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What is Access?

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Abstract

This paper sets out a framework for understanding access, with a particular focus on access to services. Previous research has examined dimensions of access, often in terms of a particular field and with an emphasis on the consumer. The work of Penchansky and Thomas (1981) has been drawn on for decades, with its 'five As' of access: availability, accessibility, accommodation, affordability and acceptability. In this paper we expand the scope of these access dimensions, consider both the consumer and producer perspectives, and frame the dimensions in terms of a spectrum of accessibility. The framework includes eight dimensions of access: time, space, price, quantity, quality, acceptability, information and awareness.

Introduction

Access is used in a wide variety of contexts and is very difficult to define. Rather than providing a single definition, this paper outlines a framework for understanding access.

The framework has four principles:

- Access is relevant to both consumers and producers and exists in the context of interaction between consumption and production. While the individual circumstances of consumers contribute to their access, so do the choices of the producer.
- Access can be understood in terms of dimensions, which are categories that describe the ways in which consumers access and producers provide services.
- These dimensions cannot be reduced to a binary relationship of 'having access' or 'lacking access', but rather exist on a continuum. Access can be measured in relative terms, with a consumer having 'more access' or 'less access'.
- The dimensions of access are interrelated and influence each other. As the dimensions exist together consumers and producers often make trade-offs between dimensions, and this reveals their relative priorities.

The dimensions themselves depend on the context in which access is being considered. Those dimensions we have found most useful in understanding access to services are set out below in Table

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1. They are described in terms of both the consumer and the producer, as the circumstances of each have a role in determining the degree of access to a service.

Table 1: Dimensions of access

Dimension	Consumers	Producers
Time	The availability and time taken to access a service.	The timing of a service and the operating hours.
Space	The travel and travel costs of consuming the service.	The location of the service.
Price	The consumer's expectation of prices and ability to pay for the service.	The price set by the service provider.
Quantity	The amount of the service available to consume.	The quantity of the service produced by the service provider.
Quality	The extent to which the service directly satisfies consumers' needs.	The degree to which the service directly satisfies consumers' needs and meets government and industry standards.
Acceptability	The degree to which a service is adapted to allow a consumer to benefit from a service.	The degree to which the service provider responds to the varied consumer needs to allow them to benefit from a service.
Information	The consumer's knowledge of the nature and availability of services.	The dissemination of information about the services available and their features.
Awareness	The consumer's understanding of their own needs and the knowledge of how to satisfy them.	The provider's understanding of consumers' needs and how to satisfy them.

While these dimensions are set out and described separately to aid conceptual clarity, in reality they are not separate from each other. The dimensions influence each other, overlap and are often the subject of trade-offs by producers and consumers who are willing to give up some access in one dimension to gain more access in another.

The remainder of the paper is separated into three sections. The first outlines the concepts that underpin the framework and ties it to the relevant literature on access. The second examines each of the eight dimensions in more detail. Finally, the paper concludes with a short case study using the experience of older migrants in Australia to illustrate how dimensions of access are interrelated, overlap and are traded-off against each other.

Developing a definition of access

Researchers and practitioners typically define access using examples from the field in which they work. As such their definition of access refers to the issues which they encounter in their own field. In the context of this report, a useful definition will capture the constraints people encounter when they attempt to use services and the extent to which they are able to derive benefit from services.

The foundations of this access framework are located in the existing literature. In particular, the concept of dimensions of access is drawn from the work of Penchansky and Thomas (1981) in the public health field. In their seminal work they define access as 'a concept representing the degree of 'fit' between the clients and the system'.

Recognising that access in one area does not guarantee an effective service in others, they elaborated five dimensions across which access to health services can be measured, as listed below:

1. Availability: 'The relationship of the volume and type of existing services (and resources) to the clients' volume and types of needs.'
2. Accessibility: 'The relationship between the location of supply and the location of clients, taking account of client transportation resources and travel time, distance and cost.'
3. Accommodation: 'The relationship between the manner in which the supply of resources are organized to accept clients (including appointment systems, hours of operation, walk-in facilities, telephone services) and the clients' ability to accommodate to these factors and the clients' perception of their appropriateness'.
4. Affordability: 'The relationship of prices of services and providers' insurance or deposit requirements to the clients' income, ability to pay, and existing health insurance.'
5. Acceptability: 'The relationship of clients' attitudes about personal and practice characteristics of providers to the actual characteristics of existing providers, as well as to provider attitudes about acceptable personal characteristics'.

Source: Penchansky and Thomas 1981, pp 128-129

This approach provides the foundations of a definition of access, however to extend the discussion beyond health services requires going beyond the initial formulation of the 'five As' of access.

First, access is perhaps best thought of as 'the ability to derive benefits from things' (Ribot and Peluso 2003). For this reason access needs to be considered from the perspectives of both consumers and producers, because services exist in the context of interaction and exchange that is related to both demand and supply. The way in which producers shape the provision of services is as important as the way consumers' individual wants, needs and circumstances shape their access. It is also important to keep in mind that there are other actors who influence access, in particular governments, which have a role beyond where they directly produce services.

Second, thinking of services as either accessible or inaccessible does not take into account the different layers of access that consumers may have, or how their access requires them to make other trade-offs. In a market economy consumers have an imperfect degree of access to services, and their access to services is based on a series of trade-offs which they make on a daily basis. Each dimension of access is best thought of as a continuum. Consumers make pragmatic decisions about which services they consume that often trade access on one dimension for access on another. On the other hand producers make pragmatic trade-offs between the dimensions of access they are willing or able to provide to consumers.

Finally, the original 'five As' are not exhaustive, and the scope of access can be expanded beyond the original five dimensions. This has become increasingly important as the concept of access has developed. Access research includes topics from fresh food (Wrigley 2002) to access to journals and other sources of information (Boellstorff 2009), access to justice (Wayne 2014), access to IT and internet services (Donner 2015) and the experience of non-English speakers in English speaking societies (Daly 2006), to provide only a few examples. Given the range of research, any list of dimensions is likely to be incomplete.

Any discussion of access or its dimensions must be able to account for its own biases. Access affects the demand and supply of services in the whole economy, not just the areas in which there is significant access scholarship, such as health or transport. It is not coincidental that the main dimensions in access literature, primarily written by public health scholars, are relevant to the health services industry (Khan and Bhardwaj 1994: 62). Similarly, government policy makers are likely to focus on access to services which are provided or coordinated by relevant government agencies (OECD 2010: 21). This paper has been written to provide a theory of access that can be applied to regional service delivery, and this is reflected in the dimensions of access discussed and the definitions used.

Dimensions of Access

There are multiple dimensions of access, each of which capture different aspects of the constraints people encounter in using services, and which affects their ability to derive benefit from services. The following section examines the eight dimensions we consider most relevant to regional service delivery. While these are shown separately, it is important to bear in mind that these dimensions are not separate from each other. They are best understood as a set of intersecting continuums describing consumers and producers' relationships with each other. In reality they affect each other, often overlap and can be traded-off against each other depending on the consumer's and the producer's priorities.

Time

The nature of services makes time one of the most important dimension of access. As discussed in the Bureau of Infrastructure, Transport and Regional Economics Staff Paper *What are services and who provides them?* (Thomson et. al. 2018), services can be distinguished from goods by the characteristic that the production and consumption of services is inseparable. When the service stops being produced, it can no longer be consumed. Time is important part of a consumer's access to services, as it is through time that services are produced and coordinated.

Consumers factor time into every economic decision. Services are often organised according to a schedule or have a fixed period of operation. Time is a limited resource and consumers factor in time-costs when they use services, as the time they invest in accessing the service could be used for something else.

The time dimension includes both duration and timing:

- A long wait time at a walk-in General Practitioner clinic would make it less accessible, as this increases the time taken to access the services (duration).
- A lack of suitable appointment times would make an appointments-based General Practitioner less accessible (timing).

The importance of duration and timing is related to the relationship between the consumer's needs and the way the producer is producing the service:

- For example, the time required for face-to-face vocational education course may make it less accessible to a person who needs to earn a living (duration).
- In contrast, the available childcare slots and hours of operation mean a police officer working night shifts has less access to childcare services (timing).

The urgency of the consumer's need also relates to their access:

- A hair cut is not urgent and can be delivered at a time chosen by the user, within the times made available by the hairdresser.
- Emergency medical care is urgent and is required when the user has a need. It is of no direct use either before or after the person requires the service. In response emergency services are provided at all times, although they are not required at all times.

Space

Space is the distance between the consumer and the service provider. Space is related to access because it increases cost of consuming a service. These costs include the increase in the time it takes to get to the service, money spent on transport, and physic costs such as the unpleasantness of long journeys.

- Space raises the cost of using a service through the direct costs of travelling to the service provider. Public transportation fares, petrol prices and other direct travel costs increase the effective price of the service.
- Travelling requires a time investment, which could otherwise be used towards other ends, and so space increases the opportunity cost of accessing a service.
 - The opportunity cost may be in terms of reduced access to the services themselves. For example, a defendant who lives in a very remote area summoned to court must travel to and from the courthouse. This reduces the time available to work with their legal representative prior to court commencing (Senate Legal and Constitutional References Committee 2004: 106). The cost in this case is the reduction in access to justice services through reduced access to legal advice.
- The time required for travel can have other indirect costs – for example, childcare costs, where parents have to pay for childcare in order to have time to access services, or accommodation costs, where it is not possible to travel and access services in the same day.
- Space can increase the cost of providing a service, as all of the costs above may also apply to producers. These costs are often passed on to the consumer and can make providing services in some locations unviable.
 - Again, these costs can be passed on in terms of reduced access to the service. To continue the example of justice services above, the high costs of traveling to remote communities means that legal aid providers often lack the resources to travel to remote communities to provide services (Cunneen et al. 2014: 235). This directly reduces the access to justices services f people living in these communities.

Price

Price refers to the monetary cost of goods and services, and determines the amount of money which consumers have to pay directly for services and which service providers receive in exchange for producing them. Some examples of the ways in which price affects access are:

- The demand for goods and services is influenced significantly by price, as consumers assess whether goods and services are worth the monetary cost. Higher prices mean that consumers have to give up more to access the service and this effectively reduces their access. In extreme cases the price may be so high that a consumer may not have the ability to pay for the service at all.
- The prices a producer can charge for their services affects the profitability and ultimately the viability of the service provider. In the absence of other sources of revenue, producers rely on the revenue raised by charging for the service to cover the costs. In the long term if the costs cannot be covered, the service provider is not viable and will be forced to stop producing.
- Some services have a high or low price due to the costs of the factors of production that go into providing the service, especially the costs of skilled labour. For example, providing legal services necessarily involves employing costly legal specialists.

Quantity

Quantity refers to the amount of a service people are able to consume. Non-market services are often regulated in terms of quantity, for example through waiting lists and quotas. Some of the reasons this may occur include:

- Shortages can be imposed by regulation. This often affects areas with ethical considerations or high risk, such as the regulations preventing the sale of human organs.
- Artificial scarcity can be imposed by producers with market power in order to improve profits/remuneration.
- Existing services not keeping up with the pace demographic changes such as population growth or internal migration.
- Unpredictable circumstances, such as natural disasters, political or economic crises.

Quality

Quality refers to the standard of service produced in terms of what the service actually delivers relative to what it should deliver. The standards of what it should deliver may refer to consumers' expectations, producers' expectations or regulatory or industry standard.

- Services must be of a certain level of quality in order to effectively meet a consumer's needs.
- Poor quality can increase the opportunity cost of consuming a service. For example, if a doctor only diagnoses some of a patient's health problems, the patient will need to return to seek treatment for their other health problems.
- Service providers are often required to produce services according to industry standards and regulations. For example, restaurants are required to produce food that is prepared according to local food safety regulations.

Acceptability

Acceptability refers to a person's ability to derive benefit from a service given their individual circumstances. While service providers may deliver an effective service by some objective standard, some consumers may still have a reduction in or no benefit from the service because it is not able to accommodate their individual needs. At one extreme consumers may not be satisfied with services they deem unacceptable, whereas as at the other they may not physically, mentally or socially be able to use the service.

Therefore unacceptability refers to a continuum where the circumstances are both subjective and objective. A person who finds the music in a shop irritating and person who cannot enter the same shop because it is not wheelchair accessible are easily distinguished. However, both these circumstances are part of the same dimension of acceptability, albeit at the extreme opposite ends of a spectrum from subjective to objective, because they relate to the way the service does not accommodate their individual needs and expectations.

Cases in between the two extremes, for example a woman who has a preference for a female doctor or a person who would prefer to talk to a religious rather than secular counsellor, are difficult to categorise as either purely subjective or objective. The individuals may be able overcome these barriers, with a loss of some satisfaction with the service, or they may not use a service at all. In either case, there is a loss of benefit from the service, either in part or in full, because it is not able to fully accommodate their individual needs.

Some of the ways in which acceptability affects access are:

- Positively or negatively affecting the consumer's degree of satisfaction with a service provider, for instance:
 - The conduct and likeability of staff members.
 - The diversity and relatability of staff members regarding gender, ethnicity, age and sexuality.
 - The comfort and amenity of the surroundings and context in which the service is provided.
 - Difficulty in navigating a website or phone service.
 - The range of services offered fitting the preferences of the consumer.
 - The ethics of the organisation.
 - Positive expectations regarding the service provider.
- Acceptability also refers to the consumer's ability to access a service from a service provider at all given their individual circumstances. This can include:
 - The physical accessibility of the service. For example the provision of wheelchair ramps to make the service available to people with reduced mobility.
 - The language accessibility of the service. For example: providing services in plain English, or in languages other than English, or methods of access for people with reduced hearing or vision.
 - The diversity of staff. For example, having both male and female doctors available in a General Practice.
 - The flexibility of the service. For example, the service provider accepting reasonable requests to alter their service and honouring consumer's requests without creating conflict.
 - The service being delivered in a non-discriminatory manner.

Information

Consumers rely on information in order to know how to access a service and producers rely on consumers' knowing what services to consume and how to access them. Information can be disseminated via a variety of means, which will affect its content as well as who and how many people are likely to receive it, understand it and act accordingly.

Information enables knowledge relating to:

- The existence of a service.
- The nature of the service.
- The cost of the service.
- That a consumer is entitled to access the service.
- Where, when and how the service can be accessed.
- How to negotiate any restrictions on access. For example, obtaining a GP referral to see a specialist .
- Ways to make access easier, such as subsidies and other government programs.
- 'Soft' knowledge of how to use a service effectively, such as filling in forms correctly and navigating bureaucratic procedures.

Awareness

Awareness refers to the consumer's understanding of their own needs and the knowledge of how to meet them and the service providers' understanding of consumers' needs and how to satisfy them. On the one hand awareness affects a consumer's access to services by affecting their likelihood to use a service. Consumers may have information about services but lack the awareness that they could benefit from these services. On the other hand, awareness of how the services provided address consumer's needs shapes the services offered by producers and this in turn affects the consumer's access.

- Awareness refers knowledge and understanding of aspects of the consumer:
 - Their needs.
 - Their preferences.
 - Their socioeconomic status.
 - Their current and future physical health and symptoms.
 - Their financial situation and future financial prospects.
 - Their behaviour and psychology.
 - Any other relevant social or psychological factors that may apply to them.
- Producers who are concerned with awareness will try to promote broader understanding of the conditions that their service addresses.
- Awareness can be produced through information campaigns, such as anti-smoking advertising to promote awareness of the dangers of tobacco.
- Awareness does not necessarily mean complete knowledge, as the consumer or producers may be aware of one of the consumer's needs while being unaware of others. For example, a person may be aware of the health impacts of their smoking, but not of their unhealthy diet.

Multi-Dimensional Access

The descriptions of the dimensions provided above treat the dimensions separately to provide a clear explanation. Real-life issues in service delivery are rarely this simple. *Multi-dimensional access* is the usual way that we see and experience access, and dimensions of access are rarely isolated. Instead, they often shape and even reinforce each other, creating situations in which it is difficult to point to one particular dimension as the most important determinant of access. The following section provides a brief case study of the experience of older migrants which draw out examples of how dimensions of access interact, overlap and are traded-off against each other by consumers and producers.

People who age outside of their country of origin often face greater difficulty accessing services. Their lower take-up of services is attributable to a number of causes, for example: “[a] lack of interpreter services, cultural resistance due to preference for family care, lack of awareness of services and the cultural insensitivity of ‘front-line’ staff” (Hurley et al. 2013: 141).

An individual's awareness represents their knowledge of themselves, their needs, and how they might relate to services being offered. Cultural differences shape how people perceive themselves and affect their desire or capacity to access services. For example, a study by Haralambous et al. (2016) indicates that within elderly Chinese migrant communities in Australia, many symptoms of mental health can go unacknowledged and untreated due to a lack of awareness. Cultural stigma surrounding mental health issues, lead many people either to ignore symptoms of depression, or only report them as physical symptoms. As recounted by a survey participant:

“Many don’t have an idea of what depression and anxiety are. Because most Chinese people don’t have a concept of mental illness or psychological disorders. If you tell someone they are depressed they think they are crazy....” (ibid: 251)

Cultural differences shape how individuals perceive services and issues, and determine their acceptability of these services:

“I think it is more people’s perception. They do not consider depression and anxiety as a common illness and that it is treatable. Therefore, they do not seek treatment for these symptoms, which might lead to very serious outcomes, such as suicide...” (ibid: 251)

By interpreting symptoms of depression as madness or weakness, some people within this community have reduced awareness of mental health issues, and are less able to access necessary mental health services, even though their incidents of mental illness are often higher (Lin et al. 2016).

Information is another aspect in which cultural difference can shape the access of people ageing outside their country of origin. Information provided by service providers gives consumers the knowledge of their services and how to access them. Some producers are not able to effectively engage with these users as the information about their services is not provided in the person’s native language (Hurley et al. 2013: 144). In the case of elderly Greek communities in Adelaide, some of whom cannot read or write in English, these consumers are more likely to receive information from their Greek-speaking social networks, their English-speaking children and trusted service providers such as General Practitioners and hospital staff. The most successful avenues for providing information, outside of social networks are through Greek radio and trusted community institutions, such as the Orthodox Church. Greek-language service providers report little need to promote information about themselves and are often fully-booked and used through word of mouth. Not only do these consumers indicate greater knowledge of Greek services, but the information about these services is communicated in a more acceptable manner (ibid: 144-146).

Like other consumers, older migrants are often forced to make trade-offs between particular dimensions of access. One participant interviewed by Hurley et. al. (2013: 144) expressed her preference for convenience over cultural acceptability:

“I go to this [mainstream] group twice a week ... they pick me up and drop me off ... I used to go to another group [Greek], but I had to catch public transport to get there ... these days I can’t walk far – I asked whether they could organise transport for me to attend, but they said no, so I go to [the mainstream] group instead.”

In this context, when the study participant had two services to pick between, she chose the service which was more convenient, even if it was not her cultural preference. She indicated that space was the barrier to access that she required help with, as she could no longer walk to the bus stop to go to her Greek group. As the mainstream group provides transportation, she chooses this service, as it was more accessible in terms of space, despite the Greek language group being more acceptable. This is a trade-off between space and acceptability and shows how access in one dimension can be traded for access in another. It also shows how the choices we make reveal our priorities in terms of dimensions of access.

These are just a handful of examples drawn from just one complex user group. Across all potential service users there are a myriad of overlapping and interacting dimensions of access. Every decision to use or not to use a service, or to decide between using one service provider or another, is based on trade-offs. For conceptual clarity it is useful to distinguish between dimensions of access, however the reality is that at any given time a person’s access is defined by multiple dimensions and multiple trade-offs.

Conclusion

Access is too complex a concept to be distilled into a single definition. The framework put forward in this paper is intended to provide a means of understanding access in the complex service delivery environment. As such, the dimensions of access that have been set out are those we have found most useful in understanding access to services.

The first section outlined the concepts that underpin the framework and located it in the relevant literature. Three areas have been expanded relative to the original framework proposed by Penchansky and Thomas (1981). The first is that access needs to be considered from the perspectives of both consumers and producers. The second is that access should be considered in terms of 'more' or 'less' access, rather than 'having' or 'not having' access. This is necessary to understand the interactions, overlap and trade-offs between dimensions. Finally, the original 'five As' are not exhaustive; in the context of services we have expanded the list to eight dimensions. However, given the breadth of access research, any list of dimensions is unlikely to be complete.

The second section described each of the eight dimensions we consider most relevant to services. While they have been considered separately in order to provide conceptual clarity, in reality they are interlinked. The dimensions influence each other, overlap and are often the subject of trade-offs by producers and consumers who are willing to give up some access in one dimension to gain more access in another. The final section illustrates some of these relationships using the experience of migrants to Australia who are aging outside their country of origin. Although only a single case study, it provides a snap shot into the complexity of access in the real world.

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