The Information Needs Matrix: A Navigational Guide for Refugee Integration

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Abstract

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This paper presents an information needs matrix as a navigation guide for refugees and host societies to support integration. It is an outcome from an information behaviour investigation into refugee integration, conducted through interviews with asylum seekers and refugees. A sense-making methodology was used as a framework to examine the experiences of refugees, focusing on the situations and information gaps encountered during integration. The study identified information needs on housing, financial, legal and social support, mobility, health, education, employment and state benefits. A unique feature of the proposed matrix is the order dependency of the uncovered needs by our investigation. The findings were validated with observation data collected while undertaking a role at the Scottish Refugee Council. The matrix can be used to guide society's provisions for integration, assess levels of individual integration and inform the design of information support for refugees.

Keywords: Information needs, refugee integration, information behaviour, sense-making, asylum seeker, refused asylum seeker, refugees.

1. Introduction

Refugee integration is of global concern with over 80% of the forced displaced living below the poverty line in host countries. Presently, there are over 65 million forcibly displaced persons reported by UNHCR (United Nations High Commissioner for Refugees), an 8% rise from 2014, a 50% increase in five years and an increase of more than 75% in the last two decades (UNHCR, 2017). These figures are unprecedented and are at an all-time high.

Fundamentally, refuge seeking is a legal right. At the same time, however, refugee integration is a political matter, and the support for integration varies across countries. Integration discourse covers a very broad spectrum that includes economic, social, political, legal, institutional and human components; as a result, there is no generally agreed definition of integration: it is seen as "individualised, contested and contextual" (Castles et al., 2002).

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Refugee integration as a concept is founded on the UN 1951 Refugee Convention, but host countries have the freedom to appropriate and tailor the convention to their national systems and concerns (Castles et al., 2002; Martin, 2015). The appropriation of the UN convention in this manner gives rise to complex processes that are difficult to administer by the host society, and complicated to follow for refugees. As a result, refugees can find themselves unable to navigate integration systems sufficiently for sustenance in their new society, thus ending up marginalized (Oduntan, 2016).

In this paper, an information need matrix for refugee integration is presented. This derives from an information behaviour investigation into how refugees traverse integration processes and their interactions with information during this integration process. The study identified person-centred information needs and sources for navigating refugee integration processes and systems. These needs can be used to guide the provisions for integration, measure levels of individual integration and inform the design of information services for refugees and asylum seekers. We will describe the background to this study in section 2, and previous studies in section 3. We then show how we created this matrix, describing its main properties, how it can be used to support refugee integration processes and services, and its theoretical implications.

2. Background

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Integration is the process of being incorporated into a host society. Integration implies a two-way adjustment, with both the individual and host society making adaptations, but is typically conceptualized as the individual's process of incorporation into a new society. Refugee integration is a complex and gradual process with legal, economic, social and cultural dimensions, and imposes considerable demands on both the individual and the receiving society (UNHCR, 2018). Refugee integration is the attempt to deal with the psychological and sociological consequences of forced displacement and is underpinned by the UN 1951 Refugee Convention, which states that "a refugee is someone who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or owing to such fear, is unwilling to avail himself of the protection of that country" (UNHCR, 2010; UNHCR, 2015).

The key phrase in the UN convention that enables appropriation by host countries is "persecution reasons," which refers to the reasons someone may be considered for protection. Persecution can occur for various reasons, which are defined by the host country, and the scope of persecutions for each host country keeps expanding and evolving with time to adapt to new humanitarian disasters. Thus, numerous complicated processes and systems surround the appropriation of the convention.

In the United Kingdom, the location of this study, the UN convention operates within a system of asylum, where refugees arrive under various conditions. Refugees may have been granted refugee status from their country of origin before arrival (e.g. whilst in refugee camps), or a refugee may arrive as an asylum seeker – a person who has made a claim to be considered for refugee status, and whose claim is still being considered, until granted the right to be classified as a refugee (SRC, 2013). However, the UK retains the right to refuse an asylum claim, thereby creating the status of refused asylum seeker whose needs nonetheless have to be met by the UK government (Oduntan and Ruthyen, 2017).

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The national immigration authority - the Home Office - governs the processes surrounding protection seeking and integration. They operate an "Indicators of Integration" framework which uses housing, health, education and employment as markers and means to measure integration (Ager and Strang, 2004, 2008). However, the actual delivery of service to those seeking protection is through numerous agencies which include refugee charities, non-governmental organizations such as the British Red Cross, community organizations, the voluntary sector, local and national government services (Oduntan, 2017).

The asylum systems in the UK include varied levels of access to provisions including support, benefits, work entitlements and rights to remain. This creates a myriad of processes and systems for refugees to navigate in order to be integrated. Refugees and asylum seekers are expected to successfully achieve integration over time with these processes and systems. However, integration studies have described these processes and systems as cumbersome, noting that there is little or no information to aid their navigation (Oduntan, 2018). In particular, they have highlighted the devastating consequences on emotional health and other aspects of personal integration (Mulvey, 2009), and that refugees experience levels of poverty and disadvantage similar to or worse than other marginalised groups (Mulvey, 2015).

While many have written on refugee integration and proposed ways to progress integration (Craig, 2015), refugee integration remains complicated (UNHCR, 2017). An information vacuum for both migrants and host societies on navigating unfamiliar processes and systems has long since been highlighted (Robinson, 1998). Kofman et al. (2007) pointed out that the lack of information effectively prevented access to provisions. Hek (2005) observed a lack of knowledge and accessible information across agencies on refugees' arrival and immigration status in the country.

More recently, the Scottish Refugee Council directly expressed the need for personcentred integration systems in their recommendations from their research into asylum accommodation (SRC, 2014). Martzoukou and Burnett's (2018) information literacy study reiterates this in their observation that information provisions to Syrian refugees in Scotland require a more structured process that acknowledges personalized information needs tailored to the different stages of the integration process. The information studies field has indeed responded to refugees' need for information and has detailed their information needs. However, no existing research has found a relationship *between* information needs. Cibangu (2013) observed the tendency of information studies to focus on only information rather than on the phenomena surrounding the studied; while Lloyd (2017) pointed out that information studies in the context of forced migration are not covered at the level of analytical depth that is expected from information studies research. Finding relationships between information needs for refugee integration could add depth and expand the scope of benefits that can be derived from an information behaviour perspective, to provide operational benefits, in terms of better integration services, in addition to informational benefits. This relationship is the main focus of this paper.

2.1 Research Objective

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We are interested in how those seeking refuge navigate these integration systems to achieve integration and how the systems may be better designed to ease this process of integration. This paper addresses the question of how to identify the relevant information needs and the relationships between them that would enable successful navigation of the integration systems.

3. Previous Studies

Information behaviour studies identify information needs and sources in context to produce person-centred outcomes (Bates, 2010). For migration, information studies can identify the information needs for facing the many challenges of adjusting to a new country, and can produce understanding that may alleviate marginalization. However, such studies are particularly daunting, as the challenges of access to participants and their disparate contextual factors are encountered. This is further complicated by the differing terminologies used for these groups in host countries.

In particular, there is a thin line between information studies of the *general migrant* and the *forced displaced*, and the differing policies and terminologies across countries make it difficult to distinguish the two types. As a result, there is more literature on general migrants whilst refugee specific studies are emerging at a slower rate. In this paper, the terms are taken literally and we divide the information studies of migration literature into *refugee studies*, where the term 'refugee' is used in the studies, and *general migrant studies* for those where any other type of term is used for migrants.

Caidi et al. (2010) summed up the information needs themes across the general migrant literature as including needs with respect to language, employment, connections in the community, housing, health, workplace safety, legal issues,

education, recreation, transportation and banking. Caidi et al. (2008) grouped similar information needs by stages of immigrant's settlement – pre-migration, immediate, intermediate, and long-term. Khoir et al. (2015) defined four categories of information needs for newcomers and longer established Asian immigrants along similar lines: personal, general, official and full participation.

The set of refugee specific information studies includes Fisher et al.'s (2016) findings on the information needs, relating to education and employment, of Syrian refugee youth in a refugee camp. Likewise, Mansour (2018) found the information needs of Syrian refugees displaced to Egypt included housing, employment and education information. This was consistent with Lloyd and Wilkinson (2017) who discussed information literacy practices of refugee youth around employment, education, faith and community information needs. Also, Shankar et al.'s (2016) information needs of refugee students revolved around everyday life, including employment and social connections. Akullo and Obong's (2017) information needs of female refugees in Uganda revolved around health and finances.

Furthermore, Fisher (2018); Kaufman (2018); Diaz-Andrade and Doolin (2018) and Kaufman (2018) elaborated on refugees' information needs and technology use. Dekker et al. (2018) highlighted refugees' social media information needs while Varheim (2014); Szabolcs (2018); and Barckow and Pierce (2017) enumerated refugees information needs in the library context. Consistently, refugees' information needs revolve around everyday life information for living in the society. However, the understanding of the forced displaced information needs is still insufficient (Bowdoin et al., 2017).

In the United Kingdom, refugee information studies are relatively scarce compared to other geographical locations. The most recent studies include the findings of Martzoukou and Burnett (2018) on the information needs of new Syrians in Scotland, focusing on the themes of information provision, English language and health and domestic issues; and Elmore (2017), who described information sharing across people, objects and space in an information ground (English for Speakers of Other Languages – ESOL classes).

These studies have identified information needs; however, the information needs are set within specific confined instances. In that, the studies have isolated participants, either from others in the process, or from surrounding contextual factors. For instance, Martzoukou and Burnett (2018) focused on information needs of New Syrians in Scotland; and Shankar et al.'s (2016) focused on the information needs of refugee students. These studies have investigated specific information needs areas, and thus have only provided informational benefits. However, the implication of these findings could be maximized, if the information needs were related. This would expand the scope of benefits, beyond informational, to operational benefits for the design of person-centred systems and processes.

Dervin (2005) stated that demographics alone may not be enough for general understanding of information needs and cautioned that the user should not be investigated independent of the context in which they exist. Oduntan and Ruthven (2017) highlighted this as they indicated that the information needs for refugee integration were affected by both biological and institutional conditions, which included persecution reasons and the arrival route into the host society.

They described persecution reasons as the conditions to be granted refugee status according to the 1951 UN convention and identified six categories in their study population including war and safety amongst others. The arrival route concerned how the refugee had arrived into the country and four routes were defined. In addition, they found that status affected integration where status was determined by the immigration authority – the asylum seeker, refugee and refused asylum seeker (Oduntan and Ruthven, 2017).

A focus on institutional dimensions and diversified demographics in the identification of information needs can expand the scope of our understanding of information needs. Therefore, information behaviour investigations that contextually and demographically explore the navigation of complex refugee integration processes are required. The outcome of such a study will reveal person-centred information needs that can be acted upon by the host society and enable the design of less complicated integration processes for easier navigation by those seeking refuge.

4. Research design

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The study adopted an information behaviour situational approach founded on sense-making methodology. The research data were collected by interviews and observations, such that the observation data validated interview findings. The sense-making approach enabled the interviews and their analysis to focus on the contextual experiences of participants within the social settings during their integration in which their information needs occurred. This allowed a deeper comparison between participants and, as a result, it was possible to determine commonalities and differences to reveal contextual information needs and relationships between these information needs during refugee integration. Such findings are immediately useful for practitioners to create systems to answer these needs.

Methodologically, sense-making studies focus on human experiences in such a way that a new kind of generalizable finding can emerge, one that honours diversity while at the same time addressing human universals (Dervin, 2003a). The strength of sense-making as a method for studying refugee integration lies in its focus on movement, change and the forces facilitating or constraining this movement (Dervin, 2003a). The assumption is that the experiences and constructions are tied to specific times, places, perspectives and human conditions (Dervin, 2003b).

In sense-making, a situation-gap-outcome metaphor is used to focus on the processes and the flow of events in human movement across time and space (Dervin, 2003a). The sense-making metaphors were used to examine refugees' experiences situationally; the information gaps tied to specific times, places, and human conditions during their navigation were elicited – hence the discovery of related information needs, as their experiences were examined in relation to the integration systems and processes.

The main research data were from direct interviews with refugees to discover the flow of events, while accessing host society provisions and observation data from a service provider, Scottish Refuge Council, validated findings from interviews. The choice of methods was informed by attendance at and participation in numerous migration related events and seminars during the period of research. The events proved to be sites of multifaceted additional insights, which could not have been obtained solely through a review of the literature. The research received ethical approval from the University of Strathclyde, Department of Computer and Information Sciences Ethics Committee.

4.1 Interview Guide

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The interview was of a semi-structured format, conducted in a four-stage process comprising introduction, opening questions, core in-depth questions and closing questions (Oduntan, 2018). The main data for analysis came from the opening and core in-depth questions, whilst the introduction and closing stages were for interviewee familiarization (Appendix A). This followed Arthur and Nazroo's (2003) recommendation for planning semi-structured interviews combined with the understanding acquired from the migration events previously highlighted. Thus, the interview questions were broadly constructed around the persons and situations on their integration journey such that there was a series of questions per topic to ensure information needs were not alienated from background experiences. The categories of questions comprised more than one question that helped understand the integration experiences from different angles. This was supported with probes to encourage a substantive conversation around the experiences rather than having participants provide list-like answers to the questions. The complete interview guide and detailed process is in Appendix A.

Opening questions. This category gathered background facts to contextualise the rest of the interview. These were introductory questions specifically aimed at discussing their refugee journey or story. This narrative introduction was designed to give participants confidence and gain their trust as core topics of integration were introduced. An instance of introductory question is shown below.

Question: Please tell me about your journey? Probes: Why did you choose this destination?

> What thoughts do you have about your journey? How did your journey prepare you for this place? Was this place what you hoped it would be?

Core in-depth questions: This category gathered data on the specific themes of interest. Questions in this category concerned the sense-making journey during integration, using the sense making metaphors – situations, gaps, and bridges that collected contextual data on conditions, information gaps, time and place.

Describe your current situation? What did/do you wish you had information about? When were the times you did not have information?

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Do you feel there is something you don't know now? At what point did you feel in need of some information? When was a time something was missing? When were the moments and times you wanted to know something - what was it?

Overall, the questions were formulated with the intent of capturing a range of information gaps that could be encountered on a journey in an unfamiliar society, with a focus on where refugees were coming from, what they were struggling with and where they were going. In addition, the interview guide was designed to avoid questions that were too complex, too long, were leading or misleading and avoid the use of technical and difficult terms.

The interview guide was tested on international students, since international students move to other countries to study and have to navigate unfamiliar processes and systems. The goal of testing the questions on international students was to check the robustness of the guide towards collecting appropriate "user" and "context" data for investigating information gaps in situations during migration. The data collected revealed the contextual information needs and situations encountered by international students.

The students had no problems understanding the questions and it was anticipated that refugees' answers to these questions would provide answers that address the understanding sought by the study. The findings from the first few interviews were used as a further validation of the interview questions as the refugees had no problems with understanding the questions, and the account of their experiences provided appropriate "user" and "context" information. This revealed the contextual information needs required during the journey, on arrival and in their continuous living in the host country.

4.2 Interview Population

Participant recruitment was through the distribution of fliers in various places, such as community centers, ESOL classes, integration networks, religious centers, service providers, and through word of mouth, friends and colleagues. It was also ensured that not all participants came from a single service provider, to prevent service provider bias in the research data. Numerous recruitment avenues were possible because Glasgow is a major dispersal city for the United Kingdom. Dispersal is the way that the United Kingdom maintains economic balance by distributing protection-seeking populations across the country so that no single area will be overburdened with the obligation of supporting them.

Length	Number of participants
Less than a year	4
2-5 years	10
6-10 years	2
Above 10 years	4

Table 1: Length Distribution

The interview population comprised of twenty persons recruited through diversity sampling, such that participants were from different origins and at different stages in the asylum system. Participants had lived between one month and fifteen years in the country, at the time of data collection between July 2016 and July 2017. Table 1 shows the population distribution by length of period in the country. This diversity is further described by demographic and contextual attributes in section 4.2.1 and 4.2.2.

4.2.1 Demographic attributes

Demographics attributes are biological and geographical characteristics of the individual. Table 2 shows the population comprised of eleven female and nine male participants, including two minors (below the age of 18) and individuals who were part of families. The participants' age ranged between fifteen and forty-eight, with ten educated to primary school level and ten educated to graduate level.

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Age	No of Participants	Male	Female
< 20	2	1	1
21-30	8	4	4
31-40	7	3	4
41-48	3	1	2

Table 2: Age and Gender Distribution

The population geography spanned fourteen countries which included the top countries in the United Kingdom Home Office list of nationalities applying for asylum such as Iran, Iraq, Pakistan, Eritrea, Afghanistan and Syria (Home Office, 2016). There were other countries in the population such as Sudan, Somali, Congo Kinshasa that have had previously held top spots in the Home Office list. Other countries include Ethiopia, Uganda, Ghana and Malaysia.

4.2.2 Contextual Attributes

Contextual attributes refer to context specific characteristics of the phenomena. The term 'refuge-seeker' is coined here to unify the contextual attributes in terms of the persons navigating integration processes and systems. Each status has different rights known to those within the asylum system as illustrated by the following quote from one of our participants:

"The home office told me I have a right and the right depends on my status, so until refugee then I can have a right. The Red Cross said I will get more right when I have status" **2-month asylum seeker**

Firstly, there are three categories of persons navigating the UK asylum system. Table 3 shows the population distribution by their statuses. The refugee and asylum seeker statuses are directly consistent with the UN convention. The refugee has been granted protection while the asylum seeker has made an application and is awaiting decision. However, the refused asylum seeker is a legal status that arises from the UK appropriation of the UN convention. Although, the refused asylum seekers are denied asylum, they are legally allowed to remain in the country and are included in integration provisions and systems (Oduntan and Ruthven 2017). They are legally distinct from illegal immigrants.

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Status	Number of participants
Refused asylum seeker	10
Asylum seeker	5
Refugee	5

Table 3: Status Distribution

Secondly, the keyword in the UN convention is "persecution", a term whose definition changes at various points and cannot be singly defined. In this study population, six reasons were identified; Table 4 shows the population distribution by the persecution reasons. Generally, humanitarian disasters, including human conflict and naturally occurring hazards like earthquakes etc., are the main reasons for seeking protection in other countries and in this study population 8 of our interviewees were seeking asylum due to war.

Persecution reasons	Number of participant
Business persecution	3
Political persecution	2
Religious persecution	3
Sexual persecution	1
Safety	3
War	8

Table 4: Persecution Reasons Distribution

However, there can be other humanitarian grounds. For instance, in this study population, business persecution included the family of a murder witness, political persecution included threatened political activists in opposition to ruling parties in the country of origin. The religious persecution included those belonging to a particular kind of practice within a religion. The sexual persecution included people whose life was threatened for their sexual orientation while safety was common to in-country

applicants (Table 5) who claimed their life would be in danger if they went back to their home country (Oduntan, 2018).

Finally, we consider the arrival route, which concerned the means of arrival into the country. Four categories were defined; Table 5 shows the population distribution by the arrival route. Road travel included those refuge-seekers who arrived through the Mediterranean Sea and traveled by road through countries to the United Kingdom. The port of entry route included those that travelled by air into the host country and applied for asylum at the airport.

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Route	Number of participants
Road travel	7
Port of entry	5
In-country	5
Humanitarian/family Reunion	3

Table 5: Arrival Routes Distribution

Individuals numbered in the in-country route category are those that have been in the country for other reasons and cannot go back to their home countries for fear of persecution. Those of the humanitarian/family reunion route are the refuge-seekers that have been granted protection status from their home countries, either as a result of host countries recruiting refugees from camps or other places, or for the purpose of family reunion, inviting their family to join the refuge-seeker after granting of refugee status.

4.3 Data Analysis

The data analysis was done through an iterative process of thematic coding. The focus of the analysis was on the commonalities and diversities in constructions and descriptions of the refugees' lived experiences, tied to specific times, places, perspectives and human conditions. This enabled the emergence of person-centred information needs, relationships and sources for integrating into a new society. The process of circling out themes was an iterative phase of coding to describe everything that was occurring and changing over time in the research data. Although the data analysis was in numerous iterations, the processes can be classified into two phases.

Preliminary analysis: This was the initial analysis during the data collection that started with the first interview, through to the completion of all interviews. The part of the interviews analysed at this phase were the responses to the opening questions. The analysis was such that responses to the questions in the introductory section of each interview were analysed and coded for distinct themes. The outcome was the contextual attributes, which were combined with demographics in the principal analysis phase.

Excerpt 1: The experiences of a <u>refugee</u>

"Researcher: Where did you go from your country?

Participant: I went to <u>Sudan</u>, from <u>Sudan to France</u> and from <u>France</u> <u>I come to UK</u>. I came <u>by plane</u>. <u>By plane</u> to France. It was when I got to France that I decided to come here – UK.

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"Researcher: When you got to France, how did you know about coming to the UK?

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Participant: They collect about \$500 dollar. The driver was not aware, just the agent that was working. The truck come to a big compound, it is not exactly the border but is not far away from the border. The driver shouted and open the door, so everybody get down from the truck. We walked out of the compound and were walking then we saw a police station and we went straight to the police station and we inform them of who we are, then they put me somewhere like detention. After one night they move to another place, I think Bedford, after Bedford maybe like four to five days they brought me straight to Glasgow."

The data from the opening questions stage of the interview showed similar journeys for refused asylum seekers, asylum seekers and refugees from different countries, and with different persecution reasons. For instance, in the excerpt above, the refuge-seeker from Sudan had journeyed to the host country through plane and truck (which fall under the port of entry and road travel arrival routes respectively) and now has refugee status. In other cases, such a refuge-seeker may still be an asylum seeker or a refused asylum seeker, with different needs, thereby highlighting the contextual attributes as a basis for further analysis and identification of information needs.

Principal analysis: This was the main analysis upon completion of the data collection. The principal analysis was a complex procedure that involved numerous cases and units of analysis from the refugees' experiences of navigating integration systems. Specifically, the part of the interviews analysed at this phase were the responses to the core questions presented in Appendix A. This revolved around the highlighted contextual conditions, such that institutional processes in refugee integration were first unraveled, and then information needs were singled out from the commonalities and differences in refugees' constructions of their experiences. Below is a sample of data analysed at this stage:

Excerpt 2: The experiences of a <u>refused asylum seeker</u> with a <u>family</u> "Researcher: What other thing did you not know for integration?

Participant: It is <u>important that I know what I need to do</u>. On the other hand, if you don't <u>know the right you might have problem</u>. For example, most of the <u>immigrant family have problems with leaving the kids alone in the house</u>, in our country that is ok but here it is not. I had an appointment for my operation for my wife at the dentist in the city centre, so I take my little boy with me and I leave my 2 kids at home. Someone phone the police that two kids in the house and then phone me, why you leave the children at home and I have appointment card for operation

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and the doctor say don't bring children with you. I don't have relative here and my neighbour don't support me, they told me I broken the law.

Because I am a professional, I read something about the Scottish law and I said but you are inside my flat that is against the law. They said no and said section 5 but I said it is the Scots Law section 4, but it says you must have warrant from the court to enter anybody house. They said but we are officers, ok you are officers but you can't open the door and go in. I challenge him with the law and he grab my hand and threw me in the room and said don't speak like this that I will have problem if you continue to say that.

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Can anybody go through anyone home without warrant? I get home and see you with my kids, I think you have broken the law and then he said because of this I think we will send your kids to the social worker. I told him I don't know the law and I am here new and this is the first time, you can give me the chance and he said no we will phone now, and he phoned in his car. After 20mins he came back, he said the letter will come to the house for the social worker but nothing came. That was in 2014. When we told our friends, most of them have the same problem"

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The experiences of the above refuge-seeker highlight a lack of information on the social norms in the society. In addition, the data suggest refuge-seeker's information needs can be as an individual or as an accompanied person, in this case a father. Therefore, even though the person's status determined information needs, contextual attributes together with demographic attributes can be combined to identify which information needs are encountered.

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The overall analysis was thus to identify those needs arising for each status (refused asylum seeker, asylum seeker and refugee), and then to determine the similarities and differences in these needs according to demographics and contextual attributes. This allowed us to map out the needs faced by each group and resulted in the emergence of collective-individual information needs. These are collective as they are needs such as housing or support, that are faced by each group, but individual because members of each group must face them individually.

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The data analysis made no *a priori* assumptions about integration information needs prior to the data analysis. The data dictated the analysis so findings were elicited from research dialogue and there were consistent information needs across groups of people in the study population. The outcome was information needs that honoured diversity and individuality while at the same time addressing the human universals in refugee integration.

5. Findings – An Information Needs Matrix

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The study found information needs in refugee integration centered on the host society's provisions for sociological needs such as housing, support, legal needs, mobility, health, education, social, employment and benefits. In addition, a relationship was discovered between information needs that cut across people in dissimilar states. As a result, an information needs matrix emerged, one that highlights a progressive journey through the societal provisions for housing, support, education, employment amongst others during refugee integration. This matrix is shown in Figure 1. We will not discuss the component of the matrix in detail, but a brief description of each component is provided in Appendix B.

Figure 1 shows the relationship was such that access to the societal provisions depended on contextual and biological conditions. The contextual condition was the status i.e. whether one was a refused asylum seeker, asylum seeker or a refugee. The biological conditions included being pregnant, part of a family with children or being a minor below the adult age. The information need matrix encapsulates the societal provisions for refugee integration in a 2-Dimensional information needs journey. The 2-D journey is 'across' i.e. from left to right and 'down' i.e. top to bottom.

Across: This move was from left to right and indicated stages of information need in relation to contextual attributes. There were nine points of information need that progressed through housing, support, legal issues, mobility, health, education, social, employment and benefit. The data showed a move from general provisions accessible to all refuge-seekers, irrespective of status, to specific provisions accessible only to refugees. Thus, refused asylum seekers obtain the barest minimum of provisions and the refugee the maximum provisions.

Down: This move was from top to bottom and indicated levels of information need in relation to demographic attributes. The level of information needs rises within each stage, signifying a more intense need for information, and the intensity of information need represents the extent to which certain individuals may require additional information. The data showed that additional information needs arose for reasons of age and biological conditions such as pregnancy or presence of children or family members, which give rise to variations among the forced displaced. This is shown by the shaded areas in Figure 2.

Ultimately, there was a dependency of information needs based on the provisions made by the host society: as will be seen, information needs are not created about provisions that are not relevant to a person's status. This is unraveled in more detail in the next section.

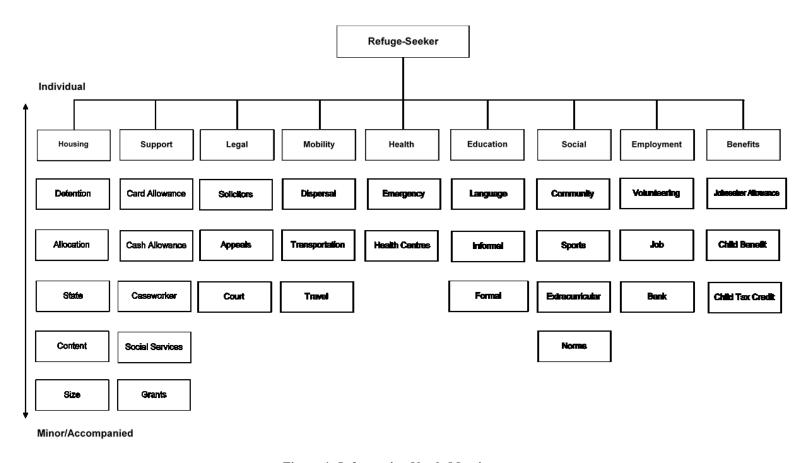


Figure 1: Information Needs Matrix

5.1 Mapping Information Needs

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The information needs emerged as information gaps in "access to" and "delivery of" societal provisions by refugees and the host society respectively. The data showed information gaps in refuge-seekers' experiences of navigating the integration systems as exemplified in this quote.

"It's coming a letter that I should leave the house. I wonder where I will go. The money stop. I'm stressed, what will I eat, where will I sleep" 11-month refused asylum seeker

In addition, the information needs were embedded within each other, as there were concurrent needs for information on different areas of life, especially at the beginning of the integration journey. In particular, housing information need appeared as the initializing need for integration.

"Now I am homeless, I need to know what is going on, because I can't plan. I have been trained by the job centre, I can't get a job when I don't know what will happen next, for instance if I get a job here then I got a flat in another off this place, so what happens. I am thinking about all that. I need to move on but I can't" 8-month refugee

From the data, a lack of housing was associated with the inability to access support, legal, mobility, health, education, social, employment and benefits. It appeared refuge-seekers were going through similar journeys (as reflected in similar information needs) in dissimilar states (refugee, asylum seeker, refused asylum seeker), and a horizontal and vertical order-dependency was inherent in access to and delivery of integration provisions. Hence, the information needs could be used to tell how far refuge-seekers were on the integration journey. These were the early indications that *order* appeared critical for successful integration in the long term.

a. Stages: Information gaps by contextual attributes

The study found that information needs arose due to information gaps around the provisions for housing, support, legal help, mobility, health, education, social needs, employment and benefits. Which needs arose depended on an individual's status. The *stages* of information needs can thus be considered as points of *sociological* need during refugee integration. As shown in the quote below, some information needs (such as how to register with a family doctor) did not arise as the individual's status meant that some provisions were not open to them.

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"The home office said you are not refugee status, you cannot go to the NHS or register with the NHS; they only brought a nurse to treat me at the home office when I had a medical problem" 2-month asylum seeker

We also found that needs have an ordering; for example, in the matrix, education precedes social and employment information needs. The effect is such that the non-English speaker, even with refugee status, may remain unemployed if the language information need is not met. Likewise, he/she may be unable to create social networks or join a community. Therefore, information about education is essential if the non-English speaker is to progress to the employment and social stages of integration. On the other hand, this suggests a potential for multiple information needs to be met at the same time, for example, mobility and education information needs. This can be envisaged as a minor requiring transportation to school, in that meeting an information need about transportation will enable them meet education needs.

"I walk to school; my school is St Andrews and it is very far away. The school close to the house said they don't have space so I have to go to a school 40 minutes away but I don't know how to get the transport cost"

- 2-year length refused asylum seeker

This relationship between the stages highlights the order-dependency of information needs; however, not everyone has all the information needs. This made the stages of information needs potential points, not compulsory points of need on the integration journey. For instance, legal information need may not be a point of need for those with asylum seeker and refugee statuses, but is compulsory for the refused asylum seeker who requires an appeal (Oduntan and Ruthven, 2017).

b. Levels: Information gaps by demographic attributes

The study found information needs also depended on biological conditions. The data showed that additional information needs arose for reasons of age and biological conditions such as pregnancy or presence of children or family members, which give rise to variations among the forced displaced. Refuge-seekers are primarily "individuals" and variants within this category, presenting higher levels of information need, were they fall into the categories of "minor" (a person below 18 years) and the "accompanied" individual (the pregnant and those with families).

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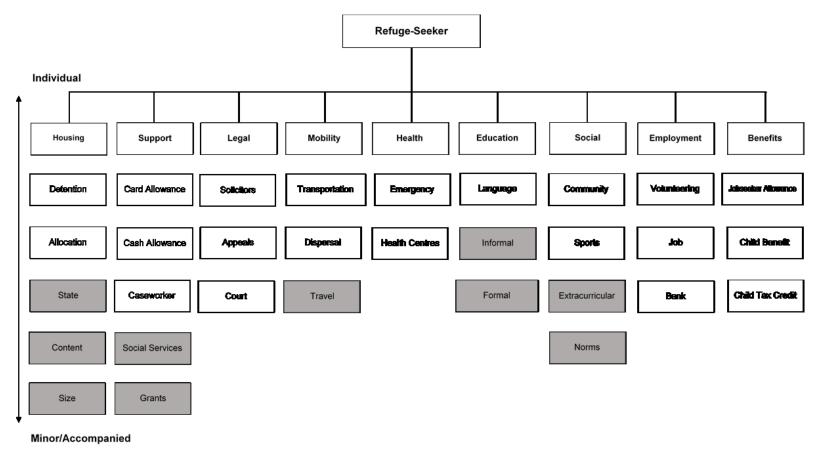


Figure 2: The Levels of Information Need

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"I had an appointment for my operation for my wife at the dentist in the city centre, so I take my little boy with me and I leave my 2 kids at home. Someone phone the police that two kids in the house and they phone me, why you leave the children at home and I told them I have appointment card for operation and the doctor say don't bring children with you, they told me I broken the law" 3-year refused asylum seeker.

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Thus, the topmost needs in the matrix are the general information needs that apply to all individuals, and the downwards move represents the additional need for information specific to the minor and the accompanied person (Figure 2). In the case of housing for instance, a refuge-seeker with a family cannot arrive into the same size of accommodation as a single refuge-seeker.

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The idea of order-dependency of information needs during refugee integration can be related to Maslow's hierarchy of needs that describes five stages of human needs with each level satisfied before progress to another (Maslow, 1943). Maslow's needs are further categorized into two – "deficiency needs" and "growth/self-actualization needs". Deficiency needs must be satisfied before progressing to growth needs. Housing information need has been highlighted as the initialising need for integration, upon which all other information need depended.

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The information needs on housing and support in the matrix corresponded to deficiency needs. The later stages of the matrix such as employment and education correspond to growth needs, which are self-actualization needs. This emphasizes the role of information in meeting sociological needs. The stages and levels of information needs are not independent, together, the stages and levels in the matrix describe the information need relationship with contextual attributes and demographic attributes, and highlights the 2-dimensional refugee integration journey.

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c. Provisions: Information gaps in access to provisions

In mapping the information needs, our study found societal provisions exist for the sociological needs of all refuge-seekers, but the provisions were inconsistent and restricted by status, which resulted in under-served and over-served occurrences. For instance, an asylum seeker accessed support from one service provider in a particular week and the same provision from another service provider the following week, whilst another participant in a similar situation had not received any support because there was no support available at that time. This suggests a lack of coordination and communication between service providers, which causes the imbalance in provisions,

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as indicated by the following quote.

"I went there on 4th June, told them I don't have a house, food or nothing and they gave me an appointment for the 21st June, in 15 days, and I said to them how can you give me 2 weeks later, I'm hungry, I don't have a place to sleep" – 11-year refused asylum seeker

Our study found that the societal provisions for integration needs were delivered in two ways which we describe as statutory or ad-hoc.

- Statutory provisions: These were planned official provisions for refugeseekers by the government. Our study found the provisions for housing, health, education, employment, legal help, support and benefits needs were statutory.
- Ad hoc provisions: These were improvised provisions and not part of the statutory provisions. Our study found the provisions for mobility and social needs were ad hoc.

The data showed that information about access to provisions was undefined, which reiterated that there are information barriers to integration. Generally, access to statutory provisions was determined by status; but the existence of ad hoc provisions created additional inconsistencies of access to provisions. The ad hoc provisions were even more difficult to navigate and were one cause of the perceived complexity of integration.

"The condition is really different between asylum seeker and refugee. If you come as a refugee, lots of people help you, there is benefit and support. Red Cross and refugee council give advice, but who came as asylum seeker, no one help them, they start from zero, no help or advice on living and payment and many things" 20-month refugee

The data also showed an absence of explicit information on the extent of service providers' provisions, and this absence appeared responsible for the imbalance in provision that led to under-served and over-served situations. For instance, some asylum seekers and refugees had received support provisions when they went to certain service providers at times of destitution, but quite a number had been turned away by the same organization when they needed similar support and were signposted to other service providers.

"The refugee council said they don't have anything for me and that I should go to the Home Office" 2-month asylum seeker

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We acknowledge that reporting these participants' experiences with provisions depends in part on how participants for the study were recruited. For instance, if the study participant were recruited from a particular service provider, then this service provider may have met all the person's needs and such a participant will have had a positive provisions experience. In light of this, the participants in this study were independently recruited without affiliation to any service provider. This eliminated any bias stemming from preferential affiliation to any service provider.

5.2 Implications: The information needs matrix for practice

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The possibility of mapped information needs potentially presents an opportunity to alleviate the current complexity and complications of navigating integration systems. The information needs matrix therefore can function as a navigation tool, to show a full range of sociological needs to refuge-seekers and guide the delivery of societal provisions by host societies. A representation of individual status information needs could be distinguished using a color-coding scheme, such that the central shade will represent the central needs, a deeper shade of same color will represent additional needs and a lighter shade of same color will indicate reduced needs.

For instance, suppose a green color-coding scheme matrix is adopted to distinguish each refuge-seeker's information needs in the matrix. In this case, we may use a central-green shade for the standard provisions of the asylum seeker, a deep-green shade for the additional provisions of the refugee and a light-green shade for the reduced provisions of the asylum seeker. Figure 3 below shows that the asylum seeker information needs revolve around housing, support, mobility, health, part education, part social and part employment.

The representation suggests that the asylum seekers' provisions are at the core of the integration provisions when compared with other statuses in integration system. This is because it cuts across from left to right in the matrix, and when the control of status is applied, it will highlight the provisions of the refused asylum seeker to the left (Figure 4) and the provisions of the refugee to the right (Figure 5) with the light-green and deepgreen shades respectively.

Figure 3: Asylum Seeker Provisions

Figure 4 below highlights the needs of the refused asylum seeker, which include information on detention, legal needs and card allowance¹. The representation highlights the refused asylum seekers' restricted access to provisions, below the standard provisions for an asylum seeker. For instance, cash allowance is eliminated and card allowance introduced to represent differences in how the UK allows refugees and asylum seekers to purchase items for daily living.

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¹ In the UK system, asylum seekers are given cash allowances but refused asylum seekers are given cards which can be used to buy food and other resources instead

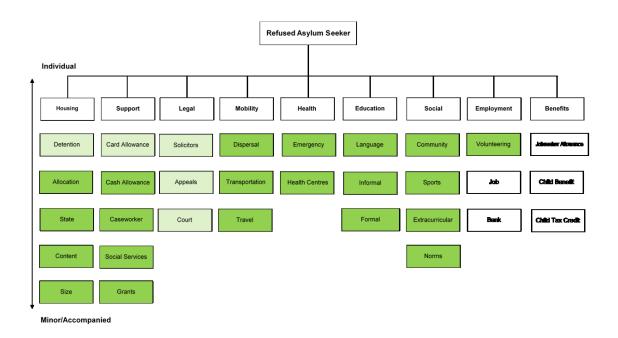


Figure 4: Refused Asylum Seeker Provisions

The information needs matrix presented as Figure 5 below highlights the needs of refugees, which are specifically for information on higher education, jobs, banks and benefits. These are in addition to the asylum seekers' information needs and highlight that the granting of refugee status increases access to provisions beyond standard provisions of the asylum seeker. For instance, the refugee has access to job seeker allowance, child benefits, etc., in addition to cash allowance.

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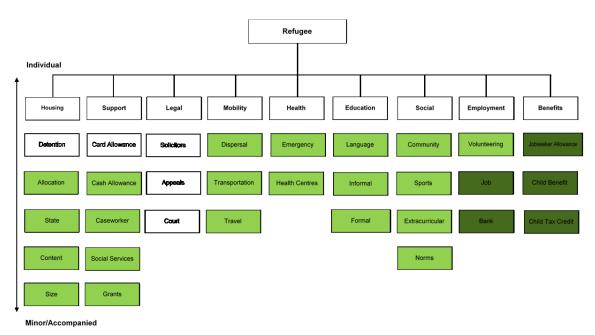


Figure 5: Refugee Provisions

The information needs matrix can be read as a breakdown of the currently complex and complicated refugee integration processes and systems. However, the information needs matrix is not a guarantee of the availability of provisions as that depends on the host society. Nonetheless, this unveiling will go a long way in the reduction of the hardship refuge-seekers encounter during the navigation of integration provisions.

5.3 Theoretical Implications

The information needs matrix can be likened to a research map for immigrant and refugee information behaviour studies. It potentially presents opportunity for the development of different information needs matrices in other geographical locations of the world. Although previous studies did not relate information needs, the findings from those studies can be directly and indirectly mapped to the matrix, some falling within the specific and others within the sub-specific information needs.

For instance, Caidi et al. (2010) summary of general migrants' information needs around language, employment, connections in the community, housing, health, workplace safety, legal issues, education, recreation, transportation, banking, social and cultural information needs can be directly mapped across the stages and levels in the matrix. Likewise, Caidi et al. (2008) similar information needs by stages of immigrant settlement. Also, Khoir et al.'s (2015) information needs, which include housing, health

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care, transportation, education, employment and English literacy, amongst others, are consistent with same in the information needs matrix. Similarly, Lloyd and Wilkinson's (2016) and Fisher et al.'s (2016) education and employment information needs of refugee youths can also be directly mapped to the matrix. Lloyd's (2014) health information needs is also directly consistent.

This suggests each specific information need in the matrix can be investigated in further depth and the matrix can be used to underpin future information behaviour investigations on forced displacement. In addition, the process of mapping information needs to the matrix gives rise to characteristics that could be considered in future investigations.

- There is an order-dependency to information needs
- There are stages and levels of information needs
- Information needs are not fixed, but flexible

Finding phases and journeys as outcomes of human information behaviour investigations is not new: Kennan et al. (2011) identified three phases in the information literacy practices of refugees, Kuhlthau (1993) described six stages of information search process and Ellis (1989) described seven patterns of information seeking behaviour, amongst other studies. They have been used to expand the knowledge of information behaviour and information needs in numerous contexts. The significance of the information needs matrix and the methods involved in its emergence potentially expands the knowledge and conceptualization of information behaviour (Oduntan, 2018). Ultimately, the matrix binds and at the same time opens up areas for research.

6. Discussion

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Refugee studies have highlighted refugees' integration needs as being complex because of the complicated processes put in place by host societies (Mulvey, 2015; Craig, 2015). Such research delves deeper into the indicators – employment, housing, education and health (Mulvey, 2009) – than the process of becoming integrated. However, due to developing humanitarian crises and natural disasters, and hence developing integration processes, the shelf life of the findings is not long, as evidenced by the continuous emergence and re-emergence of policies around refugee integration (Robinson, 2010).

The information needs matrix maps out the integration processes into series of needs with stages and levels. The newfound relationship contains the complexity of provisions during refugee integration by an intersection of demographics and contextual attributes. Therefore, the integration journey of any refuge-seeker can be

located on a position in the matrix. This makes the administration of integration provisions consistent for a host society and integration can be genuinely measurable.

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In the first instance, the information needs matrix supports and expands the UK indicators of integration framework in that it reveals sub-specific needs within its markers of integration – housing, education, employment and health. It also adds details to provisions such as support, legal, mobility, social and benefits. The information needs matrix enhances the host society's capacity to make provisions for the integration of refugees and also to better measure refugee integration. This implies that the successful navigation of integration processes and systems by both refugees and host society is dependent on information.

Furthermore, the experiences of the asylum seekers and refugees suggests the possession of information as a trait and a "survival of the informed" can be implied where some persons have access to information to meet needs which enables them to successfully navigate the integration processes better than others. This is in line with Darwin's theory of Survival of the Fittest in evolution, such that the refuge-seeker with information is best suited to survive in the host society and the host society with information is best suited to deliver provisions.

"There was no information for proper education. I could directly study in the university rather than study in the English Language college for one year, it was possible to study but without knowing I wasted a year which is a loss for me" 20-month refugee

The highlighted loss and waste in the above refugee's experience is not only for the refugee but also for the society as the spent resources could have been maximized. The introduction of the information needs matrix increases the chances of survival and success of the refuge-seekers and host society respectively. It emphasizes clarity, consistency and coordination for host society provisions, which increases the refuge-seekers' ability to access provisions, and reduces the over-served and under-served occurrences, thus the host society's provisions are maximized.

As a result, the information needs matrix is a navigational guide with implications for research, policy and practice. For research, it is directional as previously highlighted. For policy and practice, it is informational and operational: informational to the refuge-seekers and operational for the host society. This is such that it shows points of needs to refuge seekers and informs the design of provisions by host societies, thereby improving the "access to" and "delivery" of provisions for refugees and host societies respectively.

6.1 Limitations and Validation

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Refugee integration is not constant due to the continually changing definitions of persecution. As a result, investigations of the forced displaced are inherently limited from broader generalizations. Firstly, the study cannot be generalized to all parts of the United Kingdom; it is limited to Glasgow, United Kingdom and based on the provisions made by the UK government. Also, the population sample is not equally distributed across the statuses. However, this highlights a need for further research – a replication of the study in other geographical locations with different population samples. It will be interesting to observe how similar or different matrices developed in other countries are to the one presented here.

In addition, the study is limited to the interpretation of the researcher as it is a qualitative study. However, the effects of this can be mitigated with validation of findings. This study carried out validation through observations during an 8-month volunteering role with the Scottish Refugee Council – a major service provider to refuge-seekers in Scotland. They provide information, advice and practical support through individual consultation sessions. During this role, the first author was part of consultations sessions with refuge-seekers.

Ten observation data points were recorded from a diverse sample consistent with the interview population with the permission of the refuge-seekers. The information gaps in the delivery of service provision were elicited from the consultations (Oduntan, 2018). The analysis revealed consistent information needs with the information needs from the interviews, thereby highlighting the significance of the information needs matrix. The reliability of the interview findings was also highlighted, as the information needs from previous studies mapped to the information needs matrix. This highlights the applicability and transferability of the information need matrix and emphasize further studies could directly follow this investigation.

810 7. Conclusion

This information needs matrix outcome from an information behaviour investigation into refugee integration ultimately reveals how a host society attempts to deal with the sociological consequences of forced displacement. The overwhelming challenges are the chaos created by the appropriation of the UN convention, the lack of transparency with the provisions, and the inconsistency of service delivery; and this is further exacerbated by the lack of coordination and alignment in the integration processes and systems.

Host societies make available provisions to support refuge seekers but often are not equipped to successfully deliver provisions. The refuge-seeker, on the other hand,

arrives into a new society with needs but is often not equipped with information to successfully access the integration provisions. Refugee integration can thus be viewed as an information needs journey. Refuge-seekers navigate in dissimilar states and it is only the refuge-seeker who accesses the right information, who can progress on the journey.

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The information need matrix outcome is a representation of these complexities and complications. The matrix can enable a dynamic response by the host society to the evolving geopolitical forced displacement issue. The information needs matrix can be used to tackle the problems of inaccessibility, inconsistencies and lack of coordination. The explication and alignment of provisions in the matrix can bring transparency and openness to integration processes and systems.

The benefit of the information need matrix is beyond the individual; everyone concerned collectively shares it, which includes the refuge-seeker, the host society, policy makers and researchers. It could serve as an integration map to guide refuge-seekers integration journey. For refugee agencies and service providers, it could serves as a service map to enable consistency in service delivery. The matrix could also serve as a provisions map for policy to inform the design and delivery of integration processes and systems.

The information needs matrix outcome also highlights the significance of information behaviour investigations for global interventions in the information age. Sense-making methodology's focus on movement, change and the forces facilitating or constraining them enabled the possibility of aggregated properties of information within the complicated refugee integration process and systems. This not only revealed relationships in the dissimilar states of the integration journey, but also demonstrates sense-making assumption of potentially generalisable patterns (context-specific predictors) from focus on the processes and flow of events in a specific situation (Dervin, 2003a; 2003b).

Furthermore, the information needs matrix has implications for the design of societal provisions to meet the dissimilar states of refuge-seekers. This emphasizes the interdisciplinary relativity of information behaviour studies, highlighting Sonnenwald and Iivonen's (1999) information behaviour support, and expands studies in the social and behavioural sciences of humans in general. It can therefore be inferred that social sciences investigations are for interceptions and information science investigations are for interventions, even if these are not independent.

Finally, refugee integration is an evolving issue that will always be complicated; however, understandings from information behaviour investigations will continually reveal the emergent information needs at any given point in time. This will promote refugees' integration, in addition, enlighten and strengthen the capacity of host society's integration processes and systems to deal with the sociological consequences of forced displacement in any given population at any given point in time.

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Appendix A: Interview Guide

Introduction: Get to know the researched

Name	
Gender	
Age	
Country of Origin	
Language	
Level of education	
Religion	
Relationship Status	
No of Children	
Age of Children	
Date of Arrival in the UK	
Mode of entry	
Immigration status	
Length of Refuging	
(current date – date of arrival)	

Opening Questions

Their journey, integration and information

IQ1 Series: Please tell me about your journey?

Probes: Why did you choose here?

What thoughts do you have about your journey? How did your journey prepare you for here? Was this place what you hoped it will be?

IQ2 Series: Please describe your current situation? Probes: Were you prepared for what you met here?

How have you coped since your arrival?

IQ3 Series: Do you know you are now in the process of integrating into the society?

Do you feel you have integrated?

Probes: How do you feel about your integration experience?

What changes have you made since your arrival?

How would you describe your experiences of integration since you arrived?

IQ4 Series: Do you feel you had enough information to help you integrate? Why? Probe: What are your experiences with information concerning integration?

Did you think you had enough information provided for you to cope? Was there enough information about everything you need to cope here?

What do you think of the available integration information?

Core In-depth Questions

The situation, gaps, bridges and outcomes

IO5 Series: Describe times you did not know? Describe times you did not have information?

Do you have a time you did not know what to do i.e. have information? Probe:

> Can you describe a time of fear, what are your fears? At what point did you feel in need of some information?

IQ5b Series: When was a time when something was not right? Probes: When was a time something was missing?

What experience since you have arrived has impacted you?

How did you know you did not know?

IO6 Series: What did you want to know at those times?

Probes: Moments and times you wanted to know something you did not know - what was it?

What do you think was missing at those times you did not know?

IQ6b Series: Do you feel there is something you don't know now?

Probes: What don't you know now? What would you like to know now?

When do you feel you don't know?

Do you feel like you should know something? Is there anything you will like to know now?

IQ6c Series: What did/do you wish you had information about?

Probes: What do you think is the first piece of information you need as soon as you arrive? Why?

IO7 Series: How did you know what to do? Where did you get the information from?

Probes: How do you get information?

Who are your information contacts for integration?

How did you solve the problem situation? Did the information solve the problem?

Why did you make the decisions in trying to solve the situation?

IQ8 Series: Why did you choose that?

Probes: Why do you prefer that channel?

IQ9 Series: Do you get information at the times you need them? Probes: Did the information you get solve your problem?

Was the time you got the information appropriate? If no/yes: why do you think it was not appropriate?

Do you think it was communicated properly and adequately?

IO10 Series: What do you expect from integration information? Probes:

What information do you think you need for integrating.

Why do you think so?

Do you think you need information?

So far, what aspects of your experience stands out for you?

Closing

Thank you very much for talking to me.

Do you have any questions you would like to ask?

Appendix B: Glossary

Terms	
Asylum seeker	The refuge-seeker who has arrived in the host country on their own. They have applied for protection and are awaiting a decision.
Refugee	The refuge-seeker who has been accepted for protection either after an asylum application in the host country or by selection from refugee camps, including those in home countries.
Refused asylum seeker	The refuge-seeker whose asylum application has received a negative decision and who has been given the chance to appeal. They are legally allowed to remain in the host country until their appeal is exhausted.
Information Needs	
Benefits	The information needs around specialist provisions for underprivileged citizens accessible only to the refuge-seeker with refugee status
Card allowance	This is a card load equivalent of £36, currently called an Azure card. The card can only be used for spending in certain stores and cannot be used for cash. It is only for the refused asylum seeker
Cash allowance	This is a cash sum of £36 provided by the government weekly for feeding and other basic needs.
Community centres	These are local council venues that facilitate community cooperation in a local area.
Detention centres	The place where asylum arrivals are kept on arrival or application for asylum. The place refused asylum seekers are detained before deportation to their home countries
Dispersal	The way the United Kingdom maintains economic balance by distributing the protection-seeking population across the country so that no one area will be overburdened with the obligation of supporting them
Education	The information needs around the provisions and access to education for refuge-seekers including English Language learning
Employment	The information needs around the provisions and access to employment
Health	The information needs around the provisions and access to health
Housing	The information needs around the provisions and access to accommodation
Legal	The information needs around legal protocols and access to the provisions for the refuge-seeker
Mobility	The information need around movement and transportation within the host country
Social	The information needs around living and building networks and connections in the new society
Support	The information needs around the provisions and access to financial, physical and emotional support
Travel	Inter-state travel: The movement within geographical areas in a host country. It is required for higher-level administration that is not conducted locally. Local travel: The movement to fulfil local-level administrative obligations such as attendance at meetings with the immigration authorities and service providers amongst others