

The background of the entire cover is an abstract, high-energy image. It features a blurred figure of a person, likely a runner, in motion. The figure is overlaid with vibrant, streaky light trails in shades of teal, blue, and orange, creating a sense of speed and dynamic movement. The overall composition is energetic and modern.

INTERNATIONAL GRADUATE COLLOQUIUM

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SPORTS AND PHYSICAL EXERCISE ASSEMBLY OF KNOWLEDGE SHARING

COLLOQUIUM PROCEEDINGS

## **EXTENDED ABSTRACT**

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# THE INFLUENCE OF FACE-TO-FACE COACHING AND ARTIFICIAL INTELLIGENCE COACHING TOWARDS CUSTOMER ENGAGEMENT AMONG GYM USERS

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**Keywords:** Coaching, Face-to-face, Artificial intelligence, Customer engagement, Exercise adherence, Hybrid coaching

## I. INTRODUCTION

With the rising importance of fitness, sustaining customer engagement remains a challenge despite increasing gym attendance. This study looks at how AI makes coaching affordable and accessible while in-person coaching offers more tailored support [1]. Face-to-face and AI coaching influence gym users' engagement by analyzing supervision, feedback, and emotional connections [2]. Addressing gaps in engagement and effectiveness, this research aims to enhance long-term gym commitment through innovative coaching methods [3].

## II. METHODS

This quantitative, non-experimental study used a questionnaire survey to collect data from 112 gym customers in Melaka. Purposive sampling targeted individuals aged 18 and above who experienced both face-to-face and AI coaching. Key variables, including engagement, supervision, and feedback, were measured using structured survey questions to evaluate the impact of both coaching methods on customer engagement [5].

## III. RESULTS AND DISCUSSION

### A. Face-to-face Exercise Coaching

Most (74.1%) viewed face-to-face coaching for supervision and feedback as essential, with a high mean rating of 0.93. Although there was some variation, results indicate strong agreement for the efficacy of face-to-face coaching for exercise adherence. This suggests strong agreement on its effectiveness in promoting exercise adherence. While some variation exists, the overall trend supports the idea that direct interaction with a coach enhances motivation, technique, and consistency in workouts [4].

### B. Artificial Intelligence Exercise Coaching

The importance of AI coaching providing supervision and feedback during exercise training. The results indicate that only 5 respondents (4.5%) consider AI coaching important, while a significant majority of 107 respondents (95.5%) do not perceive it as important. Most users prefer face-to-face coaching over AI, likely due to trust, personalization and engagement issues [4] and AI coaching may feel less reliable and motivational.

### C. Customer Engagement

Participants reported feeling more engaged with face-to-face coaching than with AI coaching. Metrics like happiness (3.88), and emotional (3.92) were consistently higher for face-to-face coaching methods. This indicates that human training is more fulfilling because it involves more emotional support, motivation, and personal bond, thus enhancing the interaction. AI training must remain a primary consideration [6]. However, its scores also indicate an apparent weakness in nurturing emotional and motivational aspects that are important for deriving continued participation.

### D. Comparison the effects of AI and face-to-face gym coaching on gym members' customer engagement.

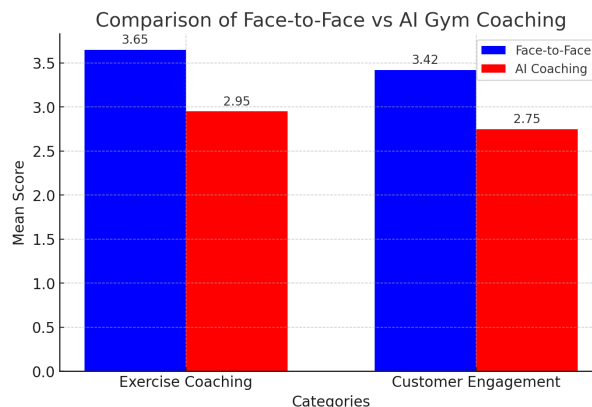


Fig. 1 A sample line graph of comparison the affects of AI and face-to-face gym coaching on gym members' customer engagement.

The results show that face-to-face coaching leads to higher engagement in both exercise coaching (3.65 vs. 2.95) and customer engagement (3.42 vs. 2.75) compared to AI coaching. This implies that human contact, immediate feedback, and encouragement from physical trainers are essential in users' engagement at the gym. By comparison, AI coaching lacks a personal touch and thus can be less engaging. Yet, with advances in AI flexibility and interactive options, its effectiveness is likely to grow in the coming times.

## IV. CONCLUSIONS

Face-to-face and AI coaching both improve customer experience, with face-to-face coaching creating more emotional connections. Despite these differences, statistical comparison shows equal overall success. This research finds the potential for transformation in blending personalized human touch with new AI technology to transform gym experiences and provide long-term exercise compliance.

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