

INTELLECTUAL CAPITAL IN ISLAMIC HIGHER EDUCATION: PESANTREN-BASED INSTITUTIONS

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Abstract

This research examines the intellectual capital (IC) at STAI Attanwir Bojonegoro, an Islamic higher education institution based on pesantren principles. The objective is to analyze the institution's human capital, structural capital, and relational capital, along with the challenges faced in managing IC in the digital era. A qualitative descriptive approach was employed, gathering data through in-depth interviews and documentary studies. The findings reveal that STAI Attanwir possesses strong human capital in terms of academic competence and Islamic knowledge among teaching staff and educational personnel. Structural capital is evident in the physical infrastructure and integrated information systems such as SIM STAI Attanwir, while relational capital is demonstrated through partnerships with community organizations, government entities, and alumni. Key challenges identified include adapting to technological advancements and managing social and political issues like radicalism. The research concludes by emphasizing the critical role of IC management as a strategy to enhance educational quality and institutional competitiveness in an increasingly competitive future.

Keywords : intellectual capital, human capital, structural capital, relational capital, Islamic higher education

Abstrak

Penelitian ini mengkaji modal intelektual (intellectual capital/IC) pada STAI Attanwir Bojonegoro, sebuah perguruan tinggi Islam berbasis pesantren. Tujuan penelitian adalah untuk menganalisis human capital, structural capital, dan relational capital yang dimiliki institusi serta tantangan yang

dihadapi dalam mengelola IC di era digital. Pendekatan kualitatif deskriptif digunakan dengan mengumpulkan data melalui wawancara mendalam dan studi dokumentasi. Hasil penelitian menunjukkan bahwa STAI Attanwir memiliki human capital yang kuat dalam bentuk kompetensi akademis dan keislaman staf pengajar, serta tenaga kependidikan. Structural capital tercermin dalam infrastruktur fisik dan sistem informasi terintegrasi seperti SIM STAI Attanwir, sedangkan relational capital ditunjukkan melalui kemitraan dengan organisasi kemasyarakatan, pemerintah, dan alumni. Tantangan utama yang diidentifikasi meliputi adaptasi terhadap teknologi dan inovasi, serta mengelola isu-isu sosial dan politik seperti radikalisme. Kesimpulan penelitian menekankan pentingnya pengelolaan IC sebagai strategi untuk meningkatkan kualitas pendidikan dan daya saing institusi di masa depan yang semakin kompetitif.

Kata Kunci: *intellectual capital, human capital, structural capital, relational capital, pendidikan tinggi Islam*

INTRODUCTION

Islamic Higher Education Institutions (IHEIs) in Indonesia consist of 847 institutions, including 58 State Islamic Universities (PTIN) and 789 Private Islamic Higher Education Institutions (PTKIS) (emis.kemenag.go.id). Despite their large number, the quality varies significantly, with only 3 institutions accredited as A by the National Accreditation Board of Higher Education (BAN-PT) in 2018, and fewer than 50 accredited as B, while the rest are accredited as C or are unaccredited. BAN-PT assesses the quality of higher education institutions based on the National Higher Education Standards (SN-Dikti) set by the Ministry of Research, Technology, and Higher Education (Kemenristekdikti, 2015) under Regulation No. 44 of 2015.

In fulfilling their functions of education, research, and community service, universities require intellectual capital (IC), comprising human capital, structural capital, and relational capital, to deliver quality services (Leitner et al., 2014; Ramirez & Gordillo, 2014; Secundo, Lombardi, & Dumay, 2018; Veltri & Puntillo, 2020). Pesantren-based IHEIs play a strategic role in providing higher education services in Indonesia, and their IC is crucial for sustainable community service (Ulum, 2019).

Evaluating the IC conditions in pesantren-based IHEIs is essential using BAN-PT accreditation criteria, which encompass aspects such as vision-mission, governance, students, human resources, finance, education, research, community service, and tridharma outcomes (Ulum, 2019). IC analysis in pesantren-based IHEIs is relevant as it assesses the institutional intellectual assets, including human capital (individual knowledge, skills, experience), structural capital (internal systems, policies, databases), and relational capital (stakeholder relationships) (de Frutos-Belizón, Martín-Alcázar, & Sánchez-Gardey, 2019; Frondizi, Fantauzzi, Colasanti, & Fiorani, 2019; Pedro, Leitão, & Alves, 2020).

Research on IC in pesantren-based IHEIs is necessary given their strategic role in producing graduates capable of optimal societal contribution. This analysis helps

identify institutional strengths and weaknesses, enhance academic performance, build branding and reputation, and plan long-term strategies (Chatterji & Kiran, 2023).

This study aims to provide an objective overview of the human capital conditions in pesantren-based IHEIs and identify strategies to enhance institutional performance. The benefits of this research extend not only to the managers of pesantren-based IHEIs for strategic IC development but also to other researchers in advancing studies on Islamic religious higher education institutions based on pesantren principles. Thus, this research is expected to contribute to improving the quality of Islamic higher education in Indonesia through better IC analysis and management.

Literature review

Intellectual capital (IC) refers to intangible assets that encompass knowledge, information, intellectual property rights, and experiences that provide a competitive advantage to organizations (Thomas A. Stewart, 1997). According to Asiaei & Jusoh (2015), IC consists of human capital and structural capital. Human capital includes human resources within an organization, while structural capital encompasses systems, software, and distribution networks. In the context of Islamic Higher Education Institutions (IHEIs) based on pesantren principles, IC plays a crucial role in enhancing education quality and competitiveness (Hamdani, 2023; Yayat Supriyadi, Safuri, Fauzi, Anis, Yogi Damai Syaputra, & Deni Iriyadi, 2023).

Human capital in pesantren-based IHEIs includes profound religious knowledge and practical skills in applying Islamic values. The curriculum emphasizes understanding the Quran and Hadith, comprehensive religious studies, and the development of Islamic character, preparing graduates to be leaders with high moral integrity (Pallathadka et al., 2023; Zainiyati, 2016). Moreover, pesantren-based IHEIs also focus on developing academic competencies and professional skills relevant to the job market needs, such as Islamic economics and Sharia-based information technology, thus equipping graduates to compete in the era of globalization (Hanik, Rachman, Samsudi, & Ekosiswoyo, 2019; Muslim, Arroisi, Jan, & Ramazani, 2024).

Structural capital in pesantren-based IHEIs comprises administrative systems, institutional policies, educational curricula, IT infrastructure, as well as databases and knowledge bases (Zainal, Manumanoso Prasetyo, Aziz Yaacob, & Jamali, 2022). Evaluating the development of structural capital can be done using Accreditation of Study Program (APT) criteria, which include vision-mission, academic leadership, internal quality management, learning systems, and physical facilities (Idris, 2023). Infrastructure and facilities such as campus buildings, libraries, laboratories, and computer centers support the teaching-learning process and research (Cuesta, Glewwe, & Krause, 2016; Restivo et al., 2021). Integrated information systems also enhance operational effectiveness and stakeholder services (Dahlin & Isaksson, 2017).

Relationship capital in pesantren-based IHEIs includes networks of cooperation with communities, religious figures, alumni, and other religious institutions (Buresh, 2002; Isbah, 2020). These relationship assets help in obtaining financial support, access to additional resources, and involving industry practitioners and experts in the

learning process. Active collaboration with local governments and educational institutions supports socio-economic development through community service programs and applied research (Isbah, 2020). Overall, IC in pesantren-based IHEIs becomes a crucial asset in enhancing education quality and institutional sustainability, focusing on the development of human capital, structural capital, and relationship capital.

RESEARCH METHOD

This study used a qualitative descriptive approach to gain an in-depth understanding of intellectual capital conditions in Islamic Higher Education Institutions (IHEIs) based on pesantren principles. The research focused on STAI Attanwir Bojonegoro, which is undergoing transformation into an institute. Primary data were obtained from performance reports on the implementation of higher education tridharma, while secondary data were collected through interviews with leaders, policy makers, and stakeholders. Data collection involved documentation techniques for performance reports and in-depth interviews to gain comprehensive perspectives.

Data analysis categorized intellectual capital characteristics into human capital, structural capital, and relational capital. This analytical technique followed data reduction, data display, and conclusion drawing processes recommended by Miles, Huberman, & Saldaña (2014). Using this method, the research aimed to provide an accurate overview of strengths, weaknesses, and potential for intellectual capital development at STAI Attanwir. Findings from this research are expected to serve as a strategic foundation for more effective institutional development and support sustainable institutional change.

FINDINGS

Profile of STAI Attanwir

STAI Attanwir Bojonegoro, as an Islamic higher education institution based on pesantren, has experienced significant development since its establishment in 2010. Currently, STAI Attanwir offers several study programs, including Islamic Economics, Islamic Guidance and Counseling, Arabic Language Education, and Madrasah Ibtidaiyah Teacher Education (PGMI), as well as a new program in Islamic Education Management (MPI). All programs have received accreditation from BAN-PT, except MPI, which is still in the accreditation process. The institution is located in Dusun Talun, Bojonegoro Regency, known as an educational center with strong support from the community and alumni of ATTANWIR pesantren, as well as organizations like Nahdlatul Ulama and Muhammadiyah.

Internally, STAI Attanwir actively develops pesantren-based teaching with the integration of contemporary texts into its curriculum. The campus is also committed to improving human resources through a transparent student admission policy from various regions in Indonesia. Additionally, STAI Attanwir has developed adequate

infrastructure, such as student dormitories, lecture halls, laboratories, and other facilities, integrated with information systems through SIM STAI Attanwir.

Externally, STAI Attanwir is in a supportive macro environment, particularly politically, with backing from local government and community organizations. Economically, STAI Attanwir contributes to local economic development through Islamic cooperatives and scholarship programs supporting students from lower-middle-class backgrounds. Challenges such as social issues related to terrorism and radicalism are addressed through pesantren-based education emphasizing moral and national values. Moreover, STAI Attanwir adopts technology and research to face the rapid development of science and technology, managing online journals and preparing IT experts.

Thus, STAI Attanwir Bojonegoro not only acts as a higher education institution but also as an agent of change in strengthening Islamic identity, advancing society, and contributing to the development of science and technology at both local and national levels.

Human Capital of STAI Attanwir

STAI Attanwir Bojonegoro has several lecturers supporting academic activities and curriculum development in the Islamic Economics program. There are 6 permanent lecturers with adequate master's and doctoral qualifications, especially in Islamic Economics and Management. The ratio of permanent lecturers to students, although not yet ideal at 1:25, is already sufficient with a ratio of 1:23. In managing lecturers, STAI Attanwir continuously enhances their quality by facilitating career development through research method dissemination, research mentoring for international publication, and support for professional certification. Intellectual contributions from lecturers include writing teaching materials, participating in professional organizations, and engaging in research published in national and international journals.

Besides lecturers, STAI Attanwir also has administrative staff supporting the program operations well. There are 6 administrative staff members with bachelor's degrees who continuously develop their competencies according to campus needs. Career development for administrative staff is encouraged through professional certification and participation in training to improve administrative service quality. STAI Attanwir also implements various evaluation and supervision systems, such as attendance systems, student questionnaires, and advisory systems to ensure the quality of educational services provided to students.

Table 1. Administrative Staff Data

No	Position	Educational Qualification
1	Head of Department	Bachelor's
2	PDDIKTI & EMIS Operator	Bachelor's
3	Librarian	Bachelor's
4	Finance	Bachelor's
5	Academic	Bachelor's

6 Administrator Bachelor's

Thus, STAI Attanwir focuses not only on academic development for lecturers and administrative staff but also ensures integrity and professionalism in every operational aspect to support the campus's vision and mission in producing high-quality graduates ready to compete in the job market. Below is a brief table of lecturer data:

Table 2. Lecturer Data

No	Name	Education	Position	Field of Expertise	DTPS Status	DTPT Status
1	Mifta Hulaikah	Doctor	Lector	Management	√	
2	Eryul Mufidah	Master	Lector	Management	√	
3	Sugito	Master	Assistant Expert	Islamic Economics	√	
4	Aris Zulianto	Master	Lector	Management	√	
5	Ahmat Arif Syaifudin	Master	Assistant Expert	Islamic Economics	√	
6	Abd. Hafid	Doctor	Lector	Islamic Counseling		√
7	Nur Laila Rahmawati	Doctor	Assistant Expert	Arabic Language Education		√
8	Dyah Ayu Ratna Dewi Anggraeni	Doctor	Lector	Islamic Education		√
9	Moch. Wahyudi Utomo	Master	Assistant Expert	English Language Education		√
10	Moh Muhajir	Master	Lector	Indonesian Language Education		√

Performance and Strategy in Tridharma of Higher Education

The performance and strategy of STAI Attanwir in the Tridharma of Higher Education show significant achievements in several aspects. Specifically, in the field of education, STAI Attanwir has implemented continuous coordination to ensure graduate profiles align with the Indonesian National Qualifications Framework (KKNI) relevant to their disciplines. Learning evaluation is demonstrated through the Cumulative Achievement Index (IPK), with the highest average in TS-1 at 3.94 and a maximum IPK of 4.00, in accordance with SN-DIKTI standards.

Additionally, there have been internal curriculum improvements with the implementation of the Merdeka Belajar Kampus Merdeka concept involving STAI Attanwir leaders, PSEI chairpersons, administrative staff, and alumni. This step is expected to improve the quality of learning and responsiveness to job market needs.

Semester learning surveys have also been conducted, showing high student satisfaction with the quality of preparation, process, and evaluation of lectures.

In the field of research, STAI Attanwir demonstrates a commitment to encouraging lecturers and educators to actively engage in research. Evaluations show an increase in the quantity and quality of research conducted, with the highest portion in TS-1 reaching 50% of the total reported research.

Community service is also a focus, particularly in the fields of Islamic business and financial consulting. STAI Attanwir has successfully implemented various community service programs, such as serving as Sharia Supervisory Boards, practitioners of Islamic cooperatives, and actively participating in social and religious community activities. Partner satisfaction surveys show positive responses to the impact of community service carried out by STAI Attanwir.

The SWOT analysis highlights the institution's strengths, weaknesses, opportunities, and threats. From this analysis, development and sustainability strategies have been formulated to leverage internal strengths and external opportunities while addressing existing weaknesses and threats. This includes adding lecturers, increasing research outputs and community service, and expanding collaborations both nationally and internationally. Thus, STAI Attanwir remains committed to improving the quality of education, research, and community service as part of its tangible contributions to the Tridharma of Higher Education.

DISCUSSION

Overview of Intellectual Capital at STAI Attanwir Bojonegoro

Based on the research results, several important aspects related to intellectual capital (IC) at STAI Attanwir Bojonegoro have been revealed. STAI Attanwir Bojonegoro is an Islamic higher education institution based on a pesantren (Islamic boarding school). The research found that STAI Attanwir possesses significant intellectual capital, primarily in the forms of human capital, structural capital, and relational capital. According to Bontis (1998) and Kianto & Cabrilo (2022), IC is a combination of all the knowledge possessed by people in an organization and how this knowledge can be applied to achieve organizational goals. The human capital at STAI Attanwir is reflected in the academic and Islamic competence of the teaching staff and educational personnel, supported by the pesantren-based education system. Stewart (2010) states that human capital includes the knowledge, skills, and capabilities possessed by individuals in an organization that add value. Meanwhile, structural capital is reflected in the physical infrastructure and integrated information systems, such as the STAI Attanwir Information System (SIM), which supports operational efficiency and knowledge management. Edvinsson & Malone (1997) define structural capital as the organizational framework that supports human capital, including infrastructure, processes, and databases used to manage knowledge. Relational capital is demonstrated through partnerships with community organizations, government, and alumni that provide financial and moral support for institutional

development. According to Nahapiet & Ghoshal (1998), relational capital is the value derived from the network of relationships the organization has with its stakeholders.

The research also indicates that although STAI Attanwir has made significant efforts in managing IC, there are several challenges that need to be addressed. One of the main challenges is adapting to technological and innovation developments, especially in the digital era and Industry 4.0, which require enhancing human resources in IT and the ability to manage big data and online platforms like their online journal, Jurnal Tawazun. According to Schwab (2017), the Fourth Industrial Revolution is characterized by the emergence of new technologies that change the way humans work and interact, necessitating organizations to adapt to these changes to remain competitive. Additionally, external factors such as social and political issues, especially related to radicalism and societal development, affect the institution's perception and actions in maintaining Islamic and national values. This aligns with Pusser's (2001) view that higher education institutions must be responsive to the social and political changes around them to maintain their relevance and credibility.

STAI Attanwir continues to optimize IC management as a strategy to improve education quality and competitiveness. By understanding the components of IC and the challenges faced, the institution can plan strategic steps in curriculum development, human resource recruitment, and strengthening cooperation with external stakeholders. These steps are crucial to ensure that STAI Attanwir remains relevant and competitive in the increasingly competitive national higher education landscape. According to Kaplan & Norton (2004), effective IC management can help organizations achieve competitive advantage and long-term sustainability through strategic planning and execution.

Human Capital at STAI Attanwir

The research on the human capital of STAI Attanwir Bojonegoro reveals several aspects that need attention in the context of developing the quality of lecturers and educational staff. Based on the data obtained, several key points can be analyzed to support further development within the educational institution.

First, in terms of lecturer qualifications, it can be concluded that STAI Attanwir has sufficiently met the academic qualification standards for lecturers. Most lecturers have a master's degree, with some having earned doctoral degrees. Although the lecturer-to-student ratio has not yet reached the ideal 1:25, the current ratio of 1:23 shows adequacy in supporting academic activities. This is important considering that the quality of teaching and mentoring by lecturers plays a crucial role in producing quality graduates (Turner, Huang, Poverjuc, & Wyness, 2016).

Second, good lecturer management is also evident from efforts in career development and intellectual contributions by lecturers. STAI Attanwir has provided adequate support in terms of research methods socialization, international publications, and professional certification. Lecturers' contributions in research, both in national and international journals, and active participation in professional organizations indicate significant involvement in their fields' development (Adedeji & Campbell, 2013).

Third, in the context of educational staff development, STAI Attanwir also demonstrates a commitment to improving the quality of administrative and operational services on campus. Although limited in number, educational staff have adequate qualifications and continually develop their competencies. This is essential in ensuring the overall efficiency and effectiveness of campus management (Naji, Gunduz, & Maki, 2023).

Fourth, regarding performance evaluation, STAI Attanwir has implemented various methods to monitor the quality of services provided by lecturers and educational staff. Attendance systems, student questionnaires, and lecturer advisories are important instruments in ensuring transparency and accountability in educational services. This evaluation is crucial for continuously improving the quality of teaching and academic services at STAI Attanwir (Imaniar, Lestari, & Munir, 2018; Kälberer, Petendra, Böhmer, Schibelbein, & Beck-Meuth, 2016).

Fifth, in terms of lecturer career development, professional certification is crucial. STAI Attanwir needs to continue encouraging lecturers to pursue certifications relevant to their fields of study and profession. This not only enhances lecturers' competencies but also boosts the institution's reputation in the Indonesian higher education landscape (Kemal & Rosyidi, 2019; Van Pham, Nguyen, Nghiem, Duong, & Nguyen, 2022).

Sixth, research and lecturers' intellectual contributions positively impact education quality. By publishing articles in accredited and non-accredited journals and participating in seminars and conferences, STAI Attanwir lecturers can broaden students' academic horizons and contribute to the general advancement of knowledge (Kucherenko, 2021; Lin, Chen, & Yang, 2014).

Seventh, the integration of pesantren-based teaching with technological and innovative developments must continue to be enhanced. The use of information technology in the learning process can improve the quality of education at STAI Attanwir. Utilizing a well-managed academic information system can streamline administrative processes and increase campus management efficiency (Lee, Stvilia, Ha, & Hahn, 2023; Sethi & Malhotra, 2023).

Finally, to maintain competitiveness in the current global era, STAI Attanwir also needs to develop networking collaborations with various educational and industrial institutions. Such collaborations not only broaden students' career opportunities but also strengthen the academic and research foundations on campus (Sharma & Kaushik, 2022; van der Wal, Thorogood, & Horrocks, 2021).

Performance and Strategy in Higher Education Tri Dharma

The research conducted on STAI Attanwir regarding performance and strategy in Higher Education Tri Dharma (three pillars of higher education) can be outlined as follows: First, in the education aspect, the evaluation results show that STAI Attanwir successfully achieved a high average Cumulative Achievement Index (IPK), reaching the highest value of 3.94 in TS-1, with a maximum IPK of 4.00. This indicates the institution's success in aligning the curriculum with the Indonesian National Qualifications Framework (KKN) and ensuring the quality of learning responsive to

labor market needs (Astuti, Zuhrotun, & Sunaryo, 2020). The implementation of the Merdeka Belajar Kampus Merdeka concept also supports a learning process focused on developing relevant skills and knowledge for students (Kemenristekdikti, 2020).

Next, in terms of research, there has been a significant increase in both the quantity and quality of research conducted by STAI Attanwir lecturers and educational staff. This is reflected in the highest proportion of research in TS-1, which reached 50% of the total reported, demonstrating a commitment to producing meaningful scientific contributions (Broadhurst, 2015; Suarez-Balcazar, 2020). These efforts not only enhance the institution's reputation nationally but also support the development of disciplines and the application of research results in the local context.

In the aspect of community service, STAI Attanwir actively participates in various programs supporting Islamic economic development and community welfare. For example, roles such as the Sharia Supervisory Board and Sharia cooperative practitioners demonstrate tangible contributions to raising awareness and applying Islamic economic principles in the surrounding community (Saad, Mohammad, & Haneef, 2020; Zaki, Zusak, Mi'raj, & Hasib, 2022). Partner satisfaction surveys also indicate that these community service activities are well received and have a significant positive impact on society.

The SWOT analysis provides a comprehensive overview of STAI Attanwir's position in facing challenges and leveraging opportunities in the internal and external environment. The proposed development strategies, such as adding lecturers, improving research outputs and community service, and expanding international cooperation, are supported by recommendations from this analysis (Budihardjo, Ramadan, Putri, Wahyuningrum, & Muhammad, 2021).

Overall, the research results and discussion indicate that STAI Attanwir has successfully implemented effective strategies in optimizing the Higher Education Tri Dharma. By focusing on quality education, impactful research, and sustainable community service, the institution not only meets stringent academic standards but also actively contributes to advancing knowledge and enhancing social welfare in the surrounding community.

General Findings

Based on the research results and discussion, STAI Attanwir has produced several interesting findings about the institution's contribution to the Higher Education Tri Dharma: First, in terms of human capital, STAI Attanwir has solid human resources supporting academic activities and curriculum development. With six permanent lecturers, most holding master's and doctoral degrees, particularly in Sharia Economics and Management, the institution ensures adequate teaching quality. The fairly ideal lecturer-to-student ratio, although not yet reaching 1:25, shows STAI Attanwir's commitment to supporting effective learning processes. Lecturers' intellectual contributions, such as writing teaching materials and active participation in research published in national and international journals, also reflect a commitment to advancing scientific knowledge.

Second, in terms of structural capital, STAI Attanwir has developed adequate educational infrastructure, such as the Pesantren Mahasiswa, Lecture Halls, and Laboratories. Integration with the information system through SIM STAI Attanwir shows positive steps in efficiently managing data and information. Implementing the Merdeka Belajar Kampus Merdeka concept and active participation from leaders, PSEI chairs, educational staff, and alumni in internal curriculum development add structural value to the institution in supporting academic excellence and graduates' readiness for the job market.

Third, from the perspective of relational capital, STAI Attanwir shows a strong commitment to contributing to society through service programs such as the Sharia Supervisory Board and Sharia cooperative practitioners. Partner satisfaction surveys show a positive response to the impact of these services, reflecting good relationships with external stakeholders. Additionally, the SWOT analysis helps identify opportunities and threats that the institution can leverage or address in further development, including expanding national and international cooperation that can enhance relational capital capacity.

Overall, this analysis highlights STAI Attanwir's contribution to the Higher Education Tri Dharma by optimizing intellectual capital through human capital, structural capital, and relational capital development. This comprehensive understanding is essential in formulating sustainable development strategies to improve education quality, research, and community service in the future.

CONCLUSION

Based on the results of this study, it can be concluded that STAI Attanwir Bojonegoro, as an Islamic higher education institution based on a pesantren system, possesses significant intellectual capital comprising human capital, structural capital, and relational capital. Human capital is demonstrated through the academic and Islamic competence of the teaching staff and educational personnel, which supports the pesantren-based education system. Structural capital is reflected in the physical infrastructure and integrated information systems, such as the STAI Attanwir Information System (SIM), which support operational efficiency and knowledge management. Meanwhile, relational capital is evident through partnerships with community organizations, the government, and alumni, providing financial and moral support for institutional development. Despite having strong intellectual capital, STAI Attanwir also faces several challenges. The main challenges include adapting to technology and innovation in the digital era and Industry 4.0, as well as managing social and political issues such as radicalism. Although significant efforts have been made in managing intellectual capital (IC), these challenges demand further attention to ensure that STAI Attanwir remains relevant and competitive in the increasingly competitive context of higher education.

The research highlights the need to focus on developing human resource competencies in IT, big data management, and strengthening online platforms such as their electronic journal. Additionally, it is important to continuously enhance

cooperation with external stakeholders to support the holistic development of the institution. However, this study does not deeply explore specific aspects such as the impact of pesantren-based education on teaching effectiveness or a comprehensive analysis of the impact of partnerships with community organizations. Therefore, there is room for further research that can delve deeper into the implications of pesantren-based educational practices in improving educational quality and supporting community development.

REFERENCES

- Adedeji, O., & Campbell, O. (2013). The role of higher education in human capital development. *Available at SSRN 2380878*.
- Asiaei, K., & Jusoh, R. (2015). A multidimensional view of intellectual capital: the impact on organizational performance. *Management Decision, 53*(3), 668–697.
- Astuti, S., Zuhrotun, Z., & Sunaryo, K. (2020). Implementasi Kurikulum Berbasis KKNI Menuju Era Revolusi Industri 4.0: Telaah Literatur. *Eksos LPPM, 2*(2), 113–121.
- Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management Decision, 36*(2), 63–76. <https://doi.org/10.1108/00251749810204142>
- Broadhurst, K. (2015). A short note on research impact: The public value of the social sciences. *Qualitative Social Work, Vol. 14*, pp. 591–598. SAGE Publications Sage UK: London, England.
- Budihardjo, M. A., Ramadan, B. S., Putri, S. A., Wahyuningrum, I. F. S., & Muhammad, F. I. (2021). Towards sustainability in higher-education institutions: analysis of contributing factors and appropriate strategies. *Sustainability, 13*(12), 6562.
- Buresh, S. A. (2002). *Pesantren-based development: Islam, education, and economic development in Indonesia*. University of Virginia.
- Chatterji, N., & Kiran, R. (2023). The influence of human, organizational and relational capital of universities on their performance: a developing economy perspective. *Journal of Intellectual Capital, 24*(3), 799–829.
- Cuesta, A., Glewwe, P., & Krause, B. (2016). School infrastructure and educational outcomes: a literature review, with special reference to Latin America. *Economia, 17*(1), 95–130.
- Dahlin, G., & Isaksson, R. (2017). Integrated management systems—interpretations, results, opportunities. *The TQM Journal, 29*(3), 528–542.

- de Frutos-Belizón, J., Martín-Alcázar, F., & Sánchez-Gardey, G. (2019). Conceptualizing academic intellectual capital: definition and proposal of a measurement scale. *Journal of Intellectual Capital*, 20(3), 306–334.
- Edvinsson, L., & Malone, M. S. (1997). Intellectual capital: realizing your company's true value by finding its hidden brainpower. (*No Title*).
- Fronzizi, R., Fantauzzi, C., Colasanti, N., & Fiorani, G. (2019). The evaluation of universities' third mission and intellectual capital: Theoretical analysis and application to Italy. *Sustainability*, 11(12), 3455.
- Hamdani, N. A. (2023). Scrutinizing Islamic Higher Education Institutions in Indonesia. *Jurnal Pendidikan Islam*, 9(1), 79–92.
- Hanik, A., Rachman, M., Samsudi, S., & Ekosiswoyo, R. (2019). Developing a Pesantren-Based Soft Skill Education Management Model for Vocational School in the Ma'arif Education Institute, Semarang Regency. *The Journal of Educational Development*, 7(1), 16-â.
- Idris, M. (2023). *Pengembangan Model Sistem Informasi Manajemen Borang Akreditasi Untuk Perguruan Tinggi Keagamaan Islam Swasta (Simba Ptkis)*. UIN RADEN INTAN LAMPUNG. Retrieved from http://repository.radenintan.ac.id/id/eprint/30140%0Ahttp://repository.radenintan.ac.id/30140/1/MUHAMMAD_IDRIS_-_1886031027_COVER%2C_BAB_1-2_DAN_DAPUS.pdf
- Imaniar, F., Lestari, L. A., & Munir, A. (2018). The teaching and learning of academic writing involving critical thinking in Higher Education. *Journal of English Language and Literature (ISSN: 2368-2132)*, 10(1), 975–981.
- Isbah, M. F. (2020). Pesantren in the changing Indonesian context: History and current developments. *Qudus International Journal of Islamic Studies (QIJIS)*, 8(1), 65–106.
- Kälberer, N., Petendra, B., Böhmer, C., Schibelbein, A., & Beck-Meuth, E.-M. (2016). Evaluation process and quality management in a blended-learning bachelor's programme. *Procedia-Social and Behavioral Sciences*, 228, 131–137.
- Kaplan, R. S., & Norton, D. P. (2004). *Strategy maps: Converting intangible assets into tangible outcomes*. Harvard Business Press.
- Kemal, I., & Rosyidi, U. (2019). Management of Lecturers Resource Development at Higher Education. *International Journal of Higher Education*, 8(5), 246–256.

- Kemenristekdikti. (2015). *Permenristekdikti Nomor 44 Tahun 2015 tentang Standar Nasional Pendidikan Tinggi*. Retrieved from <http://jdih.ristekdikti.go.id/?q=perundangan/konten/11343>
- Kemenristekdikti. (2020). *Buku Panduan Merdeka Belajar-Kampus Merdeka*. Jakarta: Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan.
- Kianto, A., & Cabrilo, S. (2022). Challenging the IC Theory: Suggestions for Some Ways Forward. *European Conference on Knowledge Management*, 23(1), 611–618.
- Kucherenko, L. (2021). Improving the Quality of Education By Strengthening the Research Component of Training. *Fisheries*, 2021(3), 25–27. <https://doi.org/10.37663/0131-6184-2021-3-25-27>
- Lee, D. J., Stvilia, B., Ha, S., & Hahn, D. (2023). The structure and priorities of researchers' scholarly profile maintenance activities: A case of institutional research information management system. *Journal of the Association for Information Science and Technology*, 74(2), 186–204.
- Leitner, K.-H., Curaj, A., Elena-Perez, S., Fazlagic, J., Kalemis, K., Martinaitis, Z., ... Zaksa, K. (2014). *A strategic approach for intellectual capital management in European universities: guidelines for implementation*. UEFISCDI Bucharest.
- Lin, P.-H., Chen, J.-R., & Yang, C.-H. (2014). Academic research resources and academic quality: a cross-country analysis. *Scientometrics*, 101, 109–123.
- Miles, H., Huberman, A. M., & Saldaña, J. (2014). *Designing matrix and network displays. Qualitative data analysis: A methods sourcebook*.
- Muslim, A., Arroisi, J., Jan, J. M., & Ramazani, R. (2024). Indonesian pesantren-affiliated higher education: universal Islamic values to develop locally engaged but globally oriented multilingual graduates. *Research in Post-Compulsory Education*, 29(1), 138–157.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242–266.
- Naji, K. K., Gunduz, M., & Maki, O. (2023). Development of a campus facility management operational framework using a modified Delphi method. *Journal of Construction Engineering and Management*, 149(7), 4023052.
- Pallathadka, H., Al-Hawary, S. I. S., Muda, I., Surahman, S. H., Al-Salami, A. A. A., & Nasimova, Z. (2023). The study of Islamic teachings in education: With an emphasis on behavioural gentleness. *HTS Teologiese Studies/Theological Studies*, 79(1).

- Pedro, E. de M., Leitão, J., & Alves, H. (2020). Bridging intellectual capital, sustainable development and quality of life in higher education institutions. *Sustainability*, 12(2), 479.
- Pusser, B. (2001). The contemporary politics of access policy: California after Proposition 209. *The States and Public Higher Education Policy: Affordability, Access, and Accountability*, 121–152.
- Ramirez, Y., & Gordillo, S. (2014). Recognition and measurement of intellectual capital in Spanish universities. *Journal of Intellectual Capital*, 15(1), 173–188.
- Restivo, L., Gerlach, B., Tsoory, M., Bikovski, L., Badurek, S., Pitzer, C., ... Schunn, M. (2021). Towards best practices in research: Role of academic core facilities. *EMBO Reports*, 22(12), e53824.
- Saad, N. M., Mohammad, M. O., & Haneef, M. A. (2020). Empowering Community Through Entrepreneurship Training and Islamic Micro-Financing: Sharing the Experience of IIUM-CIMB Islamic Smart Partnership (i-Taajir). In *Economics, Business, and Islamic Finance in ASEAN Economics Community* (pp. 57–76). IGI Global.
- Schwab, K. (2017). *The fourth industrial revolution*. Crown Currency.
- Secundo, G., Lombardi, R., & Dumay, J. (2018). Intellectual capital in education. *Journal of Intellectual Capital*, 19(1), 2–9.
- Sethi, M. N., & Malhotra, A. (2023). Efficiency Engine: Designing and Implementing an Academic Management System. *International Journal of Innovative Research in Engineering & Management*, 10(3), 115–120.
- Sharma, D. K., & Kaushik, H. (2022). A Study of Role and Importance of Academic Collaborations/Memorandum of Understanding in Higher Education Institutions. *2022 10th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions)(ICRITO)*, 1–8. IEEE.
- Stewart, T. A. (2010). *Intellectual Capital: The new wealth of organization*. Crown Currency.
- Suarez-Balcazar, Y. (2020). Meaningful engagement in research: Community residents as co-creators of knowledge. *American Journal of Community Psychology*, 65(3–4), 261–271.
- Thomas A. Stewart. (1997). *Intellectual Capital: The new wealth of organization - Thomas A. Stewart - Google Buku*. Crown Currency. Retrieved from https://books.google.com/books/about/Intellectual_Capital.html?hl=da&id=3eDtAAAAMAAJ

- Turner, R., Huang, R., Poverjuc, O., & Wyness, L. (2016). What role do teaching mentors play in supporting new university lecturers to develop their teaching practices? *Professional Development in Education*, 42(4), 647–665.
- Ulum, I. (2019). Intellectual capital framework perguruan tinggi di Indonesia berdasarkan instrumen akreditasi program studi (IAPS) 4.0. *Jurnal Reviu Akuntansi Dan Keuangan*, 9(3), 309–318.
- van der Wal, J. E. M., Thorogood, R., & Horrocks, N. P. C. (2021). Collaboration enhances career progression in academic science, especially for female researchers. *Proceedings of the Royal Society B*, 288(1958), 20210219.
- Van Pham, T., Nguyen, L. T. M., Nghiem, T. T., Duong, Y. H. T., & Nguyen, X. T. (2022). Career development for university lecturers in the field of educational sciences based on competency framework. In *Educational Innovation in Vietnam* (pp. 66–83). Routledge.
- Veltri, S., & Puntillo, P. (2020). On intellectual capital management as an evaluation criterion for university managers: a case study. *Journal of Management and Governance*, 24(1), 135–167.
- Yayat Supriyadi, Safuri, Fauzi, Anis, Yogi Damai Syaputra, & Deni Iriyadi. (2023). the Role of Transformation of Islamic Religious Universities in Improving the Quality of National Education. *Improvement: Jurnal Ilmiah Untuk Peningkatan Mutu Manajemen Pendidikan*, 10(1), 40–48.
<https://doi.org/10.21009/improvement.v10i1.36558>
- Zainal, S., Manumanoso Prasetyo, M. A., Aziz Yaacob, C. M., & Jamali, Y. (2022). Adopting Pesantren-Based Junior High School Programs: the Pesantren Change Its Educational System Without Conflict. *Jurnal Ilmiah Islam Futura*, 22(2), 260–276. <https://doi.org/10.22373/JIIF.V22I2.13525>
- Zainiyati, H. S. (2016). Curriculum, Islamic understanding and radical Islamic movements in Indonesia. *Journal of Indonesian Islam*, 10(2), 285–308.
- Zaki, I., Zusak, M. B. F., Mi'raj, D. A., & Hasib, F. F. (2022). Islamic community-based business cooperation and sustainable development goals: a case of pesantren community in Indonesia. *International Journal of Ethics and Systems*, 38(4), 621–632.