Factors Influencing Users' Intentions to Make the Web Accessible to People with Disabilities

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Abstract

The aim of this paper is twofold: to provide a theoretical model to analyze obstacles, challenges, and incentives which lead a non-professional user to design websites and produce information that are accessible to people with disabilities, and to develop a reliable and validated instrument designed to measure the construct that are part of this model.

1. Introduction

The percentage of people with disabilities range from 10% to 20% in the 'developed world' [1]. These disabilities include sensory impairments such as visual, hearing, speech, motor and cognitive impairments. A 2003 study commissioned by Microsoft determined that an even larger percentage of working adults aged 18 to 64 have varying degrees of impairments that may not be identified as disabilities, but contribute to mild to severe difficulties in performing computer-related tasks [2]. The findings show that the majority of computer users (57% or 74.2 million) are likely or very likely to benefit from using accessible technology because of mild or severe difficulties or impairments. In recent years, interest in providing access to information, services and technologies to those with disabilities has increased. Literature on designing websites accessible to users with disabilities has proliferated [3, 4, 5]. Most of the literature discusses barriers and challenges faced by those with disabilities, and focus on developing technologies, policies and methodologies to provide for accessibility and to create and maintain inclusive design approaches [6, 7] as well as providing measures for evaluating the accessibility of websites [8, 9, 10].

However, only scant attention has been given to the awareness of designers on how to develop websites and information systems with accessibility features in mind [1, 5, 11]. Even fewer studies discuss the constraints and incentives which influence the intention of designers to create and implement accessible features into the actual design itself [1, 11, 12]. Moreover, there is a lack of reliable and validated instruments to measure the negative and positive influences on designers for attention to accessibility. Even the words 'design' and 'designers' are misleading, since most of the information produced today online is by people who are not professional designers and in many cases are not part of a professional work environment. Users who are non-professional designers employ readily available customized technologies and platforms which enable them to create their own content on the Internet (for example, bloggers, using platforms such as Flickr, YouTube, etc., to swap pictures, video, audio, and other content). Large sites also provide tools for users to modify the design as desired without the need for advanced programming skills. This section of the population, which produces the majority of the content on the Internet, has been under-researched and ignored.

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The aim of this paper is to provide a theoretical framework to analyze obstacles, challenges, and incentives which lead a non-professional user to design websites and produce information that are accessible to people with disabilities, and to describe the development of a reliable and validated instrument designed to measure it. This instrument is intended to better assess the factors which influence the process of producing accessible information on the Internet by non-professional users. Identifying the factors and providing a reliable and validated instrument as such, will assist in improving the policies, plans, and strategies to increase the number of users who design and produce information accessible to people with disabilities. Finally, assessing these factors will help to increase the use of information technologies with accessible features.

2. Factors Influencing Design and Information Production of Accessible Websites

Identifying and constructing a theoretical model which reflects the factors that influence the process of accessible information production is a challenging task. The literature focuses solely on the professionals or the work environment, which have a different set of criteria that drive design behavior. Most of the literature on accessibility is in the field of Computer Science and reflects a technology-driven perspective.

The starting point for deciding which constructs to focus on is the Theory of Reasoned Action (TRA) which suggests that a person's behavior is determined by their intention, which is a function of their attitude towards the behavior [13]. Therefore, the key elements of the theory (see fig. 1) are the following three constructs:

Attitude - Feelings of personal obligation or responsibility towards the issue of accessibility for people with disabilities.

Intention to Produce - Intention to design accessible websites for people with disabilities.

Produce Accessible Information - One's design of a website which is also accessible to people with disabilities.

Gregor and Newell [1] emphasize the importance of the attitude of designers as a predictor of their behavior. Designers with a negative attitude towards accessibility can create obstacles to accessible design or produce sites that are insufficiently accessible. This task might be even more challenging when non-professional users are the designers.

One's intentions are influenced by his or her immediate environment. TRA refers to *Subjective Norms* ("the perception that most people who are important to him think he should or should not perform the behavior in question" [13]) as a determinant of the intention to behave. This is where our theory diverges from TRA to consider not only people whom we think are important to us, but encompass a broader sense of context. The *Subjective Norms* of TRA is similar to our construct of **Community Context**. Nevertheless, the literature on accessibility has not done a good job in studying influence of community as well as that of the **Societal context** on designers' intentions and behaviors, while other disciplines have emphasized their roles as antecedents of behavior [14]. The community and social impact are important not only as factors that influence one's behavior, but also serve to shape many of our preferences and attitudes during our life. Some cultures may refer to disability as an undesired issue or taboo which may influence users' attitude towards disability in general and accessibility in particular. Even societies who support equal rights for people with disabilities may address challenges of accessibility differently and therefore influence the attitudes of individuals in those societies and communities in different ways.

A common construct from the accessibility literature is the study of the **Legal context** on accessible web design and ramifications of laws on the design and production of accessible information [1, 15, 16]. For example, Section 508 of the Rehabilitation Act of 1973 defines technical requirements relating to the accessibility of technology provided by federal agencies in the United States, and has been analyzed extensively in the accessibility literature. State regulation is generally limited to technologies implemented by federal agencies and, in most cases, do not relate to private individual production of information on the Internet. Our study aims at users who are non-professionals and that do not work in federal agencies, thus the legal context is not directly relevant to these users. However, awareness of these legal guidelines may influence users' attitudes towards accessible web design. Australia is a unique example of a legal system

that also looks at accessible design at the private individual level. In 2000 the Australian court ruled that a website with barriers to accessibility was unlawful [1] according to Section 24 of the Disability Discrimination Act (DDA) which states "It is unlawful for a person who, whether for payment or not, provides goods or services, or makes facilities available, to discriminate against another person on the ground of the other person's disability or a disability". Although the case dealt with the website of the Sydney Olympic Games, this can be extrapolated to a more general audience. To date, we do not have a case that has dealt with a non-accessible site provided by a private sector company. Currently, the state of legal enforcement and compliance with accessibility laws is not high, and most websites remain in-accessible to those with disabilities. Therefore we should also look at factors other than legal context that serve as antecedents to producing accessible information.

Consequently, we hypothesize that the incentives and constraints to produce information accessible to people with disabilities is influenced mainly by the context within which users operate (see fig. 1). The three contexts that we will be considering are:

Community Context - The impact of the immediate cultural environment through which one's identity is being shaped.
Social Context - The impact of the general society through which one's identity is being shaped.
Legal Context - Statutory and regulatory constraints and freedoms.

Attitude is influenced not only by the three contexts mentioned above, but also by our exposure to and awareness of issues concerning disability, and the set of individual values which reflect our personality. Therefore, our theory proposes two antecedents to attitude: **General Awareness** and **Individual Values/Norms** (see fig. 1). Hackett et. al. [8] claim that awareness of accessibility issues has increased in the last few years. Other researchers demonstrated that lack of awareness of the needs of people with disabilities was among the top reasons why websites are not accessible [1, 5, 17]. This awareness appears to be at two levels – the level in which the user is aware of challenges that people with disabilities face, and specifically the awareness of accessibility issues on the Internet.

General Awareness - 1) One's awareness of the challenges faced by people with disabilities, and 2) One's awareness of issues of accessibility of websites by people with disabilities.

While attitude is specifically about accessibility design, the individual norms are a more general notion. Individual Values are identified as the ethical standards or normative questions of what is right or wrong and create the infrastructure to ones attitude towards specific issues. Therefore,

Individual Values/Norms are the general feelings of personal obligation or responsibility towards issues that concern people with disabilities.

The next set of factors considered, were control factors which affects attitude and in turn influences intention, the main determinant of behavior. There are two sets of control variables. The first set includes 6 factors which are believed to affect the relationship between 'attitude' and 'intention to produce' accessible information according to the literature. These factors are:

Perceived Cost – The belief of the degree to which designing accessible websites for people with disabilities would be free of effort.
Intrinsic Motivation - The perception that one will want to design accessible websites for people with disabilities for purposes of self-fulfillment
Image - The degree to which one believes designing a web-based application accessible by people with disabilities will enhance his/her image or status in one's social system.
Extrinsic Motivation - The degree to which one believes designing a web-based application accessible by people with disabilities will lead to valued outcomes which is distinct from self-fulfillment reasons.
Context Detachment - 1) The belief of the frequency with which the website will be accessed by people with disabilities, and 2) the belief of the number of people with disabilities that will access the website.
Responsibility Shifting - The belief that designing a website accessible by people with disabilities should be handled by others.

The literature indicates Perceived Cost as a major impediment to the intention to produce accessible websites in the work environment.

Managers and designers reiterate that "it is not economically practical to take these people into account" [1, p. 291] or that "it is very difficult and expensive to design accessible systems and thus do not make any attempt to reduce exclusion" (p.288). Shindler [18] claims that designers and managers often think that the effort and financial investment required for improving access is not worth the positive and ethical image they gain get in return. The perceived scale of the problem plays a big role in making this determination. Most professionals assume that if all potential users have essentially the same characteristics as people with no disabilities, this not only makes the design task simpler, but also saves much effort in testing and evaluating what has been produced. This is a misconception about the actual range of characteristics of potential users. While these perceptions are very common, studies have demonstrated that "the basic outcome of inclusive design is in fact likely to result in economic benefit. If a product or technology that can be accessed and used by a wider audience than would have otherwise been possible, then it follows that the potential customer base for that technology is increased" [1, p. 292]. While theses might be widespread beliefs by designers, why should this factor influence non-professionals users? Perceived Cost relates in this context to the perception of effort that will be required to produce accessible content online. For example, many users who are aware of accessibility issues believe that designing accessible sites makes the site boring and also very difficult to implement. Therefore, they do not want to spend the time, effort and money for this purpose [15].

Intrinsic and Extrinsic Motivation are factors that are causes of intentions of behavior [19, 20]. Although we could not find any mention of this in the literature, we argue that one of the obstacles is the low priority one gives to producing accessible sites compared to other priorities. For example, a user will be eager to upload pictures and share them with her friends before making sure they are also accessible. As a result, the task of developing accessible sites is usually accorded lower priority.

Image, the way in which our behavior is reflected in the social system we live in is also a factor that affects intentions of behavior [21]. In the business sector many companies have decided that accessibility is not worth the financial investment, which often conflicts with the positive image companies try to portray in their ethical and social responsibility to society [1]. This factor is a double-edge sword. On the one hand, **Image** may serve as a catalyst and encourage them to produce accessible websites. However, it can also serve as an impediment if societal norms tend to exclude people with disabilities from social processes.

Two important factors that were mentioned in the accessibility literature but to a lesser degree in the Information Systems literature are **Context Detachment** and **Responsibility Shifting.** Context Detachment can be described as how users often falsely assume that their content would not be of interest to people with disabilities or assume people with disabilities suffer from technophobia [1]. This provides them with excuses and reasons for not designing accessible sites. Non-professional users usually employ others' technologies, platforms and applications, and therefore assume that they do not have any responsibility to contribute to accessibility issues since this is something the service and content providers should take care of. The idea that users see themselves as 'small pawns' in the process adversely impacts their intention to do anything about this. For example, users who upload video on YouTube will often think that they lack the capability to do anything which concerns accessibility, since they are using YouTube's platform to share content. Practically, their capabilities are minimized when using other's platform, but they can still enhance accessibility levels of the content they just uploaded by, for example, adding descriptive text or tags.

The second set of control factors include three factors that according to studies affect the behavior of a user once intention to design and produce accessible information has been formed. They include:

Maintenance Cost - The perceived cost to the individual to maintain an accessible website.

Learning Cost - Learning how to design accessible websites would be free of effort.

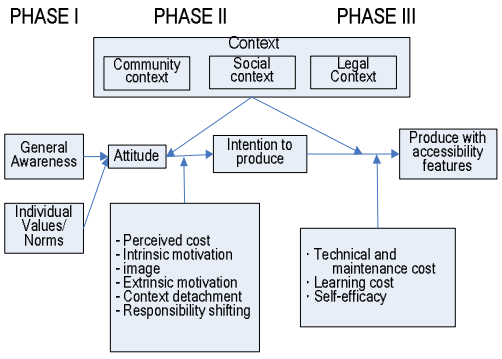
Self Efficacy - One's judgment of his/her capability to design a web-based application accessible by people with disabilities.

Self-efficacy, discussed in length in the IS literature [20] affects accessible information production when users believe they do not have capability to make content accessible. In the

context of learning, Ross warns that because the topic of accessibility is not considered a core part of the curriculum for computer science and information system this will increase the **learning cost** of designers and will weaken their ability to design accessible sites [22]. Baggett [17] and Lazar et. al. [23] also emphasize the importance of reducing the learning cost for companies in order to produce more accessible content. This challenge becomes more acute when it comes to non-professional users who may not have much programming knowledge. Finally and surprisingly, **maintenance cost** is not discussed in the accessibility literature but is in the IS literature hence added it to the model [22]

To summarize, our proposed model focuses on non-professional users who produce information online in various ways (e.g., creating personal websites and blogs, or uploading multimedia items to online platforms). Most of the information produced online today is done by non-professionals, but this group is usually ignored in research studies as well as formal efforts to raise awareness. The model attempts illustrate the phases of content creation with the constructs mentioned above to provide an understanding of the factors involved in creating accessible web content by non-professional users. Ideally, it will lead to an increase in accessible design and information production for people with disabilities.

Fig. 1 – Factors Influencing Design and Production of Accessible Information



In the next section, we present the instrument developed for this model and describe the process used to ensure its validity and reliability.

3. Instrument Development Process

The second goal of this paper was to develop an instrument to measure the constructs of the theoretical model that we suggested in section 2. The instrument would measure obstacles, challenges, and incentives which lead a non-professional user to design websites and produce information that is accessible to people with disabilities. The development of the instrument follows the methodology set by Moore and Benbasat [21] and includes three stages: i) **item creation** – creating a pool of items to match each construct definition. The objective of this stage was to ensure content validity; ii) **scale development** – using a total of 12 judges in multiple rounds to sort items into construct categories (scales), and then, examining judges' inter-rater reliabilities and their consistency of labeling these scales. The goals of this stage were to assess the construct validity of the various scales being developed, and to identify any particular items which still may be ambiguous; iii) **instrument testing** - the instrument was distributed to a small pilot sample (106 users). The objective of this stage was to check the scale reliability. **(**Another full scale evaluation is planned for further assessment of validity.)

3.1 Stage I of Item Creation: Ensuring Content Validity

Item creation should be cognizant of **content validity**, that is, make sure that the instrument covers all the items to reflect the definition of the constructs that are proposed as part of the conceptual model that is suggested (see fig.1). First, we initiated an initial item pool for the various constructs (see Appendix C). Then, items, considered being too narrow in focus and applicable only to particular situation or particular technologies, were culled. Also, after the item pools were created, they were re-evaluated to eliminate those which appeared redundant or ambiguous (i.e., which might load on more than one factor).

The culling process left the following number of items in each one of the 17 constructs for a total of 67 items:

Individual Norms	3	General Awareness	4
Attitude	4	Legal Context	4
Perceived Cost	4	Social Context	3
Maintenance Cost	4	Community Context	3
Learning Cost	4	Context Detachment	4
Image	4	Responsibility Shifting	3
Intrinsic Motivation	3	Intention	3
Self Efficacy	10	Produce	4
Extrinsic Motivation	3		

3.2 Stage II: Scale Development

The goals of the second stage were twofold: 1) to assess the **construct validity** of the various scales being developed; that is, ensure that the instrument we develop reflects the concepts and theoretical assumptions of our framework, and 2) to attempt to identify any particular items which may still be ambiguous. To achieve these goals, judges were asked to sort the various items into construct categories during two sorting rounds. In the first round the judges were not told the labels or names of the underlying constructs, and were instead asked to provide their own labels and definitions for the constructs (see Appendix B). "This procedure minimizes the potential of 'interpretational confounding' which occur 'as the assignment of empirical meaning to an unobserved variable [e.g. factor] other than the meaning assigned to it by an individual a priori to estimating unknown parameters'" [21, p. 200]. The judges were graduate students who were chosen randomly from the institution the research was conducted in. Their backgrounds reflected the target population, that is, non-professional users who produce online information. In the second round the judges received cards that contained the items as well as cards that contained the existing construct labels from the theoretical framework.

If judges' definitions matched the scale's intent, then our confidence in the construct validity of the scales increased. A second indicator of construct validity was the convergence or divergence of items within categories. If an item was consistently placed within a particular category by the judges, then it was considered to demonstrate convergent validity with the related construct and discriminant validity with the others. Finally, if the number of categories created by the various judges, the labels and definitions assigned to them, and the items included in them were consistent, then scales based on these categories could also be said to demonstrate convergent and discriminant validity.

The sorting procedures followed the Moore and Benbasat methodology [21]. The judges were given cards, each containing one item, and were asked to sort them into categories based on their similarity. In an attempt to reduce the burden on the judges, we split the 17 constructs into two sets: set A (9 constructs) and set B (8 constructs). We attempted to group theoretically similar constructs in the same set to make it more challenging for the judges to sort the cards in the correct categories and thus have a more stringent test of validity. For example, we put items from **Individual Norms** together with items from **Attitude**. The constructs are similar to each other but reflect different levels of feelings and personal obligations. Two sorting rounds were conducted on each set. The first sorting round involved four different judges for each set and the second involved two different judges for each set. All together 12 judges were involved in the sorting procedures.

To assess the reliability of the sorting conducted by the judges, two different measurements were used. First, we measured the level of agreement in categorizing items of each pair of judges using Cohen's Kappa. Once the Kappa scores were calculated, an assessment was made of the level of agreement across all pairs of judges. Recent studies consider a Kappa score higher than 0.65 to be acceptable [21] (see Table 1). A second measurement of reliability was an *Item Placement Ratios* which measure how many items were placed by the panel of judges for each round within the 'target' construct. In other words, we measured the overall frequency with which all judges placed items within the intended theoretical constructs. This procedure is used to highlight any potential problems. See Appendix A for the elaborated item ratios of the study.

The judges in both rounds created the exact number of constructs as the theoretical model suggested (17). The Kappa scores were very high in both sets and averaged 0.96 and 0.99 respectively for the first round and 0.96 and 0.95 respectively for the second rounding (see table 1).

Table 1: Inter-Judge Agreement Scores

Agreement Measure	Round 1	Round 2
Cohen's Kappa – SET A		
Individual Norms	1.00	0.82
Attitude	0.93	0.73
Perceived Cost	0.93	1.00
Maintenance Cost	1.00	1.00
Learning Cost	1.00	1.00
Image	1.00	1.00
Intrinsic Motivation	1.00	1.00
Self-Efficacy	1.00	1.00
Extrinsic Motivation	1.00	1.00
Average	0.96	0.96
Cohen's Kappa – SET B		
General Awareness	0.93	1.00
Legal Context	0.93	1.00
Social Context	0.91	1.00
Community Context	0.91	0.82
Context Detachment	1.00	1.00
Responsibility Shifting	0.74	1.00
Intention to Produce	1.00	1.00
Produce	1.00	1.00
Average	0.96	0.96
Placement Ratio Summary – SET A		
Individual Norms	1.00	0.83
Attitude	0.94	0.75
Perceived Cost	0.94	1.00
Maintenance Cost	1.00	1.00
Learning Cost	1.00	1.00
Image	1.00	1.00
Intrinsic Motivation	1.00	1.00
Self-Efficacy	1.00	1.00
Extrinsic Motivation	1.00	1.00
Average	0.99	0.95
Placement Ratio Summary – SET B		
General Awareness	0.94	1.00
Legal Context	0.94	1.00
Social Context	0.92	1.00
Community Context	0.92	0.83
Context Detachment	1.00	1.00
Responsibility Shifting	0.75	1.00
Intention to Produce	1.00	1.00
Produce	1.00	1.00
Average	0.95	0.98

After the sorting had been completed in the first round, each judge independently labeled and provided a definition for each of the categories. The panel's labels and definitions very closely matched those of the original constructs (see Appendix B). This served as another way to assure high construct validity. Examination of the resulting 'factor structure' showed very high agreement among the judges, with the exception of **Attitude** and **Responsibility Shifting.** The overall placement ratio of items within the target constructs was 0.99 and 0.95 for the first round and 0.95 and 0.98 for the second one (see Appendix A and Table 1).

The first and second round allowed for the identification of items needing refinement or re-wording. For example we re-worded an item in **Responsibility Shifting** from *"I believe accessible websites should be designed by people who are specially trained"* to "I believe accessible websites should be the responsibility of people who are specially trained". The judges thought that this would make the meaning clearer, since the issue they were asked about was responsibility and not the design.

3.3 Stage III: Instrument Testing

The goal of the next stage of the development process was to examine the scale reliability. An initial pilot test of 106 students users (see Appendix C) was carried out. Respondents were asked to complete the questionnaire and then also comment on its length, wording, and instructions. Reliability assessment of scales using Cronbach's ALPHA was carried out (see Appendix D for the inter-item correlations by scale). Items with low inter-item correlations or items that increased the ALPHA of a scale when deleted were candidates for elimination in the next round. Table 2 reflects the Cronbach's ALPHA scores before items were eliminated. (See Appendix D for the Inter-Item Correlations by scale before and after eliminating items).

Table 2: Reliability Coefficients

Scale Name	Items	ALPHA	Sig.
Individual Norms*	3	Qualitative	
Attitude	4	0.621	.000
Perceived Cost	4	0.767	.260
Maintenance Cost	4	0.820	.619
Learning Cost	4	0.852	.454
Image	4	0.833	.112
Intrinsic Motivation	3	0.882	.000
Self-Efficacy	10	0.869	.000
Extrinsic Motivation	3	0.689	.000
General Awareness**	4	0.338	.000
Legal Context	4	0.501	.000
Social Context	3	0.750	.000
Community Context	3	0.802	.000
Context Detachment	4	0.847	.000

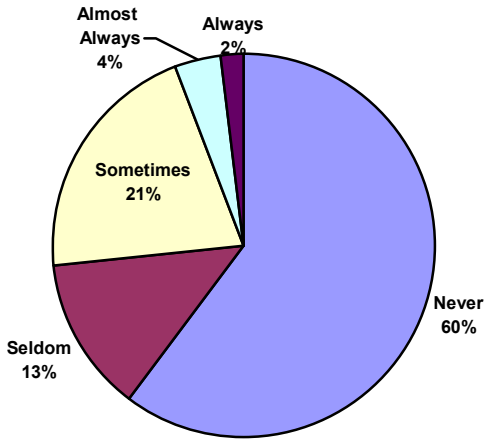
Responsibility Shifting	3	0.360	.000
Intention	3	0.931	.014
Produce***	4	0.668	.331

* **Individual Norms** was reflected by 3 items – one ordinal, and two nominal with open ended answer. We did not conduct a reliability test because one item had zero variance and was removed from the scale, while other items were open ended.
** **General Awareness** has 4 items but only 3 are nominal. The items form a notion of overall awareness but do not necessarily relate to each other.
*** **Produce** has 4 items but only 2 were ordinal. Respondents thought that the other 2 items were open-ended. Therefore, the ALPHA score was conducted only on the 2 ordinal items.

The results of this round required us to perform some re-wording and reevaluating of some of the questions, but also helped us to contribute to the existing scholarship on accessibility. For example the question measuring **Individual Behavior** which asked "Do you believe it is a good idea to provide special services to help people with disabilities" had zero variance because everyone answered 'yes', which reflects the desirable and correct answer for our society. On the other hand, an ordinal question that measured the same construct but was phrased a bit differently "how important do you consider disability rights" had 17.5% of the respondents disagreeing that disability rights were important.

Most of the respondents had an issue with the word "design". It was hard for users to think of themselves as designers: "since I don't design website and have no idea what it would mean or what's involved in making them accessible, it was difficult to answer many questions" or "too many questions assume or use website development. Information posting is not the same in my mind --- so using Flickr is not the same as designing a website". Two issues are evident through these comments – the perception of users as producers of information on the Internet and the perception that they did not know what accessibility design is. 60% of respondents said they never designed or produced accessible information (see fig.2).

Fig. 2 – Producing Accessible Information



One more stage is yet to be conducted in the future which is another full scale pilot evaluation planned for further assessments of validity. This stage will examine the reliability of the questionnaire after implementing the changes from the first pilot.

4. Discussion: Towards a Social Responsibility Approach

During the process of developing the instrument we encountered a few issues which are important to note. First, the questionnaire itself appeared to be a mechanism to increase awareness of accessibility among the respondents. Respondents reported that after filling out the questionnaire, they were interested in finding more resources on the subject. Raising awareness to the challenges faced by those with disabilities is of great importance, and should not be done only with professionals but with any potential user that produces information on the Internet. Identifying and valuing accessibility issues as a society is important not only for equality arguments, but also serves as a way for individuals to contribute to society.

The abundance of information, *infomania* and advanced technologies have accorded more alternatives and power to users which they did not have before. At one time this was the domain of professionals only. This empowered users to be able to share information, design without knowing programming, upload multimedia and information, and reach out to others. 'Others' are also people with disability. The negative side effect of this is that users feel that they are not responsible when using these platforms. Since they are not 'real' designers, they can enjoy the

benefits of designing without having the feeling of responsibility when providing content to other people. It is important to recognize that these 'other people' may also be people with disabilities who face many challenges when trying to access web content in today's dynamic, user-generated internet environment. These perceptions can be changed with the proper guidelines and education.

Another important issue is the role of *context*. The pilot revealed that the majority of responders didn't think that the community, societal or legal context encouraged or guided them to do anything about the issue of accessibility. Being ambivalent may well be acknowledged as a reason that encourages users to be passive and not do anything to promote accessibility.

Our theoretical model is dynamic and multi-phased though fig. 1 may not illustrate that well. After users produce accessible information, they accumulate experience (negative or positive), which effects their attitude toward accessibility.

Finally, we do not address in this paper the pros and cons of different methods of accessibility inclusive design and instead try to understand what encourage or prevent people from using these methods.

5. Conclusions and Next Steps

The study offers a systematic approach to understanding the factors influencing accessible design and information production non-professional users and provides tools for measuring those factors (see Appendix C) The study contributes to the body of knowledge of accessibility in various ways. First, the importance of this paper lies in its ability to theoretically address the various factors which influence a non-professional user who produces information on the Internet. Second, the study illuminates a population that is being ignored in the literature – non professional users, which contributes the majority of content online. Third, it provides a measurement instrument that is almost fully tested and can be used to examine the theoretical model. Fourth, it shifts the discourse in the accessibility literature from dealing only with technologies and methods of expanding accessibility to technology to a more rigorous consideration of social factors that prevents us from doing so. Finally, testing this theory will enable us to identify where the challenges to accessibility reside and generate policy accordingly to address these challenges.

This paper is the first stage in a multiple-stage study. In the next steps, we are going to validate the scale on a full pilot with a larger sample. Then, applying the scale on a full-scale random sample of non-professional users we will test the validity of our theoretical model. Finally, we would like to construct a tool-kit that will fit the needs of various types of non-professional users and will facilitate the process of producing accessible information.

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