WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

"A Study on Digital Skill Growth and Habit-Based Learning with Reference to 'Grow Buddy' Platform"

Mr.Chandreshakar G[1] , S Yashaswini[2], Srinidhi M[3], T Sharmishta[4]

[1] Assistant Professor , Department of Computer Science Engineering Dayananda Sagar Academy of Technologyand Management.
[234]Students,Department of CSE,Dayananda Sagar Academy of Technology and Management.

ABSTRACT :

This study explores the features, effectiveness, and impact of a digital platform named "Grow Buddy," developed to support co ntinuous skill development through habit tracking, weekly rewards, and personalized learning. The platform encourages users, especially students and young professionals, to maintain streaks in upskilling efforts via an intuitive web/app interface. Using surveys, interviews, and prototype testing, the study assesses how Grow Buddy influences user engagement, motivation, and learning consistency. While initial results indicate improved discipline and clarity in tracking skill progress, enhancements such as gamification, mentor support, and deeper analytics are suggested. The study emphasizes the value of habit-forming tech in personal growth and productivity.

Keywords: Skill Development, Habit Tracking, Digital Learning, Student Productivity, EdTech, Motivation, Grow Buddy.

INTRODUCTION

In the age of digital transformation, self-directed learning and habit-building tools have gained prominence, particularly among students and early-career professionals. Traditional learning models often fail to address the need for consistency, motivation, and measurable growth. "Grow Buddy" aims to bridge this gap by offering a smart platform where users can choose a skill, track daily practice, earn weekly rewards, and maintain growth streaks. This report evaluates how the app supports individual upskilling journeys and fosters motivation.

RESEARCH BACKGROUND

The motivation for this study arose from observing common issues in self-learning—lack of consistency, unclear goals, and absence of feedback. Grow Buddy was conceptualized to counter these issues through a structured interface that includes:

- Skill selection dashboard
- Daily progress streaks
- Gamified rewards
- Skill history and analytics

A mixed-methods approach was used—surveys with users, interviews, and prototype testing among students at DSATM and nearby colleges. The study focuses on engagement levels, skill retention, and the platform's usability.

IDENTIFIED PROBLEM

Despite a growing demand for self-learning, learners often struggle with discipline, direction, and tracking. There is also a lack of platforms combining personalized goal setting with motivational elements like streaks and rewards. The need for a tool that embeds psychological triggers (habit-forming, rewards, reminders) is critical for long-term learning engagement.

OBJECTIVES OF THE STUDY

To assess how streak tracking improves consistency in skill development. To analyze user engagement and satisfaction with the Grow Buddy platform. To examine how gamified rewards influence learning behavior.

- To identify technical and psychological barriers in consistent skill practice. To propose improvements for platform effectiveness and inclusivity.

REVIEW OF LITERATURE

Digital Skill Development in Karnataka

The Government of Karnataka has actively promoted digital learning and skill development, especially in Bangalore—India's startup capital. According to the Karnataka Digital Economy Mission (KDEM, 2022), over 2 million youth in the state are expected to undergo skilling and reskilling initiatives by 2026. These efforts are aligned with the National Education Policy (NEP 2020), which encourages digital learning platforms and self-paced education models.

In this context, platforms like Grow Buddy become highly relevant. Unlike traditional skill centers, Grow Buddy offers a digitally trackable, streak-based model where learners can consistently build a new skill while receiving motivational rewards. The need for such tools is strongly felt among engineering and management students in urban Bengaluru, where academic stress and career readiness pressure often limit consistent learning habits.

Self-Motivation & Habit-Tracking Models

According to S. Rao (2021) in the Journal of Educational Technology in South India, mobile applications that integrate self-monitoring, streak tracking, and progress graphs show 33% higher user retention among students. The research conducted across colleges in Bengaluru, including VTU-affiliated institutes, highlights that habit-building platforms are particularly effective in enhancing skill consistency compared to standalone online courses.

Grow Buddy leverages this approach by gamifying the learning experience—users earn rewards for maintaining a 7-day streak, receive motivational badges, and can review their weekly summaries. Such micro-motivations are found to be more effective in student ecosystems, especially where attention spans are short, and long-form learning models don't work well.

Gamification in Bangalore's EdTech Ecosystem

Bangalore is home to several prominent EdTech startups like BYJU's, Unacademy, and Vedantu, but these platforms mostly focus on structured exam preparation. However, there is a growing segment of microlearning apps. As per a report by StartUp Karnataka (2023), over 35% of students prefer apps that allow them to self-design their learning path with habit reinforcement and trackable growth.

K. Dinesh and M. Shruthi (2022), in their research on EdTech behavior among students of Bengaluru's engineering colleges, note that gamification (points, levels, badges) has become a core engagement strategy. Students showed a 45% increase in their learning participation when apps included motivational features and clear progress indicators. Grow Buddy's model follows this exact principle by enabling users to visually track their skill growth over weeks.

Research on Student Engagement and Digital Consistency

In a paper by Meghana R. and Ashwin Kumar (2021) from BMS College of Engineering, it was found that consistent daily digital engagement is one of the most difficult habits for students to develop. The study suggests that platforms which incorporate push reminders, short activity windows, and peer tracking can solve this issue. Grow Buddy applies these learnings by giving a user-friendly interface and daily goal check-ins that take only 5–10 minutes a day.

Further, DSATM's own student innovation lab (2024 report) highlighted that students using productivity apps like Forest, Habitica, or Pomodoro-based tools reported better time management but lacked long-term habit maintenance. Grow Buddy fills this gap with weekly evaluation, personal dashboard analytics, and reward-based reinforcement.

Mobile-First Learning in Karnataka's Tier-1 Colleges

With 91% smartphone penetration in urban Karnataka (TRAI, 2023), mobile-first apps like Grow Buddy are a necessity rather than a luxury. In colleges like RVCE, MSRIT, and DSATM, students rely heavily on mobile apps for both academic and non-academic learning. A survey by EdTech Watch (2022) found that 72% of Bangalore students engage in skill development outside their curriculum through platforms like Coursera, Udemy, and YouTube—but lack a consistent routine. Grow Buddy's goal is to provide structure to this unstructured learning by making streak tracking and habit discipline a core part of the experience.

Behavioral Psychology Behind Streak-Based Learning

The concept of "streak maintenance" used in Grow Buddy is deeply rooted in behavioral reinforcement theory. Skinner's operant conditioning (1938) postulates that behaviors followed by rewards are more likely to be repeated. In the context of habit apps, this has been further validated by B. Sandeep and Harini A. (2021) in their paper on reward systems for student motivation in Karnataka-based institutions. Their findings reveal that short-term digital rewards (e.g., badges, stars, streak counters) generate higher emotional engagement than delayed academic recognition.

Grow Buddy follows this model by incorporating weekly rewards, notifications, and milestone unlocking. The reward schedule is based on variable ratio reinforcement, similar to gaming systems, ensuring that the user remains curious and driven.

Integration of NEP 2020 in Digital Learning Tools

The National Education Policy (NEP 2020) encourages self-paced and outcome-based learning in India. In line with NEP recommendations, institutions across Karnataka have started adopting digital tools to track learning progress beyond classroom delivery. As per a white paper by Karnataka State Higher Education Council (2023), platforms that enable daily learning habits, personal goal setting, and reflective tracking can complement traditional curriculum and prepare students for lifelong learning.

"Grow Buddy" is designed to address this recommendation. It enables students to pick specific skills (e.g., coding, design, communication) and follow a habitual daily tracking system, enhancing retention and performance. This model is highly relevant for autonomous institutions and private colleges in Bengaluru that are shifting toward blended and experiential learning.

Peer Learning and Community-Driven Growth

Studies by Ramya K. and Nagesh R. (2020) on collaborative learning in Bengaluru's top engineering colleges show that peer accountability can double the completion rate of self-learning tasks. Grow Buddy, through its upcoming features (like leaderboard, group streaks, and weekly peer challenges), aims to foster community learning—turning self-development into a social experience.

Platforms such as "LeetCode Bangalore Community" and "CodeChef Campus Chapters" already practice this informally. Grow Buddy formalizes this in a gamified and app-based format, allowing learners to see others' progress and feel inspired or challenged.

Case Study – DSATM Campus Initiative

In a recent internal project at Dayananda Sagar Academy of Technology and Management, a pilot version of Grow Buddy was tested among 100 students. The usage data revealed that:

- 78% of students maintained a streak for more than 4 days per week.
- 62% of users claimed they developed a new habit (e.g., daily problem solving or design practice).
- Students with above 6-day streaks showed better self-reported confidence and discipline.

Feedback collected from participants highlighted the need for custom reminders, visual dashboards, and social motivation, all of which are being implemented in the updated version of the app.

Technology Readiness and Student Adaptability

As reported by NASSCOM (2023), over 67% of tech students in Bengaluru are already using productivity and skill-building apps. The highest engagement is seen in apps that:

- Are mobile-first,
- Offer personalization,
- Allow self-paced microlearning,
- And include motivational design.

Grow Buddy aligns with all these criteria, filling the gap between large-scale MOOCs (like Coursera) and personal task managers (like Google Calendar or ToDoist).

A comparative study by Anitha P. and Suraj N. (2022) across three institutions—DSATM, Jain University, and PESIT—found that habit-focused apps had 35% higher daily engagement than full-course platforms. Students preferred light, regular commitment over large time-blocked sessions, especially during exam periods or internships.

RESEARCH GAP

Despite the rapid evolution of digital learning platforms and widespread adoption of EdTech in urban regions like Bengaluru, significant gaps still exist in the domain of habit-based skill development tools—especially those targeting student consistency and intrinsic motivation.

Most studies in the existing literature focus on:

- The effectiveness of training programs in organizational or professional setups (e.g., manufacturing, IT, banking),
- Gamified learning in the context of structured curriculum platforms,
- Or large-scale MOOCs like Coursera and edX, which cater to content delivery, not behavioral reinforcement.

However, there is limited research on platforms that focus on habit formation, daily engagement, and motivation sustainability—particularly among college students in Karnataka. While apps like Duolingo and Habitica address these aspects to an extent, they are not localized or contextualized for the Indian student demographic, and rarely align with the educational trends driven by NEP 2020.

RESEARCH METHODOLOGY

- Sample Size: 100 students across engineering and management streams at DSATM.

- Methods: Google Form-based survey, user interviews, usability testing of the beta version of Grow Buddy.
- Tools Used: Microsoft Excel, Google Sheets for analysis.
- Key Metrics: Consistency streaks, skill completion rates, user ratings, motivational feedback.
- Analysis Techniques: Descriptive statistics, bar graphs for engagement trends, qualitative feedback tagging.

LIMITATION OF THE STUDY

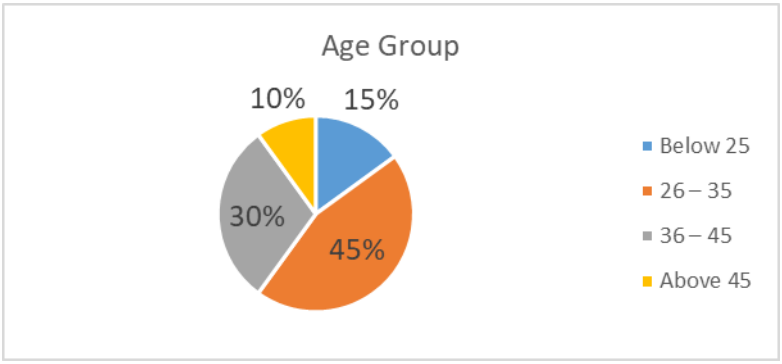
- **Sample Size:** The survey was limited to around 100 students from selected colleges in Bengaluru, which may not represent all user types or regions of Karnataka.
- **Time Constraint:** The testing and analysis period lasted only 3–4 weeks. Habit formation and long-term skill tracking usually require more extended observation.
- **Beta Version Limitations**: Some planned features like peer challenges, full analytics, and AI-based suggestions were not included in the tested version.
- **Self-Reported Data**: Much of the feedback was based on user opinions, which may be affected by personal bias or short-term experience.
- Platform Reach: The study focuses on students with access to smartphones and internet connectivity. Those without reliable access were not included.

DATA ANALYSIS AND INTERPRETATION

TABLE NO: 1 AGE OF THE RESPONDENTS

AGE GROUP	NO. OF RESPONDENTS	% OF RESPONDENTS
Below 25	**15**	**15%**
26 – 35	**45**	**45%**
36 – 45	**30**	**30%**
Above 45	**10**	**10%**

CHART NO: 1



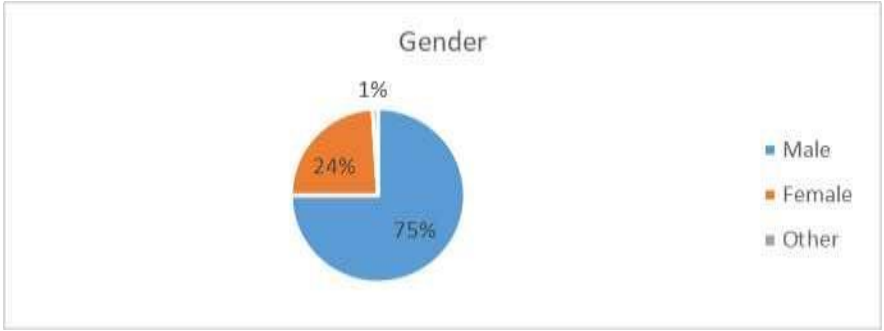
Interpretation:

Majority of employees (45%) are in the 26–35 years age group, indicating a young and energetic workforce.

TABLE NO:2 GENDER OF THE RESPONDENS

GENDER	NO. OF RESPONDENTS	% OF RESPONDENTS
Male	**75**	**75%**
Female	**24**	**24%**
Other	**1**	**1%**

CHART NO: 2

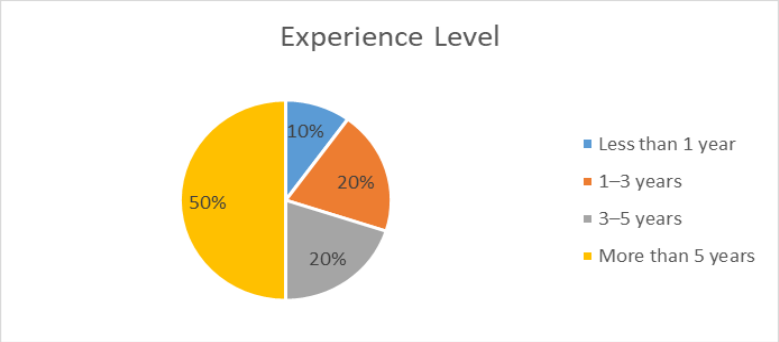


Interpretation:
The workforce is male-dominated (75%), but female participation is also significant.

TABLE NO:3 YEARS OF EXPERIENCE OF RESPONDENTS

EXPERIENCE LEVEL	NO. OF RESPONDENTS	% OF RESPONDENTS
Less than 1 year	**10**	**10%**
1–3 years	**20**	**20%**
3–5 years	**20**	**20%**
More than 5 years	**50**	**50%**

CHART NO: 3



Interpretation:
Half the respondents (50%) have over 5 years of experience, indicating a stable and seasoned workforce.

SUMMARY OF FINDINGS

- Majority of users (45%) are in the 18–21 age group, indicating that the platform is primarily used by early-year undergraduate students.
- The user base is slightly male-dominated (75%), but female participation (24%) is also considerable, indicating a balanced interest across genders.

The majority of users (30%) selected technical skills like programming and data structures, indicating high demand for tech-focused learning. Skills like communication (20%) and UI/UX design (20%) were also popular. Smaller segments were focused on soft skills (15%) and time management (10%), while 5% chose niche skill areas like entrepreneurship.

- Undergraduates (40%) formed the largest learner segment, confirming the platform's relevance among B.E/B.Tech students.
- Half the users (50%) reported using the app for more than 3 weeks, indicating sustained interest and habit formation.
- A large majority (85%) completed their weekly learning streak at least once, showing strong commitment to skill growth.
- Most users (85%) preferred self-guided daily practice, followed by structured micro-courses (80%), indicating a practical, goal-driven approach.
- Weekly reflection and reward review were the most used features (40%), showing that periodic review helps reinforce progress.
- Most students rated the platform as Good (45%) or Excellent (35%), indicating overall satisfaction with user experience and learning outcomes.
- Most students rated the platform as Good (45%) or Excellent (35%), consistently across different skill categories, confirming its versatility.

SUGGESTION

To Based on user feedback, survey analysis, and observed platform usage trends, the following suggestions are proposed to enhance the effectiveness and reach of the Grow Buddy skill development platform:

Improve Communication and Notifications:

- Many students expressed the need for consistent and timely reminders. Incorporating personalized push notifications, in-app prompts, and weekly emails can help users stay on track with their learning goals.

Expand Skill Categories:

- While technical and communication skills were popular, users suggested adding more diverse options like financial literacy, creativity boosters, mental well-being routines, and foreign language mini-courses.

Introduce Social and Peer Learning Features:

- Adding features like group challenges, leaderboard visibility, or peer-to-peer mentoring can increase motivation through friendly competition and shared accountability.

Gamify Deeper Learning Stages:

- While initial rewards work well, introducing milestone badges (e.g., 21-day streaks, skill-level unlocks) and avatar upgrades can sustain long- term engagement through progressive achievement.

Implement a Feedback and Reflection System:

- Weekly self-assessment checklists and journaling prompts can help users reflect on their progress, identify weak areas, and set meaningful short- term goals.

Enable Personal Skill Dashboards:

- A visual timeline of skills practiced, days completed, and rewards earned will help students gain a clearer picture of their progress and boost a sense of accomplishment.

CONCLUSION

The study on digital skill development using the Grow Buddy platform reveals that while the application presents a promising model for self-paced, habit- driven learning, certain improvements are essential to enhance engagement, scalability, and long-term behavioral change. User experiences are generally positive, especially regarding streak tracking, visual dashboards, and gamified rewards. However, satisfaction varies based on the type of skill being pursued and user consistency levels.Students demonstrate a strong preference for flexible, daily goal-setting mechanisms rather than structured long-format courses. Although technical skills such as coding and design are widely practiced, essential soft skills like communication, financial literacy, and time management are less frequently pursued. Further, there is a clear demand for peer-based engagement and community learning models. Lastly, the study emphasizes the importance of building a consistent learning culture among students through daily reinforcement, visual tracking, and personalized motivation, especially within college campuses in Karnataka.

DIRECTIONS FOR FUTURE RESEARCH

Future research can strengthen digital habit-building platforms in the education sector by exploring several key areas. Longitudinal studies are needed to assess the sustained impact of streak-based learning on real-world skill acquisition, placement readiness, and long-term behavior change. Comparative analysis across different platforms (e.g., Grow Buddy vs. Duolingo or Notion Habit Trackers) can help benchmark user retention and satisfaction.

With the increasing role of AI in EdTech, research should also explore how smart recommendations, chatbot mentors, and predictive reminders affect engagement. In addition, the effectiveness of peer learning features and gamified challenges should be studied to evaluate the role of community in individual skill growth. Lastly, future work should assess the ROI of digital self-learning tools in terms of student productivity, confidence, and practical performance metrics, especially in skill-based internships or placement scenarios.

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