUTQ meetings into their agendas. Participants also expressed appreciation for the venue where most meetings were located at, because they found it spacious and hidden from looks from passers-by and liked that the setting was different from where they typically work. Additionally, they mentioned preference for working at group tables to tables arranged in U-shape. Lastly, respondents showed appreciation for the provided catering. One respondent summarized it by saying "I like it that it is here and that you are here in the evening and you get a lunch, it's also little treated. Because you put it the extra time and you get good food, you get nice drinks and that's sort of a little reward for joining this and that's what I really like, better coffee. That's really something extra." Overall, the contextual aspect of the programme was perceived as important to participants' satisfaction with the programme.

5. Discussion

Teaching quality assurance has recently received attention from higher education institutions around the world (Jacob, Xion, & Ye, 2015). One of those institutions is a research-led university in the Netherlands, which has approached the topic by implementing a variety of

interventions ranging from a new HR policy for academic staff to corresponding professional development programmes for teachers. The goal of this study was to formatively evaluate an advanced professional development programme called SUTQ, which has been currently implemented for the second time, the first run being in the previous academic year. The study aimed at providing suggestions for improvement in two particular aspects of the programme, namely its alignment with the institutional context and with programme participants' needs. To achieve these two goals, a qualitative case study employing multiple research methods was conducted, including document analysis, interviews and a focus group session. The investigation identified several areas of potential improvement. In this section, these areas are summarized, implications for the success of SUTQ are discussed in light of past research and theoretical suggestions for improvement are formulated (Section 5.1). In Section 5.2 the theoretical suggestions are integrated and applied to SUTQ, resulting in an overall design proposition.

5.1 Implications of the findings and theoretical suggestions for improvement

Finding: Disconnect between programme goal and HR policy

The first and perhaps the most consequential finding of this study is that there is a disconnect between the competencies of the *skilled and collegial teacher* (SCT) as defined by the university HR policy and the competencies that are included in the SUTQ curriculum. In short, SUTQ differs from the HR policy by focusing less on collaboration skills and more on educational research skills. This shift in focus is significant, because collaboration is one of two pillars of the SCT's skillset, while educational research is a core competency of a *scholarly teacher* which is a competency model in the HR policy one level above the SCT. The fact that SUTQ is not a stand-alone intervention but is part of a larger professional development framework which is defined by the HR policy, makes the SUTQ curriculum disconnect potentially consequential for other PD initiatives. If it remains unaddressed, teachers with SUTQ certificates may not demonstrate as much collaborative behaviour as intended, and their competency in educational research may render a subsequent PD programme on the 'scholarly teacher' level less relevant. There is evidence that coherence in implementation of a policy is one of the important factors influencing the policy success, (e.g. McConnell, 2008; Giacchino & Kakabadse, 2003), which leads to a proposition to align the SUTQ curriculum with the institutional HR policy.

Finding: Research approach of SUTQ

Another finding related to the SUTQ curriculum is that expectations of the programme content of at least four out of fourteen (i.e. more than one quarter of all participants) SUTQ participants were not fully met. Participants displayed some discontent with the research aspect of the programme curriculum and reported a wish for learning more about e.g. pedagogical strategies or accreditation issues. The importance of respondents' expectations being not met lies with the relation of expectation with conscious needs and wishes (Edvardsson & Olsson, 1996). Therefore, unmet expectations about the programme content may mean that participants' learning needs or wishes were not met. However, the relationship between needs and expectations is mediated by knowledge of the product or service (in the current case, SUTQ) (Edvardsson & Olsson, 1996), so unmet expectations may also be explained by inaccurate or incomplete prior knowledge of the programme content. Nevertheless, unmet expectations are often followed by disappointment (Bell, 1985; Kruger, Van Rensburg & De Witt, 2016), which may negatively influence participants' performance in the programme (Seifert, 1995). Perhaps more important than the exact cause is the way expectations have not been met. Participants would prefer focusing on current pedagogical trends to focusing on educational research, which is aligned with the competencies of a SCT as defined by the HR policy. The concurrence of design requirements both from the HR policy and participants' needs seems material enough to become a foundation for the following suggestion for improvement:

Suggestion 1: Change SUTQ curriculum to reflect the current HR policy and participant expectations

Based on the aforementioned findings, participants as well as institutional coherence of PD initiatives may benefit from changing the SUTQ curriculum to aim at competencies of the SCT teacher. To adapt the curriculum, programme designers may use the results of the context analysis in this study and extend it by including a description of other stakeholders and their decision-making power, perceived need for change, or interest and motivations to play a role within the programme (McKenney & Reeves, 2012). Cooperation with those stakeholders may help guarantee that the SUTQ programme is aligned with the local policy and educational context to a maximum degree possible. In addition, Crossan, Lane and White (1999) suggest storing the results of the analysis in a file accessible to programme designers, who would use the analysis results as a starting point for future curriculum designs.

Finding: Differences in prior knowledge

The following finding is the issue of varying prior knowledge of principles of social science research among SUTQ participants. Prior knowledge can be defined as all relevant knowledge a learner has that can be used for further learning (Tomlinson, 1999). It is used to interpret new information and serves as mental building blocks on top of which new knowledge is added (Campbell, 2008). Its amount and quality have therefore a decisive effect on learning, which can be both positive if the learner has adequate levels of accurate prior knowledge, or detrimental in case of missing and/or incorrect prior knowledge (e.g., Nagy, Anderson, & Herman, 1987; Dochy, Segers, & Buehl, 1999; Tamir, 1996; Hailikari, Katajavuori & Lindblom-Ylanne, 2008). The role of prior knowledge for learning is what makes this finding important.

There is mixed evidence that the variation of prior knowledge of social science principles among SUTQ participants was indeed high. More than one of the focus group respondents who did not have formal training in social science implied that they personally did not feel they lacked prior knowledge of social science research principles. However, the lack of training in social science indeed may have prevented the respondents from seeing their own lack of relevant knowledge (Dunning, Johnson, Ehrlinger, & Kruger, 2003). On the other hand, there is evidence that speaks in favour of the assertion of high variation in prior knowledge among SUTQ participants. The social science professor among the respondents raised the issue during the session more than once and the SUTQ instructor, also an expert in the field, is of the opinion that there were significant differences in prior knowledge among the group (see Results section). To conclude, it is likely that the differences in level of prior knowledge of social science principles were significant among the group of SUTQ participants.

The challenge inherent to teaching a prior-knowledge-diverse group is that it is difficult to tailor the instruction, so its level lies in the zone of what each learner can already do and cannot yet do. In other words, the learner has enough prior knowledge to understand the instruction with the help of the instructor, but not enough prior knowledge to be bored. This zone, commonly known as the zone of proximal development (Vygotsky, 1966, 1986), is according to the theory the optimal level of difficulty of learning material, where learning is most efficient. However, in instructional situations like SUTQ, where the number of learners exceeds significantly the number of instructors, this tailoring to individual learning needs is not easily attainable. Although the SUTQ instructor mentioned briefly a few strategies used during the SUTQ instruction, the second suggestion for improvement contains additional tips for the teaching practise known as differentiation.

Suggestion 2: Differentiate instruction to attend to differences in prior knowledge among SUTQ participants

In educational settings where there is significant amount of variation in prior knowledge relevant to the instruction among the learners, a pedagogical strategy called *differentiation* may be applied (Tomlinson & Imbeau, 2010; Prast, van de Weijer-Bergsma, Kroesbergen, & van Luit, 2018). Although there is no standardized operationalization of a differentiated classroom, some common practices inside and outside of a classroom may be found in literature. Effective differentiated classes contain whole-class, small group, and individual instruction (Tomlinson, 2005). One option may be to gather learners into homogeneous groups according to the level of their prior knowledge and adjust the level of discussed material to the needs of that group. Group arrangements should not be fixed, meaning that mobility across groups is possible when learners' needs change (Prast et al., 2018). Learners may also be grouped based on their common interests (Tomlinson, 1999). Such grouping may be planned in advance with the knowledge of which faculties participants come from. Importantly, differentiation requires regular collection of data on students' progress and needs (Deunk et al., 2018; Prast et al., 2018; Van Geel et al., 2018). The collected data serves as input for adapting instruction, planning learning materials and activities, rearranging groups, and providing individual instruction (Roy, Guay, & Valois, 2013). An example of differentiation outside the classroom is a practice called *flipped classroom* (Davies, Dean & Ball, 2013). One flipped classroom strategy that may have potential in the SUTQ context is assigning readings to participants before coming to class. Alternatively, instruction may be video-taped. This way, participants with less knowledge on a particular topic would be allowed to spend more time on it, whereas participants with enough knowledge on the topic may skip the readings or video altogether. The final effect is that the knowledge gap among participants is narrowed, which eases in-class instruction (Davies, Dean & Ball, 2013).

Finding: Feasibility

This finding pertains to the fact that the starting date and duration of the SUTQ programme was not found optimal by most of the focus group respondents. The key issue is tied to one of the main learning activities - the final project - which required each participant to conduct a research on a pedagogical intervention implemented ideally in one's own teaching practise. This project-based approach was chosen by the SUTQ programme designers, because it allows for learning nested in a real-world situation, which has been advocated by many, also in the context of professional development of teachers (Fullan, 2001; Elmore, 2000; Burbank & Kauchak, 2003). However, because the programme currently starts in May and ends

in February, only participants teaching in the first academic quartile (September till November) were able to feasibly conduct the research embedded in their own teaching. Hence, the programme timeline did not allow other participants to draw on the benefits of situated learning. The suggestion for improvement of SUTQ following from this finding is that the new design could be flexible enough in terms of time to allow all participants anchor their learning into their own teaching.

Finding: Disconnect between programme capacity and HR policy

Another finding associated with programme flexibility is that there is a chance that as a consequence of the new HR policy, which requires almost all teaching staff to achieve the level of the SCT, the number of applicants to the programme may increase significantly. It is difficult to estimate the increase in demand for the programme, because the SUTQ certificate does not guarantee or is required for becoming an SCT. However, there is some probability that the number of applicants will increase in the future and it would help achieving the university goal to accept all eligible applicants. Therefore, the suggestion for improvement stemming from this finding is to make the SUTQ design flexible in terms of capacity to accommodate the changing demand for enrolment in SUTQ.

Suggestion 3: Make programme delivery more flexible in terms of time and capacity

There are three basic delivery formats of instruction: online, face-to-face and blended, which is a combination of the former two. The online format typically allows instruction to happen at a different time and in a different location than learning happens, whereas the face-to-face format requires the learner and the instructors to be at the same place at the same time (Branch & Kopcha, 2014). Both of these delivery formats have a potential to let all participants anchor their learning in their own teaching practise. First, an online delivery of SUTQ suggests itself, because it would allow participants to take the programme at whatever time of the year they teach. However, face-to-face delivery may also fulfil the situated learning requirement. The programme might be at least one full year long, so that all participants have the opportunity to prepare their intervention, implement it in their teaching period and reflect on it afterwards. Alternatively, the programme may run multiple times a year, each of the runs covering a particular period of the academic year.

The increased capacity problem is closely associated with the problem of cost, which is largely determined by instructor's salary (Brewer, Krop, Gill, & Reichardt, 1999). The key to accommodating large and varying numbers of participants may be minimizing face-to-face

instructor time by delivering instruction in an online or blended format. Online multimedia have a zero-marginal-cost property, which means that the cost associated with an increase of one learner is (almost) zero (Weimer & Vining, 2015). The multimedium is not consumed by being viewed, so the cost of producing it is independent of the number of times the multimedia is viewed (Cornes & Sandler, 1986). In a face-to-face delivery, instruction costs may be decreased by replacing the expert instructor by a peer. However, there is a risk that peers may be perceived as lacking expertise and therefore insufficiently credible (Molloy & Clarke, 2005), which may result in lower instruction effectiveness in terms of learning outcomes. The credibility problem will be addressed in Section 5.3.

Community building

The next finding is associated with the perceived lack of success to facilitate emergence of a community of practitioners (CoPs) reported by both SUTQ participants and the instructor. The various definitions of a CoP typically include a group of practitioners with varying levels of expertise in a particular domain who interact with each other primarily to share knowledge (Seely Brown & Duguid, 1996). In higher education, communities of teachers have been called f*aculty learning community (FLC)*, defined as "a special type of CoP in higher education that is structured, multidisciplinary, yearlong, voluntary, and of size 8–12, meeting tri-weekly with a focus on building community and developing a scholarly product, usually Scholarship of Teaching and Learning" (Cox, 2013, p.1), or *professional learning communities*, which differ from FLCs by not focusing explicitly on scholarship of teaching and learning and including e.g. leadership models instead (Cherrington et al., 2018).

Wenger, McDermott and Snyder (2002) list a variety of practical benefits that knowledge sharing and CoPs in general may have for both organizations and individual community members. Organizations may profit from increased capacity of employees to solve interdisciplinary problems, exploit existing expertise within an organization or make more strategic decisions. In other words, CoPs are often used as an organizational knowledge management intervention (Armistead & Meakins, 2002; Wenger, McDermott, & Snyder, 2002). The benefit of membership in a CoP for individuals is access to informal professional development in given domain, and improved work experience (Wenger, McDermott, & Snyder, 2002; Brief & Weiss, 2002). Work experience improves, because knowledge sharing is an example of helping behaviour (Brief & Motowidlo, 1986), which can generate positive emotions in both the provider and receiver of help (Weinstein & Ryan, 2010). In higher education, reported benefits of CoPs include boundary crossing between departments and faculties,

changes in teaching practices, reflection on teaching, valuing teaching (Cherrington et al., 2018), higher rate of tenuring of academics, increase in interest in teaching and scholarship of teaching and learning (Cox, 2013). Apart from the described general benefits that CoPs bring to an organization, the attempt to facilitate community building as part of SUTQ is congruent with the new HR policy, which requires of the SCT to contribute to a collegial and collaborative learning environment (Oosterhuis-Geers, 2018). Therefore, the next suggestion for improvement contains strategies for strengthening the SUTQ community.

Suggestion 4: Implement strategies that would facilitate formation and maintenance of a community among SUTQ participants

There is a variety of strategies for establishing CoPs in organizations to be found in literature. Wenger, McDermott, and Snyder (2002) list seven principles for cultivating communities of practise and add a description of the development of CoPs in time. In the context of higher education, Cox (2004) devised a list of ten qualities of a community necessary for emergence and maintenance of faculty learning communities (FLCs), accompanied by a list of thirty components of FLCs. Cherrington et al. (2018), who use the term professional learning communities (PLC), give three suggestions for facilitating the introduction of communities as targeted means of professional development in higher education.

The common denominator of the concepts of CoP, FLC and PLC is trust among community members. Trust is established gradually by longitudinal observation of others, for which to-be community members must have opportunity to spend time together (Mayer, Davis, & Schoorman, 1995; Aubert & Kelsey, 2003). Therefore, one important strategy is to arrange that SUTQ participants meet and interact by e.g. organizing group-based activities. An important distinction between higher education communities is that of *cohort-based* and *topic-based* communities (Cox, 2004). Members of cohort-based communities are faculty staff typically from one career level or function, such as programme directors, PhD students or deans. In contrast, members of topic-based communities consist of academics with the same interest in teaching in a particular field or, e.g. in a specific teaching method (Cox, 2004). Depending on the course the SUTQ will take, it may be worth considering which type of community may be most desirable in the context of the current university.

Increased attention has recently been paid to online communities which may also serve as a PD intervention. Results from a review indicate that for conclusive statements about benefits of drawbacks of online communities for teacher professional development more research must be conducted (Macià & García, 2016). Therefore, SUTQ administrators could in

the meantime make use of the fact that the current university has its own campus and distances between individual faculties and departments are relatively short, which enables organization opportunities of face-to-face meetings.

Finding: Feedback

The last finding pertains to the feedback channels which were part of the SUTQ design. Focus group respondents very much appreciated the amount, variety and accessibility of cognitive feedback provided by instructors, supervisors and faculty educational advisors. They also appreciated the peer feedback sessions. However, respondents mentioned two occasions where they saw room for improvement in performance feedback that was given to them for their pre-proposals and proposals.

Both of the conceptual paradigms that dominate thinking in the learning sciences assign feedback great importance. In the behaviourist tradition, where learning is associated with behaviour change, feedback is a piece of information that is used to change a behaviour, i.e. learn (Molloy & Boud, 2014). Feedback, as seen by theorists operating under the constructivist paradigm, not only contributes to a change in behaviour, but also helps to expand or correct knowledge, beliefs and motivation, and calibrate learners' capacity for self-evaluation, so they are better able to judge the quality of their performance (Molloy & Boud, 2014). Therefore, the *existence* of feedback is a prerequisite for learning.

Meta-analyses of experimental research also show that feedback on average improves learner performance and motivation (Kluger & DeNisi, 1996; Hattie & Timperley, 2007), although factors like learner's propensity to use feedback in a beneficial manner (Dweck, 2013), the nature of the task on which feedback is given (Kluger & Van Dijk, 2010), various aspects of feedback content (Shute, 2008; Sadler, 1989), timing (Hattie & Timperley, 2007), and perceived quality of the feedback giver (Molloy & Clarke, 2005; Ladyshewsky, 2010) mediate the effect of feedback and may even render it detrimental to performance and motivation.

In the context of SUTQ it is useful to elaborate on effects of expert and peer feedback. Expert feedback benefits from the perceived credibility of experts, increasing the probability that it will be used (Molloy & Clarke, 2005). On the other hand, the lack of perceived expertise of peers makes peer feedback less credible. However, peers may be the source of the most accessible feedback, collectively being able to provide timely and multiple-viewpoint feedback (Ladyshewsky, 2010). In addition to the benefit of receiving peer feedback, giving feedback to peers allows for observation of novice performance, relating it to target performance and

communicating the gap and strategies how to close the gap, which also aids learning (Fantuzzo & Riggio, 1989).

This brief review on feedback highlights the benefits of the plentiful cognitive, expert and peer feedback SUTQ participants receive. The last theoretical suggestion for improvement of this study relates to the two occasions when participants felt feedback was lacking or incomplete.

Suggestion 5: Maintain the current expert and peer cognitive feedback systems and provide plentiful and complete performance feedback

The first part of this suggestion is to maintain the possibility for participants to consult their ideas and questions with a variety of instructors, supervisors and educational advisers. In addition, peer feedback activities have been shown beneficial by both scientific literature and focus group results, so it is suggested to keep peer feedback in the future SUTQ design, too. The second part of this suggestion pertains to providing plentiful opportunities for learners to practise and accompanying them by subsequent feedback consisting of four elements: (i) performance target, (ii) actual performance, (iii) strategies for improvement to bridge the gap and (iv) observation of opportunities for further practise (Sadler, 1989; Molloy & Boud, 2014). Feedback containing these four elements makes learners conscious of their own performance in relation to a performance standard, helps them calibrate their self-evaluation skill, equips them with knowledge on how to improve and orients them toward the next opportunity to practise.

Finding: Time, venue and catering

Guskey's (2000) assertion that contextual aspects of a PD programme which pertain to biological needs also play an important role in participants' satisfaction with the programme was confirmed by one focus group respondent him/herself (see Results). In the case of SUTQ, it may be concluded that participants were overall satisfied with the contextual aspects of the programme.

Suggestion 6: Maintain the time scheduling, venue and catering

Based on respondents' satisfaction with the contextual aspect of the current SUTQ, it is suggested to keep scheduling SUTQ meetings in the afternoon and evening hours, make the schedule available during the call for applications, choose a spacious, secluded venue and provide quality catering. However, some of the suggestions may become less relevant in case the SUTQ will become a larger-scale programme opened to a broader audience.

5.2 Practical suggestions for improvement of SUTQ

In this section, the theoretical suggestions described above will be applied to the current SUTQ case. It will be explained using Figure 2, where the overall programme structure is portrayed.

It is common in the Netherlands that the academic year is divided into four quartiles instead of two semesters, meaning that academic courses typically do not span over the whole semester, but only one quarter. This also means that some teachers teach only in one quartile per year. To allow every teacher to embed their SUTQ learning into their teaching period, a new SUTQ design is proposed. The design will be explained on the example of cohort 1 in Figure 2.

	year 1				**year 2**	**...**
	quartile 1	**quartile 2**	**quartile 3**	**quartile 4**	**quartile 1**	**...**
cohort 1	**E**	**I**	**G**			
cohort 2		**E**	**I**	**G**		
cohort 3			**E**	**I**	**G**	
cohort 4				**E**	**I**	
cohort 5					**E**	
...						

E…Exploration phase I…Implementation phase G...Giving back phase

Figure 2. Suggested overall structure of SUTQ.

The SUTQ programme takes three quartiles to complete. In the first phase, named *exploration phase,* participants learn how to search for innovative pedagogical interventions and how to evaluate them based on the best evidence available about the intervention. Then, participants select a well-researched intervention and plan how to implement it in their own instruction. In the second phase, *implementation phase,* participants embed the pedagogical approach in their teaching. There are multiple activities participants do in the last, *giving back phase.* First, they evaluate the success of the intervention and second, they engage in instruction of cohort 2 and cohort 3 of SUTQ participants. Cohort 2 started one quartile after cohort 1, so while cohort 1 is in the *giving back phase*, cohort 2 is in the *implementation phase*. Cohort 1 may participate in in-class observations of participants in cohort 2 and give formative feedback or may co-teach. However, the main task of cohort 1 is instruction of cohort 3. It is assumed that cohort 1 will have the competencies to succeed at this task, because by the third quartile they will have already gained theoretical and practical knowledge and skills (in quartiles 1 and 2, respectively), and because they themselves have long professional experience in teaching. Throughout the whole programme, participants may collect evidence of their teaching activity resulting in a portfolio (Pelger & Larson, 2018). The portfolio may then serve as a basis for awarding the status of the SCT.

This design has multiple benefits. First, it allows every participant to embed their intervention into their own teaching, regardless of when their teaching period is. Second, the design is robust to changes in participant numbers, unless there are very large differences in participant numbers between cohorts, e.g. one person in cohort 1 and twenty in cohort 3. Third, the costs may decrease, thanks to peer teaching. The presence of an expert instructor may be desirable only in the cohort currently in the *exploration phase*, where they would play a supervisory role of the knowledge that is taught to cohort 3. Fourth, the design draws on benefits of peer teaching. Assuming the number of participants in each cohort will be similar, differentiation may be feasible thanks to the high number of instructors per number of learners, which means that individual learning needs are easier to attend to. Another benefit of peer teaching is that peers within and across cohorts spend time together and engage in profession-related interaction. This fulfils the important preconditions for forming trust and establishing communities of practise. Lastly, the expectation that participants will have to teach in the last phase of the programme may increase their learning significantly in the *exploration phase* (Nestojko, Bui, Kornell, & Bjork, 2014).

5.3 Limitations

It is important to consider the inherent limitations of the methods used. The focus group method used in this study has been seen as not enabling as deep understanding of an issue as individual interviews do (Hopkins, 2007; Krueger & Casey, 2009). This may be because not all respondents may actively take part in group discussion, which did in the current case happen. In the flow of discussion, a transition from one topic to another was made before all participants had a chance to contribute. Moreover, in institutional contexts, respondents may be reluctant to express their opinions in front of colleagues, especially if their opinions are strong or opposing the perceived opinion of the group. In such situations, respondents may simply conform to the dominant ideas present in the group (Liamputtong, 2011). Still in some focus groups, interpersonal relationships among respondents may influence the group discussion (Krueger & Casey, 2009). Although it did not appear to be the case in this study, respondents have neither been assessed on their personality, nor data on their interpersonal dynamics were available.

The second important limitation is bound to the quality of data used in this study. Because less than half of all SUTQ participants took part in the focus group, results about participant perceptions may not be representative for the whole participant population. This means that even if all focus group respondents unanimously agreed in their opinion on a particular aspect of SUTQ, their opinion may have still been a minor one in the whole participant population.

The last major limitation of this study is that data has not been gathered through the field portrait strategy as in McKenney & Reeves (2012). This means that data for this study came from documents (policy synthesis strategy) and stakeholder perceptions (perception poll strategy), but no observations of the actual instruction took place. By not using data from the programme implementation, the results validity and relevance of the suggestions of this study may be limited.

5.4 Future research

The relatively narrow focus of this study leaves many opportunities for further research of the current SUTQ. The logical follow-up of the current qualitative study could be investigation of the effectiveness and impact of the programme. Programme effectiveness may be established by quantifying the extent to which the programme goals are achieved. The goal of SUTQ is to prepare participants for a role of the skilled and collegial teacher. Therefore, participants may be assessed on the competencies of the SCT. A quantitative evaluation of the

programme effectiveness may provide a more solid base for deciding if and which parts of the programme may require improvement. If the programme is found effective, i.e. participants will have acquired the desired competencies, the next step may be to research how the change in teachers' competencies impacts the achievement of the organizational goal - in other words, how did SUTQ contribute to improving teaching quality? The impact evaluation research would likely be of summative character and would give insight into whether the programme is positioned properly within the institutional development framework.

Other opportunities for research may be based on the potential changes in the design of SUTQ. Of value may be research into effectiveness of differentiated instruction or community-building strategies.

After establishing an effective design of SUTQ, the next step could be to implement the programme in other settings. In this way, it would be possible to find the features of SUTQ that remain constant across implementations, which might after several validations lead to an evidence-based framework of an advanced professional development programme for university teachers.

5.5 Conclusion

This qualitative case study was conducted to improve an advanced professional development programme for university teachers called SUTQ. The programme was evaluated for its alignment with the programme context and participants' needs. To identify potential areas of improvement, analyses of relevant documents, two interviews and a focus group were performed. The investigation resulted in identification of several areas of improvement in alignment with both the programme context and participants' needs. The following five improvement points were suggested:

- Suggestion 1: Change SUTQ curriculum to reflect the current HR policy and participant expectations
- Suggestion 2: Differentiate instruction to attend to differences in prior knowledge among SUTQ participants
- Suggestion 3: Make programme delivery more flexible in terms of time and capacity
- Suggestion 4: Implement strategies that would facilitate formation and maintenance of a community among SUTQ participants
- Suggestion 5: Maintain the current expert and peer cognitive feedback systems and provide plentiful and complete performance feedback

In addition to the five theoretical suggestions above, a new model of the SUTQ programme was proposed. Through these suggestions, this study hopes to contribute to improvement of advanced professional development programme for university teachers including SUTQ.

Disclosure statement

The academic supervisor of the author was one of the instructors of SUTQ, which is the object of evaluation in this thesis. However, the author declares he is not aware of any explicit or implicit causes of a potential conflict of interest.

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Appendix A

Appendix A is not public. For questions please contact the author at nikos.basbas@gmail.com.

Appendix B: Codebook 1

Code group: context		
Code	Description	Example
career policy	Mention of (parts) of the existing career policy, which have direct implications for the programme goal, organization, implementation or other major aspect.	In the case of existing education-related professionalization offer, clearly state at what level of educational development this is aimed. Or SUTQ is not mandatory (in contrast to the UTQ, which is mandatory).
programme participants	Description of target group of SUTQ, applicants, actual participants and their characteristics, roles, and numbers.	Enrollment is open to all teachers who recognize themselves in the outlined profile and the requested motivation.
university management	University policy makers or holders of a managerial position in the organization, their characteristics and roles.	The role of the Programme Director: the programme director is a sparring partner for the participant and is also part of the review committee.
programme administrators	Stakeholders "behind" the programme. People involved in coordination, design or teaching of SUTQ.	The SUTQ is organized by the Centre of Expertise in Learning and Teaching (CELT) and receives financial support from the Centre of Engineering Education (CEE). Below you find the involved people and their roles in the trajectory. Please see the people pages to find more information about the involved people.
Code group: design product		

Code	Description	Example
AP-Sx	Mention or description of a strategy used to achieve goals of the Application Phase. Goals were mostly not explicitly stated and were deduced from text coded "purpose and goals of SUTQ". "AP" in the code denotes Application Phase, "S" the word strategy. As strategies were identified during the coding process, they were assigned numbers starting from one (replacing letter "x"). See bottom for legend.	This includes recruiting activities, design of selection procedures.
design principles	Any mention of principles incorporated in the design on the programme. Overarching paradigms, global approaches taken in the programme.	The program we offer is based on a Student Driven way (the participant as director of it's own learning process).
materials	Code for all supplementary materials, documents, guides, worksheets used by any programme stakeholders. Code can be used for whole documents or mentions of the documents.	"Application form" or During the SUTQ we use the book “Engaging in the Scholarship of Teaching and Learning” by Cathy Bishop-Clark and Beth Dietz-Uhler. Each participant receives a book during the kick off meeting. Other materials will be provided during the sessions and distributed in the Canvas environment.

PP-Sx	Mention or description of a strategy used to achieve goals of the Application Phase. Goals were mostly not explicitly stated and were deduced from text coded "purpose and goals of SUTQ". "AP" in the code denotes Application Phase, "S" the word strategy. As strategies were identified during the coding process, they were assigned numbers starting from one (replacing letter "x"). See bottom for legend.	Examples include learning activities (e.g. direct instruction, game), team building activities, procedures for selecting successful candidates.
purpose and goals of SUTQ	A broad code used for descriptions of the overall purpose of the programme, its outputs, target competencies, as well as partial goals and milestones.	The teacher uses research and/or design methodology aimed at improvement and innovation of their own education, taking into account and matching the relevant curriculum, the institutional vision on education the institutional context. The research findings or the design is realized on the basis of (scientific) pedagogical insights and methods and transcends the level of UTQ competences on relevant aspects and has an innovative component.
RPP-Sx	Mention or description of a strategy used to achieve goals of the Research Proposal Phase. Goals were mostly not explicitly stated and were deduced from text coded "purpose and goals of SUTQ". "AP" in the code denotes Application Phase, "S" the word strategy. As strategies were identified during the coding	Examples include learning activities (e.g. direct instruction, game), team building activities, procedures for selecting successful candidates.

	process, they were assigned numbers starting from one (replacing letter "x"). See bottom for legend.	
timeline	Any mention of dates, times, duration, sequence of activities or events.	For about nine months during 160 hours the participant works on an (individual) educational question.

Legend of programme strategies and corresponding codes	
Code	Strategy
AP-S1	Create/update websites about SUTQ
AP-S2	Direct contact
AP-S3	Announcement through university newsletter
AP-S4	Programme directors and faculty deans emailed to encourage potential participants
AP-S5	Announcement through educational advisors
AP-S6	Announcement through employee portal
AP-S7	Assessment of applications for the programme
RPP-S0:	Communication through online learning management system
RPP-S1	Direct instruction
RPP-S2	Peer feedback
RPP-S3	Guessing game in pairs
RPP-S4	Writing a RP
RPP-S8	Intervision
RPP-S5	Supervision
RPP-S6	Stimulating active avoidance
RPP-S7	Pitch
RPP-S9	Dining together
RPP-S10	Getting to know each other game
RPP-S11	SUTQ alumni share experience
RPP-S13	Inspirational seminars

RPP-S12	Involving programme directors
PP-S1	Direct instruction
PP-S2	Project work
PP-S3	Supervision
PP-S4	Fund for individual professional development
PP-S5	Writing sessions
PP-S6	Intervision
PP-S7	Peer feedback
PP-S13	Dining together
PP-S8	Inspirational seminars

Appendix C: Codebook 2

Code	Description	Example
research aspect	Respondents mentioning their opinion or attitude toward the research aspect of the SUTQ programme	And I find that some of the meetings we have are too much focused on how you do research in general.
feasibility	Utterances relating feasibility of finishing any part of the programme on time, work load or perceived appropriateness of programme timeline	I think it's needed if you want to test it somewhere in the cycle, you need 3 months before the educational programme starts and three months after to process data
community	Respondents mentioning building a community of practice.	What I am worrying about with the participants so far is that they don't really become a community.
prior knowledge	Utterances related to differences in prior knowledge of social science research principles among SUTQ participants. Mentions of length of experience, professional background.	Like search for literatures may be a known thing for one, but maybe not another, etc.
supervision	Respondents' opinions about supervision provided to them from any stakeholder within and outside the programme.	I wanted to add to that also that I like how much supervision is available, if you need it, you can have it.

Appendix D: Coordinator interview instrument

Interview instrument

Interviewer: N. Basbas
Interviewee: M. ten Voorde - ter Braack, SUTQ coordinator
Topic: 2018/2019 SUTQ design
Estimated length: 80 minutes
Materials:

- Interview instrument (this document)
- Skype or other video conference software depending on agreement with interviewee.
- Materials pertaining to individual questions in a slides format. During the interview, the interviewer's computer screen will be live streamed or a link to the slides will be shared with the interviewee:

Introduction

Thank for joining and say I hope she feels well now.
Ask if I can record the call.

Interview questions

Opening

1. Could you please describe how you were/are involved in SUTQ?

Step 1: Logic model of the problem

2. Can you tell me about the design of SUTQ? What was the starting point of the design? *(Analysis)*
3. What were the relevant aspects of the context that were reflected in the design?
4. *If analysis was formally done*: Could you please share with me the document containing results of the analysis?

Step 2: Logic model of change

5. How was decided what the programme goals will be?

   Expected answer: Teaching Framework of Ruth Graham, aimed at level 2: skilled and collegial teacher.

   Follow-up question: I prepared a few slides that may help us during this interview. On slide 1, there is the Teaching Framework with descriptions of level two and level three teachers. Which level would you say the current design of SUTQ prepares teachers for? Why?
6. Could you please help me understand the final competencies and qualifications matrix? (slide 2) Do I understand them correctly as assessment criteria a) of the product from a pedagogical and innovativeness point of view, b) compliance with principles of Scholarship of Teaching and Learning and c) reflection report?

Step 3: Program design

-Collecting missing information-

7. Application
   a. When did the application period start for the current SUTQ, i.e. what was the first day applicants could apply?
   b. Can you describe how were potential applicants recruited? What were the activities undertaken to create awareness and motivate potential candidates to apply?
   c. Let us have a look at the assessment form for assessing applications for SUTQ. There is a list of yes/no criteria. Can you explain how the decision was made if a particular applicant was accepted or not? (slide 4)
   d. How big is the target group of SUTQ? In other words, how many senior teachers are there who may be potentially interested in SUTQ?

    e. Can you please tell me who were the members of the application assessment committee?
8. Kick-off days
    a. I unfortunately do not have an agenda for the kick-off days, do you perhaps have it?
9. GO/NO GO
    a. The guidelines on assessing the RP say “In cases of missing or not acceptable elements of assessments the participant can't continue with the SKO trajectory.” However, there is no “not acceptable” category in the matrix. How was the decision made if the participant receives a GO or NO GO?
    Is just one “missing” element a reason for a NO GO? (slide 5)
    b. Do you know what were the reasons why this year one participant was not granted a GO to continue in the programme?
10. Budget for individual development
    a. What is the budget meant for?
    Expected answer: It is for additional learning activities (going to a conference).
    Follow-up question: How can participants cover potential costs of developing materials for research/design (printing, etc.) while working on their SUTQ project?
11. Seminars
    a. How do the seminars contribute to the goal of SUTQ?
12. Project
    a. I obtained from you a last year version of the Manual Final Review of the SUTQ product. Will there be significant changes to the manual?
    b. Can we have a look at slide 6? It shows the Review Form that helps decide if the submitted project is a) complete, b) needs a small adjustment and then is complete, c) needs a major makeover. The Review Form has a list of yes/no criteria. Is there a limit number of “no’s” for which the project is considered to be complete, “repairable” or needs a makeover?
    c. What exactly is the role of the peer in the Review Committee?
13. Reflection
    a. Can you tell me more about the reflection report?
    b. What are the expectations about the content and form?
    c. What can participants do to receive some guidance on how to write the reflection?

Step 5: Program implementation plan

14. Can you tell me what was the next step after you finished designing SUTQ?
15. What were the steps of implementing the programme?

Step 6: Evaluation plan

16. Can you tell me a little bit about how you intend to evaluate the programme?
17. What are the main outcomes you are interested in evaluating?

Closing

18. Is there anything relevant we did not discuss and you feel should be mentioned?
19. How many teachers said they will come to the workshop on Monday?
20. Can they wait in the lobby then?
21. I would like to have a word before dinner to ask them to stay > be able to prepare it all.

Appendix E: Instructor interview instrument

Interview instrument

Interviewer: N. Basbas
Interviewee: C. L. Poortman, SUTQ designer and instructor
Topic: 2018/2019 SUTQ design
Estimated length: 90 minutes
Materials:

- Interview instrument (this document)
- Skype or other video conference software depending on agreement with interviewee.
- Materials pertaining to individual questions in a slides format. During the interview, the interviewer's computer screen will be live streamed or a link to the slides will be shared with the interviewee:

Procedure:

Ask if the respondent has read the consent form and if she agrees. Then I propose that I start recording this interview and them if she could, for the record, confirm she agrees with the consent, so that I have evidence of that?

Interview questions

Opening

1. Could you please describe how you were/are involved in the SUTQ?
   Expected answer: Design + teach. If does not say design, ask.

Step 1: Logic model of the problem

2. Can you tell me more about the design process? What was the starting point, what guided your thinking and how the design developed?
3. To what extent were the needs and wishes of teachers taken into account?
4. I think what you described is in our circles commonly termed analysis of the educational problem. Could you please share with me the document containing results of the analysis, if there is one?

Step 2: Logic model of change

5. There is a document outlining workshops content you wrote in 2016 together with Kim Schildkamp and Susan McKenney. Can you please help me understand one part of the document? (slide 1) Is this document still valid?
6. As I understood, you aimed at developing teachers to the level 'skilled and collegial teacher' of the Ruth Graham framework, that is the first paragraph. Then, there is the definition of the 'skilled and collegial teacher', definition of 'evidence' and then description of the competencies of teachers who have successfully completed SUTQ. My first question relates to the first competence and is:
7. Could you explain to me how was the decision made that teachers will be able to do research? (Because I could not find this competency in the definition of the 'skilled and collegial teacher'.)
8. The reason I ask this is that I see similarities between SUTQ and the 3rd level teacher, so called 'scholarly teacher'. (Slide 2) Would you agree?
9. How are participants expected to behave after completing SUTQ? Do research? And what to do with the research? Publish?
10. My next question is about the second competency mentioned in that document - stimulate educational innovation by promoting collegial and collaborative learning. Could you explain what learning activities or materials were designed into SUTQ that would help develop this competency in teachers?

Step 3: Program design

-Collecting missing information-

11. As I understood, teachers had to write a ‘pre-proposal’ in their application. Then, during the first phase of SUTQ, they wrote an actual proposal. Is that correct? My question is, what support was in place for them to adjust the pre-proposal in terms of focus, methods, scope for the purposes of their GO NO GO proposals and their project?
12. Was there a moment during the kick-off days when they could discuss their pre-proposals with someone?
13. Slide 3. I went through the presentations on Canvas from the ERD workshops and saw that the first four steps - research question through data analysis - were discussed. However, I did not find so much information on design intervention and communication of the project. Is this true? What were the reasons for that?
14. I was not able to find any guideline on how to write the proposal - concerning the structure, content, etc. Was there one? If not, what were the reasons why there wasn’t one?
15. It is written on the SUTQ website, that the programme develops competencies for conducting educational research and design. I understood that the SoTL approach was chosen to develop competencies for educational research, is that true? What approach was chosen for the design part?

-Personal opinion collection-

16. Did you see any significant differences in prior knowledge of the group? Did it have any implications for how you lead the ERD workshops?
17. How would you evaluate the effectiveness of the programme so far? I think the only relevant data so far is a comparison of the pre-proposals with the Go NO Go proposals.
18. Should you be asked to redesign the the SUTQ, what would you change and what would you keep? Let us go over content, organization and context. Is there anything you would change about the content, i.e. the types of learning activities or the workshops content?
19. What about the organization: length, sequence? For example, do you think the proportion of time dedicated to work on the proposal (cca 1,5 months) and on the project itself (7 months including summer holidays) is adequate?
20. And what about context? The time when the activities started and finished, facilities, venue, technology?

Closing

21. Is there anything relevant we did not discuss and you feel should be mentioned?

Appendix F: Interview slides

Appendix F is not public. For questions please contact the author at nikos.basbas@gmail.com.

Appendix G: Focus group instrument

Focus groups instrument

Interviewer: N. Basbas
Participants: SUTQ participants (experiences teachers at University of Twente)
Topic: 2018/2019 SUTQ design
Estimated length: 45-60 minutes
Materials:
- Focus group instrument (this document)
- Field audio recording device

Date: December 3, 2018
Location: Drienerburght, Drienerlolaan 5, 7522 NB Enschede

This document contains a description of actions to be taken by the researcher prior, during and after the focus group session(s) as well as questions for facilitating the session.

Step 1: Collect the field recording device from the BMS Lab.
Make sure to receive instructions on how to operate it and test it before leaving the Lab. Main questions:

- Operation
- Saving data & preparing the device for another focus group that takes places immediately after the first one
- Transferring data from the device
- How to transcribe automatically?

Step 2: Ask SUTQ participants at the beginning of the ERD workshop whether they will take part in the focus group session.

Step 3: Decide whether to conduct one or two focus groups
Depending on the number of SUTQ participants who are willing to take part in the focus groups, create either one or two groups. The maximum number of participants in one group is limited by the number of recording devices available, which is eight.

Step 4: Prepare venue
Depending on the number of participants, prepare a separate room in Drienerburght or make us of the room where the workshop has taken place. Set up the recording device, hand out consents and pens. Prepare small desserts.

Step 5: Collect participants and take them to venue

Step 6: Welcome participants

- Welcome participants and thank them for joining.
- Explain that the purpose of the session is to collect their experience with SUTQ, which could be used for potential improvements for the next year cohort.
- Explain that I write my thesis on evaluating the SUTQ and that is why I am there.
- Estimated duration of the session is 45 minutes.
- To analyze the data from the session, the discussion will be audio recorded. Explain that this discussion is confidential, it will not be shared with anyone from the programme. I will use their reflections for suggestions for improvement which are the deliverables of my thesis.
- Let participants sign consents.

Step 7: Set up recording device
Instruct participants on how to use the recording device and initiate recording.

Step 8: Start of discussion

- Explain I had access to their - anonymous - answers to the questionnaire Martine gave them in October and I would like to follow up on them, clarify their answers and ask some additional questions. Tell participants to feel free to react to what others say, to agree, disagree; this is why we are doing this.

- Note: There are more questions than it is probably feasible to ask and discuss properly in 45 minutes. “Must-answers” questions are bold and are follow-ups of answers given by participants in Martine’s questionnaire.

Overall impression, expectation match	Notes
❑ **What is your opinion on the course overall?** ❑ **Does the actual programme meet your initial expectations of the programme?** [If a negative answer, ask in subsequent questions if it affected their liking/disliking of particular aspects of the course (e.g. it may have decreased their liking of workshops). ❑ **What did you like the best about the course?** ❑ **What did you like the least about the course? Do you have a suggestion for improvement? If yes, what?**	
Content questions	
❑ **What is your opinion on the ERD workshops?** ❑ **This course aims at developing competencies for educational design and educational research. How confident do you feel that you will have gained sufficient knowledge in both domains to be able to conduct good quality research and/or design after the end of the course?** ❑ **Can you raise your hand who has had knowledge of principles of social science research before starting this course?** [question for “hand-raisers”:] **How novel were the things discussed in workshops? Can you imagine skipping some of the presented content?** [question for “non-hand-raisers”:] **Could you use more time to get familiar with social science research?** ❑ **Do you have any suggestions for improvement of the workshops?**	

❑ **What do you like about seminars? Do you have any suggestions for improvement?** ❑ **What is your opinion of the supervisors from CELT that each of you have?**	
Organization questions	
❑ Did you use the website to search for information about the programme? ❑ How much time did you spend on filling out the application? Do you think the time spent was adequate? Was it easy for you to do? ❑ **I saw mentions of the workload being more than 160 hours. Do you agree? What would you do in order to fit the programme into 160 hours?** ❑ Did you have enough time for finishing the project proposal? ❑ **There were proposals to extend the programme to 1,5 years. What is the rationale behind this idea?** [programme crammed, opportunity to meet previous cohort?] ❑ How much do you appreciate the possibility to spend 1250 EUR on professional development of your choice? Did you use this opportunity? If yes, how? ❑ **How effective do you find the programme in helping to build a community?** ❑ **What do you think about the amount of time you had for the research proposal and for the project? Would you change anything about the timeline?**	
Context questions	
❑ Workshops usually ended around 7 or 8 pm. Did this schedule suit you? ❑ What about this venue? Do you think it was appropriate? Do you have any suggestions for improvement?	

❑ What about the number and timing of coffee breaks?	
Concluding questions	
❑ **Do you have a feeling that with what has been said in this session I will be leaving this room with the right impression of your opinions about the programme?**	

Step 9: Thank participants for joining and walk them out of the venue

Step 10: Clean up the venue

Step 11: Save the data and transfer them to a computer (in the library - open until 10 pm). Back up the data

Step 12: Delete the data from the recording device

Appendix H: Ethics Committee Permission

Nikos Basbas

From: Universiteit Twente - Beoordeling Commissie Ethiek <no-reply@utwente.nl>
Sent: pátek 9. listopadu 2018 15:25
To: n.basbas@student.utwente.nl
Cc: k.schildkamp@utwente.nl; m.f.clifford@utwente.nl; l.j.m.blikman@utwente.nl; c.l.poortman@utwente.nl
Subject: [BCE] Approval Ethics Committee
Attachments: BCE18865.pdf

Dear researcher,

This is a notification from the web application form for intended research proposals Ethics Committee Behavioural Science.

Requestnr.	: 18865
Title	: Formative evaluation of PD programme for teachers
Date of application	: 30-10-2018
Researcher	: N. Basbas
Supervisor	: K. Schildkamp
Commission	: C.L. Poortman
Usage of SONA	: No

Your research has been approved by the Ethics Committee.

UNIVERSITY OF TWENTE.

Faculty of Behavioural Sciences

ETHICS COMMITTEE (CE) FACULTY OF BEHAVIOURAL SCIENCES.

APPLICATION FORM INTENDED RESEARCH PROPOSALS ETHICS COMMITTEE BEHAVIOURAL SCIENCE, VERSIE 2

1. Background human research participants

1. Does your research proposal concern medical-scientific research?

NB: Medical-scientific research in this context is defined as 'research which is carried out with the aim of finding answers to a question in the field of disease and health (etiology, pathogenesis, signs/symptoms, diagnosis, prevention, outcome or treatment of disease), by systematically collecting and analysing data. The research is carried out with the intention of contributing to medical knowledge which can also be applied to populations outside of the direct research population.'

No

2. Title

2b. Date of the application

30-10-2018

2a. What is the title of the research (max. 50 characters)?

PLEASE BE AWARE: If you are going to make use of the SONA system, at the 2nd question you have to fill in the same title that you will be using in SONA. This title will (in case SONA is used) also be visible to the human research participants..

Formative evaluation of PD programme for teachers

3. Contact information Reseachers / Conductors of the research

3a. Initials

N.

3b. Surname

Basbas

3c. Research Department (if applicable)

0

3d. Student number

1917749

3e. Email address

n.basbas@student.utwente.nl

3f. Telephone number (during research):

+31612799135

3g. If there is more than one conductor of the research, than please fill in the text boxes below and fill in the contact information (initials/surname/email address/phone number) of all the conductors of the research.

No other researchers

4. Contact information leading Researcher/Supervising university teacher

PLEASE BE AWARE: The leading researcher/supervising university teacher is responsible for the all information that is submitted with this application and the research as a whole and approves (if applicable) the application by means of this form, to (AN)OTHER PERSON(S) (see point 3) to carry out the intended research with with human research participants.

This leading researcher has to have obtained a PhD title.

4a. Initials

K.

4b. Surname

Schildkamp

4c. Research Department

ELAN

4d. E-mail address

k.schildkamp@utwente.nl

4e. Telephone number (during research)

+31534894203

5. Intended start and end date of the research

5a. What is the intended start date of the research?

01-11-2018

5b. What is the intended end date of the research?

31-12-2018

6. Purpose and research question

Please give a clear and sufficiently extensive description of the research, that enables an adequate ethical judgement.

6a. What is the purpose of the research

To identify areas of improvement in a professional development (PD) programme that is being currently piloted and give suggestions for improvement of that programme. The PD programme is called SUTQ and was developed by the CELT department.

6b. What is the question definition of the research

What suggestions for improvement would a formative evaluation of the Senior University Teaching Qualification professional development programme yield?

7. Within which scope/framework will the research be performed?

7. The research will be performed in the scope of academic studies, specifically:

Masterthesis

8. Nature of the research?

8. What is the nature of the research?

Research by means of interviews

Another kind of research:

focus groups

9. Usage of human research participants by means of SONA

9. Are you planning to make use of human research participants for you research by means of SONA?

No

10. Number of sessions

Please try to estimate the needed research time as accurately as possible.

PLEASE BE AWARE: the research must be applied for in units of 15 minutes.
"Proefpersooncredits" (Human research participant credits) are attributed to standard units.

10a. Will a human research participant windup his/her participation within 1 session

In one session (questions 10b and 10c are not applicable)

10d. What is the total duration of the session(s) in minutes?

60

11. Number of human research participants, male/female division, inclusion/exclusion criteria.

11a. What is the number of human research participants needed in this research?

12

11b. What will be the intended male/female division within the group of human research participants?

50:50

11c. What are the intended inclusion critera?

participation in the current pilot of the programme, agreement to be interviewed, fitting the sample to reflect the demography of the population

11d. What are the intended exclusion criteria?

not participating in the current pilot of the programme, no agreement to be interviewed, not fitting the sample to reflect the demography of the population

12. Procedure of the research

12. What will be the activities of a human research participant taking part in your research?

An explicit description of the procedure of the research (instructions given to human research participants, variables that are to be measured, conditions, manipulations, measurement instruments) is required.

The interviews will be conducted with two programme designers. Skype interviews will be scheduled to ask designers for explanations of and justifications for certain design choices that cannot be obtained from the provided materials, for example "Could you please describe how you were/are involved in the SUTQ?" or "What is the main purpose of the GO/NO GO moment?"
The other part of the research will involve focus groups. Focus group members will be university teachers participating in the programme as learners (the ones developing themselves professionally). Participants will be reached through the programme coordinator's email and that for two reasons. The first reason is to avoid any violation of the GDPR law, which could happen if the researcher received data about the applicants. The second reason is that using the coordinator's email may result in higher response to the request for participant perceptions. Given the number of participants is seventeen, two focus groups will be organized. The researcher will facilitate the discussion by asking questions about the content (Was the seminar relevant to the goal of the programme?), organization (Did you have enough time for finishing the project proposal?) and context (Were there enough coffee breaks?) of the programme, which will be listed on a researcher's script.
The discussion will be audio recorded using a device borrowed from the university's research equipment department. Participants will be wearing sociometric badges that will record the time when participants speak so that it is possible to later identify the speaker from the recording. The data recorded by the audio recorder and sociometric badges will be transferred to an encrypted disc immediately after the end of the focus group session.

13. Is one of the following circumstances applicable?

n.a.

14. Possible consequences of the research for the human research participants.

14a. Is it possible that the research can bring discomfort and/or involve potential risks for the human research participants?

No

14b. Explanation

If No: Please explain.
If Yes: Explain why the discomfort and/or risks for human research participants are justified in view of potential benefits of the research (for the human research participants and/or other groups). Also explain what measures are taken to reduce the discomfort and/or potential risks as much as possible.

The data that will be collected will not include any personal information. Questions will be asked about factual information about the programme design (designers) and participant's reactions to their experience with the professional development programme (programme participants). Moreover, data about participant identities will not be collected.

15. Capability of consent of the human research participants

Legal competency implies that the human research participants are autonomously capable to make their own decisions.

Human research participants are capable of consent if they:
•are 18 years or older (major), and
•each for themselves are capable of a sensible judgment of their own interest in this matter.
Adults who are not able to do so, are not capable of consent.
(See also: www.ccmo.nl/en/research-with-incapacitated-adults).

15a. Are the human research participants legally competent?

Yes

16. Age category

16. What is the age category of the human research participants?

☑ Attained the age of majority: 18 years and older only the permission of the human research participant is required)

17. Complete information in advance

17a. Are human research participants (and/or their parents/caretakers) in advance fully informed about the nature of the research before they take part in the research? I.e. by means of a brochure?

Yes

17b. Explanation

If Yes: In what way?
If No: Why not?

Participants will be informed by the SUTQ programme coordinator, by the researcher (via e-mail and at the beginning of the interview and focus groups).

17c. What information do participants (and/or their parents/caretakers) receive beforehand about the goal and the content of the research?

Participants receive all information about hte purpose, goals and content of the research.

18. Informed Consent form

18a. Will the human research participants (and in case of non-competent human research participants: the guardian or parents/caretakers) give written permission for the research in advance, by means of an 'Informed Consent' form containing information on goal, nature, length, riks and objections?

Usage of a standard Informed Consent form is strongly recommended! A standard Informed Consent form can be found on the website of the Ethics Committee.

No

18b. Explanation

*If No: Why not? Is this provided for in another way? Please give a specification.**

A consent will be asked orally at the beginning of the interview/focus group. All data collection procedures will be voice recorded, so their consent will be recorded, too.

19. Information afterwards

19. How are participants debriefed? For example, can they (and/or their parents/caretakers) contact the investigator afterwards?

If Yes: In what way?
If No: Why not?

Participants will have contact details of the researcher and may contact him afterwards.

20. Dependency human research participants

20a. Describe the relationship(s) between the leading researcher/other researchers on the one hand and the human research participants on the other hand.

The researcher is a master student. Participants are university teachers from different faculties. The researcher and the participants have never met or communicated with each other. There is no relationship between the researcher and the participants.

20b. Are the human research participants, outside the context of the research, in a dependent or subordinate position, in relation to the researcher(s)?

No

20c. Explanation

If Yes: In what way?

-

21. Clarity in regard to withdrawal

21a. Are human research participants clearly informed that they can withdraw from the research without explanation/justification at any given time?

Yes

22. Reward of human research participants

PLEASE BE AWARE: Only for research where 'proefpersoon credits' (human research participant credits) are the only form of reward can be made use of the SONA system.

22. Which reward(s) can human research participants receive for their partaking in the research.

☑ None

23. Storage and processing of the data

23a. Will the research data be handled in a confidential manner and will the data be stored and processed anonymously?

Yes

24. Inspection of details

24a. Can the human research participants inspect their own details after the research has taken place?

No

24b. Is this possibility to inspect their own data explicitly announced to the human research participants? Why / Why not?

It will be explicitly announced. Where possible (depending on the data collection methods described above), it will be possible to inspect one's data (audio recordings of the interview). In focus groups, the identity will not be known to the researcher. Since the audio recording from focus groups will contain statements said by other participants, it will not be allowed for focus group participants to listen to what they said.

Remarks

Questions and/or remarks

-

Questions/remarks of researcher, supervising university teacher and commitee

2018-11-07 22:19:45 - Basbas, N.:
Note 1:
I do not plan to know the identities of people in the focus groups (SUTQ participants) and I assume I will not be able to reliably identify the speakers from the audio recording, i.e. when transcribing the audio recording, I will not be able to reliably assign the speech to a particular individual. I imagine the sociometric badges will timestamp the moment when participants speak, so I can assign the speech to Speaker 1, Speaker 2, again Speaker 1, etc.
My inability to identify the voices lead me to write what I wrote in 14b. I now agree it is false and will collect written consent (Note 2).

Note 3: (Question 12)
Thank you, the yes/no questions in the instrument will be changed in the following manner:
Was the seminar relevant to the goal of the programme? > Can you tell me how relevant do you think the seminar was in respect to the programme goals and why?
Did you have enough time for finishing the project proposal? > How would you describe the amount of time you were given for the research proposal? Why?
Were there enough coffee breaks? > What is your opinion on the number of coffee breaks during sessions?

2018-11-06 17:23:36 - Poortman, C.L. :
"Participants will be wearing sociometric badges that will record the time when participants speak so that it is possible to later identify the speaker from the recording. The data recorded by the audio recorder and sociometric badges will be transferred to an encrypted disc immediately after the end of the focus group session."
It is not clear why this (socimetric badges as such and identify speaker) is needed, also it does not agree with the answer to question 14b: The data that will be collected will not include any personal information (voice is identifiable)
18b: so for the focus group, you will ask each participant to individually state their consent on the recording? Also because the data is identifiable, perhaps it's just easier to collect written consent.
- Small note: The questions given as example in 12 are yes/no questions

Appendix I: Consent form for focus groups

INFORMED CONSENT FORM

Project Title
Formative evaluation of an advanced professional development programme for university teachers

Purpose of the Study
The purpose of this research project is to improve the current SUTQ and potentially abstract more general insights applicable to other similar professional development interventions.

Procedures

You will participate in a focus group session lasting 45-60 minutes. You will be asked questions about you experience with the programme. Sample questions include: “Did you use the website to search for information about the programme?” or “Did you have enough time for finishing the project proposal?“.

Potential Risks and Discomforts

There are no obvious physical, legal or economic risks associated with participating in this study. You do not have to answer any questions you do not wish to answer. Your participation is voluntary and you are free to discontinue your participation at any time.

Potential Benefits
Participation in this study does not guarantee any beneficial results to you. As a result of participating, changes to the current SUTQ programme might be made to improve it.

Confidentiality
Your privacy will be protected to the maximum extent allowable by law. No personally identifiable information will be reported in any research product. Moreover, only trained research staff will have access to your responses. Within these restrictions, results of this study will be made available to you upon request.

This research project involves making audio recordings of interviews with you. Transcribed segments from the audio recordings may be used in published forms (e.g., journal articles and book chapters). In the case of publication, pseudonyms will be used. The audio recordings, forms, and other documents created or collected as part of this study will be stored in a secure location with the University of Twente or on the researchers password-protected computers and will be destroyed within ten years of the initiation of the study.

Data from the audio recorder will be transferred to an folder in the principal researcher’s encrypted (BitLocker) computer upon completion of the focus group session. The principal researcher declares that has been trained in computer-safety behavior and habitually locks his

computer when the computer is out of his reach or sight. The original data will not be given to any third party.

Right to Withdraw and Questions

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. The data you provided before you stopped participating however will be processed in this research; no new data will be collected or used.

If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the primary investigator:

Nikos Basbas, s1917749, +31612799135, nikos.basbas@student.utwente.nl

Statement of Consent

Your signature indicates that you are at least 16 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree that you will participate in this research study. You will receive a copy of this signed consent form.

I agree to participate in a research project led by Nikos Basbas. The purpose of this document is to specify the terms of my participation in the project through being interviewed.

1. I have been given sufficient information about this research project. The purpose of my participation as an interviewee in this project has been explained to me and is clear.

2. My participation as an interviewee in this project is voluntary. There is no explicit or implicit coercion whatsoever to participate.

3. Participation involves being part of a focus group organized by (a) researcher(s) from the University of Twente. The focus group session will last between 45 and 60 minutes. I allow the researcher(s) to take written notes during the focus group session. I may allow the recording oft he audio of the focus group session. It is clear to me that in case I do not want the interview to be taped I am at any point of time fully entitled to withdraw from participation.

4. I have the right not to answer any of the questions. If I feel uncomfortable in any way during the interview session, I have the right to withdraw from the interview.

5. I have been given the explicit guarantees that, if I wish so, the researcher will not identify me by name or function in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure.

6. I have been given the guarantee that this research project has been reviewed and approved by the BMS Ethics Committee. For research problems or any other question regarding the research project, the Secretary of the Ethics Commission of the faculty Behavioural, Management and Social Sciences at University Twente may be contacted through ethicscommittee-bms@utwente.nl

7. I have read and understood the points and statements of this form. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

8. I have been given a copy of this consent form co-signed by the interviewer.

_____	_____	_____
Naam deelnemer	Handtekening	Datum
_____	_____	_____
Naam Onderzoeker	Handtekening	Datum