

Precise Funding for College Students: A Call for Enhanced Information Literacy Among Counselors in the Digital Age

Qiong Lin^{1,a,*}, Qiao Liang^{2,b}

Guangdong Teachers College of Foreign Languages and Arts, Guangzhou, China Guangdong University of Foreign Studies, Guangzhou, China

a*linqiong@gtcfla.net, bliangqiao@gdufs.edu.cn

Abstract. This study examines the concept of "precise funding" and its importance within university student financial aid programs, underscoring the pivotal role that counselors play in its execution. The research articulates the fundamental nature and attributes of precise funding, highlighting its beneficial effects on educational equity, the enhancement of students' overall capabilities, the augmentation of their self-esteem, and the promotion of social responsibility. The study indicates that counselors can utilize information technology to facilitate accurate identification, support, and management of funding processes. To effectively implement these strategies, counselors must possess competencies in data analysis, proficiency in student information management systems, familiarity with learning management tools, and a strong commitment to data privacy protection. Ultimately, the paper suggests strategies for improving counselors' information literacy, which include increased training in information technology, fostering an awareness of information literacy, leveraging diverse educational resources, and promoting innovative practices.

Keywords: Precise Funding, Counselor, Information Literacy.

1 Introduce

The group of poor students among the students receiving higher education is expanding and the problems arising are more diversified. [1]There have been a number of reforms to the Chinese financial aid system which are shaping the provision, financing and regulation of student aid available to undergraduate students.[2]The Ministry of Education has advocated for the implementation of "precise funding" as a fundamental strategy in the administration of student financial aid, underscoring the importance of a precise approach to assistance. Trough the establishment of a scientific and effective working mechanism, it can accurately identify the poor students in school and accurately assess their poverty level. This concept of "precise funding" offers novel guidance and direction for university financial aid programs in the contemporary context. In a recent communication, the General Office of the Ministry of

Education issued a "Notice on Effectively Carrying Out the Fall 2023 Semester Student Financial Aid Work in Universities," which outlines several mandates for institutions of higher education. These mandates include:

The continuous enhancement of the quality of aid data and a steady improvement in the level of information technology utilized in aid management.

The execution of outreach and promotional activities regarding aid policies, with an emphasis on leveraging new media, technologies, and methodologies to thoroughly and effectively communicate student financial aid policies through diverse channels.

The employment of information technology as a supportive mechanism for precise funding, enabling data to function as a resource and facilitator in the administration of student financial aid.

precise funding represents a financial assistance strategy that focuses on the unique requirements of individuals, the allocation of resources, and the assessment of outcomes. This approach prioritizes specificity, accuracy, and efficacy in the distribution of financial aid, ensuring that funds are allocated to areas of greatest necessity. Consequently, this method aims to enhance the overall impact of financial assistance by thoroughly analyzing the needs and circumstances of the recipients.

Precise funding is characterized by several key features:

- (1) A clear definition of the intended student demographic: This aspect ensures that financial aid resources are allocated to those who are most in need. Counselors are advised to adhere to the guidelines established by national financial aid policies, accurately assessing the circumstances of students from economically disadvantaged backgrounds. This approach aims to guarantee comprehensive coverage, prevent omissions and errors, avoid arbitrary allocations, identify suitable recipients, and evaluate the extent of their financial challenges.
- (2) Acknowledgment of individual differences: This entails the creation of customized financial aid plans that reflect the unique situations of each recipient, thereby implementing tailored solutions.
- (3) Enhancement of oversight and evaluation: This component is crucial for ensuring the effective use of financial aid resources.
- (4) A focus on long-term benefits: This perspective transcends immediate economic support, prioritizing the sustainable future development of the recipients.

China's government has put forth financial aid programs to enable poor students to access higher education. [3] Precise funding plays a critical role in the education, growth, and development of university students. It promotes educational equity, enhances students' overall competencies, bolsters their self-confidence and self-esteem, and cultivates a sense of social responsibility. Such funding is instrumental in mitigating educational disparities, thereby ensuring equitable access to higher education for all individuals. Through precise funding, students are afforded the opportunity to acquire a broader range of knowledge and skills, which are essential for their future career advancement. Furthermore, it allows university students to concentrate more fully on their academic pursuits, alleviating the distractions associated with financial burdens, and thereby contributing to the enhancement of their comprehensive abilities, including academic performance, social skills, and leadership capabilities.

Counselors, as the primary mentors for university students, hold a pivotal position in the accurate allocation of funding. In what ways can counselors utilize information tools to improve their information processing capabilities? The level of their information literacy significantly impacts the execution and efficacy of precise funding policies.

2 Information Technology: A Fundamental Assurance for Precise Funding

The role of counselors in student financial aid programs is of paramount importance. To ensure accuracy, counselors are required to proficiently employ information technology to manage three essential phases of their work:

2.1 Precise Identification

Accurate identification of funding requirements necessitates the integration of information systems, enabling data to function as a consultant and facilitator for student financial assistance. Counselors employ a systematic three-step methodology involving the collection, analysis, and processing of data to effectively identify students in need. For example, they may utilize platforms such as Wenjuanxing or Jinshuju to gather information regarding students' familial economic conditions, health statuses of family members, and sources of income. Subsequently, counselors harness the capabilities of big data analysis and service platforms established by the university, utilizing systems related to student affairs, academics, admissions, and employment to develop comprehensive and multi-dimensional profiles of student development. This process allows for the creation of precise student representations, thereby enabling the accurate identification of financial aid recipients. Furthermore, counselors may consult the university's logistics management center to examine student dining expenditure records at the cafeteria, which provides insights into their family's economic situation[4]. By synthesizing the outcomes of this multi-dimensional data analysis, counselors can effectively compile a list of students in need of financial assistance and categorize them accordingly, thereby facilitating the formulation of customized financial aid strategies. This approach establishes a robust foundation for subsequent precise support and management.

2.2 Precise Support

Counselors create individualized electronic records for students requiring assistance. Tailored financial aid plans are developed in accordance with the unique circumstances and challenges faced by each student, which may encompass financial support, career counseling, and psychological guidance. To remain apprised of students' difficulties, counselors utilize real-time communication platforms such as WeChat or QQ, enabling them to respond effectively to emerging issues. By integrating information technology into the financial aid process, counselors enhance the efficacy and quality

of support provided, facilitated by thorough data collection and analysis, thereby ensuring precise assistance.

2.3 Precise Management

Counselors have the capacity to utilize information technology to oversee and administer the allocation of financial aid resources, thereby ensuring adherence to regulatory requirements and facilitating the swift identification and resolution of any arising issues. Furthermore, they can employ data analysis software to assess and evaluate the efficacy of financial aid programs, which allows for timely modifications to financial aid strategies and initiatives.

3 Precise Funding and Counselor Information Literacy Requirements

Precise funding emphasizes the importance of precision. The effective transmission and communication of information can only be achieved through the mastery of information technology tools and skills. This mastery is essential for verifying the authenticity of recipients and ensuring the accurate allocation of funds, thereby facilitating the attainment of educational equity.

(1) Data Analysis and Decision Support Capabilities

Counselors must possess the ability to collect, organize, and analyze student financial aid data in order to make informed[5], data-driven decisions that facilitate the development of personalized financial aid plans.

Data Collection and Organization: Counselors are responsible for gathering pertinent student information, which includes academic performance, family background, and economic circumstances. This data is then organized into formats that are conducive to subsequent analysis.

Data Cleaning and Preprocessing: Prior to conducting data analysis, counselors engage in data cleansing and preprocessing. This process entails the removal of outliers, the imputation of missing values, and the conversion of data formats, all of which are essential for ensuring the accuracy and integrity of the data.

Data Analysis Method Selection: Counselors must select appropriate data analysis methods and techniques, such as statistical analysis, machine learning, and data mining, tailoring their approach based on the specific issues at hand and the characteristics of the data.

Data Analysis and Interpretation: Utilizing the chosen data analysis methods, counselors analyze the data to extract meaningful insights regarding students. This analysis may yield information related to student academic performance, awards received, and family economic conditions.

Decision Support and Tailored Financial Aid Strategies: Utilizing the results of data analysis, counselors formulate individualized financial aid strategies for each student, encompassing scholarships, grants, and tuition waivers, tailored to their unique needs and circumstances.

Monitoring and Evaluation: Counselors can leverage data analysis to assess the efficacy of financial aid programs and track student academic performance, thereby facilitating feedback and adjustments aimed at continuously enhancing the effectiveness of financial aid strategies.

The integration of data analysis and decision support systems empowers counselors to more accurately and scientifically identify the financial aid requirements of students, thereby offering personalized assistance and services. By adeptly applying data analysis methodologies, counselors can gain deeper insights into student circumstances, optimize the allocation of resources, enhance the effectiveness of financial aid initiatives, and ultimately maximize the beneficial impact of financial aid on student outcomes.

- (2) Student Information Management Systems, Including Financial Aid Management Platforms: It is imperative for counselors to possess a comprehensive understanding of the university's student information management systems to guarantee the precise and timely updating of student personal information, academic records, and related data. Additionally, counselors should be well-versed in the university's financial aid management platforms, which will facilitate the prompt review and processing of student financial aid applications, approvals, and disbursements.
- (3) Counselors must possess a comprehensive understanding of and proficiency in utilizing the university's learning management systems, including online learning platforms and course management systems, to effectively support students in their online educational endeavors and facilitate access to learning resources.
- (4) Data Privacy and Security Protection: It is imperative for counselors to comprehend and adhere to pertinent data privacy and security regulations in order to protect the confidentiality and integrity of students' personal information. By acquiring these information technology competencies, counselors can more effectively secure appropriate funding for university students, thereby offering tailored support and services. Furthermore, counselors should engage in ongoing professional development to enhance their information technology skills in response to the evolving demands of the university and advancements in educational technology, thereby adapting to the dynamic landscape of the educational environment.

4 Effective Pathways to Enhance Counselor Information Literacy

The enhancement of information literacy among counselors necessitates a structured approach to training and education. Continuous learning and practical experience are essential for counselors to effectively respond to the challenges posed by the increasing prevalence of information technology and to elevate their information literacy competencies.

(1) Augmenting Information Technology Training

Counselors must develop proficiency in emerging information technology tools and applications through organized training initiatives. Educational institutions should implement robust training frameworks that facilitate the organization of pertinent courses and seminars, thereby creating opportunities for counselors to acquire operational skills in information technology as well as educational theory. The training curriculum should encompass fundamental computer operations, network applications, data analysis, and other relevant topics, with the objective of deepening counselors' comprehension and utilization of information technology.

(2) Foster Awareness of Information Literacy

Counselors must acknowledge the significance of information literacy and proactively develop their competencies in this area. This entails engaging in self-directed learning, remaining abreast of emerging technologies, and participating in professional development workshops, among other activities, to perpetually enhance their information literacy skills.

(3) Employ a Variety of Learning Resources

Educational institutions should offer essential resource support for counselors, thereby creating a conducive environment equipped with information technology tools, software applications, and educational materials. Counselors can utilize online resources and social media platforms while intentionally enhancing their information literacy[6]. Additionally, they may establish specialized resource libraries to facilitate learning and research endeavors.

(4) Promote Innovative Practices

It is essential to motivate counselors to engage actively in research and practice within the realm of informationized education. This involves the application of contemporary information technology tools and methodologies in their work with students. Counselors should explore the use of online teaching platforms, student management systems, and personalized tutoring software, among other resources, to improve student engagement and academic performance.

5 Conclusion

This study examines the critical importance of precise funding within university student financial aid programs and elaborates on the essential role that counselors play in its execution. It underscores that precise funding prioritizes targeting, precision, and effectiveness, ensuring that financial aid resources are allocated judiciously based on a comprehensive understanding of the recipients' needs and circumstances, thereby optimizing the impact of financial assistance. The integration of information technology is discussed, providing a comprehensive overview from three distinct perspectives: precise identification, precise support, and precise management.

During the precise identification phase, counselors leverage information technology to gather, analyze, and process student data to accurately identify eligible recipients. In the precise support phase, counselors formulate personalized financial aid plans and utilize technological tools to implement intelligent and unobtrusive financial assistance. In the precise management phase, counselors employ information tools to oversee and manage the allocation of financial aid funds, enabling the prompt identification and resolution of any arising issues.

Ultimately, the paper highlights the necessity of enhancing counselors' information

literacy. Counselors must possess competencies in data analysis and decision support, demonstrate proficiency in student information management systems, be well-versed in learning management tools, and prioritize the protection of data privacy and security. To bolster counselors' information literacy, the paper suggests effective strategies such as enhancing information technology training, fostering awareness of information literacy, utilizing diverse educational resources, and promoting innovative practices.

By implementing precise funding and improving counselors' information literacy, we can effectively advance the scientific, precise, and information-driven nature of university student financial aid programs, thereby providing students with fairer, more equitable, and efficient financial assistance services. This initiative will facilitate comprehensive student development and contribute to societal advancement.

Acknowledgments

Guangdong Teachers College of Foreign Languages and Arts 2022 School-Level Project: A Study of the Practice of College Students' Subjectivity-Based Ideological and Political Education on E-Class Platform (2022ZX08); Guangdong Teachers College of Foreign Languages and Arts Research Innovation Team Construction Project.

References

- Du, W., & Yu, Q.: The Construction and Realization of the Precise Funding Platform for Impoverished Students in Colleges and Universities Driven by Computer Intelligence Technology. Journal of Computer Science and Technology38(4),329-338 (2023)
- 2. Yang, P.: Who gets more financial aid in China? A multilevel analysis. International Journal of Educational Development30(6), 560-569(2010).
- 3. Wang, X., Liu, C., Zhang, L., Yue, A., Shi, Y., Chu, J., & Rozelle, S. Does Financial Aid Help Poor Students Succeed in College? Public Economics: Fiscal Policies & Behavior of Economic Agents eJournal. (2013)
- 4. Li, H., Zhang, X., Li, X., & Wang, Y.: An effective method to improve the accuracy of precise funding in campus. In Proceedings of the 3rd International Conference on Computer Science and Application Engineering (CSAE '19), pp.1–6. Association for Computing Machinery (2019).
- 5. Liu X.: Innovative measures of student management by counselors in higher education institutions under a big data environment. Applied Mathematics and Nonlinear Sciences9 (1), (2024)
- 6. Qingmei M. Educational Technology and Counselor Innovation: Utilizing New Media Technology for Educational Development. Frontiers in Educational Research 7 (6),(2024)

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

