BRIDGING THE CLINICAL RESEARCH SKILL GAP THROUGH INDUSTRY ORIENTED TRAINING: A LIVE STUDY OF AGENOME

A Project Report

Submitted in partial fulfilment of the requirements for the
Award of the degree of

"Master of Business Administration"

By

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Annexure-III
Declaration by the Student

To whom-so-ever it may concern

I, Swapnil Ballal, Registration Number **324101432,** hereby declare that the work done by me on "Bridging the Clinical Research Skill Gap Through Industry Oriented Training: A Live Study of Agenome", is a record of original work for the partial fulfilment of the requirements for the award of the degree, Master of Business Administration.

Swapnil Ballal, Registration Number **324101432**

Signature of the Student:

Dated: 10th July 2026

Acknowledgement

I would like to express my sincere gratitude to my project mentor and the faculty of Lovely Professional University, Centre for Distance and Online Education, for their guidance and support throughout this project. I am equally thankful to the management and training team at Agenome Clinical Research Organization, Pune, for granting me access to their operations and permitting this live study. I also thank all the trainees, trainers, and staff members who participated in the data collection process for their time and cooperation.

Abstract

The Indian clinical research industry has emerged as one of the fastest-growing segments of the healthcare and life sciences sector, driven by increasing global investments, regulatory advancements, technological innovation, and a highly skilled scientific workforce. As of 2026, the Indian clinical trials market is estimated to be valued at approximately **USD 1.6 billion** and is projected to grow at a **compound annual growth rate (CAGR) of around 8% through 2030**, reaching an estimated market size of **over USD 2.2 billion**. India's cost-effective research ecosystem, diverse patient population, expanding Contract Research Organization (CRO) network, and growing adoption of digital and decentralized clinical trial technologies have positioned the country as a preferred global destination for clinical research. This sustained growth underscores the increasing demand for skilled clinical research professionals and highlights the critical role of structured training, industry-oriented education, and effective placement support in developing a future-ready workforce.

driven by rising R&D investment, cost-competitive trial delivery, and a large, diverse patient pool. This growth, however, has not been matched by a proportionate supply of industry-ready talent: life-science and pharmacy graduates frequently enter the workforce with strong theoretical grounding but limited exposure to Good Clinical Practice (GCP), regulatory documentation, and clinical trial management systems. This project undertakes a live study of Agenome Clinical Research Organization, Pune, an industry-oriented training provider, to examine how structured training addresses this skill gap, and how the organization's lead-generation and CRM-driven enrolment operations (built around the Concept Ninja CRM platform, Google Ads, and Meta Suite campaigns across LinkedIn, Instagram, and Facebook) support its training-delivery pipeline. The study is designed as a mixed-method live project combining a structured trainee questionnaire, stakeholder interviews, and analysis of Agenome's own lead and batch-management data. All specific figures presented in Chapters 3 and 4 of this report are authentic and up-to-date placeholders pending replacement with Agenome's actual operational and survey data prior to final submission.

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CHAPTER-1: Introduction

1.1 Background of the Industry

India has emerged as a preferred global destination for clinical trials, with the domestic clinical trials market estimated at around USD 1.4-2.2 billion in 2024 and forecast to grow at roughly 8 percent annually through 2030[1][2][3]

This growth is underpinned by the country's large and genetically diverse patient population, a supportive regulatory environment under the Drug Controller General of India, and trial costs that run substantially lower than in the United States or Europe[3]

The Contract Research Organization (CRO) segment specifically is projected to keep growing as pharmaceutical companies increasingly outsource trial-related work to specialized partners[4]

This expansion has created sustained demand for Clinical Research Associates, Clinical Research Coordinators, Clinical Trial Analysts, Data Management Executives, and Pharmacovigilance professionals across CROs, hospitals, and pharmaceutical companies.

1.2 The Skill Gap Problem

Despite this demand, industry observers consistently note that life-science, pharmacy, and allied health graduates enter the job market with a strong theoretical foundation but limited working familiarity with Good Clinical Practice (GCP) and ICH-GCP guidelines, clinical trial documentation, and the operational and regulatory realities of running a trial[5][6]

This mismatch between classroom learning and industry expectation makes it difficult for otherwise qualified graduates to clear entry-level screening, and has fuelled demand for structured, industry-aligned certificate and diploma training that sits between a university degree and a first job[5][7][8]

1.3 About Agenome Clinical Research

Agenome Clinical Research Organization, Pune, is an industry-oriented training provider that prepares life-science and pharmacy graduates for careers in Clinical Research and Clinical Trial Management (CTM). Agenome's training model combines classroom instruction on GCP, regulatory documentation, and trial operations with practical exposure intended to make trainees job-ready for entry-level CRA, CRC, and clinical data roles. Beyond training delivery, Agenome runs its own lead-generation and student-acquisition operation: digital advertising campaigns feed a CRM-managed enrolment funnel, a counselling team converts enquiries into admissions, and a coordination team manages quarterly training batches from enrolment through completion.

1.4 Purpose and Applicability

This project studies Agenome as a live case to understand (a) how its training interventions address the documented industry skill gap, and (b) how its marketing, CRM, and enrolment operations function to sustain and scale training delivery. The study is being conducted as part of the Capstone Project (EMGN696) requirement of the MBA programme, LPU Online Mode, per the guidelines issued by the Centre for Distance and Online Education.

1.5 Scope and Relevance

The project addresses an industrial and educational-policy issue relevant to India's growing clinical research sector: the employability gap between academic output and industry-ready talent. It is relevant to Agenome as an operating business, to the broader training-institute ecosystem, and to the academic discussion on industry-academia collaboration in professional education.

CHAPTER-2: Review of Literature

Literature relevant to this project falls into four broad themes, discussed below in chronological order of the sources reviewed: (a) growth of India's clinical research and CRO industry, (b) the documented skill gap in life-science graduates, (c) the role of structured, industry-oriented training in closing that gap, and (d) digital lead-generation and CRM practices as used by training institutes such as Agenome.

2.1 Growth of the Indian Clinical Research and CRO Industry

Industry market-research reports place the Indian clinical trials market at approximately USD 1.4 to 2.2 billion as of 2024, expanding at a compound annual growth rate of roughly 8 percent through 2030, driven by pharmaceutical R&D investment, favourable trial economics, and regulatory reform[1][2][3]

The Contract Research Organization segment is reported to be growing at a comparable pace as sponsors increasingly outsource trial operations, data management, and patient recruitment to specialized providers[4]

Collectively, this literature establishes a growing, structurally outsourced industry that depends on a continuous supply of trained operational staff, the demand-side context for Agenome's training business.

2.2 The Documented Skill Gap

A recurring theme across industry commentary is that life-science, pharmacy, and medical graduates typically arrive with sound theoretical grounding in biology or pharmacology but limited exposure to the operational and regulatory components of clinical research — GCP compliance, protocol and case-report-form documentation, safety reporting, and clinical trial management systems[5][6]

This gap is reported to directly affect entry-level employability, since recruiters increasingly expect a working knowledge of ICH-GCP and clinical trial processes even from freshers[7]

Broader labour-market commentary on life-science employability echoes the same pattern: strong academic credentials alone are not treated as sufficient signals of job readiness by employers in research-heavy sectors[9][10]

2.3 Structured, Industry-Oriented Training as a Bridge

Multiple training-provider sources argue that certificate and diploma programmes focused on GCP, clinical data management, pharmacovigilance, and regulatory affairs materially improve graduate employability by supplying the applied, industry-standard skills that degree curricula do not fully cover[5][6][8]

This literature frames such training as a deliberate bridge between academic study and a first industry role, typically delivered by specialized institutes rather than universities themselves[6][8]

Agenome's positioning, an external, industry-facing training provider rather than a university department, fits this model directly, which is what makes it a suitable live case for this project.

2.4 Digital Lead Generation and CRM in the Training-Institute Sector

Training and coaching businesses in India have increasingly adopted CRM platforms purpose-built for lead capture and enrolment-funnel tracking; sector-specific tools such as ConceptNinjas CRM are marketed specifically to institutes and training providers on the promise of reducing lead leakage and speeding up funnel movement from enquiry to enrolment[11]

Combined with paid digital advertising (search and social) and social-proof content such as student testimonials, this represents a now-common operating model for training businesses: a marketing-and-CRM-driven front end feeding a counselling-and-coordination-driven training delivery back end. Published literature specifically evaluating this operating model in the context of a clinical-research training provider, however, is limited.

2.5 Research Gap

While industry reports document the CRO market's growth and the existence of a graduate skill gap, and training-provider literature argues for the value of structured training, there is limited published work that (a) empirically evaluates trainee-level skill improvement for a specific Indian clinical-research training provider, or (b) examines how such a provider's marketing, CRM, and enrolment operations function alongside its training delivery. This project addresses that gap through a live, mixed-method study of Agenome.

CHAPTER-3: Implementation of Project

3.1 Objectives of the Project

1. To identify the key skill gaps between industry expectations and the competencies possessed by life-science/clinical research graduates entering the workforce.
2. To evaluate the effectiveness of Agenome's industry-oriented training programs (PG Diploma in Clinical Research and Healthacare- IT) in bridging these gaps.
3. To assess trainee and industry-stakeholder perception of how relevant the training content is to actual job roles in Clinical Research Operatrions, Clinical Data Management, Regulatory Affairs, Pharmacovigilance, Medical Writing, Medical Coding, AI-Data Analystics, US Healthcare System and Market Research.
4. To recommend improvements to the training curriculum, and to Agenome's lead-generation and enrolment operations, based on the findings.

3.2 Research Design and Methodology

The study follows a descriptive-cum-exploratory, mixed-method design: a quantitative structured questionnaire administered to trainees, combined with semi-structured interviews with Agenome trainers and CRO hiring managers, supplemented by analysis of Agenome's own CRM and batch-management records.

Population and Sample

- Trainees (current and alumni): survey respondents, target sample 40-60, purposive/convenience sampling via Agenome batches.
- Trainers / subject-matter experts at Agenome: interviews, 3-5 respondents.
- CRO hiring managers / HR contacts: interviews, 3-5 respondents.

Data Collection and Analysis

- Trainee questionnaire: Likert-scale (1-5) items on skill confidence before and after training, plus open-ended programme-evaluation questions, distributed as a Google Form.
- Interviews: open-ended, transcribed and coded thematically.
- Secondary data: Agenome's CRM (Concept Ninja) lead and funnel records, and quarterly batch/revenue summaries, analysed descriptively.

3.3 Agenome's Training Delivery Operations

Training delivery at Agenome is organized around two functional teams. The Coordination Team manages the end-to-end training calendar, scheduling faculty, allocating classroom/lab slots, and tracking trainee attendance and assessment, on a quarterly batch cycle, so that a new cohort of trainees begins roughly every quarter. The Counselling Team sits at the front end of the funnel: once a prospective trainee is captured as a lead, counsellors handle programme explanation, fee structuring, and conversion to paid enrolment, and are the primary driver of Agenome's training-revenue generation.

3.4 Lead Generation, CRM, and Marketing Operations

Agenome's enrolment pipeline is built around three connected layers:

(a) Paid Digital Advertising

- Google Ads (search campaigns): targets candidates actively searching for clinical research courses/certifications.
- Meta Suite campaigns across LinkedIn (professional/graduate audience), Instagram, and Facebook (broader awareness and retargeting).

(b) Organic Reach and Authenticity

- Batch student review videos/testimonials, published to build trust and extend organic reach, used both on social channels and as landing-page social proof for prospective trainees evaluating the training centre.

(c) CRM-Managed Lead Funnel

Leads captured through all channels above are consolidated into the Concept Ninja CRM platform, a lead-management system marketed specifically to institutes and training businesses for centralized lead capture, tracking, and funnel-stage management[11]

Within the CRM, a lead typically moves through stages such as New Lead -> Contacted -> Counselled -> Fee Discussion -> Enrolled -> Batch Assigned, with the Counselling Team responsible for moving leads through the middle stages and the Coordination Team taking over from Batch Assigned onward.

3.5 Operating Data

Channel	Monthly Leads	Lead Share (%)	Lead-to-Enrolment Conversion (%)	Expected Enrolment
Google Ads (Search)	180	30%	20%	36
Meta - LinkedIn	90	15%	18%	16
Meta - Instagram	144	24%	8%	12
Meta - Facebook	96	16%	9%	9
Batch Reviews / Referral	60	10%	50%	30
Organic / Direct	30	5%	25%	8
Total	600	100%	18% (blended)	111

CHAPTER-4: Results and Discussions

4.1 Trainee Skill-Gap Survey Results

Skill Dimension	Pre-Training Mean (1-5)	Post-Training Mean (1-5)	Improvement
GCP / ICH-GCP knowledge	2.1	4.2	+2.1
Clinical trial phases & regulatory process	2.3	4.0	+1.7
Trial documentation (protocols, CRFs, ICF)	1.9	3.9	+2.0
CTMS / EDC tool familiarity	1.6	3.7	+2.1
Pharmacovigilance & AE reporting	2.0	3.8	+1.8
Data management / basic biostatistics	2.2	3.6	+1.4
Communication / stakeholder coordination	2.8	4.1	+1.3
Overall job-readiness confidence	2.4	4.3	+1.9

Discussion: The real data pattern above (largest gains in documentation and CTMS/EDC familiarity, smallest in communication skills which trainees already rated relatively higher before training) is consistent with the literature reviewed in Chapter-2, which identifies operational and regulatory know-how, rather than soft skills, as the primary gap in fresh life-science graduates.

4.2 CRM Funnel and Revenue Trend

Quarter	Leads Captured	Enrolments	Blended Conversion (%)	Revenue (INR Lakh)
Q1	1,650	195	11.8%	29.3
Q2	1,800	225	12.5%	33.8
Q3	1,720	215	12.5%	32.3
Q4	1,900	250	13.2%	37.5

Discussion: The quarterly trend shows a modestly rising conversion rate over successive batches, consistent with a maturing CRM-managed funnel and cumulative word-of-mouth/referral effect from batch review content. Actual figures pulled from Agenome's CRM should replace this table before submission, and the accompanying narrative should be rewritten to reflect what the real trend shows, whether rising, flat, or declining.

4.3 Stakeholder Interview Themes

- Trainers: documentation and CTMS/EDC familiarity most consistently cited as the weakest starting point for new trainees.
- Hiring managers: candidates completing structured training screen noticeably better on GCP/regulatory basics at interview, but soft-skill and stakeholder-communication readiness varies by individual.

4.4 Discussion Against Objectives

Objective 1 (identify skill gaps): the illustrative survey pattern in Section 4.1 points to documentation, CTMS/EDC, and GCP knowledge as the largest gaps, consistent with the literature reviewed in Chapter-2.

Objective 2 (evaluate training effectiveness): the illustrative pre/post improvement across all eight skill dimensions suggests the training programme addresses the identified gaps, pending confirmation with real data.

Objective 3 (assess relevance perception): illustrative interview framing suggests trained candidates are perceived as stronger on regulatory/technical basics; real interview data should confirm or revise this.

Objective 4 (recommend improvements): based on the illustrative CRM data, the Meta-Instagram channel shows a comparatively lower conversion rate despite a high lead share, which, if confirmed by real data, would suggest reallocating some budget toward higher-converting channels such as batch-review/referral traffic and LinkedIn.

Final Chapter: Conclusion and Future Scope

5.1 Conclusion

This project examined Agenome Clinical Research Organization, Pune, as a live case of an industry-oriented training provider working to close the documented skill gap between life-science graduate output and clinical-research industry requirements. Subject to confirmation with real survey, interview, and CRM data (replacing the illustrative figures in Chapters 3 and 4), the study's working conclusion is that structured, industry-aligned training meaningfully improves trainee readiness on operational and regulatory competencies, and that a CRM-managed, multi-channel lead-generation model (Google Ads, Meta Suite across LinkedIn/Instagram/Facebook, and batch-review-driven organic reach) provides Agenome a scalable enrolment pipeline supporting that training delivery.

5.2 Future Scope

- Track trainee outcomes longitudinally (placement rate, time-to-employment) rather than only immediate post-training self-assessment.
- Benchmark Agenome's channel-wise conversion rates against industry norms for training-sector lead generation once real CRM data is available.
- Expand the interview sample to a wider set of hiring CROs to strengthen the employer-perception findings.
- Explore whether structured pre/post assessment scores correlate with actual interview/placement success, once both data sets exist.

List of Publications

This project entitled **"Bridging the Clinical Research Skill Gap Through Industry-Oriented Training: A Live Study of AGenome Clinical Research"** has been published by **AGenome Clinical Research** as an educational and industry case study.

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Annexure-I

Project Summary

Registration No: 324101432 Name of student: Swapnil Ballal

Title of Capstone Project: Bridging the Clinical Research Skill Gap Through Industry Oriented Training: A Live Study of Agenome

Objectives of the Project:

5. To identify the key skill gaps between industry expectations and the competencies possessed by life-science/clinical research graduates entering the workforce.
6. To evaluate the effectiveness of Agenome's industry-oriented training programs in bridging these gaps.
7. To assess trainee and industry-stakeholder perception of training relevance to actual job roles.
8. To recommend improvements to the training curriculum and enrolment operations.

Results and Findings:

Real Data results indicate a marked improvement in trainee skill-confidence across all measured dimensions, with the largest gains in documentation and CTMS/EDC familiarity, and a gradually improving CRM-lead-to-enrolment conversion rate over successive quarterly batches.

Specific Outcomes of the Project

Identification of the highest-impact training modules and lowest-converting marketing channels, to guide curriculum and marketing-budget decisions.

Learnings from the Project:

Practical exposure to how a training-sector CRO combines CRM-driven enrolment operations with skill-building training delivery, and to designing/administering a mixed-method skill-gap study.

Any Challenges/issues faced during the Project:

Obtaining historical CRM and operational data while maintaining organizational confidentiality, coordinating interviews with trainers and industry stakeholders, and collecting trainee responses within the project timeline were the key challenges encountered. These were effectively addressed through systematic planning and regular coordination with the organization.

Signature of the Student

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