A vertical botanical illustration on the left side of the page. It features several thin, grey, branching stems. Interspersed among these stems are clusters of small, bright red flowers. The flowers have a delicate, multi-petaled structure. The overall style is that of a traditional botanical sketch, with fine lines and a limited color palette.

Mapping the information seeking process regarding the Personal Budget

Comparing information seeking models and mapping information seeking
phases among those in need of care

Name: Catherina Johanna Maria Egelmeer
Study: MSc Communication Studies
Supervisor: Dr. Joyce Karreman
Second supervisor: N. Baas, MSc

Abstract

INTRODUCTION: In this exploratory study, the information seeking process of parents of children in special education will be mapped. The leading research question in this matter is “How do parents of children in special education engage in information seeking phases when seeking information on the Personal Budget, and to what extent do these phases correspond with the information-seeking models proposed by Ellis (1989), Kuhlthau (1988), Savolainen (1995) and Wilson (1997)?

METHODS: In order to answer this question, 33 in-depth interviews with parents of children who attend special education were conducted.

RESULTS: The target group seeks information in the phases identified in the theories of Ellis (1989), Savolainen (1995) and Kuhlthau (1988). However, the order in which the phases were engaged in is not as static and defined as presented in the theories. Furthermore, several contextual factors influence this process. Firstly, the amount of information, the pieces of information which are examined, and the organization of information are contextual factors. Secondly, information sought to solve problems, and information regarding current events form contextual factors in this research.

CONCLUSION: A reviewed research framework is constructed in this study. In this model, it is shown that participants may go back and forth between information seeking phases, and may not engage in them at all. Additionally, direction, degree, pattern, seeking of orienting and practical information form contextual factors which influence the information seeking process.

Dedication

I dedicate this master thesis to my parents, and above all, my lovely brother. In the past years, I have watched my parents take care of both their children, sparing no effort. Even though my brother needed more attention on some occasions, my parents have always given us an equal amount of attention. This is something I wholeheartedly admire, and am thankful for.

My parents have struggled with the administrative workload matters such as a Personal Budget – also referred to as a PGB - bring along. After I met more parents who had a PGB, I knew they weren't the only ones, and that something had to be done. Therefore, I am very grateful my supervisors supported my ideas when I wanted to study this issue. After all, so many people deal with it every day. Of course, mapping information seeking behavior with regard to the PGB is only a start. However, I hope this thesis will form a stepping stone into an entire new research field; the Personal Budget. In order to provide people such as my brother with a bright future, with equal opportunities compared to every master student, lawyer, or baker, a lot of things still remain to be done.

This thesis does, therefore, not only contribute to the research gap in the literature. This thesis is about people who deserve more attention in this society. This thesis is about the future of an entire generation which sometimes tends to be ignored. This thesis is meant to open the discussion to make sure everyone gets its fair piece of our welfare society. I encourage you to read this thesis with this in mind, and wish you a pleasant read.

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1. Introduction

In this study, the process of information seeking will be studied. This will be done by analyzing the way in which parents of children in special education seek information regarding the Personal Budget – referred to as the “Persoonsgebonden Budget” in Dutch.

A Personal Budget – also referred to as a PGB - is a budget that is granted to an individual in order to allow them to hire their own caregivers, to buy aid devices or to realize services. If one is chronically ill, suffers from a disability or disease, a Personal Budget allows them to decide who comes to help them, when, and in what way (Per Saldo, N.D.).

In this study, the information seeking phases of parents with children who attend special education will be mapped. In researching this matter, the Personal Budget is used as a case. Researching this process among this target group is of great importance, as “parents of children with disabilities need satisfactory and more accessible information sources and services from libraries and other agencies” (Al-Daihani & Al-Ateeqi, 2015, page 131). By mapping the phases in which information is sought, the knowledge base regarding the information seeking behavior of this target group will be broadened. This knowledge may be able to aid municipalities and other (governmental) institutions to improve the information provision they provide – e.g., regarding the Personal Budget - towards parents of children who attend special education schools.

It is also of great importance to research this target group since many studies regarding information seeking are based upon professionals or consumers of tangible goods, such as cars (e.g. Blythe & Royle, 1993; Buyens, de Vos, & Schalk, 2005; Louis, 1980; Capon & Burke, 1980; Furse, Punj, & Stewart, 1984). Furthermore, the science of information is an research field in which information phenomena need to be examined in various settings (Bates, 1999). As this target group and the case of the Personal Budget is a setting which has not been researched before in information science, it is an addition to the current knowledge base. Finally, Warner et al. (1973) state that an individual without information “cannot seek effective help or correct abuses. He cannot benefit from the protection and services the government offers. He cannot get the most from his resources” (Warner, Murray, & Palmour, 1973, page 10). Therefore, it is of great importance to empower people in order to benefit from services and protection so they can be powerful in society.

In researching the information seeking process of the aforementioned target group, the question “How can the phases in which parents of children in special education seek information be characterized?” will be aimed to be answered. Firstly, the theoretical evidence that is related to this matter will be presented in the theoretical framework. From this

evidence, a research framework will be constructed. Secondly, the methods guiding the research will be presented. Thirdly, results of this study will be elaborated upon in chapter 4. This is done by means of the analysis of in-depth, face-to-face interviews which were conducted with 33 individual parents, or couples. By means of this analysis, the validity of theories on the information seeking processes identified in the theoretical framework, as found in this specific target group will be assessed. Finally, this research will conclude by means of a discussion, recommendations for future research and a conclusion, in which the research question will be answered.

2. Theoretical Framework

2.1. Information Needs

There are many different interpretations of the term “information” (e.g. Buckland, 1991, Byström & Järvelin, 1995, Case, 2002). Information, in this research, is defined as “something that modifies an individual’s knowledge structures or knowledge states” (Talja, 1996, page 67). In order to respond to information – something that modifies one’s knowledge structure, individuals have to develop information needs. These needs are recognitions that one’s knowledge is inadequate to satisfy one’s goal. Information seeking is a subsequent response to this need or to a gap in one’s knowledge; it is a conscious effort to acquire the missing information (Talja, 1996). This proposition is echoed by Itoga (1992), who states that information seeking behavior is often seen to be caused by information needs; when one finds oneself in a situation which imposes a problem, the individual is confronted with the need to gather additional information.

Within this study, the most important information needs are those in governmental information provision, as the Personal Budget is a governmental fund. Therefore, citizens applying for this budget are likely to have particular information needs which have to be met by the government to empower its citizens to apply for a Personal Budget. These needs will be elaborated upon in the coming paragraphs. Firstly, a general overview of the information needs in governmental information provision is presented. Secondly, in box 1, included after the general overview, additional information can be found encompassing information needs with regard to the Personal Budget in the context of governmental information needs.

As we live in an information society, information and communication fulfill an increasingly important role for the government. Therefore, information has become a full-fledged and crucial part of the policy instruments available to the government. Education has transformed into public communications management, or citizen relationship management,

making the “PR state” an actual reality (Erp, 2007). However, the theoretical framework concerning communication management is still at its starting point in governmental institutions. Communication theories which are available are mainly developed in a corporate context. Therefore, not all of these theories will be transferable to the public sector (Gelders, Bouckaert, & Ruler, 2007).

In the communication between the government and its citizens, several relationships have to be taken into account. Four communication patterns arise in four relationships; the relationship between the provider and the customer, the government-subject relationship, the voter and the politician and the decision-making and participation relationship. As a consumer of services and products of the government, the citizen is to be seen as a customer (Tops & Zouridis, 2000). When the citizen is a customer, the communication has to make the product or service accessible, understandable or easy for the citizen. It has to answer questions such as “How do I apply for this product?” and “Who do I have to contact for this service?” Citizens are approached by means of brochures, commercials, ads and other media in order to provide them with such information. In the same time, communication takes place during the consummation of the product or service, especially when it concerns a complicated product, such as taxes (Tops & Zouridis, 2000).

Municipalities will have more tasks and responsibilities from January 2015 onwards. These tasks and responsibilities are of great importance in the lives of vulnerable people in need of care. Municipalities face the challenge to provide everyone with the care they need in a better, faster and smarter way, while spending less money. An approach to tackle this challenge is to involve other organizations and institutions who exchange data to enable this process (Mohnen & Struijs, 2015). An example of such involvement, is the conduction of the “Exploration Information Provision Social Domain” (Verkenning Informatievoorziening Sociaal Domein – VISD – in Dutch) . This exploration is performed to acquire an insight on the information needs of citizens and professionals, and the minimum standards for information exchange. The exploration can be used to strengthen the information position of municipalities in both operational activities and the development of information regarding certain policies. Furthermore, this information is also important to professionals, service providers and information experts, who cooperate with municipalities (Mohnen & Struijs, 2015).

In the Exploration Information Provision Social Domain, three types of customers, needing certain types of care, are distinguished. The first group encompasses people living a ‘regular life’. This group of citizens does not need special care or support. The second group

of citizens identified in the exploration is those involved in a 'multi-problem situation'. These citizens receive multiple forms of intensive care at the same time, coming from multiple areas in the social domain.

The final group of citizens is the group addressed in this study. This group needs individual support as they use both lighter and heavier forms of care and aid. These services mainly encompass individual services such as the Act of Work and Support (Wet Werk en Bijstand in Dutch), care at home and various forms of youth care (which may be forced). These services mainly target the reintegration of individuals into the 'regular life' group, or to help individuals with a chronic disability to participate in the society as smooth as possible. Services to accomplish the latter include social work and individual services for individuals who are chronically ill (Kwaliteitsinstituut Nederlandse gemeenten, 2013). Since this group has a more specific need for care, individuals in this group also need more specific information. Examples of their information needs are questions concerning where they have to go, and what their rights and duties are. In line with these information needs, a need for contact or application arises. In this group, digital channels can contribute to a smooth service. These channels can be used to e.g. plan appointments with the municipality, or to find out whether one is or is not entitled to receive certain funds or services. The use of these channels also strengthens the self-sufficiency of the citizen, as they can find the answers to their questions themselves (Kwaliteitsinstituut Nederlandse gemeenten, 2013).

In box 1, additional information can be found encompassing information needs with regard to the Personal Budget in the context of governmental information needs.

When it comes to the relationship between the participants and the government in this research, a provider and customer relationship is in place. This is due to the fact that the participants receive a Personal Budget from the government. The main information given in this citizen-as-customer relationship encompasses service information, promotion information, and individual face-to-face communication concerning the consummation of the product or service (Tops & Zouridis, 2000). It can be said that the Personal Budget is an example of service information and individual face-to-face communication concerning the consummation of the product or service. This is due to the fact that the Personal Budget is a financial service from the government, in which face-to-face service is provided in e.g. a “kitchen table conversation”, during which the municipality visits the PGB-holder. Additionally, since the Personal Budget is currently subject to a discouragement policy (Koster, 2016), promotion does not take place any more.

Finally, as the Personal Budget is an individual service, and is aimed towards helping disabled individuals to participate in society in a smooth manner, this research focuses on the second group of citizens, which are in need of individual support.

Box 1, Additional information regarding governmental information needs and the Personal Budget

2.2. Information Seeking Models

Seeking information is a part of information behavior, which also encompasses the totality of other passive or unintentional behaviors, and purposive behaviors in which one does not seek information, but avoids it instead (Case, 2002). The seeking of information forms a subsequent reaction in which one responds to one’s information needs (Wilson, 1997).

2.2.1. External Search

In the model of Srinivasan and Ratchford (1991), search is defined as “the effort aimed at acquiring information from the external environment” (Srinivasan & Ratchford, 1991, page 235). Building upon this definition of an effort, Beatty and Smith (1987) define external search effort as “the degree of attention, perception and effort directed toward obtaining environmental data or information related to the specific purchase under consideration” (Beatty & Smith, 1987, page 85).

When one decides to search information, one involves oneself in a process of identifying where to seek information, and how to seek it (Savolainen, 2008). When one decides to seek information, an information horizon in which this can be done is present. An information horizon may encompass various information resources such as social networks, subject matter experts, information brokers, documents, information retrieval tools and observation and experimentation in the world (Sonnenwald, 1999).

Several models regarding information seeking have been constituted. An example of such a model is the five-stage model one from Cole (1999). He found that individuals went through a progression of awareness or consciousness of information as each stage of the information-seeking process was completed. Cole's findings are in line with the article of Bates (1989), who argued that the search process can be characterized as an evolving process. In this process, individuals search information "bit-at-a-time" by utilizing several techniques such as chaining and scanning.

In this study, four main models will be compared by means of a research framework. These models are the information seeking model of Ellis (1989), the six-stage model of Kuhlthau (1988), the basic components of the study of ELIS in the context of way of life (Savolainen, 1995), and the consumer information acquisition model (Wilson, 1997, simplified from Bettman, 1978). As the information seeking model of Ellis (1989) and the six-stage model of Kuhlthau (1988) present the general view on information seeking, and the other two of Savolainen (1998) and Wilson (1997) present more specific information seeking processes, encompassing everyday life information seeking and consumer information seeking, a broad overview of information seeking theories is discussed. Therefore, the research framework will thus be based on a stable base of theoretical evidence.

2.2.1.1. Theory on information seeking (1989)

Table 1 presents the overview of Ellis' theory on information seeking (1989), including the eight phases in which information is sought, according to Ellis. These phases are presented in the order maintained in the model of Ellis (1989), however, "the models do not attempt to define the interactions and interrelationships between the categories or the order in which they are carried out" (Ellis, Cox, & Hall, 1993, page 359). In this table, the definitions of the stages are extracted from the study of Blandford and Attfield (2010).

Table 1, The stages of Ellis' model of information seeking (1989), defined by Blandford and Attfield (2010).

Stage	Definition
Starting	The individual identifies sources of interest.
Chaining	The individual follows leads from an initial source.
Browsing	Documents or sources are scanned in order to find interesting information.
Differentiating	Sources are assessed and organized.
Monitoring	The individual stays up-to-date on an area of interest by seeking new developments in familiar sources.
Extracting	Information is extracted by identifying and using interesting material in certain sources.
Verifying	The individual checks the reliability and accuracy of the found information.
Ending	The individual performs concluding activities.

2.2.1.2. Six-stage Theory

Kuhlthau constituted an information seeking model in which six information seeking stages are incorporated (1988). During these stages, the individual goes through various affective, cognitive and physical experiences, according to Kuhlthau (1991), who studied this matter in a follow-up study. Firstly, the information seeking stages of Kuhlthau's theory (1988) are described in table 2.

Table 2, The six-stage theory of Kuhlthau (1988).

Stage	Definition
Initiation	The individual is confronted with the task to recognize one's need for information.
Selection	The individual identifies and selects the general topic which has to be investigated.
Exploration	One attempts to extend one's general understanding of the topic by exploring information regarding this matter.
Formulation	A focus is formed from the thus far encountered information in the searching process.
Collection	The information user begins the process of gathering the information that was encountered in the researched system which is related to the focused topic.
Presentation	the individual uses the findings or outcomes of the search.

When it comes to the affective, cognitive and physical experiences, various experiences can be encountered during each stage (Kuhlthau, 1991). Firstly, in the initiation stage, the individual recognizes the need for information as they become aware of a lack of understanding or knowledge. During this stage, feelings of apprehension and uncertainty are common (Kuhlthau, 1991). The thoughts which are common in this phase are general or vague, as the individual contemplates the problem at hand, tries to comprehend the task and relates the problem to their prior knowledge and experience. The actions in the initiation stage encompass the discussion of potential topics and approaches. The appropriate task according to the model of Kuhlthau (1991), is the recognition of the problem and one's task (Kuhlthau, 1991).

Subsequently, the selection phase takes place. During this phase, the uncertainty of the individual is replaced with optimism after the individual has identified the topic which has to

be researched, and the right approach to do this, leading to readiness to tackle the task. Therefore, the appropriate task in this phase is identification.

The phase of selection is followed by the exploration phase. In this phase, the individual experiences frequently increasing confusion, doubt and uncertainty. One investigates information on the general topic in order to extend one's understanding, while one's thoughts encompass orientating and being sufficiently informed on the topic, in order to form a personal point of view or a focus. The communication between the system and the user is awkward in this stage, as the individual is unable to express in a precise manner what information (s)he needs. The actions the individual undertakes include locating information regarding the general topic, reading in order to become informed, and relating novel information to prior knowledge. The search may be abandoned altogether in this stage, as new information rarely fits previous constructs smoothly, and information gathered from different sources may seem incompatible and inconsistent. This may discomfort and threaten the individual, causing one to experience a frustration with the system and personal inadequacy (Kuhlthau, 1991)

Formulation is the turning point in the information seeking process, where the individual experiences less feelings of uncertainty and an increase in confidence. In this stage, the focus from the encountered information needs to be formed. The thoughts involved in this stage encompass the identification and selection of ideas from the information, meant to form a focused perspective of the topic at hand. This focus in information seeking is comparable to the construction of a hypothesis. A focus may be formed in a sudden moment of personal insight, however, it is more likely to emerge gradually as the constructs become increasingly clear. In this phase, the individual's feelings commonly change, as they indicate an increased sense of confidence and clarity (Kuhlthau, 1991).

In the collection phase, the interaction between the individual and the information system functions in the most effective and efficient way. At this point in time, one gathers information related to the topic at interest. The thoughts of the individual are centered on the definition, extension and support of the focus. In this phase, one selects detailed information which is relevant to the focused perspective upon the topic, as general information on the topic at hand is no longer relevant after the formulation stage. When the individual has a clearer sense of direction, (s)he can specify the need for focused, relevant information to systems and to intermediaries, in order to facilitate a comprehensive search of all resources which are available. In this stage, one's confidence continues to increase, as uncertainty decreases as the interest in the project increases (Kuhlthau, 1991)

Finally, in the presentation phase, one feels relieved and experiences a sense of satisfaction if the search has succeeded, or disappointment if it has failed. In this phase, the search is completed and the individual prepares to present or use the findings. One's thoughts center on the culmination of the search with a personalized synthesis of the problem or topic. Actions encompass a summarizing search in which a decreasing relevance and an increasing redundancy are experienced in the encountered information (Kuhlthau, 1991).

2.2.1.3. Everyday life information seeking

Within information seeking behavior, various purposes can be identified. These purposes can mainly be divided in job-related information seeking and non-work information seeking, also referred to as citizen information seeking (Savolainen, 1995). In the latter, everyday life information seeking – hereafter referred to as ELIS – is an important element. This phenomenon can be defined as “the acquisition of various informational (both cognitive and expressive) elements which people employ to orient themselves in daily life or to solve problems not directly associated with the performance of occupational tasks” (Savolainen, 1995, p. 266-267). A theoretical framework from Savolainen (1995) encompassing ELIS is presented in figure 1.

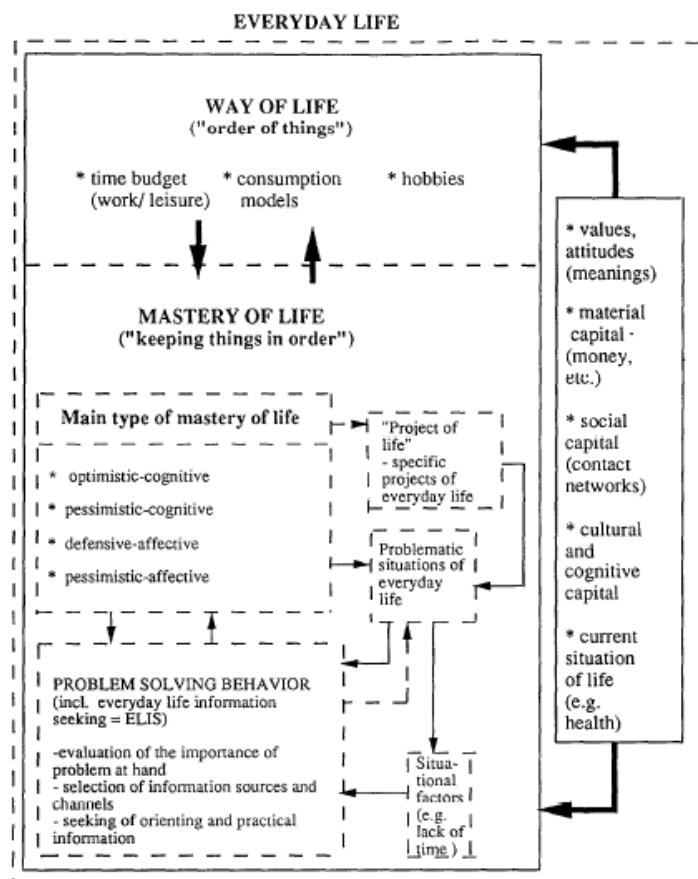


Figure 1, The basic components of the study of ELIS in the context of way of life, (Savolainen, 1995).

In this study, the captions in the bottom left corner, categorized under “problem solving behavior” will be incorporated as information seeking phases. These captions encompass the “evaluation of the problem at hand”, the “selection of information sources and channels” and “seeking of orienting and practical information”. In this final caption, seeking of orienting refers to the seeking of information regarding current events, and practical information refers to information which is sought to solve specific problems (Savolainen, 1995). Unfortunately, no in-depth descriptions of the other captions are provided in the paper. However, when it comes to the “selection of information sources and channels”, the English dictionary (2005) does provide additional information. Firstly, it states that a source is “a document (or organization) from which information is obtained”. Secondly, a channel is described as “a means of communication or access”. Therefore, it may be stated that the channel carries the information source to the receiver. In this paper, this description of this phase will be maintained. Finally, the “evaluation of the problem at hand” will be maintained as a self-explanatory activity, in which a problem can be defined as “something that is a source of trouble, or worry” (Merriam-Webster's Learner's Dictionary, 2016). In this matter, being confronted with new information, or a lack of knowledge will not be seen as a problem. A practical problem, which worries or troubles the participant, such as not being able to provide one’s child with the care it needs, will be regarded as a problem which may be evaluated.

2.2.1.4. Consumer information seeking

Consumer information seeking is an example of ELIS, as it involves non-work information seeking. A simplified model of Bettman (1978) incorporated in the study of Wilson (1997), addresses this matter. In this theory of consumer information acquisition, internal search – a search within one’s memory - and external search are distinguished. An overview of this structure, and the entire model, is provided in figure 2.

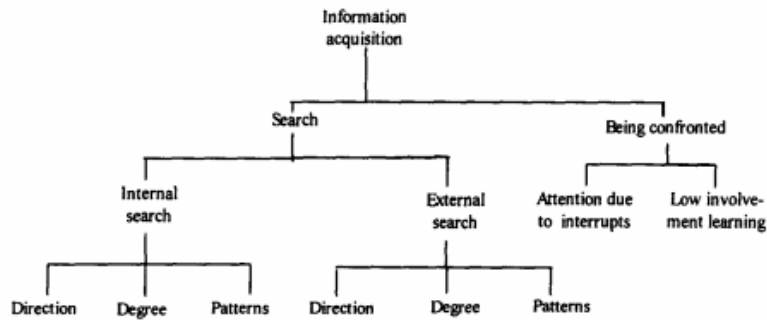


Fig. 4. Consumer information acquisition (simplified from Bettman, 1978).

Figure 2, Consumer information acquisition (Bettman, 1978, in Wilson, 1997).

As can be seen, in both internal and external search, three factors are presented. These factors are described in table 3.

Table 3, Factors within external and internal search in the consumer information acquisition model, Wilson (1997).

Factor	Definition
Direction	The pieces of information which are examined.
Degree	The amount of information which is sought.
Patterns	The organization of the information in the internal search, and the organization of search procedures in external search.

As opposed to external search, internal search will not be studied in this study. Therefore, it will not be elaborated upon. This also means that within the pattern factor, only the part of the description which addresses the organization of search procedures in the external search will be maintained. The other two factors are identical in both in- and external search. Therefore, they will be studied as presented in table 3, maintaining their entire definition.

“Being confronted” refers to passive attention of two kinds; true passive attention, i.e. low involvement learning, and attention due to interrupts, which occurs when one’s attention is attracted when a certain kind of existing behavior is interrupted (Wilson, 1997).

As direction, degree and pattern are stated to form factors within external search, discussed in this research, they are incorporated in the research framework. Furthermore, the importance of the “being confronted” element in information seeking will be analyzed as well.

2.3. Influential Factors

Several factors influence one's information needs, barriers and information seeking behavior (e.g. Belkin, 1990; Sonnenwald, 1999; Ingwersen, 1996; Pejtersen, 2004; Talja, 1996). In this study, amongst others, the theory of Savolainen (1995) is maintained. As this theory includes influential factors, the factors of this study will be maintained and studied in this research. A short overview of the most important influential factors upon the information seeking process is provided in table 4.

Table 4, Influential factors upon information behavior (Savolainen, 1995)

Influential Factors (Savolainen, 1995)				
Values, attitudes (meanings)	Material Capital (e.g. money)	Social Capital (contact network)	Cultural and Cognitive Capital	Current situation of life (e.g. health)

Of these influential factors, one's social and cognitive capital, and one's current situation of health are researched in this study. Therefore, these factors will be elaborated upon in this chapter.

Firstly, one's social capital influences one's information seeking behavior (Savolainen, 1995). Social networks shape human information behavior (Sonnenwald, 1999), as well as construct one's reality along with individuals themselves (Berger & Luckmann, 1966). Furthermore, "socialization, reference groups, norms, roles, formats, standards, communicative events, patterns of communication, and the like influence perceptions and interpretations" (Solomon, 1997, page 1111). Therefore, the social system plays an important role in the sense making process (Solomon, 1997). Additionally, social networks serve an important goal in providing particular information (Taylor, 1991, McKenzie, 2003), as well as help determine the available information resources in order to satisfy one's information need (Sonnenwald, 1999). This is echoed by the studies of Hersberger et al. (2000) and Williamson (1998), in which the importance of intimate and informal social networks is stressed. For example, as individuals engage in networks meant to address a shared focus or interest, potential access to other actors in the social networks is provided (Lin, 2001). Social networks may also impede information seeking (Sonnenwald, 1999), as its nodes seek to follow a normative way of life (Pettigrew, Fidel, & Bruce, 2001), which may not allow certain information behavior.

Secondly, one's cognitive capital also influences information seeking (Wilson, 1997). The influence of knowledge structures, intelligence, and education upon information seeking is echoed by various researchers (Pettigrew, Fidel & Bruce, 2001; Wilson, 1997; Vernon, 1983; Pezeshki-Rad & Zamani, 2005).

Finally, one's current situation of life influences one's information behavior. People in both mental and physical ill-health have been proven to rely on specific sources for information collection (Powell & Clarke, 2006, Chen, 2012). It has also been proven that parents of children with disabilities need information regarding three purposes; "to improve the management of the child, to help themselves cope emotionally and to be able to access benefits and services" (Pain, 1999, in Al-Daihani & Al-Ateeqi, 2015, page 132). This specific need for certain information may also influence the information seeking process.

2.4. Research Framework

The theories of Ellis (1989), Savolainen (1995), Kuhlthau (1988) and Wilson (1997) discussed in the previous sections will guide this study by means of a combined framework. In this framework, the concepts of these theories are combined in order to create a comprehensive overview of the factors and processes involved in information seeking. The overview of this model is presented in figure 3.

Consumer Information Acquisition (Wilson, 1997)
Direction, degree and pattern.

	A general model of information seeking behavior (Ellis, 1989)	Everyday life information seeking in the context of way of life (Savolainen, 1995)	Six-stage model (Kuhlthau, 1988)
1.			Initiation
2.	Start	Evaluation of the problem at hand	Selection
3.	Chaining		
4.	Browsing		Exploration
5.	Differentiating	Selection of information sources and channels	Formulation
6.	Monitoring		
7.	Extracting	Seeking of orienting and practical information	Collection
8.	Verifying		
9.	Ending		6.Presentation

Figure 3, Research framework of the study on information seeking with regard to the Personal Budget.

The degree, direction and pattern elements of the consumer information acquisition model of Wilson (1997) are included as contextual factors, as the amount of information, the examined information pieces, and the organization of search procedures may be in close relation with one's behavior within the phases of external search. In the middle part of the framework, the information seeking phases of Ellis (1989), Savolainen (1995) and Kuhlthau (1988), are presented.

In Ellis' model, the individual identifies sources of interest in the starting phase. In the first stage of Savolainen's theory (1995), the individual evaluates the importance of the problem at hand. Therefore, both theories start with the topic of interest and the problem, which are both starting points for information seeking. However, Ellis does not evaluate the importance of the problem, as he does not presume the information seeking process starts with a problem. Furthermore, in Ellis' model, the importance of the knowledge gap – which may

or may not be due to an experienced problem – is not evaluated. When it comes to the theory of Kuhlthau (1988), the information searching process in fact starts with the recognition of one's information need. Kuhlthau's vision corresponds with the one of Ellis, as they both do not stipulate whether the information is sought due to a problem or another reason.

In the chaining phase, the individual follows leads from an initial source. This phase is not present in neither Savolainen's nor Kuhlthau's theory. They both do not address the following of leads; Savolainen takes a giant leap towards the selection of information channels and sources. Kuhlthau immediately proceeds to the action where one attempts to extend one's general understanding of the information by exploring information on the matter at hand. This exploration phase is in line with the browsing phase in Ellis' theory, as both phases entail the scanning of documents, and exploring sources in order to find interesting information.

Additionally, the selection of information channels and sources as described in Savolainen's theory corresponds with the differentiating phase of Ellis, in which sources are assessed and organized. This is due to the fact that when sources are assessed and organized, they are selected as well.

The monitoring phase identified in Ellis' theory, is also skipped by the theories of Savolainen and Kuhlthau. In this phase, the individual stays up-to-date on an area of interest by seeking new developments in familiar sources. Both theories skip this phase in Ellis' theory, and reconnect with Ellis during the extraction phase. In this phase, the individual extracts information by identifying and using interesting material in certain sources. In the theory of Savolainen, a distinction is made between the information which is extracted from the source. Savolainen mentions two dimensions, which are referred to as the seeking of orienting and the practical information. The former encompasses information regarding current events, the latter the information sought to solve specific problems (Savolainen, 1995). These extraction and seeking of orienting and practical information phases correspond with the collection phase from Kuhlthau's theory, where the individual begins the process of gathering the information that was encountered in the researched system which is related to the focused topic. This is due to the fact that all three phases encompass the extraction, or collection of certain information from a source.

The verifying stage from Ellis' theory is not addressed by neither Savolainen nor Kuhlthau. In this phase, the individual checks the reliability and accuracy of the found information. However, Kuhlthau proceeds to the final stage of the external search, whereas Savolainen does not conclude his process. The final stage of Savolainen is the seeking of orienting and practical information. Only Ellis and Kuhlthau conclude their processes by

incorporating an ending and presentation phase. In the ending phase of Ellis the individual performs concluding activities. Kuhlthau concludes his searching process with the presentation phase, in which the individual uses the findings or outcomes of the search. Whether the use of these findings or outcome corresponds with the concluding activities mentioned in Ellis theory cannot be said, as Ellis does not elaborate on these concluding activities.

2.5. Aim of the research and research question

The research will aim to study the validity of the research framework among parents of children in special education. By means of in-depth interviews, it will be researched whether or not this target group is aware of, and goes through the information seeking phases identified in the research framework. In order to attain this aim, a research question will guide this proposition. This research question is;

RQ1: “How do parents of children in special education engage in information seeking phases when seeking information on the Personal Budget, and to what extent do these phases correspond with the information-seeking models proposed by Ellis (1989), Kuhlthau (1988), Savolainen (1995) and Wilson (1997)?”

3. Methods

In this chapter, the methods used to conduct this research are discussed. Firstly, the research design of the study is elaborated upon. Secondly, the procedure of the research is discussed, and thirdly, the data analysis is addressed. Finally, the methods regarding the participants are discussed. In this part of the methods chapter, the background information on the participants is also elaborated upon.

3.1. Research Design

In its essence, a task is a thing which people are trying to achieve and the activities or actions which specify how they may structure their achievement. At the most basic level, a task can be related to the lowest level of an information behavior, where one attempts to accomplish or is accomplishing certain tasks (Bartlett & Toms, 2005). Subsequently, task analysis is used to refer to the study of what a – team of – operators is required to undertake to achieve a system goal (Kirwan & Ainsworth, 1992)

Several techniques to conduct a task analysis are available. The technique which was used in this research is the Concepts, Processes, and Principles Gathering. In this type of analysis, semi-structured and multi-stage interviews are conducted, asking the individual to outline the performance sequence of all important subtasks in order to perform the larger task (Clark, Feldon, Merriënboer, Yates, & Early, 2008).

In line with the methods used in the Concepts, Processes, and Principles Gathering, in this research semi-structured, multi-staged interviews were also conducted. Therefore, this study was conducted in a qualitative way. A number of factors characterize qualitative research; it is case oriented, non-controlling, holistic, flexible, open, about processes, scientific, humanistic, inductive and diverse in methods (Fidel, 1993). Interviews were selected as the method of data-collection, as they provide better possibilities to conduct a thorough analysis of information seeking (Byström & Järvelin, 1995).

3.2. Procedure

The contents of the interviews were based upon the research framework. This was done in order to investigate the validity of this framework among the target group. The questions related to the different phases identified in information seeking, as well as to the possible factors that influenced information seeking. The exact content of the interviews in both English and Dutch can be found in Appendix C.

The in-depth, semi-structured, multi-staged interviews were conducted with 33 individual, or couples of parents of children attending special education schools. These parents were interviewed in a face-to-face setting, inside their own homes. Before the interviews were conducted, the participant was asked to sign an informed consent form, which can be found in Appendix D. Furthermore, the interviews were recorded while the researcher was conducting them.

3.3. Data Analysis

After the interviews were conducted, they were analyzed by the researcher. By using the audio records, the interviews were transcribed in order to subdivide the provided answers into phases such as monitoring, differentiating and presenting. After the researcher had transcribed and analyzed the outcomes of the interview, a second coder verified this analysis by analyzing ten per cent of the interviews, in order to see whether the findings from both the second coder and the researcher corresponded with each other. The outcome of this analysis is presented in the next paragraphs. Finally, conclusions were drawn by comparing the found results to the theoretical framework.

As previously stated, a second coder analyzed 10 per cent of the interviews of this research. In this analysis, the number of codes given by the researcher and the second coder, per code family was compared. An overview of this number of quotes is provided in a table, which can be found in Appendix E. From this table, the Cohen's kappa, showing the overall agreement between the first and the second coder, can be computed.

The number of observed agreements is 169, which is 92.86% of the observations. Additionally, the number of agreements which are expected by chance is 27.0, which is 14.82% of the total amount of observations. Therefore, the kappa is 0.916. On a 95% confidence interval from 0.872 to 0.960, the strength of the agreement can be considered to very good. However, these calculations only take exact matches between both coders into account. In order to assess how far apart both coders are, a weighted kappa should be calculated. In this case, this is a kappa of 0.908, which is considered to be very good as well.

This, however, may be due to the fact that the fragments to which one of the two researchers assigned no code, are left out of the calculation. The reason why these 'no codes' fragments were left out, was the fact that the researcher gave insufficient instructions to the second coder when it came to providing exact pieces of text, as opposed to entire interviews, to which the preferred codes should be linked. This led to an extensive amount of pieces to which no codes had been assigned, as the researcher and second coder coded different fragments on various occasions.

3.4. Participants

Parents who have children in special education, who have, or recently had a Personal Budget, constitute the target group of this study. These parents were asked to contribute to the research via various channels. Firstly, a part of the participants was called or e-mailed by the researcher personally, as they formed a part of her social network. Secondly, institutions such as day care companies, swimming schools, and special education schools were contacted. Through these institutions, other participants were gathered. Finally, the researcher used social media to find participants, by means of posts on e.g. Facebook pages.

In total, a group of 33 participants were found, and included in the research. In two interviews, a couple was included. Therefore, the total of participants which took part in the research is 35. Of these 35 participants, only one was between 30 and 34 years old. Four were between 35 and 40 years old, and eleven between 40 and 44 years old. Furthermore, twelve participants ranged between the ages of 45 and 49, six between 50 and 54, and finally, one participant was between 55 and 60 years old.

Not only the ages of the participants were included in the research; the researcher also asked for the age of the children for which the PGB was applied for. Eight participants stated to have children between the ages of four and eleven. The majority of twenty participants had children between twelve and seventeen years old, and seven participants had children between the ages of eighteen and twenty-one. In this matter, it must be taken into account that two participants had two children who received a Personal Budget.

Furthermore, the researcher also asked how many children the participants had in total. Here it was found that two participants had one child, and the majority of 16 participants had two children. Thirteen participants had three children, one had four children, and one participant did not answer the question.

When it comes to the levels of education of the participants, it was found that two participants had a VMBO degree. Two other participants stated they had finished the HAVO, and the majority of twenty participants had a MBO degree. Ten participants finished HBO, and one participant had an academic degree. This matter was discussed, as cognitive capital was stated to influence the information seeking process.

The researcher also asked the participants what their employment status was, as well as the employment status of their partners. The background information derived from this question is depicted in table 5.

Table 5, Employment status of participants and their partners.

	Participant	Partner*
Employed	25	21
Unemployed	3	1
Unknown	5	8

*Three participants were single parents, therefore, 30 partners are mentioned in this table

Of the thirty participants who had a partner, 29 stated they were married, and, or lived together with their partner in one home. Therefore, only one participant had a relationship, but did not live together with their partner.

Furthermore, the researcher also asked the participants to state the type of disability their child had. 30 participants stated their child is mentally disabled. Of these mentally disabled children, 10 also had a physical handicap. Only one participant stated their child only had a physical handicap.

When it comes to the health of the participants and their families, the majority of 24 participants stated that everyone in their family is healthy. In four situations, participants were

not healthy themselves, or had partners suffering from disease. In five interviews, this question was not answered. This question was also asked, due to the fact that health was also stated to be of influence on the information seeking process in chapter 2.4.

Furthermore, 14 participants stated they had (also) applied for a PGB individually. However, as this was not an official question, it is unknown how many participants did this as well, but did not mention this to the interviewer. 23 participants stated they had been helped by an official institution, such as MEE, and 13 participants stated they had been helped by a private institution to apply for a PGB. These numbers do not add up to a perfect 33, as various participants were e.g. helped by MEE during their first application, and performed the next ones individually, or with help from a private institution.

Finally, in this research, four individuals have transferred to Zorg in Natura (ZIN) after having had a Personal Budget. Examples of reasons for such a transfer are a higher budget in ZIN, less administrative activities, or because it was obligated by the municipality.

4. Results

4.1. Phases in information seeking

In the theoretical framework, various phases in information seeking were identified. In this section of the results, the practical occurrence of these phases in the interviews will be discussed. In doing so, the order of the phases as presented in figure 3 will be maintained.

In table 6, an overview of the results when it comes to the presence of the phases identified in the models of Ellis (1989), Savolainen (1995) and Kuhlthau (1988) is provided.

Table 6, Number of quotations related to a code and participants with relation to the phases identified in the research framework.

	A general model of information seeking behavior (Ellis, 1989) Including the {amount of quotes} and the #number of participants	Everyday life information seeking in the context of way of life (Savolainen, 1995) Including the {amount of quotes} and the #number of participants	Six-stage model (Kuhlthau, 1988) Including the {amount of quotes} and the #number of participants
1.			Initiation {47} #29
2.	Start {28} #24	Evaluation of the problem at hand {19} #15	Selection {47} #31
3.	Chaining {156} #33		
4.	Browsing {82} #33		Exploration {82} #33
5.	Differentiating {18} #11	Selection of information sources and channels {53} #29	Formulation {25} #30
6.	Monitoring {89} #33		
7.	Extracting {105} #33	Seeking of orienting {88} #31 Practical information {19} #11	Collection {103} #33
8.	Verifying {45} #22		
9.	Ending {0} #0		Presentation {54} #30

4.1.1. Initiation

Firstly, the initiation phase was mentioned on 47 occasions, by 29 participants. Therefore, all but four participants stated why they engaged in a searching process in order to find information. The reasons for seeking this information varied among different parents. One parent needed more care; “She already had an indication, however, it wasn’t high enough. She only had very little, only two dayparts per week.” Other parents applied for a PGB for a specific purpose, for example, to enable one’s child to go to a residential facility, or to form one’s own care teams. Two participants also engaged in their searching process, as they wanted to switch from a Zorg in Natura agreement to a PGB.

4.1.2. Start, selection and the evaluation of the problem at hand

24 participants mentioned they had gone through the “start” phase. However, in some interviews, this phase took place simultaneously to the browsing and exploration phases. This proposition is echoed by quotes such as “so, through school, one receives a lot of information,

or at least, the general information, and then I knew the possibility was there, and then I delved into it..”

Furthermore, 31 participants mentioned the selection phase in their description of their searching process. It was however found that, in practice, the starting and selection phases are not identical. Whereas during the starting phase, sources of interest which are related to a certain topic are identified, in the selection phase, this topic is selected. Therefore, before interesting sources can be identified in the starting phase, the subject has to select the topic which has to be investigated first. It was also found, that the selection phase often occurred simultaneously with the initiation phase; “Actually, through school, they advised to apply for a Personal Budget to learn him how to play.” This participant was thus confronted with the task to seek information, and the topic to be investigated at the same time.

On nineteen occasions, 15 participants stated to have evaluated the problem at hand. This problem was evaluated using different means, however, the majority used personal contact to do this. Less participants stated to have evaluated the problem at hand, compared to starting and selecting, as not all participants experienced their need for information as a “problem” which needed to be evaluated. As previously stated, in this study, a problem is “something that is a source of trouble, or worry” (Merriam-Webster's Learner's Dictionary, 2016). In this matter, a practical problem, which worries or troubles the participant, such as not being able to provide one's child with the care it needs, is regarded as a problem which may be evaluated. Therefore, the selection and evaluation of the problem at hand are only comparable when the participant experiences the situation as posing a practical problem to them.

Comparing the start, selection, and the evaluation of the problem at hand phases was mainly done by comparing the exact quotes which were coded by means of these phases. In some quotes, multiple phases were present. This does, however, not mean that these phases are identical to each other; they merely take place at the same point in time.

4.1.3. Chaining

156 mentions of the chaining phase were made, by all 33 participants. Therefore, of this research sample, everyone engaged in this information seeking phase. All 33 participants used personal contact in order to chain. Most of the time, this contact formed the start to a further investigation, which sometimes continued by using personal contact; “Someone told me, I should call – Employee -, caregiving broker of the municipality. And I called her, and she knew exactly, how to tell me, I need this from school, why she's in special education, why we want she'll get a PGB..” However, sometimes, this personal chaining also results in

looking for information on the internet; “I heard that isn’t the case anymore, that they only get it after they finish school, so go to work. Well, you can’t find that information on the internet... At least, I couldn’t find it, that those regulations have changed.” Of course, not only personal contact was used to chain initially. Some participants also used the internet to chain on some occasions; “Well, I believe Per Saldo has a few references when you’ve got questions about, you can use links, just all sorts of links that you can proceed on the internet. To get you information, so well, that actually goes automatically.”

4.1.4. Browsing and exploration

82 mentions of all 33 participants who engaged in browsing were found in this research. Therefore, not a single participant skipped this phase. It is interesting, that 26 participants mentioned having used people, and personal contact as a source for browsing. This emphasizes the importance of personal contact in this phase; “We actually asked the caregiver, and, they told us how we had to apply, so we didn’t use a computer, or such things, to gather information, we only consulted the caregiver.” Of course, not all participants solely used personal contact to browse. This was also done by googling; “It’s just, well, just shopping on the internet. I’m just looking, searching some key phrases, PGB, application, and, well.” Finally, 33 participants mentioned to have gone through the exploration phase in identical quotes.

4.1.5. Selection of information sources and channels, differentiating and formulating

On 53 occasions, 29 participants mentioned the phase in which they selected information sources and channels. Within these fragments, 24 mentions were made by parents who stated to select official institutions as their information sources. However, this was closely followed up by a number of 23 mentions of parents who selected other institutions as information sources. Examples of these information sources are private institutions, schools, hospitals, or other care institutions.

On 37 occasions, parents mentioned having selected parents, or other social contacts as information sources, and on eight occasions, participants did not clearly stipulate their sources. Examples of quotes in which participants did not stipulate the sources they used are “and then you start gathering information, and applying for it, and it says everything, about what is allowed, and possible, and mandatory, and, well.” As previously stated in the theoretical framework, in this research, the channel carries the information source to the

receiver. Therefore, when it comes to social contacts, personal contact may be seen as a channel, and social contact as a source. An overview of these data is provided in table 7.

Table 7, Selection of information sources by the researched group.

Selected information sources and channels	Amount of mentions
Social contact	37
Official institutions	24
Other institutions (e.g. private institutions, schools, hospitals, or other care institutions)	23
Unknown	8

* As multiple sources were mentioned in some fragments, the total amount of sources mentioned is higher than the number of fragments.

Concerning the timing of this phase in the information seeking process, the selection of information sources and channels does not only occur simultaneously to the differentiating and formulating phases. It was found that channels and sources were selected during the start, selection, chaining, browsing and exploration phases as well. As previously stated, in cases throughout these phases, participants for example selected people as their information sources and channels.

The differentiating phase, in which sources are assessed and organized (Blandford & Attfield, 2010) was linked to fragments 18 times, occurring in 11 interviews. Of these eighteen mentions, in the majority of fourteen mentions, participants had solely used the internet while differentiating. Furthermore, personal contact and internet were also combined, and in a mere case, personal contact was also used as only mean to differentiate. Furthermore, one participant did not state what means they used while differentiating. An overview of these results is provided in table 8.

Table 8, Means of differentiating.

Means of differentiating	Amount of mentions*
Internet	14
Personal contact and internet	3
Personal contact	2
Unknown	1

*Some participants mentioned multiple means of differentiating in one fragment. Therefore, more mentions than fragments are found in this table.

Formulation as a phase was mentioned 25 times, by 20 participants. This is a higher number compared to the differentiating phase. This was due to the fact that the phases were not comparable to each other in practice. It was found that differentiation may take place right before or right after formulation, or not at all. This is echoed by a parent who states that “I started looking on the internet, where I had to go, and I think, through MEE, I had my first contact.” In this fragment, it is clear that differentiation took place during “And then I started looking on the internet, where I had to go”, and formulation took place immediately after this quest on the internet, before the participant actively engaged in contacting MEE. After all, the participant firstly had to assess and organize all sources he found on the internet, before being able to formulate the focus in which he decided that he had to contact MEE.

4.1.6. Monitoring

On 89 occasions, all participants stated to monitor the current situation regarding the PGB. Therefore, it can be stated that monitoring is a phase the target group actively engages in while seeking information. One participant emphasizes the importance of monitoring; “Well, you would be informed before the 1st of January 2016, which has been postponed for a year, but I think I’m going to look into it for myself. Because otherwise it’ll take a long time, I think.”

4.1.7. Collection, extraction, seeking of orienting and practical information

All participants stated to have engaged in the collection phase in their information seeking process. 23 participants stated to have used personal contact only, as a means to collect this information. Therefore, the “researched system”, which is described in the definition of this phase of Kuhlthau’s model (1988), in this research, mostly is a person. Two participants formed an exception with regard to this matter, as they only used the internet to collect information. An overview of these specific means, and a few others mentioned by the participants to collect information is provided in table 9. These means differ from those used to differentiate. This is due to the fact that the means to differentiate were used to assess and organize sources, whereas the means used in the collection phase are used to collect information, from a source such as personal contact. Therefore, where one may have used the internet to assess and organize sources – differentiating -, collection may subsequently have taken place by means of, for example, personal contact.

Table 9, Means of collection.

Means of collection	Number of participants
Personal contact	23
Personal contact and the internet	7
Internet	2
Letters from official institutions	1

All participants stated in 105 statements, equal to the statements related to the collection phase, they had extracted information. To this phase, the findings presented in table 9 also apply.

Furthermore, Savolainen (1995) distinguished two types of information which could be extracted, namely seeking of orienting and practical information. The former encompasses information regarding current events, the latter the information sought to solve specific problems. Regarding these types of information, it was found that they do not correspond with specific phases, such as collection and extraction. As practical information and seeking of orienting are types of information, they can be sought during all phases, and extracted or collected at the end of the information seeking process.

On 19 occasions, 11 participants stated to have sought practical information. For example, one participant stated “Well, I think – employee – trained our son, due to the nutrition and all. That he couldn’t eat. And that’s how she came to us, because, I think that is MEE.” On 88 occasions, 31 participants sought to orient. A parent who sought to orient stated that “we were attending a meeting, and you talk about, what does your son have, what does your child have, and one of the parents said, do you have a TOG? I was like, what’s a TOG? Compensation, something. Yes, compensation disabled child. And we applied for that, and we applied for PGB instantly as well, we went to MEE, like, listen, this is going on with our son. Can we get such a PGB?”

Finally, the numbers of participants who sought to orient and gathered practical information do not add up to 33, as some participants experienced both in their process towards their applications for a Personal Budget.

4.1.8. Verifying

22 participants stated they had gone through the verifying phase. Especially in cases where the individual did not trust the information source, verifying was an important phase. This is emphasized by quotes such as “Well, Facebook, you know, I think Facebook is, they come up with so much nonsense, I don’t assume, well, a sort of trust thing or so.” and “well, I think the source, like, an article in the Telegraaf, I’m like, well, who knows, I’m not taking it too seriously.” When the participant trusts the given source, information is not verified. This is echoed by quotes such as “Well, MEE was an official institution, so, there was nothing wrong with that.”

Some participants also used a single source to verify whether they had found the right information; “Well, that Per Saldo, I can remember that, that was the support, to seek information from there.” Other participants emphasized that they used personal contact to verify their information; “Well, with other people, like, how do you solve this problem”, “when I find something on the internet, I’ll go to a person to check it.” and “Well, I’ll ask the caregiver whether it’s right or not.”

4.1.9. Presentation and ending

On 54 occasions, 30 participants mentioned they had gone through the presentation phase. In this phase “the individual uses the findings or outcomes of the search”. In many cases, presentation was related to the point at which the participant applied for the PGB, after having finished their search; “I think we asked other parents how you had to apply for that, at that time. We had to do that with the CIZ, and I think I had a look at the website, and, just applied for it, for the early bird, for that early intervention.” However, not all participants applied for the PGB in the presentation phase. One participant stated: “She came here, she took all my data, her documentation from the school, papers from the hospital, all those, psychological, diagnostics. Everything they did in school, and why she had to attend special education, all those papers, she took them, and she had it fixed in no time. Well, she knows where to go, and..” Therefore, the presentation phase for some participants, who were helped by either a private or an official institution in order to apply, encompassed contacting these institutions. In doing so, they used the findings or outcomes of the search in order to outsource the application itself.

Ending was not present as a phase, as it is described as the phase in which “the individual performs concluding activities”. However, as applying for, and maintaining a PGB is not a process which is concluded, this phase is not applicable to this specific searching

process. This is due to the fact that having a PGB is an ongoing information seeking process, which is only concluded by the ending of one's use of a Personal Budget.

4.2. Direction, degree and pattern

In the research framework, the direction, degree and pattern factors of Wilson (1997) were included, besides the phases discussed in the previous section. In the following paragraphs, the presence of these factors as a contextual factor with regard to the information seeking process will be discussed.

Firstly, the direction factor, encompassing the pieces of information which are examined, can be related to the information seeking process as a contextual factor. This is due to the fact that participants stated to prefer certain pieces of information. This, therefore, may influence the information seeking process with regard to the sources which are used in each phase. An overview of the preferences of sources or channels expressed by the participants is presented in table 10.

Table 10, Preferences of sources or channels

Type of preferred source or channel**	Number of participants*	Quotes
Personal contact	13	"I have a better understanding of things, when the mentor explains them."
Did not prefer certain media	12	"It's a newsletter that includes all information, and changes, it's the newspaper, the news, it's everything together, "
Physical mail, or written text	9	"You hear a lot, verbally, from people of the Zorgkantoor and the SVB as well, but, I persist until I have it on paper"
E-mail and, or internet	7	"You can simplify your searching question yourself, instead of, receiving whole files of papers you have to read"
General information	2	"General news is more plausible.. Because, a, a foundation can shape a lot to its own preference."
Letters as opposed to e-mail, or physical booklets	1	"I think letters are better, compared to e-mail, or a booklet."

*Some participants stated to prefer multiple sources in their statements, therefore, overlap is present. ** On three occasions, the question was not asked to the participants. Therefore, not everyone provided the researcher with an answer.

Thirteen participants stated to prefer personal contact when gathering information, or remaining up-to-date. One participant emphasized this contact was important to her, as she wasn't that familiar with digital means to collect information. Another important occasion at which people stated to prefer personal contact, is when things are unclear, or the provided information is not experienced as being sufficient. Therefore, it can be stated that personal contact is also very important as an addition to other information.

Furthermore, 12 participants stated they did not prefer certain media when gathering information, or staying up-to-date. However, one participant did state that she expected different sources to publish information in ways which suited the type of information and the organization in a better way.

Seven participants stated to prefer e-mails and, or internet to stay up-to-date. One participant preferred the internet, because e-mails could be documented in an easier manner compared to physical mail. Finally, two participants also emphasized their use of social media, such as Facebook and Twitter, to gather their information through the internet.

Nine participants stated to prefer physical mail, or written text to remain up-to-date. In this category, two participants stated to have no preference for either e-mail or physical mail, as long as information was provided in a written form.

Secondly, when it comes to the pattern factor of Wilson (1997) three phenomena were found amongst the participants. Firstly, the majority of the participants stated they purposefully sought information after confrontation. In addition, another group stated they purposefully sought information – without being confronted first. Finally, the smallest number of participants stated they ran into new information. An overview of these results is presented in table 11.

Table 11, Engagement in information seeking.

Type of behavior	Number of participants
Purposefully seeking information after* confrontation	25
Purposefully seeking information*	19
Running into new information*	6

*Overlap is discussed below.

An overlap in these matters can be seen, as some participants expressed multiple information seeking behaviors in one interview. Therefore, a participant may run into new information, as well as purposefully seek information after confrontation, during different occasions.

Furthermore, it can be said that in most cases, being confronted is not always experienced parallel to the search factor, as presented in the consumer information acquisition model (Bettman, 1978 in Wilson, 1997). It may also form a step prior to the search, as twenty-five participants stated to purposefully seek information after confrontation. However, when the subject the participant is confronted with is not deemed interesting enough to engage in purposeful information seeking, this step is not undertaken. Therefore, the search step does not always follow when an individual is confronted.

By means of these results, it can be stated that the participants are aware of the pattern they seek information in, in different information seeking phases presented in the research framework. Therefore, the pattern factor forms a contextual factor with regard to the information seeking process of parents of children who attend special education.

Finally, the degree factor of Wilson (1997) was also found to form a part of the information seeking process. In table 12, it can be seen that participants are aware of the amount of information they seek during the monitoring phase.

Table 12, Amount, or type of information gathered while monitoring.

Amount, or type of information gathered while monitoring	Number of participants
Seek less information while monitoring	23
Seek an equal amount of information while monitoring	6
Seek more information while monitoring	2
Unknown*	4

*4 participants did not provide the researcher with a clear answer.

Four participants stated to seek different information while monitoring. All four participants stated here, that the information they sought in the earlier phases was more general, compared to the more specific information searches in the current monitoring phase. Therefore, degree plays a role as a contextual factor during the information seeking process, when it comes to the amount of information which is gathered by the participants.

4.3. Reviewed research framework

In order to include the findings presented in last two sections, a reviewed research framework including these matters is presented in figure 4.

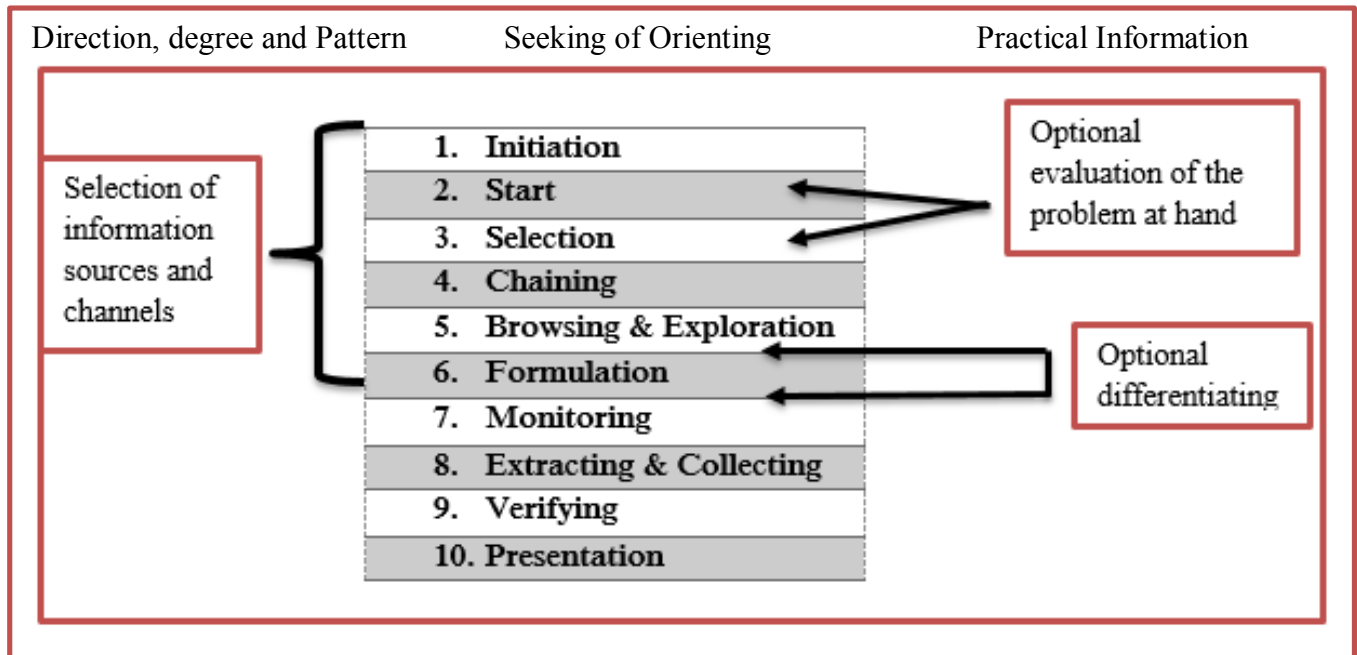


Figure 4, reviewed research framework including direction, degree and pattern as contextual factors.

In this research framework, three contextual factors are presented, besides the phases in the middle. Firstly, the direction, degree and pattern factors encompass the pieces of information which are examined, the amount of information which is sought, and the organization of the information in the external search. Secondly, seeking of orienting and practical information encompass the type of information is sought. The former relates to the information regarding current events, and the latter to the information which is sought to solve specific problems. These matters have been included as contextual factors, as they describe the type of information which is sought during all phases, instead of the collection and extraction phases only. In summary, these contextual factors firstly describe how the information is sought and examined, and secondly, which type of information is sought, throughout all phases.

5. Discussion

In the reviewed research framework presented in chapter 4.3, it was firstly found, that the contextual factors of Wilson (1997) indeed influence the information seeking process of the target group. Secondly, it was found that the seeking of orienting and practical information factors of Savolainen (1995) also form contextual factors, instead of a phase which is comparable to the collection and extraction phases. This is due to the fact that they encompass types of information which can be gathered throughout all phases, instead of being phases themselves. Thirdly, it was found that parents indeed engage in the information seeking phases identified by Ellis (1989), Savolainen (1995) and Kuhlthau (1988). In the research, no other phase that was not mentioned by these researchers was identified. Therefore, the presence of the phases identified in the literature does correspond with the presence of these phases in the information seeking process of this target group. Additionally, the initiation, chaining, monitoring and verifying phases are only mentioned in one of the four theories in this research. However, the participants actively engage in all of these phases, and they should therefore not be disregarded in the information seeking process. However, when it comes to verifying, it should be stated that 21 participants stated that they, at least sometimes, did not verify information on some occasions. This matter may be related to the fact that participants trust certain institutions, or sources, and do not feel the need to verify these sources.

The process of information seeking was found not to be as static and defined, as presented in the research framework in the phases of Savolainen (1995) and Kuhlthau (1988). Regarding the theory of Ellis (1989), it was already stated that the phases were not subject to a static, pre-set order (Ellis, Cox, & Hall, 1993).

Firstly, individuals may or may not engage in certain phases, as can be seen in evaluation of the problem at hand. A phase which is not engaged in at all, is the ending phase of Ellis (1989). This is due to the fact that the search for information regarding the Personal Budget, is not concluded after the PGB is applied for; it is a constant process. This possibility of not engaging in a phase was not stipulated in the model of Ellis (1989). However, Godbold (2006) did address this phenomenon in his information seeking study. Here, it is stated that individuals indeed may not engage in the next step in the information seeking process. However, when this step is not undertaken, the search, according to this model, is abandoned. This is not the case with the ending phase, as the individual subsequently engages in presentation. Abandoning the search entirely may not always be an option in this target group, regarding the topic of a Personal Budget. When one's child is in immediate need of care,

abandoning the search process would not be beneficial for the situation for both the child and its family. This is in contrast with the purchase of a simple, tangible good, as in most cases, the stakes are lower for the individual and, or its family in these cases. Therefore, the exact matter of not engaging in another phase, but concluding the searching process, is not addressed in any other studies.

Furthermore, individuals may also go back and forth between phases. When it comes to the phases of the model of Ellis (1989) this was already accounted for in the theory (Ellis, Cox, & Hall, 1993). When it comes to the theory of Kuhlthau (1988), these findings were echoed by the study of Shah and González-Ibáñez (2010). In this study, it was found that individuals went back and forth between the exploration, formulation and collection phases when trying new search queries, collecting relevant information and exploring various sources. Therefore, this study is in line with the findings in this research.

The selection of information sources and channels does not only take place during the formulation and differentiating phases. Therefore, it has been stretched over the first six phases of the reviewed research framework. Additionally, as not all participants experienced their need for a PGB as a practical problem - “something that is a source of trouble, or worry” (Merriam-Webster's Learner's Dictionary, 2016) - which needed to be solved, the evaluation of the problem at hand is included as an optional phase. Differentiating is also included as an optional phase, as it may take place before or after the formulation phase, or not at all. This may be due to the fact, that participants were more occupied with finding the information they needed, than assessing or organizing the information sources they found.

Within the direction factor, and throughout the phases, it was also found that personal contact is of great importance, as it is also stipulated as the most preferred information source, next to its manifold use in practice, e.g. during the collection phase. This was mostly due to the fact that participants experienced the provision of information through personal contact as the way through which the clearest information was provided. When receiving information in this manner, the information is tailored to the participant, and the full amount of information needed can be received in a quick manner. These findings are echoed by various studies. Firstly, in the study of Hertzum and Pejtersen (2000), it was found that “engineers get most of their information from colleagues and internal reports”. Rosenberg (1967) also concluded that visiting a knowledgeable person who may be able to help, ranked third in the top eight of information-gathering methods used in problem solving among industrial personnel. Additionally, the importance of a social network when seeking information is emphasized by Cross, Rice and Parker (2001), who researched the influence of social context upon

information seeking and the receipt of information benefits. However, personal contact may even be more important in this research, as parents mostly thrive on mutual trust regarding the topic, as they are all in the PGB-information seeking process together. Due to, e.g. distrust towards official institutions, personal contact, especially between parents, formed an important factor in the information seeking process.

Furthermore, when it comes to information seeking behavior, it was found that, in disagreement with Wilson's theory (1997) most participants purposefully sought information after confrontation. The only research in which the findings in this study related to this matter were echoed, was research related to information seeking regarding disease. In the study of Johnson (2003), it was found that patients who were confronted with the symptoms of cancer, or the disease itself, subsequently searched for information regarding this matter.

5.1. Limitations

This research was merely conducted among a specific group of people, who had a very valid reason for applying for a Personal Budget. When the research would have been conducted among a group of 33 people, who simply had a PGB, the outcomes may have provided the researcher with another view of the information seeking process. As a PGB can be applied for in a broad amount of cases – which may be less urgent - by a broad population of people, the information seeking process might have come out completely different. When “people who have, or are responsible for a Personal Budget” would have been the research group, the need for a PGB, in some cases, may be lower, which may e.g. inhibit an active information seeking process.

As the interviews were conducted in people's homes, during some occasions, distracting situations took place, e.g. when children entered the home during the interview, or the participant had to answer the phone. This, on some occasions, may have reduced the spontaneity of the answers provided by the participants. These interruptions in the interview cause the individual to be distracted from the interview for a short amount of time, which may have caused distracted, or incoherent answers from the participant, as they were not fully engaged in the interview any more.

Furthermore, participants did not describe their entire searching process in phases, as was expected they would do when the researcher opened the interview with the first question regarding information seeking. However, when the researcher asked questions regarding monitoring, or verifying information, the participants often did elaborate on these matters, and stated to indeed monitor or verify information. Therefore, it can be stated that the participants are not that consciously involved in identifying their information seeking phases in general,

however, they do, most of the time, engage in these phases. In this research, this may however not be expected of the specific target group, however, it may have inhibited to the point, and clear answers, which could have provided the research with other results.

As some participants recently had a Personal Budget, as they transferred to Zorg in Natura, they may have not been completely up-to-date regarding the current PGB situation. As matters change in a quick pace at the moment, the most recent developments may have missed in their argumentation when they stipulated certain experiences.

Finally, when it comes to the reliability of this research, the calculation of the Cohen's kappa forms a limitation as well. As the researcher did not provide the second coder with sufficient instructions to code ten per cent of the interviews, a lot of fragments to which no code was assigned were present. In the calculation of the Kappa, these fragments were left out. However, this provides the study with a kappa that is not completely reflective of its reliability.

6. Recommendations for future research

6.1. Recommendations for future information seeking research

The amount and type of information which is sought in different information seeking phases has never been researched before. In this exploratory research, it was found that most participants sought less information in the monitoring phase compared to the other phases. However, this is a mere starting point for future research when it comes to the type and amount of information gathered in this phase, or other phases.

The possibility of not engaging in an information seeking phase, but continuing the information seeking process should be studied as well. Now, only studies stating one abandons the information seeking process when one does not engage in another phase are present. In order to find the reasons for not engaging in e.g. the 'ending' phase, but engaging in the presentation phase instead, more research should be conducted. This research should also explore other areas besides the Personal Budget, in order to see whether other processes also skip this phase to engage in presenting their findings. The possibility of skipping other phases, such as differentiating, to subsequently continue the information seeking process should also be researched, possibly in other contexts.

Finally, the relation between whether or not one verifies information, and trusting information sources should be studied. In this research, some leads were found in which participants stated not to verify information as they trusted the information source. However, more research should be conducted regarding this matter.

6.2. Recommendations for future PGB or other governmental funds research

Firstly, this research should also be conducted among a general group of people who have, or are responsible for a Personal Budget. By doing this, a broad perspective of the information provision, and the information seeking process of this - more general - group can be mapped. As a PGB can be applied for in a broad amount of cases – which may be less urgent - by a broad population of people, the information seeking process may differ from this research. Not only people who have a Personal Budget should be included in future research. Other stakeholders, such as employees of municipalities, caregivers, and employees of institutions such as the SVB should be researched. When their perceptions of information seeking processes are aligned with those of the group they are providing information to, the information provision regarding the Personal Budget may improve.

Secondly, the relation between health, academic degree and information seeking should be researched among this target group as well. In this research, data were gathered regarding the academic degrees and the health of the participants, and their families. However, to enable comprehensive results regarding this matter, additional research, including cross referencing, should be done. Such research may broaden the knowledge base regarding the information seeking behavior of specific individuals in this target group, as e.g. unhealthy individuals, or individuals with a lower academic degree may seek information in a different pattern compared to healthy individuals with a higher academic degree.

Thirdly, more topics related to governmental information seeking should be explored. At this moment, consumption related information seeking, and information seeking related to the Personal Budget have been mapped. However, a large spectrum of possibilities still remains to be researched. Topics which still need to be researched are e.g. other governmental provisions, such as rental funds, care funds, and welfare. One would expect a different information seeking procedure regarding these matters, as topics such as rental funds have no relation to care. Therefore, in this matter, no other party – such as a caregiver – has to be involved in the process. As one can apply for a rental fund on an individual base, and the money is directly meant for the person him or herself, involving other parties in the information seeking process may be a less frequently used method.

As this research focused on the information seeking phases of parents of children who attend special education, their information needs, barriers and internal search have not been discussed. However, these topics would need to be researched in future studies. By identifying the information needs and barriers of this specific research group in a comprehensive manner, the information provision could be improved from its core.

7. Conclusion

In this exploratory study, a reviewed research framework is constructed with regard to information seeking related to the Personal Budget. This framework is the first framework to address non-professional information seeking behavior with regard to a ‘product’ such as a Personal Budget, which is not effectively ‘consumed’ such as a holiday, or a vacuum cleaner. This contrasts this study against e.g. the one of Zoontjes (2015), in which the information seeking behavior of professionals was studied.

The reviewed model presented in this study provides an answer to the research question; “How do parents of children in special education engage in information seeking phases when seeking information on the Personal Budget, and to what extent do these phases correspond with the information-seeking models proposed by Ellis (1989), Kuhlthau (1988), Savolainen (1995) and Wilson (1997)?” In this model, it is shown that participants may go back and forth between phases, and may not engage in them at all. Furthermore, the selection of sources and channels takes place during the first six phases of the information seeking process, and the evaluation of the problem and differentiating phases have been included as optional phases. Finally, direction, degree, pattern, seeking of orienting and practical information form contextual factors to the information seeking phases.

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Appendix A: Information on the Personal Budget

A Personal Budget is a budget that is granted to an individual in order to allow them to hire their own caregivers, to buy aid devices or to realize services. If one is chronically ill, suffers from a disability or disease, a Personal Budget allows them to decide who comes to help them, when, and in what way (Per Saldo, N.D.). In this research, the information seeking process of parents of children who attended special education was evaluated. In doing so, the Personal Budget served as a case. The organizational construct of the Personal Budget was changed on the 1st of January 2015, in order to reduce the high costs of long-term care in the Netherlands. This change, among other things, entailed the transfer of the responsibility of the Personal Budget from a national to a municipal level (NU.nl, 2014).

The base of the renewed Personal Budget has been split into three categories, replacing the old base, the Exceptional Medical Expenses Act – Algemene Wet Bijzondere Ziektekosten in Dutch-. Firstly, Personal Budgets given to individuals who are in need of intensive, long-term care on a 24/7 basis are categorized under the Long-Term Care Act – Wet langdurige zorg in Dutch -. Secondly, individuals who are in need of individual care, group care – such as activities during the day -, short-term stay, household help, aid devices and services, receive their Personal Budget through the Social Support Act – Wet Maatschappelijke Ondersteuning in Dutch -. Thirdly, the Personal Budget secured in the Youth Act provides children below the age of 18 in need of personal care – such as help in bodycare -, individual or group care and short-term stay with financial means to receive this care (Per Saldo, N.D.). Finally, health insurance companies provide a group of individuals with specific needs with a Personal Budget as well. This type of budget is given to those who are in need of personal care and caretaking or intensive childcare (Per Saldo, N.D.). In the proposed research, the information seeking process towards the Personal Budget secured in both the Long Term Care Act the Youth Act was researched.

Appendix B: Management Summary in Dutch

In dit onderzoek wordt informatiezoekgedrag van ouders met kinderen op het speciaal onderwijs bestudeerd. Hierbij dient de zoektocht naar informatie wat betreft het Persoonsgebonden Budget als casus. Op deze manier kan het informatiezoekgedrag van deze doelgroep in kaart worden gebracht, zodat informatievoorzieningen (bijvoorbeeld die wat betreft het Persoonsgebonden Budget) mogelijk verbeterd kunnen worden.

Binnen de studie wordt getracht de volgende algemene onderzoeksvraag te beantwoorden: “Hoe kunnen de fases waarin ouders van kinderen op het speciaal onderwijs informatie zoeken worden beschreven?” Deze vraag wordt beantwoord door het afnemen van persoonlijke, uitgebreide interviews tussen de onderzoeker en 33 ouders van kinderen op het speciaal onderwijs. Hierbij dient een onderzoekskader, gebaseerd op vier theorieën binnen informatiezoekgedrag, als basis. Met behulp van dit kader zal worden bestudeerd of de theoretische fases in informatiezoekgedrag eveneens voorkomen in de zoektocht naar informatie wat betreft het Persoonsgebonden Budget binnen de beoogde doelgroep.

Appendix C: Interview questions

1. English:

Background information

1. What is the age of the child you applied for a Personal Budget for?
2. What is your age?
3. Can you describe the situation at home?
 - a. *Marital Status*
 - b. *Amount of children*
 - c. *Environmental factors (Jobs or unemployed, circumstances related to other family members, such as parents, etc.)*
4. What is the highest educational degree you have?
5. Which disability/disabilities does your child have?
6. Is everyone in your family completely healthy?
7. When did you apply for a Personal Budget?

Information seeking

External Search

8. How do you look for information regarding the application for a Personal Budget?
 - a. If this question does not automatically generate answers: How do you generally look for information? Can you describe how you went about collecting information in your most recent information search?

Optional (ask when not mentioned in 1):

9. *What conditions or other events led you to the right way to seek information?*
10. *Did you need certain materials to search for information?*
11. *Differentiating: How do you select your information sources and channels? Do you assess whether they are valid or not? What affects these choices?*

Continuing regular questions:

12. Monitoring: Do you follow up on the information you gathered by means of various media? Do you stay up to date?
 - a. Direction: Do you have a preference for certain media when you want to stay up to date regarding the Personal Budget?
 - b. Degree: Do you look for as much information to remain up to date compared to the phase in which you still have to find information about the entire theme?
 - c. Pattern: How do you organize your search for new information? Do you intentionally look for information or do you 'run into it'?

13. Verifying: Do you ever doubt the reliability and accuracy of the information you find regarding the PGB? How do you verify that the information you find is reliable and accurate?
14. Ending: Did you feel you were able to apply for a Personal Budget when you concluded your search process?
15. When do you think you have found enough information? Do you sometimes also settle for less than you wanted? Why?
16. Do you think one is in need of certain standards, such as speed, accuracy or other personal abilities in order to find the information needed to apply for a Personal Budget?

Closing

17. Is there anything we haven't discussed yet, that may be of importance?

2. Dutch

Achtergrondinformatie

1. Hoe oud is het kind waarvoor u een Persoonsgebonden Budget aan heeft gevraagd?
2. Hoe oud bent u?
3. Kunt u uw thuissituatie beschrijven?
 - a. *Burgerlijke staat (getrouwd, ongetrouwd, samenwonend)*
 - b. *Aantal kinderen*
 - c. *Omgevingsfactoren (werk of werkeloos, omstandigheden gerelateerd aan andere familieleden, zoals ouders, etc.)*
4. Wat is de hoogste opleiding die u voltooid heeft?
5. Welke beperkingen heeft uw kind?
6. Is iedereen in uw gezin volledig gezond?
7. Wanneer heeft u een Persoonsgebonden Budget aangevraagd?

Informatiezoekgedrag

Extern zoekgedrag

1. Hoe zoekt u informatie wat betreft het aanvragen van een Persoonsgebonden Budget?

- a. *Als deze vraag niet automatisch een antwoord genereert: Hoe zoekt u in het algemeen naar informatie? Kunt u beschrijven hoe u informatie verzamelde in uw meest recente zoektocht naar informatie?*

Optioneel (vragen als dit niet vernoemd is bij vraag 1):

2. *Welke omstandigheden of andere gebeurtenissen hebben u naar de juiste manier om informatie te zoeken geleid?*
3. *Had u bepaalde materialen nodig om informatie te kunnen zoeken?*
4. *Differentiating: Hoe zoekt u informatie bronnen en kanalen uit? Beoordeelt u of ze deugen of niet? Wat beïnvloedt deze keuzes?*

Verder met de reguliere vragen:

5. *Monitoring:* Gaat u de informatie die u verzameld hebt bij verschillende media na? Blijft u op de hoogte?
 - a. *Direction:* Heeft u een voorkeur voor bepaalde media wanneer u op de hoogte wil blijven wat betreft het Persoonsgebonden Budget?
 - b. *Degree:* Zoekt u evenveel informatie wanneer u op de hoogte wil blijven vergeleken met het stadium waarin u nog informatie over het hele onderwerp moet vinden?
 - c. *Pattern:* Hoe organiseert u uw zoektocht naar nieuwe informatie? Zoekt u doelbewust naar informatie of komt u het tegen?
6. *Verifying:* Betwijfelt u de betrouwbaarheid en nauwkeurigheid van de informatie die u vindt over het Persoonsgebonden Budget? Hoe verifieert u dat de informatie die u vindt betrouwbaar en nauwkeurig is?
7. Wanneer had u het idee dat u genoeg informatie gevonden had? Neemt u ook wel eens genoegen met minder dan u eigenlijk had gewild? Waarom?
8. *Ending:* Voelde u zich in staat tot het aanvragen van een Persoonsgebonden Budget toen u uw zoekproces afrondde?
9. Denkt u dat iemand bepaalde standaarden, zoals snelheid, accuraatheid of andere persoonlijke vaardigheden nodig heeft om de benodigde informatie te vinden om een Persoonsgebonden Budget aan te vragen?

Afsluiting

10. Is er iets waar we het nog niet over hebben gehad, maar wat wel van belang is?

Appendix D: Informed Consent Form (Dutch)

Toestemmingsverklaringformulier (informed consent)

Titel onderzoek: Information seeking and the Personal Budget 2015 – A qualitative study

Verantwoordelijke onderzoeker: Karin Egelmeer

In te vullen door de deelnemer

Ik verklaar op een voor mij duidelijke wijze te zijn ingelicht over de aard, methode, doel en [indien aanwezig] de risico's en belasting van het onderzoek. Ik weet dat de gegevens en resultaten van het onderzoek alleen anoniem en vertrouwelijk aan derden bekend gemaakt zullen worden. Mijn vragen zijn naar tevredenheid beantwoord.

[indien van toepassing] Ik begrijp dat film-, foto, en videomateriaal of bewerking daarvan uitsluitend voor analyse en/of wetenschappelijke presentaties zal worden gebruikt.

Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik behoud me daarbij het recht voor om op elk moment zonder opgave van redenen mijn deelname aan dit onderzoek te beëindigen.

Naam deelnemer:

Datum: Handtekening deelnemer:

In te vullen door de uitvoerende onderzoeker

Ik heb een mondelinge en schriftelijke toelichting gegeven op het onderzoek. Ik zal resterende vragen over het onderzoek naar vermogen beantwoorden. De deelnemer zal van een eventuele voortijdige beëindiging van deelname aan dit onderzoek geen nadelige gevolgen ondervinden.

Naam onderzoeker:

Datum: Handtekening onderzoeker:

Appendix E: Inter coder reliability over nine code families.

Inter coder reliability over the nine code families.

	Background information	Materials	Negative Experiences	Neutral Experiences	Phases	Positive Experiences	Sources	Abilities	Information Seeking Behavior		Total
Coder 1											
Coder 2											
Background information	42	0	0	0	0	0	0	0	0	0	42
Materials	0	18	0	0	0	0	1	0	0	0	19
Negative Experiences	0	0	25	1	0	0	0	0	0	1	27
Neutral Experiences	0	0	1	9	0	0	1	1	0	0	12
Phases	0	0	0	0	23	0	0	0	0	0	23
Positive Experiences	0	0	0	1	0	6	0	0	0	0	7
Sources	2	0	0	0	0	0	29	0	0	1	32
Abilities	0	0	0	0	0	0	0	6	0	0	6
Information Seeking Behavior	1	0	0	0	1	0	1	0	11	0	14
											182
Total	45	18	26	11	24	6	32	7	14	183	

*In this table, the fragments where no codes were given are left out.