International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2024: 7.101

A Study on the Impact of Student Induction Programs on Freshers' Academic Motivation and Institutional Belonging

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Abstract: ***The transition into higher education often brings a mix of academic, emotional, and social adjustments for first-year students. This research explores the role of a well-designed Student Induction Program (SIP) in enhancing newcomers' academic motivation and their sense of connection to the institution. Delivered through 19 diverse modules, the SIP introduced students to essential aspects of college life, including academic orientation, emotional resilience, ethical values, leadership, creative expression, and physical wellness. The program was enriched with interactive workshops, expert sessions, and talent-driven activities. Assessment outcomes such as attendance trends, student feedback (average score: 8.19/10), and SIP test results (average range: 18-26 out of 30) demonstrated a noticeable improvement in student motivation and campus integration. The findings affirm that comprehensive induction initiatives can significantly support student engagement, boost confidence, and lay the groundwork for long-term academic success.***

Keywords: student induction program, academic motivation, first year students, campus integration, student engagement

1. Introduction

The transition from school to college, particularly within demanding disciplines such as engineering and technology, represents a pivotal phase in a student's academic development. This period often comes with challenges, including adjusting to heightened academic expectations, engaging with a diverse peer group, and managing emotional and social transitions. Recognizing these challenges, the All-India Council for Technical Education (AICTE) introduced the Student Induction Program (SIP) in its 2018 Model Curriculum. The program is structured to assist first-year students in smoothly integrating into the college environment by fostering their academic readiness, emotional resilience, ethical grounding, and overall well-being.

In alignment with AICTE's educational reforms and the broader goals outlined in the National Education Policy (NEP) 2020, implemented an extensive SIP for newly admitted students from various branches. The program was delivered through 19 focused modules (M1-M19) covering a broad spectrum of developmental areas such as institutional orientation, communication and soft skills, universal human values (UHV), leadership training, physical fitness, and creative engagement.

The SIP was crafted to instill a strong sense of belonging among students, promote interaction with peers and mentors, and lay a firm academic foundation. Activities included departmental inductions, sessions led by industry professionals, ERP system orientation, and collaborative discussions. This study analyzes the structure, delivery, and outcomes of the SIP conducted with a focus on its effectiveness in enhancing academic motivation and fostering institutional connection among freshers. Using both qualitative insights and quantitative metrics, the research underscores the critical role of induction programs in promoting student engagement, confidence, and holistic development at the outset of their academic journey.

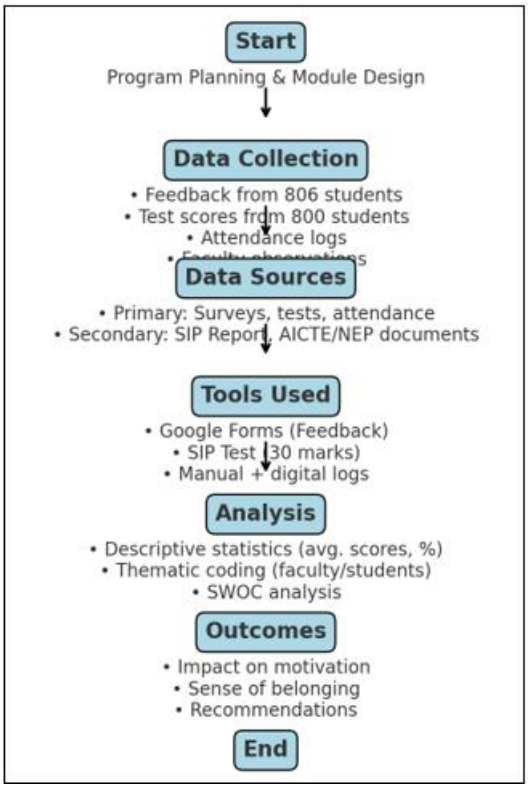
2. Objectives

1) To examine the influence of SIP on academic clarity and motivation.

2) To assess the development of students' social and institutional integration.
3) To evaluate SIP through attendance, test scores, and feedback data.

3. Methodology

1) Quantitative data: test scores, attendance, and feedback ratings.
2) Qualitative observations: student participation, leadership, and engagement.
3) Structured analysis of SIP modules, guest sessions, and SWOC insights.



4. SIP Overview, Objectives & Timeline

- The **Student Induction Program (SIP)** is a structured initiative introduced by the **All-India Council for Technical Education (AICTE)** as part of its **Model Curriculum (2018)** and further reinforced through the **National Education Policy (NEP) 2020**. The primary goal of SIP is to ease the transition of first-year students into the higher education environment. It offers a well-rounded orientation that familiarizes students with institutional culture, encourages relationship building, and lays the groundwork for academic and personal growth.
- This program acts as a bridge between school and college, aiming to make students feel welcomed, valued, and better prepared for the journey ahead. It also integrates essential values, academic systems, and co-curricular engagements into the early days of college life.

1) Key Objectives of SIP

- The Student Induction Program is guided by the following core objectives:
- To help students adapt smoothly to the college environment, reducing anxiety and uncertainty.
- To introduce institutional values, traditions, policies, and academic practices.
- To foster positive interactions among peers, faculty, and mentors to build a supportive academic community.
- To cultivate **universal human values** and encourage personal reflection and ethical development.
- To provide insight into the academic structure, departmental functions, laboratories, and expected learning outcomes.
- To develop essential **soft skills**, promote creativity through the arts, and encourage physical activity for overall wellness.
- To introduce students to the **Outcome-Based Education (OBE)** model, including evaluation methods and academic expectations.

2) SIP Timeline and Weekly Framework

The SIP was designed to unfold across **three key phases**: each tailored to specific aspects of student development:

Week 1: Orientation and Connection Building

1) Core Activities:
- Welcome address and inaugural session
- Guided campus tours and facility exposure
- Departmental introductions and role clarity sessions
- Class-in-charge interaction and mentorship introduction

2) Primary Focus:
- Creating a friendly and inclusive space that introduces students to the campus, infrastructure, and academic support systems.

3) Notable Sessions:
- Institute and departmental overviews
- Soft skills initiation
- Creative and expressive arts engagement

Week 2: Engagement and Exploration

1) Core Activities:
- Leadership development workshops
- Guest lectures by industry and academic experts
- Participation in debates, group discussions, and yoga
- Preliminary rounds of talent show activities

2) Primary Focus:
- Building interpersonal confidence, encouraging teamwork, and developing communication skills.

3) Notable Sessions:
- Orientation to foundational subjects (Math's, Physics, Chemistry, etc.)
- Interactive sessions with eminent personalities
- Public speaking and group literary exercises

Week 3: Academic Orientation and Evaluation

1) Core Activities:
- Orientation to the exam structure, internal assessment rules, and academic calendar

- ERP platform training and library access guidance
- Sessions on human values and reflective learning
- Final test and feedback submission

2) **Primary Focus:**
- Preparing students for academic expectations and encouraging value-driven learning.

3) **Notable Sessions:**
- Universal Human Values (UHV) - Levels I & II
- Information on higher studies and online learning pathways
- Final talent showcases and student reflections
- Schemes.

SIP Timeline:

Week 1: Orientation and Icebreaking

1) **Activities**: Welcome session, campus tour, department introductions, and interaction with class in-charges.
2) **Focus**: Creating a welcoming atmosphere and introducing institutional infrastructure.
3) **Key Sessions**:
   - Institute orientation
   - Departmental induction
   - Soft skills and creative arts workshops

Week 2: Engagement and Exploration

1) **Activities**: Leadership training, expert lectures, literary activities (debates, public speaking), yoga sessions.
2) **Focus**: Team building, student confidence, and communication enhancement.
3) **Key Sessions**:
   - Talent shows auditions
   - Subject orientations (Mathematics, Physics, Chemistry, etc.)
   - Eminent speaker lectures

Week 3: Academic Foundation and Assessment

1) **Activities**: Exam orientation, ERP training, library orientation, human value sessions.
2) **Focus**: Academic preparedness and value-based growth.
3) **Key Sessions**:
   - Universal Human Values I & II
   - Higher studies & online certification orientation
   - Final test and feedback collection
   - Talent shows final performance

5. Program Highlights

- **Modules Covered**: 19 (M1 to M19) including ERP, Professional Skills, UHV, Creative Arts, etc.
- **Facilitators**: Core SIP committee, departmental faculty, and external experts

6. SIP Module Objectives Snapshot

These 19 modules ensured a **comprehensive and systematic induction** of students into college life. By addressing cognitive, emotional, and social dimensions, the SIP built a foundation for holistic development. The objectives also aligned with **AICTE guidelines and NEP 2020 goals**, ensuring academic relevance and long-term impact.

Module No.	*Module Title*	*Objective Summary*
M1	Induction by Class In-Charge	Familiarize with institute rules, schedule, and discipline.
M2	Induction & Orientation of Institute	Understand institute's vision, mission, hierarchy, and facilities.
M3	Department Induction	Learn department structure, facilities, and best practices.
M4	Professional Skills (HME)	Develop professional communication and technical presentation skills.
M5	Indian Knowledge System (IKS)	Understand traditional knowledge systems and their application.
M6	Proficiency Module	Enhance RLSW communication skills.
M7	Student Leadership	Build leadership, time management, and teamwork abilities.
M8	Physical Health Activities	Promote physical and mental wellness through sports and exercise.
M9	Universal Human Values - I	Explore ethics, relationships, and holistic well-being.
M10	Literary & Creative Arts	Foster creativity and public expression.
M11	Exam Orientation	Clarify exam structure, credits, and evaluation norms.
M12	ERP & Library Orientation	Train on ERP and effective library use.
M13	Defense and Physical Education	Highlight leadership opportunities through NCC.
M14	Logic Building Skills	Improve logic and reasoning for technical problem-solving.
M15	Training & Placement Orientation	Understand employability skills and placement processes.
M16	Higher Studies & Certification	Explore postgraduate and certification opportunities.
M17	Exam Induction	Explain ATKT rules and re-evaluation process.
M18	Subject Practical Orientation	Plan for practical and addressing industry skill gaps.
M19	Subject Theory Orientation	Learn course structure, prerequisites, and research scope.

7. Student Attendance

The Student Induction Program saw enthusiastic participation from the newly admitted F.E./F.T. students. On the opening day, the program recorded a high turnout with, reflecting a strong initial interest and excitement among the freshers. The second and third days-maintained momentum. However, from the fourth day onward, there was a gradual decline in attendance, The final week showed a slight recovery, ending with **341 students** on during the concluding talent show and feedback session. Despite fluctuations, the consistent engagement from a significant portion of students throughout the program reflected the overall success and relevance of SIP in welcoming and orienting freshers.

Day-wise Student Attendance Record

Day	*Attendance*
1	852
2	779
3	805
4	672
6	530
7	502
9	272
13	341

8. Student Feedback and Satisfaction Analysis

To assess the effectiveness and reception of the Student Induction Program (SIP) conducted and structured feedback was collected from participants across various sessions. A total of 806 first-year students provided feedback, offering insights into their perceptions of the program's quality and relevance.

The feedback instrument was designed to evaluate five key dimensions of each session:

1) Clarity of content delivery,
2) Perceived utility of the session,
3) Guidance provided for the academic year,
4) Awareness about institutional processes, and
5) Accessibility to necessary resources.

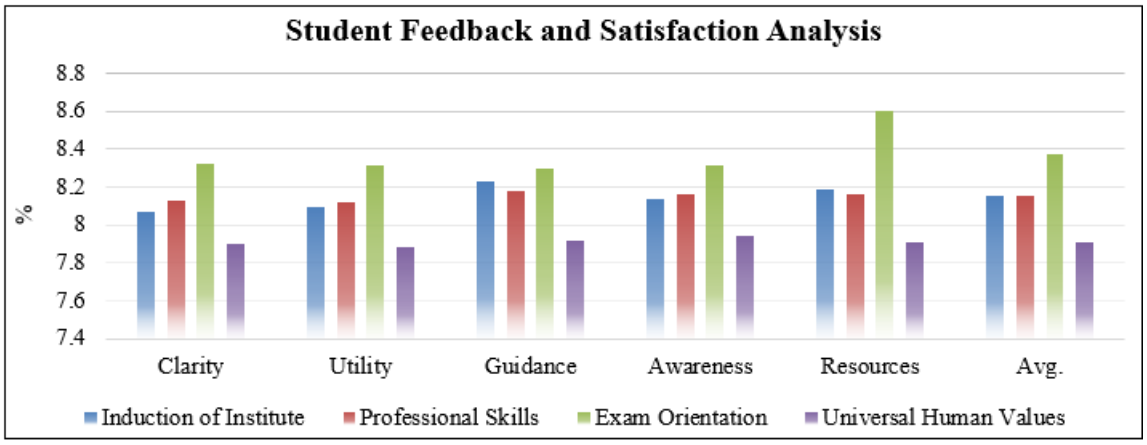
The analysis revealed consistently high satisfaction levels. The average scores for each parameter were as follows:

- Clarity: 8.14
- Utility: 8.15
- Academic Guidance: 8.22
- Process Awareness: 8.19
- Resource Accessibility: 8.23

These ratings culminated in an overall average feedback score of 8.19 out of 10, reflecting a strong positive response to SIP's structure and delivery.

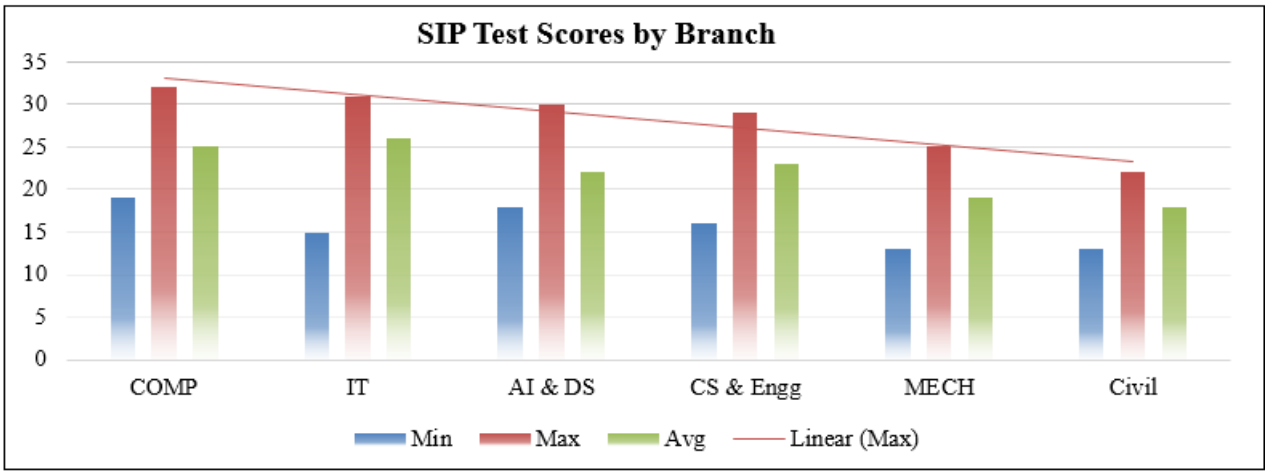
Among the most highly rated modules were those focused on departmental induction, examination orientation, and ERP training. These sessions were particularly noted for demystifying institutional protocols and aligning student expectations with academic requirements, thereby contributing directly to enhanced institutional belonging and academic motivation.

The high feedback scores support the conclusion that the SIP was both strategically planned and effectively implemented. These findings further reinforce the notion that well-structured induction programs can significantly aid in reducing first-year academic anxiety and fostering a smoother transition into the collegiate environment.



9. SIP Test Scores by Branch

To evaluate the effectiveness of the Student Induction Program, a structured assessment was conducted on 24th August 2023. The test aimed to measure students' understanding of the SIP modules, institutional framework, and foundational topics covered during the induction period. Out of 1020 enrolled students, 800 students appeared for the SIP test. The analysis of branch-wise performance revealed interesting trends. The Information Technology (IT) department achieved the highest average score of 26 out of 30, followed closely by the Computer Engineering (COMP) branch with an average of 25. Branches such as Cyber Security (CS&E) and AI & Data Science (AI&DS) also demonstrated strong performance, scoring 23 and 22 respectively. Mid-range averages were observed in branches like Electronics and Telecommunication (E&TC), E&CS, and AI & ML, all scoring around 21. Meanwhile, the Mechanical (MECH) and Civil Engineering branches recorded relatively lower averages of 19 and 18, possibly due to variation in academic preparedness or familiarity with technical modules. Despite the diversity in scores, the results overall indicated that students had successfully grasped the key objectives of the induction program and were academically oriented toward the semester ahead.



10. SWOC Analysis Summary

The **SWOC (Strengths, Weaknesses, Opportunities, Challenges)** analysis of the Student Induction Program conducted offers key insights into its planning, execution, and impact on first-year students.

1) Strengths

- **Comprehensive Familiarization**: Students were effectively introduced to the ES&H department, institutional facilities, academic practices, curriculum, evaluation system, and faculty members through interactive sessions.
- **Holistic Development Approach**: The program included multidisciplinary modules covering logic building, soft skills, leadership, and universal human values, providing balanced personal and academic orientation.
- **Expert Involvement**: Eminent guest speakers delivered motivational and domain-specific lectures that enhanced student engagement and exposure.
- **Strong Initial Engagement**: High attendance during the first week indicated effective pre-program awareness and student curiosity.

2) Weaknesses:

- **Fluctuating Attendance**: Afternoon sessions in the first two weeks saw reduced participation due to overlapping CAP admissions and academic counseling activities.
- **Limited Participation by Late Admits**: Students admitted in later rounds (CAP 2 and 3) missed early sessions, impacting their continuity and involvement.
- **Accommodation Constraints**: Outstation students faced challenges in settling accommodation, affecting their attendance and focus during initial days.

3) Opportunities

- **Student Settling and Bonding**: The SIP provided a dedicated space and time for students to adjust to college life and develop peer relationships.
- **Talent Identification**: Events like the talent show helped in recognizing student interests and encouraged participation in future co-curricular activities.
- **Leadership and Skill Development**: Sessions on student leadership, creative arts, and soft skills allowed students to reflect on their personal and professional goals.

4) Challenges

- **Prolonged Admission Cycle**: The extended CAP admission rounds disrupted uniform participation and continuity for some students.
- **Logistical Planning for Large Groups**: Managing over **800 students** for multiple sessions requires meticulous coordination and flexibility in scheduling.
- **Faculty Workload**: Simultaneous academic duties, examination responsibilities, and SIP sessions placed a strain on faculty resources and availability.

The SWOC analysis underscores the **success of the SIP in achieving its core goals** despite certain operational challenges. With strategic improvements in planning, digital accessibility, and follow-up mechanisms, future iterations of the SIP can be made even more inclusive, seamless, and impactful.

11. Unique Highlights

The Student Induction Program was not just an orientation initiative but a comprehensive, value-driven engagement platform. Several elements made the 2023-2024 SIP uniquely effective and student-centric:

1) Offline Mode with Large-Scale Participation

- The entire program was conducted **completely offline** for over **1020 first-year students**, making it one of the largest physical induction events post-pandemics.
- Active participation across departments ensured inclusivity and campus-wide engagement.

2) Multidisciplinary Module Structure (M1-M19)

- The SIP was divided into **19 well-defined modules**, covering academic orientation, soft skills, human values, leadership, physical well-being, creative arts, ERP training, and logic development.
- Each module had **clear objectives and measurable outcomes**, aligned with **AICTE model curriculum** and **NEP 2020** guidelines.

3) Talent Show and Creative Arts Engagement

- A **multi-format Talent Show** allowed students to showcase their skills in dance, music, drama, poetry, magic, painting, and photography.
- Creative expression activities enhanced student confidence and created a strong peer bonding experience early in their college journey.

4) Universal Human Values (UHV) Sessions

- UHV sessions enabled self-reflection and discussions on happiness, relationships, and ethics—going beyond academics to build emotionally aware and socially responsible students.
- Conducted in **small interactive groups**, these sessions received positive feedback for their depth and impact.

5) Focus on Digital and Academic Systems

- Hands-on training in **Enterprise Resource Planning (ERP)**, exam policies, and online certification portals helped students understand institutional digital tools and evaluation systems.
- Introduced concepts of **Outcome-Based Education (OBE)** early in the academic journey.
- Learning objectives were evaluated and refined.

6) Departmental Familiarization

Students were given detailed tours and presentations by their respective departments, highlighting:

- Program Outcomes (POs) and Course Objectives (COs)
- Laboratories, projects, and research opportunities
- Departmental achievements and industry linkage

Leadership and Literary Training

Activities such as **debates, public speaking, and leadership training modules** enabled students to enhance their confidence and interpersonal skills right from the start.

These highlights showcase commitment to creating a **holistic, student-centered onboarding experience** that transcends traditional orientation and builds a solid foundation for both academic success and personal growth.

12. Conclusion and Recommendations

12.1 Conclusion

The present study, titled "A Study on the Impact of Student Induction Programs on Freshers' Academic Motivation and Institutional Belonging," clearly demonstrates that a carefully designed and effectively delivered induction program can significantly influence a student's initial academic journey. The Student Induction Program (SIP) implemented and successfully met its fundamental goal of offering a smooth, engaging, and well-rounded transition for newly admitted students into the collegiate environment. Through its three-week, offline format involving 19 strategically designed modules, the program addressed key dimensions of student development ranging from academic orientation and value-based education to creative exploration, soft skills training, and interpersonal connection. The integration of Universal Human Values, departmental mentorship, and motivational guest lectures fostered a strong foundation for both personal growth and institutional belonging.

In conclusion, the SIP serves as a model framework that goes beyond orientation. It acts as a catalyst for academic motivation, a bridge for emotional adjustment, and a launchpad for institutional engagement. The findings of this research affirm that induction programs, when implemented with purpose and structure, have the potential to transform the student experience from day one setting the tone for long-term academic and personal success.

12.2 Recommendations

Based on the insights gained from the implementation of SIP, the following recommendations are proposed for enhancing future programs:

1) **Digital Access for Late Entrants:** Develop a repository of recorded sessions and key SIP resources for students admitted in later CAP rounds, ensuring they can access missed content and integrate seamlessly.
2) **Alumni Interaction Modules:** Introduce sessions with recent alumni who can share their real-life experiences, career paths, and strategies for maximizing college opportunities. This can serve as practical motivation for new students
3) **Village/Social/Industry Exposure:** Include community or industry visits to give students early exposure to societal needs and professional environments, aligning with NEP 2020's vision for holistic learning.
4) **Peer Mentorship Programs:** Assign senior student mentors to small batches of first years for continuous academic and emotional support throughout the first semester.
5) **Flexible Scheduling and Modular Tracking:** Consider more modular and flexible SIP delivery, especially for large student batches, to manage attendance issues without compromising program quality.
6) **Enhanced Physical Activities and Outdoor Engagement:** Incorporate structured team-building outdoor activities to strengthen peer bonding, time management, and physical fitness.
7) **Post-SIP Evaluation and Reflection:** Conduct follow-up surveys or focus groups after one semester to evaluate the long-term impact of SIP and gather suggestions for iterative improvements.

This structured combination of academic orientation, values-based education, and creative engagement of SIP are among the best practices in engineering education. With these enhancements, future iterations can become even more impactful and inclusive.

The SIP effectively contributed to enhancing freshers' academic motivation and building a sense of institutional identity. Students demonstrated improved clarity, motivation, and social connection. The balance of academic, ethical, physical, and creative modules supported holistic onboarding.

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