Integrating AI into the Coaching Process in the Banking Industry

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***Abstract*—The paper presents the incorporation of Artificial Intelligence (AI) into coaching in banking, focusing on its role in employee development, productivity, and efficiency. The research highlights the way AI improves coaching by using a digital infrastructure that includes NLP and machine learning, deploying real-time analytics, personalization in feedback, and automated support. The research is informed through qualitative means, including literature reviews and interviews with experts. Findings show that AI improves decisions while cutting costs but has challenges ranging from ethical concerns to resistance and reduced interaction. The research presents strategic insights and guidelines for responsible AI adoption into HR and coaching that will serve banking staff and leaders, as well as policymakers in the digital transformation quest.**

Keywords—artificial intelligence, coaching process, banking industry

I. Introduction

Artificial Intelligence (AI) has had a tremendous impact across industries worldwide, including the banking one. Its infusion in various banking processes has further resulted in higher efficiency, lower errors, and better customer experience. Among the many applications, AI appears to be a good opportunity for improving employee development via digital coaching frameworks [1]. The study hereunder aims to assess avenues for embedding AI in those processes with the potential for enhancement, automation, and streamlining of coaching activities within banking institutions, especially in the UAE, using "Abu Dhabi Islamic Bank (ADIB)" as a reference point. An organization's sustainability is closely coupled with its leadership in decision-making and team guidance in today's dynamic corporate environment. This is critically important in the banking sector, where a few seconds made in decision-making can mean the difference between great financial and reputational loss. For example, if Abu Dhabi Islamic Bank (ADIB) leaders do not coach their frontline employees with updated information, customer dissatisfaction will result in a drastic drop in service demand, which in turn would kill the bank's performance and profitability [2].

Robust coaching processes grounded on data that help with decision-making would help mitigate such risks. AI is poised to completely transform the way we think about coaching in terms of its powers in data analysis, automation, and real-time feedback. Hence, this research investigates how AI can support effective coaching by leaders to enhance employee performance and sustain growth.

Therefore, the aim of this research is to explore how AI can be utilized to digitalize and enhance coaching processes within banking institutions to improve decision-making and workforce productivity.

II. Literature Review

Coaching in the industry has continued to be face-to-face or virtual sessions on compliance, customer service, and skill development [4]. Although effective, these traditional modes are resource-intensive, time-consuming, and have little personalization of their own. According to Ige, Kupa [7] such traditional forms of coaching have relatively poor efficiencies and very much rely on human trainers.

Transforming such a model would, however, be possible through the introduction of AI. JPMorgan Chase & Co. (2017) state that AI allows personalized learning pathways along with giving automated feedback according to predictive analytics and keeping an eye on performance. Königstorfer & Thalmann, (2020) equally point out that AI helps in coaching by giving individualized, real-time insight and engaging employees. This technology hence creates the opportunity to align training with individual learning needs, thus enabling banks to develop targeted and effective coaching approaches. For example, COiN by JPMorgan Chase helps demonstrate how AI can be used for training purposes, offering data-supported insights for employees' improvements in selected areas [5]. AI systems can

be costly, including regular upgrades to keep pace with regulatory and technological changes; which makes implementation in itself very difficult [6].

AI's role in knowledge retention and employee development. On one hand, a disadvantage of greater reliance is that it can hurt the development of interpersonal skills—skills critical to client-facing roles [7]. Thus, a hybrid coaching model, interspersed with AI and human interaction, becomes inevitable. One such instance exists with Amazon's AI training systems, where workers under a regime of personalized training receive real-time feedback [8]. AI identifies weaknesses and enhances specific skills. Yet, a balance between technical and artificial training offers an effective approach toward the holistic development of employees.

III. Methodology

This research uses a qualitative research design in semi-structured interviews with senior executives in the banking industry, particularly those who are well-informed about digital transformation and AI-based coaching processes. Ethics approval for the research was obtained from the ADSM ethics committee, which addressed major issues including informed consent, confidentiality, anonymity, and data protection.

The literature review was undertaken with the identification of appropriate academia from credible databases such as SAGE, ScienceDirect, and Google Scholar. Search terms were "AI in coaching," "digital coaching in banking," and "AI-enhanced learning and development". Then, only the most pertinent and recent studies were chosen for detailed review in support of the research.

Primary data were collected via semi-structured interviews: the format allows participants to express their experiences and perceptions freely, while the researcher can probe deeper into emerging themes. This qualitative technique is consonant with the research's aim of understanding the implications of AI on coaching practices in the real world, as experienced by the participants.

Participants were selected based on criteria that included their roles in digital transformation initiatives and collaborative work with AI-driven coaching tools. The interview questions include key benefits of AI in coaching processes; personalization of learning through AI; areas having the highest impact of AI; implementation challenges; impact on employee motivation and commitment; comparative efficiency with traditional coaching; risks related to AI dependence; ethical aspects of AI-driven coaching; and improving productivity and decision-making with AI.

Interviews were recorded with consent from participants and transcribed verbatim, preserving anonymity. The transcripts were edited for clarity, without changing the gist of the responses [11].

IV. Data Analysis

Data were analyzed via thematic analysis, as proposed by Rodrigues *et al.* (2020). It is fitting for use in identifying, analyzing, and reporting patterns within qualitative data.

Steps of Analysis:

1. Familiarization: Transcribing was repeatedly read to immerse oneself in the data.
2. Initial Coding: Data segments pertinent to the research objectives were coded.
3. Development of Themes: Codes were grouped under key themes such as:
   - Integration Strategies
   - Challenges in AI Application
   - Employee Development and Motivation
4. Review and Refine: The themes were revised and validated to ensure that they accurately representing the data.
5. Definition and Labeling: Each theme was defined clearly with evidence supporting it.
6. Use of NVivo: NVivo software was used to organize and manage data so that visual mapping and deeper comparative analysis of themes were done.

To ensure academic rigour, the research employed strategies to reinforce the trustworthiness of qualitative research: credibility, dependability, transferability, and confirmability [12].

- Credibility: In-depth interviews with well-experienced professionals, together with member checking, provide the opportunity given to the participants to check their transcripts for accuracy.
- Dependability: Documenting every stage of the process so that other researchers may replicate it, or auditors may follow an audit trail.
- Transferability: Detailed contextual descriptions about the participants, the setting, and the study process provide information for readers to determine the applicability in other contexts.

V. Findings

The findings of this research highlight the increasing relevance of AI in terms the decision-making, and different kinds of streamlining operations and even focuses on minimizing different kinds of human error in various areas such as data processing and customer services. This research also focuses on the ways AI provide support to the coaching processes in banks in terms of improving employee performance, productivity and even the satisfaction level of the customer.

AI primarily aims to enhance effectiveness and even the precision of the coaching with the help of automating different kinds of repetitive queries and on delivering real-time feedback. Employees also get the benefits from faster responses and even tailoring the learning, particularly with the tools which are powered by Natural Language Processing (NLP) and data analytics. On the other hand, the problem statement mainly highlights the challenges such as the lower level of productivity and even poor decision-making among the different banking staff even stemming from the lack of different kinds of structured coaching systems. The incorporation of AI especially with the help of different technologies such as cloud

computing and even data analytics mainly helps to automate and even increase the decision-making processes.

This research mainly references the use of AI in the ADIB in terms of analyzing the behavior of the customer which increases the chances for more personalized delivery of the services and even makes an improvement in the efficiency of the employee. It also uncovered the different kinds of barriers and even the major challenge is the technical skill gaps among the employees which mainly focus on creating resistance in terms of the adoption of AI. The majority of the staff members lack the required proficiency in terms of interacting effectively with the different kind of systems of AI which mainly increase the stress and increase the chances for disengagement. Financial constraints mainly include the implementation cost of the AI and even the system updates. Ethical concerns become another key finding and even this study focuses on underlining issues such as breaches related to data privacy and even the biased algorithm and the reduced interaction between the humans.

VI. Discussion

AI into an unprecedented journey toward performance optimization for the banking sector by automating tedious cycles of training and thus saving time and resources useful for continuous learning. AI can analyze strengths and weaknesses to offer targeted assistance and skill-building. Rodrigues et al. (2022) have argued that personalization enhances training duration and the quality of customer service offered. This shows the effectiveness of AI in employee training at HSBC, where it reduced training time and operational resources [3]. The AI system monitored employee performance during training sessions, providing just-in-time coaching, and 20% more customer satisfaction. Ige, Kupa, and Ilori (2024) further note that AI-enhanced coaching is somehow an accelerant to learning, service quality, and customer experiences; hence, it's strategic for AI to drive superior performance.

Though the banking coaching domain witnesses increased AI applications, notable research gaps still linger. Most studies do not address the long-term consequences of AI for employee engagement, interpersonal skill development, or diversity of skills. Very few have researched the need for blending AI- and human-coaching approaches, especially when we consider the dangers that come with data privacy, ethical leveraging, and regulatory compliance [3]. Furthermore, there exists no substantive framework linking AI coaching to HR and strategy roles in fostering digital transformation in banks. Without grasping the strategic integration of AI toward sustainable growth, its promise may remain underused. Bridging these gaps could further ensure the role of AI in workforce upskilling in both hard and soft skills [10].

VII. Conclusion

The research mainly provides that the incorporation of AI into the coaching processes in the case of the banking sector mainly increases the performance of the employee, operational efficiency and even provides personalized learning. On the other hand, AI tools mainly offer real-time feedback and even automate different kinds of repetitive tasks and provide support to decision-making. Successful implementation mainly requires overcoming barriers such as technical skill gaps, financial constraints and even ethical concerns regarding data privacy and bias. The hybrid model mainly makes an effective combination of AI capabilities.

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