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Practical Exploration of Digital Media Education in Public Libraries: An Analysis of YOUmedia in the United States (Postprint)

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Date: 2023-07-26T00:00:00+00:00

Abstract

[目的/意义] To analyze the YOUmedia digital media education theory and its practical implementation in the United States, thereby providing references for public libraries in China to conduct digital media education programs.

[方法/过程] This study reviews the development process of YOUmedia's digital media education theory, summarizes its specific content, analyzes the theoretical application models and educational activity management, examines the implementation outcomes of these activities, and distills YOUmedia's distinctive experiences along with their implications for China.

[结果/结论] Digital media exerts profound influence on adolescent development. Public libraries in China may develop digital media education initiatives under relevant theoretical frameworks to guide youth toward rational digital media usage. In educational activities, public libraries should extensively collaborate with social organizations, foster an atmosphere characterized by equality, mutual respect, and peer learning, leverage reciprocal behaviors among youth participants, and orient learning content toward adolescents' academic pursuits and future career prospects.

Full Text

Preamble

Exploration of Digital Media Education Practices in Public Libraries: An Analysis of American YOUmedia

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Abstract

[Purpose/Significance] This paper analyzes the theory and practice of digital media education in American YOUmedia to provide reference for Chinese public libraries conducting digital media education activities. **[Method/Process]** The paper reviews the development process of YOUmedia’s digital media education theory, summarizes its specific content, analyzes the theory’s application model and the management of educational activities, examines implementation effectiveness, and finally summarizes YOUmedia’s distinctive experiences and their implications for China. **[Result/Conclusion]** Digital media has a profound impact on youth development. Chinese public libraries can conduct digital media education under relevant theoretical guidance to help teenagers use digital media rationally. Public libraries should extensively cooperate with social organizations in educational activities, create an atmosphere of equality, mutual respect, and mutual learning, leverage reciprocal behaviors among teenagers, and orient learning content toward teenagers’ academic and future career development.

1. Research Status and Significance

1.1 Research Status

The development of 3D printing technology has spawned numerous maker spaces. The American library community was among the first to recognize this phenomenon and introduce maker spaces into libraries. In July 2009, the Chicago Public Library established the first “YOUmedia” space to provide digital media services for local youth. In September of the same year, the Skokie Public Library in Illinois established a “Digital Media Lab” with state government funding to support residents in creating digital media content. Since then, maker spaces have developed rapidly and become a focus of attention in the American library community.

Chinese library scholars began paying attention to American developments in 2013, with research papers emerging on libraries establishing maker spaces. The number of papers has grown annually, particularly in recent years, becoming a research hotspot. A search in the CNKI journal database using “library” and “maker space” as keywords yielded 531 articles (as of January 6, 2019), including 156 in 2017 and 165 in 2018. Research objects primarily involve public libraries (200 articles) and university libraries (198 articles). The research trend has gradually transitioned from early theoretical discussions to practical studies, such as analyzing foreign cases, service functions and models, and operational management. However, most studies focus on service or management forms rather than the specific content of maker activities.

Maker spaces are essentially learning and innovation spaces involving diverse industries and varied activities. Currently, public library maker activities mainly include 3D printing, digital programming, animation and video production, and model making. Existing research seldom considers the actual significance

of maker spaces for specific user groups from the perspective of activity nature. Public libraries introducing maker spaces typically emphasize educational functions—achieving educational and instructional goals through innovative creation activities that foster user growth—yet existing research generally focuses on library business development rather than social education perspectives on user issues.

1.2 Research Purpose and Significance

Digital media refers to technologies that allow users to create new forms of interaction, expression, communication, and entertainment in digital ways, encompassing computers, digital cameras, smartphones, digital music production, and video games. With the widespread popularization of smartphones, computers, and other digital devices, people’s frequency of using digital media continues to increase. As of December 2017, China had 772 million internet users, including 753 million mobile internet users. Various network-based communications, entertainment, and payment services have become extremely common. While digital media brings numerous conveniences, it also introduces negative issues such as personal privacy leakage and internet addiction. Teenagers represent society’s future, and there is widespread concern that addiction to digital media may adversely affect their academic performance and future development.

This study attempts to break previous research patterns by focusing on providing solutions to social problems among Chinese youth caused by digital media. Centering on the YOUmedia project and applying relevant theories, it examines the important role of digital media activities in youth development and how public libraries can effectively leverage their advantages and favorable conditions to guide teenagers in rational digital media use while overcoming limitations. This research thus has positive practical significance and certain theoretical value.

2. Digital Media Education Theory

2.1 Development Overview

The John D. and Catherine T. MacArthur Foundation conducted research on how digital media affects teenagers. In 2005, the foundation shifted its education investment focus from public K-12 school reform to digital media, learning, and education, deciding to invest \$50 million from 2006-2011. The foundation believed that increasing digital media was influencing how teenagers think, learn, express themselves, and perceive themselves, with potentially far-reaching educational implications. That same year, with foundation support, the University of California and the University of Southern California jointly began a three-year anthropological study on teenagers’ digital media practices in daily life, proposing the important “HOMAGO” theory.

Based on this theory and with MacArthur Foundation support, the Chicago Public Library launched the YOUmedia project in July 2009 to provide digital

media education and services for youth. After project implementation, the foundation supported the University of Chicago and the University of California in conducting research around YOUmedia practices. Building on the HOMAGO theory, researchers including M. Ito advocated for collaboration among YOUmedia researchers, designers, and staff to establish a unified set of principles for digital media learning and technology deployment. These principles became known as Connected Learning, with its research framework formed in 2011 and specific content released in 2012 [14].

2.2 Theoretical Content

2.2.1 HOMAGO Theory Content To study teenagers' digital media usage, researchers M. Ito and H. Horst interviewed over 800 teenagers (ages 13-18) and young adults (ages 18-30), compiling more than 5,000 hours of online observations. They focused on digital media usage scenarios including homes, schools, websites, and interest-based communities, discovering patterns in teenagers' digital media use as shown in Figure 1 [Figure 1: see original paper]:

- (1) **Teenagers use digital media to enhance friendships and expand interests.** This involves two behavior types: friendship-driven and interest-driven behavior. Friendship-driven behavior refers to teenagers using private methods (e.g., instant messaging, smartphones) or public methods (e.g., MySpace, Facebook) to maintain frequent contact with friends. These friends exist both virtually and in real life, strengthening friendships through frequent interaction. They discuss music, television, movies, and games; browse the internet and play video games together; share knowledge; and develop common tastes. Interest-driven behavior refers to teenagers using the internet to explore their interests and find information beyond school and local community limitations. Various specialized interest groups exist online—such as video gaming, artistic creation, and video editing communities—where teenagers can find like-minded peers. They can also publicly post their works to receive encouragement and recognition from peers. These two behavior types are called “Hanging Out” (HO).
- (2) **Teenagers participate in peer-based, self-directed learning activities online.** After discovering new interests in digital media, teenagers begin “Messing Around” (MA) with digital media devices, focusing on experimentation and exploration—such as attempting to create digital media products (producing a video or game, modifying digital photos in personal spaces). Through continuous trial and error correction, teenagers acquire digital media skills and may develop long-term interest in creating digital media products. In the early MA stage, teenagers need to find relevant experimental resources, such as information, tools, and preliminary technical preparation. Access to these resources may require social environment support, which can be provided by local friendship networks and peer groups with common interests developed during the HO stage.

- (3) **The MA stage transitions to the “Geeking Out” (GO) stage.** Some teenagers who experience the MA stage exhibit highly socialized, high-frequency participation in digital media or technology. At this point, teenagers focus on certain digital media features or technologies, accessing sophisticated knowledge and practices in digital media with the goal of obtaining in-depth knowledge and skills in their interest areas. To support this deep learning, teenagers rely not only on local friendship networks but more importantly seek support from specialized knowledge groups with shared interests. These groups include both teenagers and adults, distributed nationally or globally, forming specialized knowledge-sharing networks based on common interests, with the internet serving as the ideal supporting infrastructure. Learning within these networks occurs through peer sharing and feedback—for example, exchanging someone’s digital media works or technologies via online chat or forums, even conducting competitive rankings and reviews. This feedback generally comes from community members interested in the author’s works and viewpoints. Both authors and feedback providers can gain status and reputation through sharing and feedback, though feedback providers have no absolute evaluative authority. Under the 激励 and suggestions of feedback providers, authors may sustain their interests, learn more knowledge and skills, and make more friends with common interests.

2.2.2 Connected Learning As shown in Figure 2 [Figure 2: see original paper], the Connected Learning theoretical model further develops based on the HOMAGO theory and YOUmedia practice. It divides learning into three domains [14, 16]:

- (1) **Interest-driven learning:** Learners have intrinsic interest in certain knowledge and skills, willing to make efforts and showing enthusiasm. When learners are interested in content, learning outcomes are typically better. Interests cover a broad range, including common interests like arts, sports, and academics, as well as unique personal hobbies. Connected Learning suggests that intrinsic interest can be established through external pathways—learners can discover or develop their interests through exposure to others’ interests.
- (2) **Social learning:** Learners receive support from social relationship networks—primarily peer groups—while learning knowledge and skills. Support manifests as frequent interaction and mutual assistance between learners and peer groups, with timely feedback when sharing viewpoints. “Peers” here are not limited to age-similar groups but include groups composed of members with equal status and interconnections. Therefore, in interest-driven learning activities, adults are also welcomed to participate, playing support roles similar to age-appropriate “peers.”
- (3) **Academic learning:** This learning is strongly goal-oriented, undertaken for future success and access to opportunities (including educational, eco-

conomic, or political opportunities), focusing on practical returns. For teenagers, this refers to school learning, as most teenagers' most immediate future goal is academic success. Such learning is typically organized in structured, standardized, and institutionalized forms, guided by adults, with teenagers' motivation usually derived from structured guidance and evaluation systems.

The Connected Learning theory incorporates HOMAGO's elements of "personal interest" and "peer group support," explicitly linking learning to real-world goals such as academic achievement, future careers, or civic political participation. It posits that these three types of learning are often separated or even interfere with each other in reality, affecting overall learning effectiveness, while their integration achieves the most effective learning.

3. YOUmedia Practice Analysis

Although the MacArthur Foundation supported the Chicago Public Library in creating YOUmedia, the library had already recognized low youth participation in library activities before receiving funding in 2008 and felt the need to establish youth programs and dedicated youth spaces to enhance engagement. As public learning centers, public libraries were deemed by the MacArthur Foundation capable of providing youth learning spaces based on the "HOMAGO" theory, leading to active collaboration and the establishment of YOUmedia. The foundation commissioned Carnegie Mellon University to design the library's youth space and facilitated cooperation between the "Digital Youth Network" (DYN) project and the library to provide media arts courses and instructors. Based on YOUmedia, the MacArthur Foundation and the Institute of Museum and Library Services (IMLS) issued a joint statement in September 2010, planning to invest \$4 million to establish 30 YOUmedia-modeled learning labs in libraries and museums nationwide [17]. The plan designated the Harold Washington Library Center's learning lab (HWLC, located in Chicago) as a case for national promotion. YOUmedia has now developed into a national program spanning 30 cities [18].

3.1 YOUmedia Model Composition

YOUmedia comprises physical and online spaces. Using HWLC as an example, the physical space is located on the library's first floor, covering 5,500 square feet (approximately 511 square meters). The entire physical space is divided into three sections according to HOMAGO: HO, MA, and GO spaces. A specialized team designs the space colors to make teenagers feel natural and energetic without causing distraction from reading and learning. For instance, light green and blue are used in the HO space to energize teenagers, while deep red is used in the GO space to provide calmness conducive to learning.

3.1.1 HO Space The HO space features green flooring with bright red, yellow, and green sofas, rocking chairs, bean bag chairs, and popular young adult fiction. These novels are so popular that they are also placed in other spaces beyond HO. This space also provides PlayStation consoles, audiobooks, and digital learning trees. To promote interaction among teenagers, “Lyricist Loft” events are held Wednesday evenings for poetry recitation and digital media work presentations, with approximately 100 teenage participants. Teenagers can freely use portable computers to log into Facebook, play games, read books, or rest on sofas, even eating food, with the goal of promoting social interaction and stimulating various interests.

3.1.2 MA Space The MA space features red flooring, PlayStation consoles with music equipment, luxury seating, more books, Mac desktops with creative software and immovable computer guides, lightweight ping-pong tables, and displays of teenage works throughout. It also lends digital cameras, portable computers, and other digital devices for use within YOUmedia. Unlike the HO space, the MA space begins to feature partitioned recording studios providing tools for creating music or recording audio, such as desktops with Protools and GarageBand software, multimedia players, and microphones. The MA space begins to have librarians and network navigators to help teenagers. Staff must both understand teenagers in the MA space—their interests and ideas—and guide teenagers with similar interests to connect with each other, helping them join workshops and discover learning resources in both physical and online spaces [19]. The MA space is located close to the HO space, facilitating easy access for HO space teenagers to media resources.

3.1.3 GO Space The GO space features movable conference tables, “smart whiteboards,” and dry-erase boards. Teenagers can use portable computers, digital cameras, and other digital devices to create digital media works. This space is for deep learning, primarily providing workshops that require registration. These learning activities are guided by instructors from the Digital Youth Network, with dedicated learning courses. Workshop content overall includes: digital music production, digital video production, broadcasting and podcasting, graphic design, spoken word works, and video games. Workshop names include YOUmedia Record Label, YouLit Magazine, Lyricist Loft: Opening the Mic for Teenagers, Library of Games, Girl-Leah Media, and Changing Society @ YOUmedia [19]; each workshop corresponds to one or more learning content areas. These learning activities are designed based on teenagers’ interests, with constantly updated forms and content. To avoid mutual interference, the GO space is located relatively far from the HO space.

3.1.4 Online Space The online space is a social network based on the iRemix platform requiring registration. Teenagers can create personal pages, join online peer groups with shared interests, send messages to each other, and post and comment on various digital media works. DYN originally created this space to

allow teenagers and instructors to communicate when the library was closed or they couldn't visit, serving as a supplement to physical space. However, it later emphasized the space's role in facilitating teenage learning [11]. Unlike general social networks, this space promotes learning through incentives and feedback mechanisms. For example, virtual Remix currency rewards posting and commenting on digital media works, which can be used to purchase physical items like USB flash drives. Through quality rankings, comments, and competition for works, teenagers gain social status and reputation among peer groups, obtaining motivation to continue learning in an atmosphere of recognition and appreciation.

3.2 YOUmedia Management

3.2.1 Learning Organization and Management for Teenagers Although YOUmedia provides free learning resources for teenagers, it requires them to complete registration forms to facilitate participation in physical and online space learning activities. Using Miami's registration as an example, registrants must be aged 14-19, reside in Miami, have formal student status, and have parental or guardian consent [20]. Registrants receive necessary training before using YOUmedia, must sign in each time they enter learning spaces, and their course learning and project completion progress is tracked and recorded.

YOUmedia offers both unstructured and structured learning activities. Unstructured learning activities are distributed in HO and MA spaces, led by teenagers, available for participation anytime, with content completely based on teenagers' own choices without staff involvement (though staff help can be sought). Structured learning activities are organized, with content led by staff based on respecting teenagers' interests, requiring regular participation and frequent instructor guidance. To ensure content truly interests teenagers, YOUmedia grants them autonomy to switch conveniently between unstructured and structured learning activities, respecting their choices even in structured activities to achieve balance between teenage autonomy and staff guidance.

Structured learning activities include three types of workshops. The initial design was course-based (similar to school teaching), emphasizing basic digital media skills and their application. However, due to strong continuity in learning objectives and multiple schedules, teenagers couldn't guarantee attendance because of conflicts with schoolwork. Therefore, YOUmedia added project-based workshops (see Table 1) [14]. These workshops have specific project goals, with learning schedules depending on project completion progress and more flexible timing arrangements, ensuring teenagers' participation time. Project-based workshops generally collaborate with external professional organizations, connecting teenagers with artists and other professionals to develop advanced digital media skills. To expose teenagers to multiple skill levels, YOUmedia also designed theme-based workshops with only 1-2 sessions, shorter than course-based workshops, not requiring advanced digital media skills, aiming to stimulate cu-

riosity about specific digital or traditional media rather than developing related skills.

3.2.2 Instructor Roles in Learning Activities New York University research found that adult guidance is an important factor for teenagers' successful participation in learning [21]. YOUmedia leadership also regards knowledgeable adult guidance as a key component, providing instructors for each learning activity. In interest-driven learning groups, adults are regarded as experienced peers who can significantly influence teenagers in setting public norms and learning goals. Their knowledge can help teenagers express themselves, become creative, and develop their own interests.

Initially, the Chicago Public Library and its partner organization DYN assigned staff as personnel. Based on different knowledge backgrounds, they had different divisions of labor. Librarians assumed resource provision functions, mainly responsible for YOUmedia's daily operations such as front desk services, book and equipment lending, and consultation services, without directly undertaking teaching or guidance for teenagers. DYN staff served as instructors based on their digital media expertise, responsible for guiding course-based workshops and helping teenagers acquire skills in graphic design, music production, photography, etc. However, for teenagers, since they regarded all staff as instructors without distinguishing their organizations, objective demand led to the need for continuous integration of the two types of personnel. Therefore, in YOUmedia's early development stage, both groups began regular meetings to establish a common knowledge base, share complete sets of practices as educators, and librarians began assuming some educational responsibilities.

Beyond course instruction, instructor responsibilities include: (1) **Establishing personal connections with teenagers.** To integrate teenagers' socialization and learning, instructors serve as connecting links—introducing appropriate learning opportunities to teenagers while maximizing personal connections, maintaining balance without neglecting either aspect. In a sample survey, over two-thirds of teenagers believed they had established personal connections with at least one instructor [11]. (2) **Identifying teenagers' emotional and social needs to discover their interests.** Teenagers' interests don't emerge from nowhere; they always hide personal emotional and social needs. By maintaining personal relationships with teenagers, instructors discover these needs to more accurately identify their interests, while teenagers use digital media production to express their worldviews and emotions, meeting their own needs. (3) **Providing learning resources.** Based on teenagers' interests, instructors provide relevant learning resources including various documents, equipment, courses, and learning projects. (4) **Establishing and implementing learning rules.** To ensure learning space efficiency, instructors set usage rules for resources, behavior, and safety, regularly evaluating these rules to adapt to teenagers' changing needs. (5) **Evaluating teenagers' digital media works.** In addition to peer evaluation of works and skills, instructors can also participate

informally in evaluation to determine teenagers' proficiency with digital media tools and their ability to create works.

4. Implementation Effects

4.1 Teenage Participation

A spring 2012 survey on teenage participation in YOUmedia [11] (data in this section from this survey) found 350-500 weekly visitors. The majority (approximately 66%) were African American, followed by Latino (approximately 11%). Eighty-eight percent of teenagers were public high school students, and 62% came from family education backgrounds (teenagers' mothers) below undergraduate level, representing relatively disadvantaged social groups. Except for some teenagers whose schools were near HWLC or on their route home from school, nearly half traveled specifically to visit YOUmedia, with 80% of visitors living more than 5 miles from HWLC—but distance couldn't stop teenagers' participation enthusiasm. Regarding duration and frequency, 63% of teenagers had visited YOUmedia at least weekly for one year, with 39% having visited weekly for more than one year, indicating YOUmedia's popularity.

4.2 Teenage Gains

YOUmedia's popularity stems from achieving five aspects: (1) **Providing a safe, welcoming environment.** Providing a safe environment for teenage socialization and community building was one of YOUmedia's establishment purposes. Approximately two-thirds of teenagers considered themselves important members of the YOUmedia community, with both personal friends and instructors having close personal connections. Consequently, 54% of teenagers cited safety and welcome as their reasons for visiting, perceiving YOUmedia as having a sense of belonging or being interesting. (2) **Focusing on interest discovery and cultivation.** About 89% of teenagers expressed excitement about their interests at YOUmedia, with 86% making friends with shared interests in the space and 84% believing instructors shared their interests. Most teenagers devoted themselves to specific digital media interests after entering YOUmedia, such as music, video, graphic design, or gaming, with the proportion of teenagers having personal interests increasing. Among them, "experimenter" type teenagers (those playing music using computers or electronic keyboards) showed the greatest improvement, increasing from an initial 30% to 74%, while "creator" type teenagers (participating in YouLit, LoG, etc.) reached the highest interest level of 94% after learning. (3) **Improving digital media skills.** Approximately 57% of teenagers improved their digital media skills because of YOUmedia, with "creator" type teenagers showing significant improvement—84% increased skills in more than one area, and 60% increased skills in 2-6 areas. (4) **Improving academic skills.** This includes helping teenagers complete school assignments, improving reading and writing abilities, and enhancing interpersonal communication skills with adults. (5) **Increasing awareness of**

post-high school opportunities through instructor guidance. For example, consulting literature on college selection and scholarship applications; planning for future college studies and career development; understanding future study or career situations through workshops.

4.3 Existing Problems

YOUmedia also faces some problems in serving teenagers: (1) **The online space’s function of expanding learning opportunities needs strengthening.** Two-thirds of teenagers don’t use the online space. Compared to other social network tools (like Facebook) that teenagers frequently use, the online space’s integration with the “Hive” network creates additional inconvenience, exacerbating user loss. Therefore, the online space’s function of expanding learning opportunities is inadequate. (2) **Some teenagers don’t participate continuously.** Some teenagers cannot guarantee regular visits to YOUmedia due to participation in activities outside YOUmedia, and since YOUmedia has no mandatory requirements, learning continuity is affected. (3) **The proportion of teenagers developing deep expertise in specialized fields is not high (only 1/4).** About half choose socialization and “hanging out,” meaning the conversion rate from the latter to the former is low, with most teenagers consuming rather than creating digital media. (4) **Equipment and resource maintenance needs optimization.** Since some teenagers are novices in digital media, improper operations easily damage equipment, requiring staff guidance, repairs, or replacements. Without timely updates to computer hardware and software resources, staff flexibility in conducting educational activities is limited.

5. Characteristic Experiences and Implications

5.1 Adopting a “Guidance” Strategy for Digital Media

Regarding teenagers’ access to digital media devices like mobile phones and computers, parents in China believe they facilitate life and develop intelligence to some extent but worry more about teenagers’ addiction affecting academic performance and growth, thus mostly adopting restrictive approaches. YOUmedia boldly advocates a “guidance” strategy based on relevant research, encouraging teenagers to engage with digital media. In the United States, digital media literacy has been unprecedentedly recognized as part of “21st-century skills” including creation, collaboration, and problem-solving—a major conceptual shift. American public libraries, with large teenage user bases serving as important learning bases for youth, have become the preferred objects for this experimentation and exploration. Seizing on the social pain point of teenagers’ addiction to digital media devices, libraries have undertaken open digital media education. Theory and practice have shown that socialization, play, and learning are not opposites but can be utilized as part of social education programs. Through adult guidance, teenagers recognize and accept positive values, directing their digital media participation toward healthy development.

Chinese teenagers face similar digital media dilemmas. Chinese public libraries have gradually increased in number through strengthened county-level library construction (reaching 3,166 in 2017) [23], with enhanced service capabilities and wide geographical distribution, giving teenagers ample opportunities to access public libraries. Can these libraries undertake similar urgently needed educational functions? The answer is yes. Article 34 of China's Public Library Law explicitly stipulates that public libraries should conduct social education activities for children and teenagers, establishing dedicated areas and professional staff. However, before implementation, empirical research must be conducted on Chinese teenagers' digital media usage to identify digital media education theories and implementation methods applicable to China.

5.2 Theory-Guided Practice

Before YOUmedia's emergence, researchers had conducted empirical studies on teenagers' digital media usage activities, discovering usage patterns—the “HOMAGO” theory. Under this theory's guidance, YOUmedia practice was fully implemented in Chicago Public Library and extended nationwide. After applying the HOMAGO theory to YOUmedia practice, researchers didn't stop theoretical exploration. Represented by M. Ito, they proposed a more comprehensive Connected Learning theoretical model based on empirical research to guide YOUmedia practices nationwide and optimize digital media learning. Marxist philosophy shows that practice and theory are complementary; practice without theoretical guidance is blind. HOMAGO and Connected Learning theories summarize digital media education laws, which are then applied to and continuously refined through educational practice.

YOUmedia sets an exemplary model of combining practice and theory for Chinese public library social education activities. It features not only distinctive practical activities but also dedicated research teams conducting fundamental theoretical research. Theoretical research is a shortcoming of Chinese public library social education. Undeniably, Chinese library science research strength is mainly distributed in university departments and libraries, with relatively weak research capacity in public libraries themselves. Although corresponding public library research has increased due to national emphasis on public library construction, there is a lack of organized theoretical research specifically targeting public library social education activities. Some promotional education activities rely on policy guidance from relevant organizations rather than theoretical foundations, inevitably resulting in suboptimal educational effects. Strengthening public library social education theoretical research is an important issue China needs to address in building its public cultural service system.

5.3 Conducting Extensive Cooperation

The YOUmedia project is a product of multi-party cooperation. The MacArthur Foundation and the Pearson Foundation funded YOUmedia in 2009 by investing in the Chicago Public Library Foundation. The MacArthur Foundation

remains the main funder, establishing digital media research projects and supporting its DYN to cooperate with the Chicago Public Library in jointly building YOUmedia. Additional supporting organizations include Harris Bank, Allstate Insurance, and “Hive Chicago” learning organizations. DYN and Hive Chicago are specialized organizations dedicated to youth learning, both primarily funded by the MacArthur Foundation. The former is committed to providing reliable, high-quality, and equitable digital media learning opportunities for urban children in America—recruiting and training instructors while conducting research to help people better understand how digital media learning environments affect teenagers, teachers, relevant organizations, and communities, identifying important learning practices [24]. The latter is an alliance organization currently comprising 85 organizations including libraries, museums, higher education institutions, and technology companies. Guided by Connected Learning theory, it provides internet-based learning opportunities for teenagers (middle and high school students) to develop capabilities in digital literacy, critical thinking and collaboration, media production, and other areas [25]. Beyond overall cooperation, project-based workshops also actively collaborate with external organizations to increase learning opportunities for teenagers. Through such cooperation, teenagers have opportunities to interact with compelling social celebrities, such as established artists and professionals, and their digital media works may reach broader audiences through external organizations, providing potentially huge incentives for teenage learning.

Thus, cooperation brings YOUmedia funding, instructors, and teenage attention and participation, while also creating extensive connections between YOUmedia and youth education organizations, forming essential foundations for project operation and development. Chinese public library social education activities can also learn from this multi-party cooperation model, actively utilizing various social resources to solve difficulties faced in library education activities. For example, to obtain necessary instructors for education activities, libraries can cooperate with relevant youth education and training institutions, leveraging their teaching staff to guide library education activities. While adhering to government principal responsibility, libraries can extensively contact enterprises, social welfare organizations, or individuals to help provide funds and equipment for youth education activities.

5.4 Creating a Culture of Equality, Mutual Respect, and Interest Stimulation

Stereotypically, people believe the teacher-student relationship is unequal, with teachers dominating learning content and processes to achieve educational goals. YOUmedia’s digital media education differs because prior research found that adults participating in teenagers’ digital media learning activities as friends are unwelcome by teenagers, while intervening as peers with common interests and more experience can play powerful roles [15]. In this equal cultural environment, teenagers have substantial unstructured time for thinking and exploration

without being controlled by direct guidance, yielding better learning outcomes. Instructors don't treat teenagers as underage children but give them sufficient respect, serving as learning supporters, while teenagers regard instructors as older peers, respecting and trusting them and seeking various help. On this basis, instructors stimulate new interests by demonstrating digital media skills and expertise, while convincing teenagers that instructors possess knowledge and skills in their interest areas.

This cultural atmosphere aligns well with public libraries' long-advocated concepts of knowledge and information freedom and equal rights. It also leads some teenagers to view instructors as role models for their future growth, generating strong learning desires. Modern public libraries have become "third spaces" for people to interact and participate widely, fulfilling multiple social functions including cultural shaping, political democracy, and educational equality. Chinese traditional concepts of public library social education generally emphasize vertical guidance from literature and librarians, showing some similarity to school education while neglecting group self-education functions formed through mutual inspiration among individual users and overlooking the establishment of good interactive relationships among users. YOUmedia demonstrates the existence and importance of these functions and relationships in user learning from a new perspective, opening new ideas for Chinese public libraries to conduct social education activities—namely, establishing dual knowledge and information exchange systems between libraries and users and among users themselves.

Chinese teenagers now have relatively prominent individual consciousness. Therefore, Chinese public libraries can learn from YOUmedia's relationship model in social education, reforming traditional teacher-centered education models and allowing instructors to interact with teenagers as collaborators rather than controllers to achieve better learning outcomes. Research shows that highly engaged inquiry-based learning promotes teenagers' knowledge absorption and understanding more than traditional teaching models [26].

5.5 Utilizing Teenage Peer Groups as Inspiration Sources

If instructor guidance represents vertical interaction, mutual inspiration among teenagers represents horizontal interaction. Beyond instructors, individual teenagers also gain inspiration and knowledge from peer groups. To pave the way for teenagers' participation in formal learning activities (such as established learning programs), YOUmedia first provides a platform for free socialization (HO space). Surveys found that not all teenagers eventually enter formal learning stages—some (about 18%) remain only in social activities, and only 22% of teenagers truly transform into digital media creators through formal learning activities [11]. Although this low conversion rate is a challenge, such social activities remain necessary for teenagers' creative learning: (1) YOUmedia practice based on friendships can enhance newcomers' trust in learning venues, increase user stickiness, add learning partners, and develop existing interests; (2) By establishing new friendships, teenagers can be stimu-

lated to conduct deeper exploration, learning, communication, and cooperation in digital media. Based on friendship establishment, teenagers exhibit a series of reciprocal behaviors including mutual assistance, sharing, and feedback in learning activities, with interest and friendship becoming dual drivers of learning that can produce highly effective learning outcomes.

5.6 Connecting Interests with Academics and Future Careers

Careers are means of livelihood and important aspects of life development. Due to realistic pressures, personal interests and careers often become misaligned—engaged careers are not interest-based. The ideal state is integrating interest with career, transforming careers from mere livelihood means into intrinsic needs and career pursuits that maximize human potential. YOUmedia sensitively organizes teenagers' learning from the perspective of future career development. Some teenagers are high school students who, with peer and YOUmedia instructor support, develop strong desires for higher education related to their interests. Through instructors' introduction of their own work experiences, teenagers recognize various career options in digital media, greatly benefiting their future career path planning. For current academics, YOUmedia provides computers, reference materials, and various software to help teenagers complete school assignments; through reading, writing activities, and writing workshops, teenagers enhance writing skills; and through peer group communication and interaction, teenagers improve interpersonal skills, also benefiting academic progress.

Academic and future career-oriented social education activities enable teenagers to find practical value in learning, and applying what they learn is also a motivation for most learners. In China, parents universally have high expectations for their children's learning and future work. Chinese public libraries can fully utilize these favorable conditions, learn from YOUmedia's model, design various digital media learning activities, develop teenagers' relevant potentials, and use interesting career prospects and multi-faceted academic ability cultivation as incentives. Adhering to academic and future career-oriented digital media learning activities can reverse parents' previous stereotype that children's digital media use is unproductive, guiding teenagers to use digital media correctly.

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

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