

Iranian National Electronic Theses and Dissertations Program: Development, Achievements, and Obstacles

Sirous Alidousti¹ and Behrooz Rasuli²

¹PhD in Management, Associate Professor, Iranian Research Institute for Information Science and Technology (IranDoc), Tehran, Iran

²PhD in Library and Information Science, Assistant Professor, Iranian Research Institute for Information Science and Technology (IranDoc), Tehran, Iran

Abstract

National programs for Electronic Theses and Dissertations (ETDs) are valuable for universities, government, and industry. National ETDs (NETDs) aim to gather ETDs from institutions around a country and disseminate them based on certain terms and conditions. An NETDs program brings numerous advantages to all stakeholders within a country. As a result, many nations have already implemented their own NETDs initiatives. Over the past few decades, Iran has taken steps to plan and execute its own NETDs program. In its initial phase, the Iranian Documentation Center (IranDoc) pioneered a program in 1969 to collect and index the theses from Iranian higher education institutes (HEIs). The first tangible output of this program was the 'Bibliography of Theses in Social Science', which has been printed and published in July 1974. This center center persisted in the compilation, indexing, and dissemination of theses and dissertations until 1992. Subsequently, between 1992 and 2017, significant milestones marked the advancement of the NETDs program in Iran. Eventually, a law mandating the establishment of an NETDs program was passed by the Iranian Parliament in September 2017. This paper aims to trace the evolution of the NETDs program in Iran, delineating its chronological progression. Furthermore, the present status is expounded, and the accomplishments of this program are discussed, offering insights into the successes achieved. Finally, the lessons learned through the development of the Iranian NETDs program and related obstacles are examined.

Keywords: Higher Education Institutes, Information Management, Iran, Open Access, Open Repository

1. Introduction

While Electronic Theses And Dissertations (ETDs) are usually stored and accessed online through institutional repositories, there are other types of ETDs programs, namely; national, regional, and global programs (Rasuli et al., 2018). ETDs programs at a larger domain, like a country or the globe are more valuable for different users and stakeholder (Bangani, 2018). The national ETDs (NETDs) program is a coordinated effort to collect, preserve, and disseminate ETDs from multiple institutions within a country

Corresponding Author: Sirous Alidousti, Email: rasuli@irandoc.ac.ir and Behrooz Rasuli

(Webley et al., 2011). The values of an NETDs program can be understood from different perspectives; such as, academic, social, economic, cultural, and environmental (Schöpfel, 2013).

Many countries have already established their NETDs, including the UK (British Library EThOS), Canada (Theses Canada), Brazil (Biblioteca Digital Brasileira de Teses e Dissertações [BDTD]), Taiwan (National Digital Library of Theses and Dissertations), Turkey (Yükseköğretim Kurulu Ulusal Tez Merkezi), Japan (CiNii Dissertations), Lithuania (eLABa ETD), South Africa (ETD Portal), and Italy (TesiOnline).

Considering the significant impact of NETDs program on users' access to information and research findings, Iranian Documentation Center (IranDoc)¹ pioneered a program in 1969 to collect and index the theses from Iranian higher education institutes (HEIs). The first tangible output of this program was the 'Bibliography of Theses in Social Science' which has been printed and published in July 1974 (Farnia, 1974). Since then, many ups and downs have happened in the progress of the development of the Iranian NETDs program. Now, a law mandating the establishment of an NETDs program was passed by the Iranian Parliament in September 2017.

This paper aims to trace the evolution of the NETDs program in Iran, delineating its chronological progression. Furthermore, the present status is expounded, and the accomplishments of this program are discussed, offering insights into the successes achieved. Finally, the lessons learned through the development of the Iranian NETDs program and related obstacles are examined.

2. History of the Iranian NETDs Program

In 1969, the initial phase of establishing an NETDs program in Iran was commenced by the Iranian Documentation Center (IranDoc). IranDoc involved the collection and indexing of the theses from Iranian higher education institutions (HEIs) (Alidousti et al., 2009). The first tangible output of this program was the 'Bibliography of Theses in Social Science', which has been printed and published in July 1974. This bibliography encompassed 1352 records compiled up until 1973. Participation in this program was entirely voluntary (Farnia, 1974).

To a certain extent, IranDoc maintained its efforts in collecting, indexing, and disseminating theses and dissertations (TDs) until 1992. During this year, HEIs were possibly granted their initial mandate. The Minister of Culture and Higher Education² at the time, through regulation No. 15518 dated September 14, 1992, requested affiliated HEIs '[...] to send the titles of the approved PhD dissertations [...]' to IranDoc.

In 2005, a second mandate concerning submitting TDs to a national repository was extended to the HEIs under the purview of the Ministry of Science, Research, and Technology (MSRT). Pursuant to the aforementioned directive, Regulation No. 11/1621 dated May 29, 2005, stipulated that these institutions were required to 'submit an electronic or printed copy of these documents [TDs] to IranDoc.'

In 2007, in the third mandate, MSRT issued Regulation No. 2/14389/12238 dated November 11, 2007, instructing the affiliated HEIs to submit a copy of their TDs to IranDoc. Although this directive did not explicitly address the dissemination of information pertaining to these documents, it notably marked the first instance where the emphasis was placed on ‘providing access to these scientific resources for researchers and other users on one hand and avoiding the duplication of studies on the other hand.’ As a measure to ensure implementation, the issuance of a graduation certificate was made contingent upon the ‘announcement of the receipt of the student’s dissertation/thesis’ from IranDoc.

In 2016, a comprehensive fourth mandate was introduced in this domain, comprising six chapters and 18 articles. MSRT delineated this mandate in the ‘Regulations for Registration and Dissemination of Proposals, Theses, and Dissertations and Protection of Authors’ Copyright in Them’ bearing reference number 195929 and dated November 26, 2016. This directive mandated the affiliated HEIs to meticulously register their TDs and proposals and digitally upload the full-text versions of these documents onto an online platform hosted at IranDoc. For the first time, this regulation encompassed proposals in addition to TDs. Starting from that year, the implementation of this regulation has been facilitated through the ‘Sabt’³ website (accessible at sabt.irandoc.ac.ir). A dedicated chapter within this regulation was specifically dedicated to dissemination and access policies. According to this chapter, IranDoc was entrusted with the responsibility of disseminating the metadata and abstracts of TDs and proposals. Moreover, the first 20 pages along with the bibliography of TDs were required to be made freely accessible on the web immediately after registration. Furthermore, the full-text of proposals for TDs was mandated to be disseminated freely on the web after 12 months (for master theses) and 24 months (for doctoral dissertations) from the defense date, respectively. Similarly, the full-text of TDs had to be made available on the web 18 months (for master theses) and 30 months (for doctoral dissertations) after their respective defense dates. Dissemination of TDs and proposals has been done using ‘Ganj’⁴ website (at ganj.irandoc.ac.ir). As an additional implementation guarantee, this regulation stipulated that students’ graduation and related financial disbursements to supervisors, advisors, and referees, as well as their advancements in tenure and promotions, were contingent on the submission of TDs.

The ‘Law on Prevention and Encounter Plagiarism in the Preparation of Scientific Works’ was approved by the Iranian Parliament on August 22, 2017. A notable component of this legislation focused on the compulsory registration of TDs and their associated proposals across all Iranian HEIs:

Henceforth, various institutions including seminaries (Hawse), universities, research institutes, governmental and non-governmental bodies engaged in higher education, research, and technology affiliated with the Ministry of Science, Research, and Technology; the Ministry of Health and Medical Education; the University of Applied Science; Islamic Azad University; Academic Center For Education, Culture, and Research; non-governmental and non-profit higher education institutions; institutions affiliated with the non-governmental

and non-profit higher education institutions; institutions affiliated with the governmental organizations; and Farhangian University are required to meticulously register and gain approval for the non-classified proposals, theses, and dissertations produced by their graduate students within the platforms hosted at the Iranian Research Institute for Information Science and Technology (IranDoc). This procedure also encompasses verifying the full-text content for instances of plagiarism. The submission of the registration certificate, alongside the upload of the complete text and the outcomes of the plagiarism assessment for these documents, has been established as obligatory for the disbursement of financial remuneration to supervisors, advisors, and referees, as well as the allocation of points in the context of their academic advancement, along with the academic progress of the students themselves.⁵

This legislation signifies the inaugural nationwide directive for the central registration of all TDs and proposals. The IranDoc online platforms stipulated within this legislation are the very ones that have been operational since 2016. As articulated in Article 8 of the regulations encompassed by this legislation, endorsed by the Iranian Cabinet on August 14, 2019⁶ (Formally announced as No. H55686T/66612, dated August 21, 2019), ‘the HEIs are mandated to publish the complete content of unclassified theses no later than five years subsequent to the date of their defense.’ This directive represents the initial comprehensive mandate on a national scale to make the full-text of TDs available within the repositories of HEIs.

Hence, from a legal perspective, particularly grounded in the ‘Law on Prevention and Encounter Plagiarism in the Preparation of Scientific Works’ and other regulations, the submission of all TDs and proposals, along with their full-texts, is obligatory within the National Platform for TDs and Proposals Submission (accessible at sabt.irandoc.ac.ir). In accordance with the ‘Regulations for Registration and Dissemination of Proposals, Theses, and Dissertations and Protection of Authors’ Copyright in Them,’ IranDoc is responsible for disseminating both metadata and full-text of TDs and proposals from HEIs affiliated with MSRT. Now, within ‘Ganj’, one can access the metadata and abstracts of TDs from HEIs affiliated with the Ministry of Health and Medical Education, though the full-texts remain inaccessible. Figure 1 depicts the fundamental components of the NETDs program in Iran, as dictated by the present array of laws and regulations.

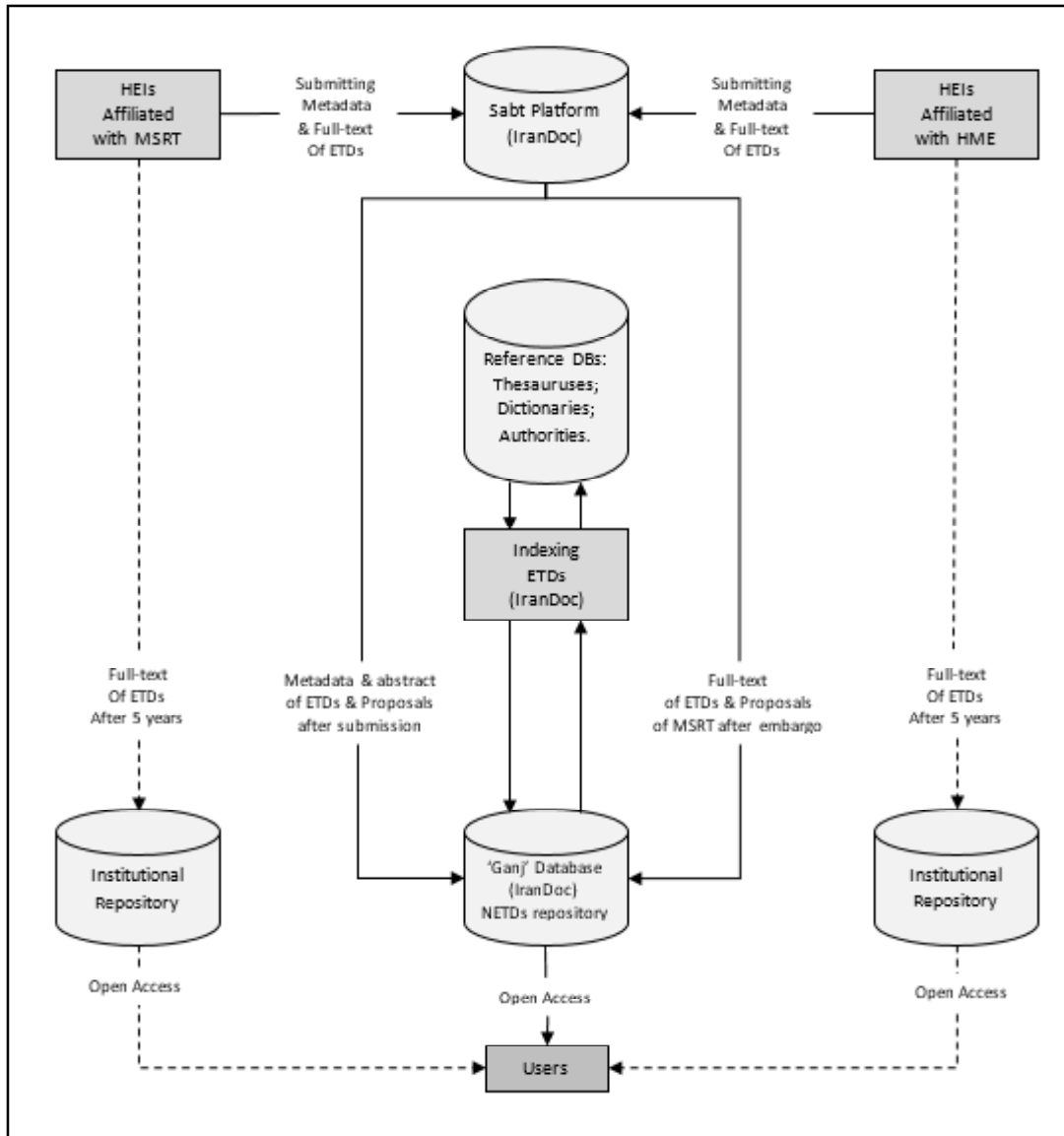


Figure 1: Building blocks of NETDs program in Iran

The process of making an ETD available on ‘Ganj’ starts with the student/HEI uploading its metadata and full-text to the ‘Sabt’ platform. Most of the HEIs require their students to complete a form and upload their ETDs to the ‘Sabt’ platform. IranDoc then checks the quality of the metadata and full-text of the ETDs. If any revision is needed, IranDoc sends the ETDs back to the HEIs. If the ETDs pass the quality control, they are directly indexed in the ‘Ganj’ database. However, this does not mean that IranDoc has approved them. IranDoc approves an ETD after its indexing specialists review it and assign appropriate keywords, edit abstract, and perform other technical tasks using reference resources (such as thesauruses, dictionaries,

etc.). The ETDs that are approved by IranDoc are marked with a ‘blue’ color on ‘Ganj’, while the others are marked with a ‘grey’ color. ‘Ganj’ provides various features for users to search, browse, view, and download ETDs according to their needs and interests.

Some Iranian HEIs have their own repositories for ETDs, besides participating in the ‘Ganj’ program. Although it is not mandatory for HEIs to have their own repositories, some of them prefer to do so, especially the larger ones. However, the number of institutional repositories in Iran is quite low (Dastani, 2018), because they are costly to set up and maintain.

3. Achievements

3.1. Submission of ETDs and Proposals

Starting from January 2009, when the inaugural ETD submission platform was established by IranDoc, up until June 2023, over 738 thousand ETDs and in excess of 401 thousand proposals from 577 HEIs have been collected. The incremental trend of registrations is evident from Figure 2. In the preceding year, ‘Sabt’ has received an average of 4,533 IP-based visitors daily (Iranian Research Institute for Information Science and Technology, 2023).

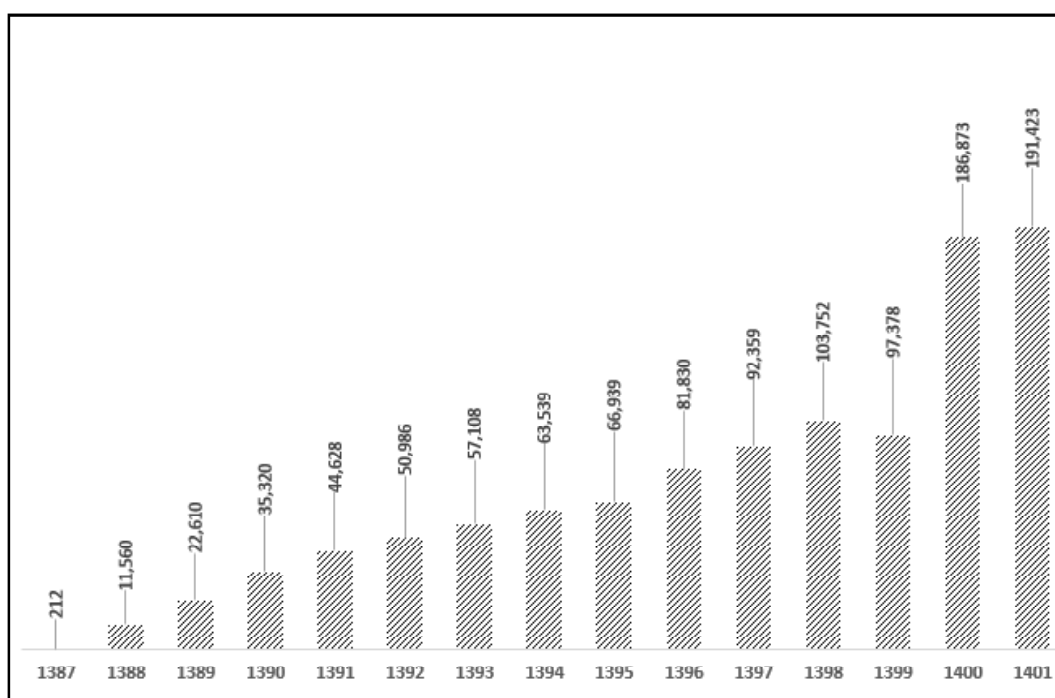


Figure 2: Number of ETDs and proposals submitted to IranDoc

Figure 2 provides a chronological breakdown of the number of ETDs) and proposals submitted to IranDoc over several years. The figure encompasses data in the Iranian calendar, where a year typically spans from

March 20 to March 19 (For example, 1387 in the Iranian Calendar corresponds to March 21, 2008, to March 20, 2009, in the Gregorian Calendar). The data within this figure offers a clear insight into the incremental growth of ETDs and proposals being submitted over the specified years, encapsulating the program’s substantial growth and impact.

3.2. Access to ETDs and Proposals

As previously mentioned, ‘Ganj’ serves as a platform for disseminating metadata, abstracts, and full-texts of ETDs and proposals. Notably, during the preceding year, the platform garnered an average of 4,533 daily unique visitors, each identified by their IP addresses. This statistic exemplifies the substantial interest and engagement surrounding this database. Commencing from 2016, when access to the full-texts of ETDs was initiated, a discernible pattern of increased usage has emerged, as exemplified in Figure 3. This figure illustrates a grow in the download frequency of full-text ETDs (Iranian Research Institute for Information Science and Technology, 2023).

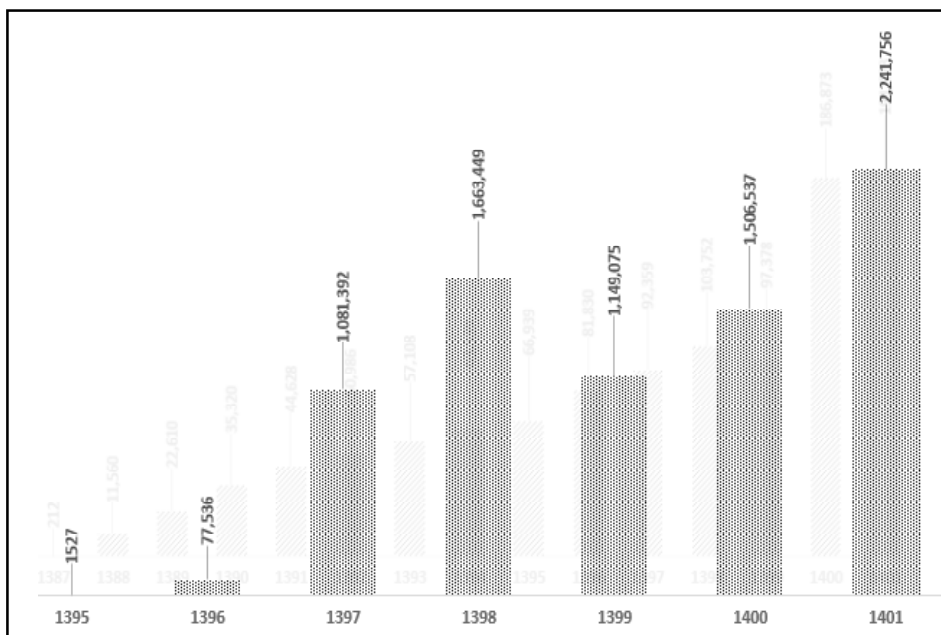


Figure 3: Download frequency of full-text ETDs from ‘Ganj’

This pattern of escalating downloads, demonstrated in Figure 3, attests to the increasing relevance and value of the platform’s content. The significant increase in engagement over the years underscores the platform’s pivotal role in facilitating comprehensive access to academic research materials, further affirming its critical place in the scholarly community.

3.3. Preserving Cultural Heritage

Among the manifold advantages inherent to a NETDs program, the preservation of cultural heritage stands as a paramount benefit. Such programs safeguard the intellectual legacy of a nation by meticulously documenting and archiving the academic contributions of its scholars and researchers. These repositories encapsulate a treasure trove of cultural insights, societal perspectives, and scholarly wisdom, spanning various disciplines and domains. By preserving these scholarly works, a nation ensures the continuity of its cultural heritage, allowing future generations to delve into the minds of past intellectuals, understand the evolution of thought, and trace the trajectory of ideas.

3.4. Increasing Productivity

Enabling unrestricted access to the full-text of ETDs has facilitated the practical utilization of their insights and fostered heightened collaboration within the academic community. This accessibility has concurrently curbed the redundancy often found in academic research, enhancing overall scholarly efficiency.

Moreover, it has played a pivotal role in bolstering the relationship between HEIs and industries. Notably, certain HEIs lack the necessary technological infrastructure and updated platforms to effectively manage and distribute ETDs' metadata and full-texts. In this regard, a NETD portal, such as 'Ganj', has the capacity to address this shortfall.

Conversely, centralizing the organization, preservation, and distribution of ETDs within the country offers multifaceted advantages. This approach not only trims the national and institutional expenses associated with ETDs management but also elevates operational efficacy. By concentrating efforts in a unified platform, the nation can optimize its resource allocation while ensuring the continued accessibility of valuable research, thereby advancing academic and research endeavors.

3.5. Academic Responsibility

The fundamental mission of HEIs is to advance and proliferate scientific knowledge, a goal often supported by public funding. In alignment with this mission, the principle of open access to ETDs resonates, as it aligns with the dissemination of knowledge and contradicts practices involving concealing or commercializing ETDs, which are inherently incongruent with the ethos of promoting knowledge and are at odds with the responsible utilization of public resources.

3.6. Increasing visibility

Enabling open access to the full-text of ETDs through a centralized platform like 'Ganj' can significantly enhance the contentment of researchers, students, and the broader scientific community associated with HEIs. Prior research underscores that users predominantly engage with open access resources (Alperin et al., 2018; Mack, 2020). Such access not only amplifies the visibility of research and its outcomes but also culminates in increased citations and recognition (Abrizah & Kiran, 2010; Ezema & Onyancha, 2017; Ferreras-

Fernández et al., 2016). Conversely, the concealment of ETDs diminishes stakeholder satisfaction and renders citations, which serve as the foundation for application and impact, ineffective.

3.7. Market Expansion

The availability of open access to ETDs holds the potential to extend the dissemination of Iranian research findings and the accomplishments of Iranian HEIs within Persian-speaking nations like Afghanistan, Pakistan, Tajikistan, and others. This accessibility not only facilitates regional collaboration but also opens up new avenues for Iranian HEIs, and researchers to tap into unexplored markets.

3.8. Monitoring Research Impact

Through centralized access to ETDs via a single portal like ‘Ganj’, the tracking of view and full-text download statistics becomes achievable. This data can be harnessed to generate various statistical and analytical reports, offering valuable insights for policy makers. Moreover, such a platform enhances the ability to measure the impact of academic research; for example, citation analysis is possible through such a platform. ‘Ganj’ streamlines the process for policy makers to govern aspects like access, impact, copyright, and research ethics, thereby contributing to effective and informed decision-making.

3.9. Academic Integrity

Enabling open access to the full-texts of ETDs significantly contributes to transparency and fosters a robust scientific discourse. Notably, one of its pivotal accomplishments lies in enhancing the scientific integrity and precision of researchers while advancing and enriching scholarly achievements. This form of open access can effectively mitigate scientific misconduct by establishing transparency as a deterrent. Wrongdoers become apprehensive about the potential exposure of their work, and the ease of identifying plagiarism becomes more pronounced. Furthermore, the awareness of open access to ETDs stimulates authors to elevate the quality of their work and uphold a higher level of accountability within the scientific community. Concealing ETDs, on the contrary, diminishes authors’ motivation to enhance the quality of their scientific contributions.

3.10. Enhancing Employment Opportunities

Open access to the full-text of ETDs acquaints the job market with the competencies of graduates, thereby expanding employment prospects for them. This accessibility enables employers to gain insights into the depth and breadth of knowledge possessed by potential candidates. With detailed access to the research and academic pursuits of graduates, employers can make informed decisions about hiring individuals whose expertise aligns closely with their organizational needs. This not only streamlines the recruitment process but also fosters a more efficient and effective match between job requirements and candidate skills. Ultimately, open access to ETDs empowers graduates to present their academic achievements comprehensively, while assisting employers in making well-informed and strategic hiring choices.

3.11. Informed Policy Making

Open access to the full-text of ETDs offers policy-makers direct and up-to-date access to the outcomes of academic research, facilitating their utilization in policy formulation and strategic decision-making processes. This access to comprehensive academic research allows policy-makers to stay informed about the latest developments and trends within various fields. By having direct access to the full-text content of ETDs, policy-makers can engage in evidence-based decision-making, drawing from a wealth of knowledge generated by the academic community. This real-time insight not only enriches policy discussions but also ensures that policies are grounded in the most current and relevant information available. As a result, open access to ETDs serves as a bridge between academia and policy-making, fostering a symbiotic relationship that enhances the quality and effectiveness of policies while promoting the overall advancement of society.

3.12. Eliminating Academic Ghostwriting

Ghostwriting in TDs is a serious issue in Iran (Rasuli et al., 2020; Varij Kazemi & Asghri, 2023). Open access to full-text ETDs aids in curbing the illicit market and prevalence of ghostwritten theses and dissertations. The transparency offered by open access acts as a deterrent to ghostwriting practices. Conversely, any attempts to conceal ETDs could inadvertently reinforce the unethical landscape, potentially amplifying profitability for those engaged in such practices.

3.13. Promoting Equity

One significant advantage of implementing open access for ETDs at a nationwide level is its ability to foster greater equity within the academic landscape. Open access ensures that valuable research outcomes are universally accessible, regardless of institutional affiliations or financial constraints. This inclusive approach dismantles barriers that could otherwise impede students, researchers, and institutions with limited resources from accessing vital scholarly information. By promoting equity, open access ETDs empower a broader range of individuals to contribute and benefit from the academic discourse, ultimately enriching the overall quality of research and educational endeavors.

3.14. Decreasing Research Duplication

Open access to ETDs and research proposals on a nationwide scale offers a substantial advantage in reducing the duplication of research efforts. With easy access to comprehensive repositories of ETDs and research proposals, scholars can quickly ascertain the existing body of knowledge and ongoing investigations within their field. This knowledge prevents the unintentional repetition of studies, enabling researchers to build upon existing insights rather than reinventing the wheel. By mitigating redundant research, open access ETDs and research proposals optimize the allocation of intellectual resources, allowing scholars to address new questions and expand the boundaries of knowledge in a more efficient and effective manner. This advantage not only conserves time and effort but also contributes to the overall advancement of research and innovation within the academic community.

3.15. Decreasing Financial Expenses

The implementation of open access ETDs program on a nationwide scale offers a significant advantage in reducing financial burdens for HEIs. Traditionally, HEIs had to invest substantial resources in developing and maintaining individual ETD repositories, including expenses related to infrastructure, technology, security, and personnel (Kohl & Sanville, 2006). However, with a centralized platform like 'Ganj' that facilitates open access to ETDs and research proposals, the need for individual repositories diminishes. This centralization eliminates the need for redundant investments, saving HEIs from the high costs associated with developing and managing their repositories. As a result, HEIs can redirect their resources towards more critical academic endeavors, such as research initiatives, faculty development, and improving the overall quality of education. This cost-effective approach promotes a more efficient use of funds while ensuring broader accessibility to academic works, thereby benefiting both institutions and the academic community as a whole.

4. Obstacles and Challenges

The journey of the NETDs program in Iran has unveiled the intricate nature of establishing, managing, and sustaining such an endeavor, exposing an array of barriers and challenges along the way.

4.1. Resistance to Participate

Among key obstacles, the cultural aspect stands out as a pivotal hurdle. Despite the enactment of parliamentary mandates, certain HEIs, particularly the larger ones, have exhibited reluctance to engage and actively participate in the Iranian NETDs program. This reluctance is notably apparent in the absence of cooperation from institutions like Seminaries and the incomplete engagement of Islamic Azad University, a prominent institution with a significant number of graduate students.

4.2. Technological Infrastructure

Infrastructure emerges as another significant challenge. Presently, the IranDoc bandwidth's limitations restrict users within the 'Ganj' community to download only five ETDs full-text per week, constraining broader access due to the traffic limitations. This bandwidth constraint not only hampers the user experience but also impedes the efficient dissemination of knowledge. In an era, where digital accessibility is paramount, addressing this limitation is crucial to ensure that open access to ETDs truly serves its purpose of facilitating academic exploration and research. Efforts to enhance bandwidth capacity and optimize the platform's performance are pivotal steps towards providing a seamless and enriching experience for users seeking to access and engage with valuable academic content.

4.3. Human Resource

Organizational resources, particularly human resources, within IranDoc have not expanded proportionally with the surge in ETDs submission and download rates. Consequently, a considerable portion of submitted

ETDs have been directly funneled into ‘Ganj’ without undergoing requisite processing and organization. This deficiency in resource allocation has not only led to potential discrepancies in the quality and accuracy of the content available but has also limited the platform’s ability to offer value-added features such as comprehensive categorization, tagging, and metadata enrichment. To address this challenge, a strategic investment in human resources, including skilled cataloguers, metadata specialists, and digital archivists, is imperative. Such investment will ensure that the platform not only houses a vast collection of ETDs but also delivers a user-friendly, well-organized repository that enhances the accessibility and usability of academic research for all stakeholders.

4.4. Copyright

Insufficient copyright support has emerged as a key issue. Inadequate measures to safeguard against plagiarism in TDs pose a significant challenge, making it challenging for authors to initiate effective prosecution against potential plagiarists. This obstacle casts a shadow on the seamless registration of ETDs, requiring a more comprehensive approach to address these concerns effectively. Strengthening copyright enforcement mechanisms and implementing robust plagiarism detection tools within the ETD registration process would not only protect the intellectual property rights of authors but also enhance the credibility and integrity of the academic content available in the repository. Additionally, fostering awareness and education around ethical research practices can contribute to creating a culture of academic integrity and responsible authorship. By bolstering these aspects, the NETDs program can not only ensure the authenticity of the deposited content but also encourage a higher standard of scholarly work within the academic community.

4.5. Embargo

Another significant challenge that the NETDs program in Iran has encountered revolves around the concept of embargo. Embargoes refer to the temporary restrictions placed on the availability of full-text ETDs after their initial submission. This challenge is particularly pronounced in cases where researchers aim to share their findings promptly with the academic community or the broader public. The existing embargo durations for master’s theses and doctoral dissertations, set at 24 and 30 months respectively, do not align with international norms.

4.6. Lessons Learned

The journey of the Iranian NETDs program has been accompanied by a series of valuable lessons that shed light on the complexities and intricacies of implementing and managing a nationwide initiative of this magnitude. These lessons provide insights into both the achievements and challenges faced, offering guidance for future endeavors in the realm of ETDs.

One of the most profound lessons garnered from the NETDs program is the significance of fostering cultural and institutional cooperation. While legislative mandates can encourage participation, genuine engagement

from HEIs is essential for the program's success. The reluctance of certain HEIs to fully embrace the program underscores the importance of aligning institutional values with the broader goals of knowledge dissemination. Moving forward, efforts to garner enthusiastic participation must consider the cultural contexts and institutional priorities of the participating organizations. Perhaps developing different tools and dashboards for participating HEIs can motivate them to effective collaboration with the NETDs program.

An essential lesson gleaned from the Iranian NETDs program pertains to the paramount significance of information quality for users. The program's journey has underscored the critical role that accurate, organized, and comprehensive information plays in ensuring the effectiveness and credibility of the platform. The user-centric access goes beyond providing access to a sheer volume of content. Instead, it entails offering information that is accurate, reliable, and easily navigable. Users, ranging from students and researchers to policy-makers and industry professionals, rely on the NETDs platform for credible academic resources. This necessitates a rigorous approach to content curation, metadata enrichment, and effective indexing. Ensuring that information is up-to-date, categorized appropriately, and accompanied by thorough abstracts contributes to the overall user experience, enabling them to quickly identify relevant resources.

The experience of the NETDs program has highlighted a crucial lesson concerning the necessity of establishing a standalone organization and a sustainable business model to ensure the long-term viability of such a program. This lesson underscores that a dedicated entity and a well-defined financial structure are essential for the program's continued success and growth. A standalone organization dedicated to managing the NETDs program allows for greater operational autonomy. This autonomy empowers the organization to make swift decisions, implement necessary changes, and adapt to evolving technological and academic landscapes. A focused entity can dedicate its efforts solely to managing, maintaining, and advancing the program, streamlining processes, and responding effectively to challenges as they arise. A separate entity can allocate funds, personnel, and technological resources specifically to the NETDs program. This focused allocation prevents the dilution of resources and ensures that the program's objectives receive the necessary attention and investment. Additionally, a well-defined financial structure enables transparent resource allocation, contributing to the overall efficiency and sustainability of the program. A dedicated organization can explore revenue-generation strategies that align with the program's mission while maintaining ethical and academic integrity. This might include subscription-based services for premium content, partnerships with academic and corporate entities, or targeted funding initiatives. A sustainable financial model reduces the program's dependence on external funding sources, ensuring its resilience over time.

One of the invaluable lessons gleaned from the NETDs program is the imperative of continuous improvement. This lesson emphasizes the necessity of consistently enhancing and expanding the program's offerings, introducing new products and services that align with the evolving needs of users and stakeholders. The program must remain attuned to the shifting preferences, behaviors, and expectations of researchers, students, faculty members, and other stakeholders. By gathering and analyzing feedback, the program can identify areas of enhancement and create tailored solutions that directly address the concerns and desires of its user

base. In line with this lesson, the NETDs program should aim to diversify its offerings. This involves introducing new features, content formats, and services that extend beyond the core function of providing access to theses and dissertations. By incorporating multimedia elements, interactive tools, and collaborative spaces, the program can create a comprehensive academic ecosystem that supports various modes of learning, research, and knowledge dissemination.

Another essential lesson gleaned from the evolution of the Iranian NETDs programs is the importance of embracing a holistic approach to document collection. While the primary focus has historically centered on ETDs, the efficacy and value of these initiatives markedly increase when they encompass a broader spectrum of scholarly output. Recognizing this, NETDs programs have evolved to encompass not only ETDs but also research proposals, derived papers, and even associated research data. This comprehensive approach offers multifaceted advantages. Including research proposals enables scholars to trace the evolution of an idea from inception to completion, providing insights into the genesis of scholarly pursuits. By embracing this expanded scope of document collection, NETDs programs create a robust ecosystem of interconnected knowledge. Scholars, students, and researchers can traverse the entire research journey, uncovering the evolution of ideas, the methodologies employed, and the practical implications of academic inquiry.

5. Conclusion

Many countries around the world have not launched their NETDs programs yet. The experiences gained from the Iranian NETDs program, particularly the ‘Ganj’ program, provide valuable insights and lessons that can guide these countries in their future endeavors. The anticipated findings of this study, including the achievements and challenges faced by the ‘Ganj’ program, offer practical knowledge for other contexts seeking to establish and maintain national ETD initiatives. By understanding the achievements and challenges of an NETDs program, countries can recognize the potential benefits and impact of such initiatives.

The findings of this study highlight the progress and growth of the ‘Ganj’ program, demonstrating its ability to enhance the visibility and impact of academic research, preserve cultural heritage, facilitate research trend analysis, etc. Additionally, the study identifies the challenges and obstacles that may arise during the establishment and maintenance of NETDs programs, allowing countries to proactively address these issues and develop effective strategies. For countries yet to launch their NETDs programs, this study serves as a valuable resource, providing a foundation of knowledge and guidance for their implementation. It emphasizes the importance of collaboration between institutions, policymakers, and information professionals in creating a successful national ETD initiative.

By learning from the experiences and practices of the ‘Ganj’ program, countries can avoid potential pitfalls and leverage best practices to optimize their own NETDs programs. The lessons learned from the Iranian experience can guide policymakers, information professionals, and stakeholders in effectively implementing and managing NETDs programs, ultimately enhancing global access to scholarly research and fostering academic progress.

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