

Exploring New Pathways for Youth Social Work in the Digital-Intelligent Environment

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Abstract

With the rapid development of digital technology, the developmental context of adolescents has changed, and the ecological environment has been fundamentally reshaped. Digital media has become the primary platform for adolescents to interact with the outside world, yet it also has negative impacts, which may induce psychological problems and Internet addiction. Against this backdrop, the traditional model of youth social work fails to adequately meet the needs, which requires social work practice to innovate, to analyze the challenges of the digital economy confronting youth social work, to formulate targeted strategies, to improve the digital literacy of social workers, to build a sound evaluation mechanism, and to provide solid support for the sustainable development of youth social work.

Keywords

Digital-intelligent Environment, Youth Social Work, Digital Literacy, Service Innovation, Evaluation System.

1. The Profound Impact of Digital-Intelligent Technology on Youth Development

In the development of contemporary society, digital technology is constantly updating and upgrading, and adolescents are regarded as "digital natives", who are deeply influenced by digital space in their growth process, employ smart phones, social media and other mobile devices in their daily lives, and are inseparable from them. It is evident that the advancement of digital technology has changed the way young people acquire information and interact, and has exerted profound impacts on their identity, psychological development and social participation, leading to fundamental changes in their behavior and cognition.

From a social perspective, social platforms can provide favorable spaces for adolescents, so that they can obtain feedback and interact with each other, which can enhance their social connectivity and offer them valuable opportunities for self-expression, so that their social skills and cognitive level can be improved, and their psychological well-being can be ensured. Adolescents' problem-solving ability and visual-spatial attention have been significantly improved, and the social support network has been further optimized, which is enough to show that adolescents can achieve all-round development with the support of digital technology; particularly in resource-poor areas, digital technology can provide support for adolescents, so that they can obtain information and educational resources. Digital technology can also narrow the geographical divide between adolescents. However, this deep integration is also accompanied by complex negative chain reactions, introducing new risk factors such as excessive comparison, social pressure, and cyberbullying[1]. Adolescents are inevitably driven by peer feedback mechanisms during identity development. If there is a gap between real-life identity experiences and online constructed identities, it will exert a negative impact on their mental health. Algorithmic recommendations can exacerbate adolescents' perception of "lifestyle competition" and "appearance anxiety", and the number of likes and comments in the

virtual space serves as an important reference for self-evaluation. If the feedback is not ideal, adolescents will experience strong frustration. The anonymity of digital space can provide a breeding ground for bullying behavior, and boundless negative interactions will exert a negative impact on adolescents' psychology.

The application of digital technology has become increasingly extensive, and adolescents must have high-level digital literacy to achieve all-round development. Digital literacy is the ability to organize, understand, filter, evaluate and process information in the digital environment, which demonstrates how important it is for adolescents to make decisions and form behavioral patterns. In the digital-intelligent context, the connotation of literacy is evolving. It is no longer enough to master basic skills; instead, individuals should cultivate a higher level of cognition, be able to identify misinformation, understand algorithmic logic, and manage digital footprints. If adolescents are overly dependent on non-authoritative sources when obtaining health information online, it indicates that they lack the ability to judge the authenticity of information, which will lead to inappropriate behaviors and cognitive distortions. For adolescents, such cognitive biases may exert adverse impacts on their development, including career planning, health consultation and other aspects. Many studies have pointed out that adolescents lack competence in addressing digital risks; the gap between digital literacy education and their developmental needs is considerable, and school education focuses excessively on the use of technical tools rather than cultivating adolescents' critical thinking competence. In terms of family education, technological advances are not taken into account, and parents fail to guide their children to guard against online fraud and address harmful information and other risks.

2. Key Issues in Youth Social Work under the Digital Economy

(1) Increasing Difficulty in Understanding Service Targets

In the digital-intelligent economic environment, the developmental space of adolescents has expanded from physical space to a hybrid space where the two spaces are deeply intertwined. The extensive use of digital technology has shifted adolescents' emotional expression, identity construction and social interaction to online platforms, enabling cross-context mobility. Research indicates that the extensive use of the internet and social media is reshaping the socialization process of adolescents, making their identity formation and social relationships more dependent on digital interactive environments[2]. This transformation has broken the original social circle, freeing adolescents from restrictions of schools and geographical space, and fostered virtual communities centered on common interests and subcultures.

In this case, adolescents exhibit a strong sense of self-identity, and their identity expression is relatively diversified, yet inevitably fragmented. For example, some adolescents demonstrate favorable social adaptability, strong self-confidence and high willingness to communicate on social media, but in real life, they may encounter difficulties in interpersonal communication and experience a strong sense of loneliness. Certain discrepancies exist between online identities and real identities, which creates challenges for social workers and also increases the difficulty of assessment. When intervening with adolescents, if social workers only focus on adolescents' performance in schools but overlook their role as leaders in online forums, the intervention effect will be less than ideal. Traditional assessment methods that rely on real-world observation and face-to-face interviews often struggle to fully capture the implicit interaction patterns and social relationship structures within digital spaces[3].

In the online environment, adolescents face risks and challenges when managing their privacy, and their behavioral patterns are distinctive. Relevant studies suggest that when making digital privacy decisions, adolescents typically weigh social benefits against potential risks—a process conceptualized as the “privacy calculus” mechanism[4]. Within this framework, adolescents seek

social recognition through information sharing, while at the same time potentially underestimating the risks associated with privacy leakage[5]. Such behaviors make it difficult for social workers to identify risk signals, and they also need to conduct sound needs assessments. Therefore, it is necessary to accurately grasp the needs of adolescents and analyze the motives and social significance of their digital behavior. This constitutes the key content of youth social work. In this case, social workers need to analyze digital interaction from the perspective of adolescents' ecological development, rather than a peripheral stance, so as to gain a more comprehensive understanding during intervention and assessment. In this regard, it is necessary to analyze adolescents' developmental logic, identify their emotional projection points, and build trust with adolescents.

(2) Limitations of Traditional Service Models

At present, the youth social work service mode is still dominated by physical settings, including school intervention, individual counseling and other relevant services. This mode has played an important role in the development of traditional society, but it has prominent limitations in the digital-intelligence era. In the traditional service process, there are obvious regularities, and services are provided at fixed intervals. However, information iterates rapidly in this era, and the frequency of such services cannot match the pace. A variety of risks exist in the digital space, making it difficult to capture these risks through offline services. A number of studies have shown a correlation between the intensity of internet use and adolescents' mental health issues, with excessive immersive digital activities potentially exacerbating anxiety, loneliness, and other psychological risks[6]. These risks are hard to detect timely via offline services. Conventional periodic screenings and face-to-face assessments struggle to capture such signals promptly. For example, some adolescents develop suicidal thoughts due to online gaming failures, yet routine in-person consultations fail to deliver timely interventions at critical moments, and adolescents tend to conceal their online emotional states. On the other hand, the frequency of adolescents' online interactions is rising, and they have growing needs for psychological support and emotional expression in digital spaces, whereas traditional social work services cannot respond in real time, and the digital risk early-warning system remains inadequate. As a result, digital technology is driving social work practice toward the development of "digital social work," which leverages online platforms and information technologies to enhance the accessibility and immediacy of services[7].

It is worth noting that digital space features temporal-spatial integration, which imposes higher requirements on the effectiveness and coverage of social services. Some adolescents experience cyberbullying and suffer from negative emotions when they are alone or at night, yet they can only access professional assistance the next day and receive school-based intervention during such periods. Cyberbullying has a prolonged impact on adolescents' mental health, necessitating more timely and diversified intervention mechanisms[8]. Some social work institutions have inadequate institutional arrangements, insufficient staffing, and fail to establish a digital crisis response system, resulting in inadequate handling of risk incidents and exclusive reliance on post-incident disposal, which prevents the capture of optimal intervention opportunities. With the rapid development of the intelligent environment, the traditional service model can no longer meet adolescents' needs, necessitating adjustments to practical approaches and service concepts to enhance coordination between digital and real-world spaces.

(3) Significant Gaps in Digital Evaluation Systems

Evaluation is an indispensable part of social work, which can not only assess service effectiveness but also optimize intervention strategies. With rapid social development and technological advancement, the evaluation tools adopted in this link remain relatively outdated and rely on traditional approaches, including interviews and questionnaires, which fail to effectively guide adolescents' online interactions. In the process of scale development, it is

necessary to address the impact of "information cocoons" on adolescents, as algorithmic recommendations may exert adverse effects on adolescents-effects that traditional methods cannot capture. Key indicators such as emotional fluctuations and the frequency of online interactions are difficult to track dynamically, leaving current evaluation systems with prominent limitations. Traditional evaluation merely serves as a snapshot assessment that captures only a single static state rather than the dynamic evolution of digital behaviors. It is evident that adolescents' emotional changes during internet browsing occur frequently, and such short-term fluctuations require intelligent monitoring systems for accurate characterization, which simple conversation records cannot achieve.

At present, the evaluation system for adolescent digital-intelligent behavior lacks standardized criteria, and its data analysis mechanism is imperfect. Most evaluation conclusions rely on subjective judgment rather than objective data. Some social workers hold one-sided perceptions of problems arising from adolescents' digital behavior. For instance, they simply regard prolonged online engagement as internet addiction. Such evaluation criteria are overly simplistic, leading to misjudgments and triggering adolescent resistance, which hinders professional relationship building. Furthermore, the collection, analysis, and utilization of digital data require strict ethical consideration, and social workers need to strengthen their technical competencies and ethical awareness. Digital footprints constitute critical personal data, and social workers should set reasonable boundaries and adopt information technology to obtain such information throughout the evaluation process. Unclear ethical guidelines and inadequate technical frameworks may infringe on adolescents' privacy rights and constrain their space for self-expression. Failure to mitigate ethical risks will undermine public recognition of the digital transformation of social work. Therefore, developing a sound evaluation system anchored in robust ethical norms constitutes a core task for the modernization of youth social work. This system should integrate psychological assessment with big data technology and prioritize ethical review, which serves as the foundation for ensuring evaluative legitimacy and objectivity.

3. Innovative Strategies for Youth Social Work in the Digital Era

(1) Building an Integrated "Online+Offline" Service Ecosystem

In order to grasp the digital and real development of adolescents, we should build a good ecological environment to provide services for them, which is a new requirement for the development of social work. The construction of this ecological environment should focus on the three aspects of collaboration, real-time response and service continuity. Integration does not simply mean that it can be online, but that the two spaces are connected and complement each other.

Firstly, youth social workers should actively use digital platforms to provide services for adolescents, including delivering resources, monitoring emotions, and providing counseling services. This platform should be able to interact with adolescents, and adolescents should be willing to use it on this platform. Artificial intelligence chatbots can be used for psychological screening to provide emotional support for adolescents, and more and more adolescents can get help in this way.

Social workers should actively carry out work in the offline environment, find breakthroughs from the network, and guide groups or families to build a support system, and make full use of resources. On this basis, we should realize the integration of virtual space and real space, achieve the purpose of bidirectional flow, and take effective measures to deal with the problems found in the network environment in the real environment, and maintain trust in the network environment.

For example, if a system can find that adolescents in a community are subject to cyber bullying, social workers need to organize offline workshops to solve bullying problems. For this purpose, it is necessary to form a multi-party cooperation mechanism, so that schools, enterprises, families and communities can cooperate with each other.

The construction of such a collaborative mechanism can provide more effective services for adolescents, integrate a variety of resources, build a "support community", and form a matrix of public services. In this way, the information silo can be broken, the social responsibility of Internet enterprises can be enhanced, the technical support can be enhanced, and the data can be jointly managed and protected.

(2) Enhancing Social Workers' Digital Literacy

In the process of digital intelligence upgrading, the needs of social workers have changed, requiring them to master the methods of data analysis, network ethics and behavior, and have a higher level of digital literacy. At the training stage of social work, we should set up a digital literacy course and carry out education in a variety of fields such as data ethics and network security. At the same time, we should also guide social workers to deepen their understanding of algorithm traffic, metaverse and other concepts, and to use these concepts to guide adolescents to form a correct understanding, not to regard them as technical terms.

It is necessary to develop cross-training and collaborative practice, to form partnerships between data science, education, psychology and other disciplines and social work, to deepen the theoretical foundation, and to increase the depth of practice. When social work is only a single discipline, it can not meet the needs of the digital intelligence context.

By bringing data analysts into case discussion meetings, social workers can learn how to identify people with suicidal tendencies from massive social media data, and can better understand the psychological needs of Internet users in cooperation with psychological experts. In the process of carrying out educational activities, we should organize social workers to participate in case learning, so that they can master the relevant tools, grasp the data, and issue early warning information.

Training should not only be theoretical, but also practical, such as simulating cyber bullying scenarios, using anonymous social platforms to find risk points through discourse analysis, and formulating reasonable intervention strategies. These measures are conducive to improving the professional quality of social workers, enabling them to make correct judgments in the digital environment, and to deal with digital challenges.

Only when social workers have a high level of digital literacy can they form resonance with adolescents, eliminate the technological gap, enhance their professional authority, and provide high-quality services for adolescents in the digital age.

(3) Developing Intelligent Dynamic Evaluation Systems

In order to obtain a more accurate assessment and track the results, we should make full use of digital technology to build a reasonable evaluation system, analyze the behavior of adolescents in the network environment with the help of machine learning, and dynamically adjust the service according to the data. The evaluation should not be limited to a specific period, but should be carried out in real time throughout the service.

By analyzing the digital footprints of adolescents in a non-intrusive way, we can further grasp their social interaction situation and draw a more accurate picture. By building a multi-level evaluation index system, we should not only pay attention to the level of digital literacy and online interaction, but also pay attention to the social function and psychological well-being of adolescents, so as to form a "holistic" view.

In the process of development, adolescents need to use a variety of indicators, including online interaction frequency, online emotional communication and so on, and assign weights to each

indicator to form a radar chart. This method can find adolescents who are active in the online world but have problems in real life.

In addition, it is also necessary to safeguard privacy, enhance the effectiveness of data ethics, and build a sound mechanism to make the evaluation system more ethically sound and more advanced in technology. The "privacy-by-design" principle should be implemented in the development of evaluation algorithms, all sensitive data should be anonymized, and the informed consent of adolescents and their guardians should be obtained in the supervision process.

The construction of the intelligent evaluation system is conducive to improving the efficiency of evaluation and providing reliable support for personalized services. It can accurately grasp the profile information of adolescents and formulate reasonable intervention packages for adolescents with different needs. For example, for adolescents trapped in "information cocoons", they can be guided to participate in interest groups of different fields, and for adolescents who have experienced cyber bullying, they can be guided to get support.

The change from diversified intervention to targeted support is the inevitable requirement for the development of social work, and also a necessary step to promote social work towards modernization.

(4) Strengthening Youth Digital Literacy and Critical Thinking

Whether adolescents can form good digital literacy is the basis for their healthy development in the intelligent environment. Social workers can promote systematic digital literacy programs in schools and communities, advocating for the inclusion of information evaluation, online ethics, and privacy protection within the educational system[9]. Adolescents should realize that they are not only users of digital products, but also contributors to the development of the digital environment.

In this respect, education should not only avoid risks, but also enable teenagers to have a positive attitude towards participating in social life and realize their own value. The importance of family education should also be realized, and good digital habits should be cultivated. Social workers should organize digital parenting workshops to help parents play the role of companions, and also help parents sign agreements with their children.

In the process of growth, if adolescents participate in activities such as co-reading digital news and discussing online trends, they can enhance their ability to analyze complex information and reflect critically in the process of family interaction. In practice, social work interventions should also strengthen adolescents' critical thinking and self-protection skills, thereby enhancing their adaptability and safety in online environments[10].

In the face of algorithmic manipulation, critical thinking is an important defense weapon. Social workers should guide adolescents to deconstruct the editing logic of popular videos and analyze the emotional persuasion strategies of false information. In workshops, debates and other activities, guide adolescents to reflect deeply on the "big data price discrimination" and "algorithmic black box" problems.

Teenagers have developed strong digital literacy. They are no longer captives of technology, but can actively choose and make reasonable choices in the digital environment. This ability can not only avoid privacy breaches, but also avoid Internet addiction, and can create a good digital public opinion environment. Therefore, cultivating digital literacy is the inevitable requirement of social work practice, but also an effective way to give teenagers more power in the intelligent age.

4. Conclusion

In recent years, the rapid development of digital intelligence technology has had a significant impact on adolescents, and they will inevitably face the challenges brought by the development of such technology.

From the aspects of evaluation mechanism, service model and user understanding, the shortcomings of youth social work have become more and more prominent, which requires urgent transformation and innovation.

In the context of digital intelligence, in order to enable youth social work to meet challenges and achieve development, this paper puts forward reasonable suggestions, including the construction of service ecology system, the improvement of digital literacy of social workers, the creation of dynamic evaluation system, and the improvement of digital literacy of adolescents. The implementation of the above innovative measures can enable social work to meet the needs of the digital age, enhance professionalism, and promote the balanced development of adolescents.

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