

Grounded Theory-Based Growth Model for Electronic Dance Music Information Retrieval Needs (Postprint)

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Abstract

[Purpose/Significance] To address the issue of low matching degree between resource organization and retrieval needs arising from the rapid growth of electronic dance music digital resources, this study attempts to construct a retrieval needs model for electronic dance music information resources to guide organization practices in new network environments. [Method/Process] Through retrieval experiments on domestic mainstream electronic dance music platforms, an interview outline for electronic dance music retrieval needs was developed, and grounded theory was subsequently employed to explore listeners' music information retrieval needs and construct a corresponding information retrieval needs model. [Results/Conclusion] The study reveals that electronic dance music listeners' needs exhibit a "growth" characteristic that connects the two dimensions of aesthetic subject (listener) and aesthetic object (music) in their music information retrieval needs. The internal driver of this "growth" is the Matthew effect of information needs. The study indicates that electronic dance music resource organization must balance core dimensions including subjective feelings, external descriptions, content elements, and production processes, thereby providing a reference basis for electronic dance music information resource organization in new network environments.

Full Text

A Growth Model of Demand for Electronic Dance Music Information Retrieval Based on Grounded Theory

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Abstract

[Purpose/Significance] This study addresses the low matching degree between resource organization and retrieval demands caused by the rapid growth of electronic dance music digital resources. It attempts to construct a demand model for electronic dance music information retrieval to guide the organization of electronic dance music information resources in the new network environment. **[Method/Process]** Through retrieval experiments on mainstream domestic electronic dance music platforms, we developed an interview outline for electronic dance music retrieval demands. We then applied grounded theory to explore the music information retrieval needs of electronic dance music listeners and constructed a corresponding information retrieval demand model. **[Result/Conclusion]** The study found that electronic dance music listeners exhibit “growth” in their demands, which connects the aesthetic subject (listener) and aesthetic object (music) dimensions of their music information retrieval needs. The internal driver of this “growth” is the Matthew effect of information needs. The research indicates that the organization of electronic dance music resources must balance core dimensions such as subjective feelings, external description, content elements, and production process, providing a reference basis for electronic dance music information resource organization in the new network environment.

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Introduction

After World War II, modern electronic music emerged alongside Europe’s technological development wave. Electronic music primarily includes “tape music” characterized by collage, “electroacoustic music” featuring electronic synthesizers, and “computer music” based on computer programming. Its creation presents characteristics distinct from traditional music in terms of rhythm, meter, mode, orchestration, and other musical elements. Electronic dance music represents the product of combining electronic music with traditional dance music, possessing both the “electronic” characteristics of electronic music and the fundamental functional attributes of dance music that provides rhythm and emotional foundation for dancing. It is an emerging musical form created and recorded through electronic devices such as computers [1].

The rapid development of information technology has gradually lowered the barriers to electronic dance music production, enabling numerous enthusiasts to create and release their own works. This has led to a sharp increase in the quantity of electronic dance music digital information resources, posing challenges for their organization and retrieval. Although current online music platforms

provide various retrieval methods—for instance, NetEase Cloud Music, SoundCloud, and Douban Music offer search options by track title, artist, playlists, and folksonomy-style tags—these approaches still fail to meet listeners’ diverse and personalized retrieval demands for electronic dance music.

Electronic dance music differs from traditional music in both content information and descriptive information, rendering some traditional music information organization and retrieval methods unsuitable. For example, in terms of content information, tonality and mode are important elements in traditional music, making organization and retrieval by these characteristics meaningful. However, a large amount of electronic dance music uses electronic synthesizers and noise to construct musical texture, with no obvious tonality or mode, thus losing significance for organization and retrieval by these attributes. In terms of descriptive information, while traditional music can be organized and retrieved by composer and lyricist, a substantial amount of electronic music is produced by remixing traditional music’s lyrics and melodies, making it impossible to distinguish original tracks from remixed versions based solely on lyricist and composer information.

Therefore, this study attempts to use grounded theory to explore electronic dance music listeners’ music information retrieval demands and construct a retrieval demand model, aiming to provide guidance for the organization of electronic dance music information.

Literature Review

Currently, no literature specifically addressing electronic dance music information retrieval demands has been identified. In the research field of user music information behavior, a few studies touch upon user music information needs. For example, Wang Minhong analyzed questionnaire data on folk music information needs in Guangdong using a Logistic regression model, discovering factors such as age, education level, and average monthly income that affect public music information needs [2]. However, this study only described music information needs as either present or absent, which is neither comprehensive nor specific. Although reference [3] indicated that users’ music information needs manifest behaviorally as identifying musical works and obtaining recommendations and evaluations, and thematically as needs for descriptive metadata and music-related knowledge, it did not present users’ music information retrieval demands in a concrete and structured manner.

Given the scarcity of research on music information retrieval demands, this paper reviews literature closely related to the theme of music information retrieval needs, specifically in music information organization and retrieval, to provide a broader research perspective.

2.1 Traditional Music Information Organization

Traditional music information organization primarily relies on classification. From music scholars' perspectives, standards and methods for music classification vary, with no unified, effective, and universal approach established. Du Yaxiong found that the "four categories" and "five categories" classification systems for Chinese traditional music suffer from inconsistent standards in sub-categories [4]. H. Lacombe [5] attempted to construct music classification based on listeners' subjective feelings but neglected the music content itself. From information organization scholars' perspectives, the *Chinese Thesaurus* contains few music-related subject terms and none regarding the audio industry. The "J6 Music" category in the *Chinese Library Classification* (hereafter CLC) uses musical instruments as classification criteria but lacks attention to other musical content such as rhythm, harmony, and tonality. Additionally, inherent defects in hierarchical systems make CLC unable to satisfy diverse retrieval demands [6-7]. The *Dewey Decimal Classification* similarly classifies music by instrument type, showing insufficient attention to other musical content.

2.2 Network Digital Music Information Organization

In the Web 2.0 era, listeners' retrieval demands have become increasingly personalized and diversified. Traditional music information organization methods can no longer effectively organize music information resources, and music scholars' attention to network digital music information organization has waned. Consequently, some information organization scholars have begun introducing emerging organization techniques and methods into music information organization.

In the fields of folksonomy and ontology, scholars have addressed music information organization. For example, E. Pampalk et al. achieved music classification through similarity in user group annotations in social tagging systems [8]. Wu Dan et al. constructed an ontology for classical music recording digital resources [9]. D. P. Madalli et al. proposed using faceted classification to build music domain ontologies [10]. Dong Gaojie constructed a music ontology based on Douban Music tags [11]. Regrettably, these organization methods pay insufficient attention to listeners' retrieval demands. Additionally, some scholars have classified music through specific algorithmic models. For instance, Lou Qiaoqiao proposed a static model for music emotion classification based on psychology's classic emotion model [12]. Zhuang Yan conducted classification and experimental simulation of music genres based on acoustic and musical features [13]. However, besides not comprehensively focusing on music content itself, these methods also neglect listeners' retrieval demands.

Specifically in the electronic dance music domain, scholars have made exploratory classification attempts, discovering conventional music style description vocabulary. T. Baruah et al. used neural network technology to achieve automatic classification of electronic dance music [14]. V. A. Van used

twelve music style-related concepts such as “House,” “Techno,” and “Trance” to describe electronic dance music clustering results [15]. However, this “by-style” organization method suffers from semantic ambiguity and non-unified classification standards, failing to effectively organize large amounts of music information resources or provide retrieval convenience for listeners.

2.3 Music Information Retrieval

With the digitization and networking of music information, research on music information retrieval has gradually emerged, primarily focusing on two aspects: retrieval based on music descriptive information and retrieval based on music content.

First, retrieval based on music descriptive information primarily uses descriptive metadata to provide users with retrieval vocabulary. Examples include Indiana University Digital Music Library’s metadata project [16], which uses controlled vocabulary as descriptive metadata for music, and MusicBrainz’s music metadata scheme [17], which defines a set of descriptive metadata naming domains including artist, album, publication date, etc., based on the DC metadata set. Additionally, some scholars view tags in social tagging systems as music descriptive information to provide users with tag-based music retrieval results. For instance, Li Jing calculated the similarity between user emotion tags and music resources, combined with music popularity ranking, to return music information retrieval results using tags as retrieval entry points [18].

Second, retrieval based on music content primarily identifies content information such as melody and rhythm to provide users with retrieval pathways from content information. For example, M. A. Casey et al. enabled users to retrieve music containing hummed melodies through a humming recognition system and used audio fingerprinting technology to identify and match music in databases with the same melody as currently playing music, returning relevant information about the current track (the “song recognition” function) [19]. Zhang Liang used compressed sensing algorithms to identify rhythmic characteristics of different music, thereby providing users with retrieval pathways based on music rhythm [20].

Although the above studies provide various music information retrieval pathways, they lack clear and structured descriptions of users’ retrieval demands, causing music information retrieval research to lack purposefulness. The author believes that music information resource organization has long been disconnected from music information retrieval activities. In today’s rapidly growing network information resources, electronic dance music information organization should be based on listeners’ retrieval demands, serving listeners as its starting point and destination. Therefore, this study attempts to explore electronic dance music listeners’ information retrieval demands, establish a retrieval demand model, and provide guidance and reference for electronic dance music information organization.

Research Methods

3.1 Grounded Theory Research Method

Grounded theory is a bottom-up theory-building research method and methodology that generates theory from data after systematically collecting and analyzing materials. The grounded theory research process begins with data collection, gathering data about the research environment and questions through observation and interaction. This data originates from the research environment and subjects, representing subjects' interpretations of their own statements and behaviors. Through qualitative coding of data—distinguishing, categorizing, and synthesizing—concepts are constructed, and conceptual categories are analyzed to obtain theory [21].

Currently, electronic dance music information organization, whether through style classification borrowed from traditional music classification methods, “tag”-style organization based on folksonomy, or organization based on metadata and ontologies, all fall short of satisfying listeners' music information retrieval demands. Therefore, this study attempts to use grounded theory to collect various music information retrieval demand data from listeners through in-depth interviews, analyze relationships between different demands through qualitative coding, and construct a theoretical model of electronic dance music listeners' music information retrieval demands.

3.2 Data Sources and Research Process

First, the authors conducted retrieval experiments on mainstream music platforms including NetEase Cloud Music, SoundCloud, and Douban Music, recording experimental notes (see [Figure 1: see original paper]). Based on accumulated questions regarding retrieval effectiveness and demands from these experiments, we developed a semi-structured interview outline covering interviewees' basic information, their process of becoming electronic dance music listeners, preferred electronic dance music styles, views on electronic dance music classification, commonly used retrieval platforms, retrieval strategies, and their retrieval demands.

We then randomly selected members from the “CEM Electronic Music Community” (Note: This QQ group is an online exchange platform for Chinese electronic dance music enthusiasts. As of April 12, 2018, the group had 739 members, all electronic dance music enthusiasts and producers) and conducted in-depth interviews via telephone and online chat. After analyzing and organizing the interview data, we performed open coding, axial coding, and selective coding to form initial concepts, conceptual systems, and core concepts from the data. According to the specific needs of establishing the conceptual system, we adjusted interview strategies and outlines, adding two questions: whether current mainstream platforms' retrieval pathways satisfied interviewees' demands,

and whether interviewees had begun electronic dance music production practice. We then conducted additional in-depth interviews with randomly selected group members and coded the resulting data. Finally, based on the conceptual groups obtained from coding, we constructed the electronic dance music listeners' music information retrieval demand model.

The coding process was completed manually by the authors. Terminology and word selection during coding primarily derived from Li Chongguang's *Fundamentals of Music Theory* [22], B. Hrac's research findings in the digital music industry [23], and D. Howard's monographs on psychoacoustics and musical acoustics [24]. In the interview and coding process, we used "theoretical saturation" as the standard for stopping interviews. When the number of interviewees reached 12, no new concepts could be formed from the interview data, and theory reached saturation. We then interviewed three additional people to confirm theoretical saturation, after which we stopped interviewing, numbering the 12 interviewees from "01" to "12."

In open coding, we used line-by-line coding to obtain 23 conceptual categories as the foundation for axial coding. In axial coding, we summarized, analyzed, merged, and induced initial conceptual categories to form four axial coding concepts. In selective coding, we continued to induce and merge axial coding categories, summarizing electronic dance music listeners' music information retrieval demands into two dimensions: aesthetic subject (listener) and aesthetic object (music), as shown in .

Research Results

4.1 Music Information Retrieval Demands of Electronic Dance Music Listeners Under the Aesthetic Activity Model

In aesthetics, the "art production" theory based on Marx's "practice view" holds that aesthetics is a process where the aesthetic subject interacts with the aesthetic object through practice, thereby "grasping the artistic spirit of the world" and "producing beauty" through labor. This paper argues that listeners' ultimate purpose in retrieving music information is to complete aesthetic experiences through listening to, learning from, and reproducing retrieved music. In the qualitative coding of interview data, we found that electronic dance music listeners' music information retrieval demands primarily manifest in two dimensions: from the listeners' own perception and from the music content and its production process. Therefore, this paper uses aesthetic subject (listener) to define music information retrieval demands from the listeners' self-perception dimension, and aesthetic object (music) to define demands from the music content and production process dimension.

4.1.1 Retrieval Demands in the Aesthetic Subject (Listener) Dimension

Electronic dance music listeners' retrieval demands in the aesthetic sub-

ject dimension refer to demands manifested in retrieval activities based on listeners' perception and experience of musical works, using auditory subjective feelings as retrieval entry points to find related works. This level of retrieval demand is defined as the subjective feeling level.

The subjective feeling level primarily includes loudness/strength perception, tempo perception, music emotion perception, music imagery perception, and personal preferences. Subjective feelings are listeners' auditory psychological perceptions of musical works, which vary with different musical works. In the raw statements collected through interviews, listeners expressed desires to use descriptive words such as "ear-blasting" or "loud" for loudness/strength, "rapid" or "soothing" for tempo, "sad" or "joyful" for music emotion, "ink painting-like" or "oil painting-like" for music imagery, and "vulgar" or "trendy" for personal preferences as retrieval entry points.

4.1.2 Retrieval Demands in the Aesthetic Object (Music) Dimension

Electronic dance music listeners' retrieval demands in the aesthetic object dimension refer to demands manifested in retrieval activities based on listeners' cognition of music production processes and internal and external characteristics of musical works, using music information resources' external descriptions, content elements, and production processes as retrieval entry points to find related works.

The arrival of the Web 2.0 era and the development of digital music technology have significantly lowered the threshold for music production, making it a trend for electronic dance music listeners to have practical demands for "producing" music. As interviewee 09 stated: "When I made music for the first time, I found a [version] I liked to imitate, then [learned] the writing techniques inside." Listeners' practical demands also manifest as learning needs, which cause them to pay attention to basic musical elements such as scales and melodies, intervals and chords, rhythm and meter, etc. [19], as well as music industry processes including recording and production, and issues of rights and obligations attribution. Therefore, besides the external description level, listeners' music information retrieval demands are also concentrated in the content element and production process levels.

- (1) **External Description Level:** Music information retrieval demands at this level include track title, artist, label, performance version, style/genre, release time, release region, peripheral products, and popularity. External descriptions form the basis for listeners to construct their understanding of musical works through external descriptive information. For example, interviewee 01 mentioned: "I search for music based on [popularity] (popularity degree). If there are many comments and listens, the song should be good."
- (2) **Content Element Level:** Music information retrieval demands at this level include scales and melodies, intervals and chords, rhythm and me-

ter, mode and tonality, tempo and dynamics, musical form structure, and instruments and timbres. Due to practical needs, listeners' learning demands cause them to understand musical content elements, relationships between elements, and music processing techniques as a theoretical foundation for "producing" music. For example, interviewee 11 mentioned: "The [chord progressions] of EDM are actually quite fixed; some Drop sections have only one [chord]. If you could input [chord progression] or [mode] to search for songs with the same progression, it would be much more convenient to learn how to make electronic music."

- (3) **Production Process Level:** Music information retrieval demands at this level include music industry processes and rights and obligations attribution. Music industry processes encompass songwriting, arrangement/production, recording, mixing, mastering engineering, promotion, and distribution. Rights and obligations attribution includes lyricist/composer copyright owners, recording copyright owners, distributors, and other rights and obligations. Some listeners (such as interviewees 09 and 11) are professional electronic dance music producers whose "products" have been released through complete music industry processes. These listeners' attention to specific details of music production processes, related technologies, and resulting rights and obligations attribution causes their music information retrieval demands to show concern for music production processes. For example, interviewee 09 stated: "If there are [songwriters] besides the producer, they should still be annotated, and [recording engineers], [mixing engineers], and [mastering] should all be annotated."

4.2 The "Growth" of Electronic Dance Music Listeners' Retrieval Demands

Through data analysis, besides obtaining different dimensions and levels of listeners' information retrieval demands, we also discovered that the distribution of electronic dance music listeners' retrieval demands shows stage differences, arising from varying degrees of cognition and practice regarding electronic dance music. For example, interviewee 03 mentioned: "At first, I thought music that sounded ['exciting'] was EDM. Later, I began to pay attention to information like [style] definitions and [genre], and then I thought about [making my own] electronic music."

Listeners' cognition and practice of electronic dance music are phased, including four stages: from direct auditory "experience" at the intuitive level, to "cognition" from external descriptive information, to beginning to "learn" and "want to practice," and finally to having practical ability and engaging in "production" practice. This paper defines this stage change as listeners' "growth," the four stages as "growth stages," and listeners at each stage as "novice listeners," "general enthusiasts," "avid enthusiasts," and "practitioners (producers)." lists listeners at different growth stages and their current retrieval demand levels. It

should be noted that this paper considers retrieval demands at a certain level to be satisfied if and only if all respondents with demands at that level have all aspects and subcategories of demands at that level satisfied. Otherwise, respondents' retrieval demands at that level are considered unsatisfied.

Table 2. Growth Stages of Electronic Dance Music Listeners and Music Information Retrieval Demands

Growth Stage	Interviewee Numbers	Original Statement Examples	Retrieval Demand Levels (Unsatisfied)	Retrieval Demand Levels (Satisfied)
Novice Listeners	01, 07, 10	01: "Friends introduced me to EDM. I haven't heard many styles yet... I personally prefer Trance-style tracks. Sometimes I want to search for tracks based on mood."	Subjective Feeling	—
General Enthusiasts	02, 05, 06, 12	05: "I've been listening to EDM for over two years and have fixed favorite styles and artists... I also search for songs by label. I want to search for songs through MVs..."	Subjective Feeling, External Description	—

Growth Stage	Interviewee Numbers	Original Statement Examples	Retrieval Demand Levels (Unsatisfied)	Retrieval Demand Levels (Satisfied)
Avid Enthusiasts	03, 04, 08	03: “I want to make my own electronic dance music... Sometimes I want to find different Remixes or festival performances of a song...”	Subjective Feeling, External Description, Content Elements	—
Practitioners (Producers)	09, 11	09: “As a producer and mixing engineer for seven years... If I could search for songs by mixing engineer... Also, timbre, sections, and BPM are important for electronic music. But feeling and emotion are most important.”	Production Process, Content Elements, External Description, Subjective Feeling	—

Based on these results, this paper argues that as listeners’ cognition of electronic dance music deepens and practice begins, their music information retrieval demands, particularly unsatisfied demands, increase. Specifically: (1) “Novice listeners” know little about electronic dance music and rely mainly on direct auditory feelings for cognition, so their unsatisfied retrieval demands primarily manifest at the subjective feeling level. (2) “General enthusiasts” begin to rely on both external descriptions and subjective auditory feelings, so their unsatisfied retrieval demands primarily manifest at the subjective feeling and external description levels. (3) “Avid enthusiasts” have strong practical intentions and

hope to learn knowledge about electronic dance music production, thus paying more attention to external descriptions and music content elements and production techniques. Therefore, their unsatisfied retrieval demands primarily manifest at the external description and content element levels. (4) “Practitioners” have begun “producing” music, so besides paying attention to music content elements and external descriptions, they also focus on music industry processes and rights and obligations attribution. Moreover, since musical works ultimately need to serve listeners’ direct auditory feelings, “practitioners” also pay high attention to direct auditory feelings of electronic dance music works. Thus, their unsatisfied retrieval demands manifest at the production process, content element, external description, and subjective feeling levels.

4.3 A Music Information Retrieval Demand Model Conforming to Electronic Dance Music Listeners’ “Growth”

Based on the above analysis, this paper established an electronic dance music listeners’ music information retrieval demand model, as shown in [Figure 2: see original paper].

The model’s horizontal axis represents listeners’ music information retrieval demands; the vertical axis represents electronic dance music listeners’ “growth,” marking different “growth” stages; the black and gray rectangles in the plane indicate the distribution status of listeners’ music information retrieval demands at various levels. The model shows that electronic dance music listeners’ music information retrieval demands are distributed across all aspects of the aesthetic subject and object dimensions, with currently unsatisfied demand levels outnumbering satisfied ones. Along the direction of listeners’ “growth,” listeners’ music information retrieval demands and currently unsatisfied retrieval demands increase accordingly, expanding from the aesthetic subject dimension to the aesthetic object dimension. The overall distribution of listeners’ music information retrieval demands presents a trapezoid shape that is larger at the top and smaller at the bottom. This distribution reflects the Matthew effect of information needs: as listeners’ cognition of electronic dance music deepens and practice begins, their information acquisition increases, causing their information demands to increase accordingly, and their information retrieval demands gradually increase as well.

The model reflects both listeners’ demands for the objectivity of music information and their interactive demands for music information. At the external description and content element levels of listeners’ retrieval demands, the relationship between listeners and music information is static: listeners’ retrieval demands arise from the objective existence of music information. At the production process and subjective feeling levels of listeners’ retrieval demands, the relationship between listeners and music information is dynamic and interactive. On one hand, it is a production and produced relationship: music experiences a series of production processes from creation to distribution, while listeners’ identity changes during music production generate different rights and obligations

attribution. On the other hand, it is a perception and perceived relationship: as described by mathematical models of emotional information [25], music information forms specific physiological reactions in human ears through the physical characteristics of air vibration, generating physiological signals that form listeners' perceptions of music loudness and strength. These perceptions form listeners' emotional and imagery perceptions of music through mapping of physiological and psychological signals, ultimately generating emotional expressions about personal preferences. It is precisely the interaction between listeners and music information that generates retrieval demands at the subjective feeling and production process levels.

Conclusions and Outlook

Based on the grounded theory research method, this study explored electronic dance music listeners' music information retrieval demands and reached the following main conclusions: Electronic dance music listeners' music information retrieval demands manifest in two dimensions: aesthetic subject (listener) and aesthetic object (music). The aesthetic subject (listener) dimension includes the subjective feeling level; the aesthetic object (music) dimension includes three levels: external description, content elements, and production process. Electronic dance music listeners' retrieval demands exhibit "growth," with differences existing in music information retrieval demands among listeners at different stages. Using electronic dance music listeners' "growth" as the pivot connecting the aesthetic subject (listener) and aesthetic object (music) dimensions of listeners' music information retrieval demands, we established an electronic dance music listeners' music information retrieval demand model.

The growth model proposed in this paper has two main application directions:

5.1 As a "Ruler" for the Ideal State of Electronic Dance Music Information Organization

Information organization must follow principles of objectivity and purposefulness, scientifically reflecting and ordering information and centering on users' information demands—that is, information organization serves information retrieval. Using grounded theory, a "bottom-up" method, to construct listeners' retrieval demand model structurally expresses users' retrieval demands. From the user perspective, it reflects retrieval demands at different "growth" stages, representing the purposefulness of information organization. From the retrieval demand perspective, it reflects the content and external characteristics of retrieved objects, embodying objectivity requirements for information organization. Therefore, this paper argues that this model represents the "ought-to-be" result of ideal electronic dance music information organization and can serve as a reference and ruler in the process of electronic dance music information organization, providing "document information guarantee" that meets objectivity

requirements and “user guarantee” that meets purposefulness requirements.

Specifically, for expert classification methods, ontologies, and other knowledge organization methods, the model can provide references for concept selection and “class” selection. It can also be benchmarked against existing thesauri and ontologies to complete revisions of existing knowledge organization methods. For folksonomy, the model can provide guidance for users of social tagging systems, controlling tag quality to some extent. It can also serve as a standard for screening existing tag sets to discover high-quality tags and improve annotation levels, guiding and limiting individual users’ indexing behavior through structured retrieval demands of user groups—coming from users and going to users.

5.2 As an “Interface” for Interoperability Among Various Electronic Dance Music Information Organization Methods

This paper argues that the electronic dance music information retrieval demand model can serve as an intermediary and hub for interoperability among various methods in the field’s knowledge organization systems. On one hand, using grounded theory to “bottom-up” construct the model, all concepts come from users, providing the model with an “interface” to weak-semantic knowledge organization methods like folksonomy. The model’s structured description of electronic dance music information resources’ content and external characteristics provides an “interface” to strong-semantic knowledge organization methods like expert classification and ontologies. On the other hand, the model’s structured description of electronic dance music’s content and external characteristics is closely linked to users’ “growth stages” and corresponding retrieval demands. Therefore, various methods in knowledge organization systems can achieve integration and interoperability by establishing mappings with the information retrieval demand model.

Although this study takes the electronic dance music domain as an example to research and construct a user retrieval demand model, the structured expression of user retrieval demands based on grounded theory should also be meaningful in other domains.

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Author Contributions:

Zhang Yuanming: Conceived research topic, designed research methods and plan, collected and coded data, analyzed data, constructed model, wrote research paper.

Zhang Yunzhong: Guided research topic selection, provided suggestions during data collection, coding, analysis, and model construction, guided paper revision.

Liu Di: Participated in data collection and coding, provided reference opinions for data analysis and model construction.

Growth Model of Demand for Information Retrieval Based on Grounded Theory: A Case Study of Electronic Dance Music

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Abstract: [Purpose/significance] Aiming at the problem of low matching degree of information organization and retrieval demand caused by the rapid growth of electronic dance music digital resources, this paper tries to construct a demand model of electronic dance music information retrieval to guide the organization of electronic dance music information resources under the new network environment. [Method/process] Through the retrieval experiment of mainstream music platforms in China, the paper drew the outline of the interviews of the electronic dance music retrieval needs, and then used the grounded theory to explore the music information retrieval needs of the electronic dance music listeners and constructed the information retrieval demand model. [Result/conclusion] The study found that the audience demand of electronic dance music has “growth”, which connects the aesthetic subject (audience) and aesthetic object (music) of the audience information retrieval needs, and the internal promotion of “growth” is the Matthew effect of information needs. The research indicated that the information organization of electronic dance music needs to balance the core dimensions such as subjective feelings, external description, content elements and production process. The paper can provide a reference for the organization of electronic dance music information under the new network environment.

Keywords: electronic dance music; music information retrieval need; grounded theory

Note: Figure translations are in progress. See original paper for figures.

Source: ChinaXiv — Machine translation. Verify with original.