الأكاديمية العربية للعلوم والتكنولوجيا والنقل البحري

Arab Academy for Science, Technology & Maritime Transport

Graduation Project

Learning Experience Platform.

Similar System & and Research.

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Learning Experience Platforms

System Name	Features	Inputs	Outputs	Technologies Used	Concepts	Other Aspects	Key Features	Main Strength	How Our System Varies
360 Learning	Collaborative learning, peer-to-peer learning	User-generated content, skill data	Personalized learning paths	AI, machine learning, analytics	Collaboration, social learning	Strong in engagement & collaboration	Peer-driven content creation, community interaction	High level of collaboration and user engagement	Focus on career and college guidance, leveraging psychometric tests and tailored roadmaps instead of general learning paths
EdCast	AI-powered content curation, microlearning	User activity, skill profiles	Adaptive learning recommendations	AI, natural language processing (NLP), cloud	Personalization, microlearning	Mobile-first, integrations	Contextual learning, personalized daily micro-lessons	Strong AI-based content delivery	Use of psychometric assessments and a specialized career/college matching system, which EdCast lacks

Degreed	Skill tracking, upskilling tools	Skill data, prior learning	Skill progress dashboards, recommendations	Data analytics, API integrations	Upskilling	Professional skills focus	Skill-based career pathways, external integrations	Ability to measure and track progress across various skill areas	Aimed at college and career alignment, incorporating comprehensive personality and skill tests, not just skill tracking
Docebo	LMS with AI-driven LXP features	Training data, learning content	Personalized course recommendations	AI, LMS infrastructure	Adaptive learning	Corporate training focus	AI-powered course delivery and analytics	Effective for corporate training	Focus on educational/career decision-making rather than general corporate training needs
Fuse Universal	Video-based learning, social interaction	User-generated videos, social interactions	Knowledge sharing, engagement analytics	Video streaming, community-driven platforms	Video learning, social learning	Focused on social features	Collaborative video content, easy sharing of knowledge	High engagement via multimedia-based learning	Our platform prioritizes psychometric testing and structured roadmaps over a purely video-based system
Juno LXP	Personalized content, gamification	User interactions, quizzes, test results	Leaderboards, badges, recommended courses	Gamification engines, adaptive tech	Gamification	High engagement	Gamification strategies (leaderboards, badges), targeted recommendations	High user engagement through gamified experiences	Our platform extends gamification to career/college roadmap milestones and is focused on long-term personal growth

Learn Amp	Learning pathways, curated playlists	User-selected preferences	Step-by-step learning pathways, playlists	Content curation tech	Pathways	Designed for long-term skills	Easy-to-use pathways, content curation	Simple and intuitive design for learning journeys	Incorporates psychometric test results and targeted career/college suggestions, a focus absents in Learn Amp
Skillsoft Percipio	Large content library, mobile-first	User-selected courses	Personalized learning dashboards	AI, mobile technologies	Mobile learning	Comprehensive course access	Large-scale, mobile-accessible content	Extensive library for skill-building	Provides psychometric-based guidance for specific goals rather than generalized content consumption
Valamis	Digital learning, skill-based learning paths	Skill assessments, prior learning data	Personalized learning paths	AI, big data, API integrations	Skill paths	Strong analytics focus	Robust learning analytics, customizable learning paths	Strong data-driven personalization	Builds upon learning paths by adding career/college guidance and psychometric testing

Conclusion: How Our System Stands Out

Our Learning Experience Platform (LXP) differentiates itself by focusing on psychometric-based guidance for college and career decisions. Unlike the listed systems, which often center on corporate training or generalized skill-building, our platform is tailored to students who are either entering college or seeking career clarity during their studies. Key advantages include:

- **Psychometric Assessments:** In-depth personality and skills testing tailored for educational and career alignment.
- **Roadmap-Based Recommendations:** Clear, actionable steps provided through structured roadmaps.
- **Long-Term Focus:** Guidance that aligns with users' personal goals and aspirations, beyond immediate learning needs.
- **Specialization:** A dedicated platform for students rather than corporate learners, making it unique in the LXP landscape.

1. 360 Learning

- **Description**: A collaborative learning platform that enables peer-to-peer learning within organizations. It focuses on user-generated content and collaboration, which can be useful for creating a community-driven approach to skill building and career exploration.

- **Relevance**: While it is more enterprise-oriented, the idea of collaborative learning and peer-driven content could inspire community-building features in your platform.

- **Website**: 360 Learning

2. Ed Cast

- **Description**: A powerful LXP that integrates AI for personalized learning paths, microlearning, and social features to boost engagement. It supports upskilling and career readiness.
- **Relevance**: Ed Cast's approach to personalized and adaptive learning paths, as well as its social features, align with your roadmap-based guidance and interactive testing goals.
- **Website**: EdCast

3. Degreed

- **Description**: A platform that tracks and measures skill development, offering access to personalized learning content and career development tools.
- **Relevance**: Degreed's focus on skill measurement and recommendations could serve as a foundation for designing your skill assessment and career matching features.
- **Website**: Degreed

4. Docebo

- **Description**: A learning management system (LMS) with LXP features such as AI-powered content recommendations, social learning, and content curation.
- **Relevance**: Docebo's AI-driven personalization and content curation could inform how your platform suggests colleges and careers based on user profiles.
- **Website**: Docebo

5. Fuse Universal

- **Description**: Focuses on social and video-based learning experiences to enhance engagement and knowledge retention.
- **Relevance**: Its focus on engaging, video-based content could enhance your platform's roadmap delivery, making it more visually appealing.
- **Website**: Fuse Universal

6. Juno LXP

- **Description**: A learning experience platform offering personalized content, gamification, and social collaboration to boost learning and engagement.
- **Relevance**: Its gamification features can inspire the creation of interactive skill tests and engaging roadmaps for your users.
- **Website**: Juno LXP

7. Learn Amp

- **Description**: Combines LMS and LXP features, offering tools like learning pathways, curated playlists, and engagement analytics.
- **Relevance**: Learn Amp's pathway and playlist features could align with your platform's roadmap concept, ensuring a guided experience for users.
- **Website**: Learn Amp

8. Skillsoft Percipio

- **Description**: An LXP with a large content library, personalized learning recommendations, and mobile-first access.
- **Relevance**: Skillsoft's comprehensive content and accessibility features can be adapted for your platform's college and career recommendations.
- **Website**: Skillsoft Percipio

9. Valamis

- **Description**: A digital learning platform offering personalized learning experiences, robust analytics, and support for skill-based learning paths.
- **Relevance**: Valamis's data-driven approach to skill-building and personalized pathways can serve as a strong example for your roadmap features.
- **Website**: Valamis

Key Takeaways for Your Platform:

- **Personalization and AI**: Platforms like EdCast, Degreed, and Valamis emphasize AI-driven personalization, which aligns with your goal of creating tailored roadmaps.
- **Skill Measurement and Pathways**: Degreed and Learn Amp focus on skill tracking and pathways, providing a structure for your platform's career and college guidance.
- **Engagement Features**: Gamification (e.g., Juno LXP), social learning (360 Learning, Fuse Universal), and multimedia content (Fuse Universal) could make your platform engaging for users.
- **Data-Driven Insights**: Platforms like Valamis and Docebo highlight the importance of analytics in tracking progress and refining recommendations.

Research papers and insights related to Learning Experience Platforms

Personalized Learning and AI

- A review of AI-based e-learning systems highlights the importance of personalization in enhancing the learning experience. Such systems analyze learners' preferences, skills, and progress to provide tailored recommendations for courses, career paths, and resources. However, challenges include data privacy concerns, scalability, and ensuring equitable access to learning opportunities. The study underscores that integrating AI effectively into LXPs requires addressing these issues while maintaining user trust and engagement.
  Read more: IEEE Xplore: AI-Based Personalized E-Learning Systems【32】.

Digital Recommendation Systems

- This paper focuses on using digital recommendation systems to improve online education. It emphasizes how these systems leverage algorithms to suggest personalized educational content and career pathways based on user data. For systems like yours, prioritizing user engagement, creating intuitive interfaces, and using accurate recommendation models will be key.
  Read more: IEEE Xplore: Digital Recommendation Systems【31】.

1. A Digital Recommendation System for Personalized Learning

Source: IEEE Xplore【31】

Key Insights:

- Personalized recommendation systems improve engagement by tailoring content to individual user preferences, abilities, and needs.
- Using machine learning and AI for recommendation systems increases accuracy in predicting user preferences and matching them with optimal content or career paths.
- A seamless and intuitive user interface is critical for adoption, alongside trust-building mechanisms to ensure users feel comfortable sharing personal data.

Takeaways:

- **Data-driven personalization**: Implement algorithms (e.g., collaborative filtering, content-based filtering) to analyze test results and user profiles, generating highly relevant college or career recommendations.
- **User-centric design**: Prioritize simplicity and responsiveness in your UI/UX design to encourage engagement.
- **Transparency and privacy**: Clearly communicate how user data will be used to foster trust and comply with data protection regulations.

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2. AI-Based Personalized E-Learning Systems: Issues, Challenges, and Solutions

Source: IEEE Xplore【32】

Key Insights:

- AI systems in e-learning can create adaptive learning pathways tailored to a learner's progress and performance.
- Challenges include biases in AI models, scalability for diverse user bases, and ensuring accessibility for users with different backgrounds and abilities.
- The use of gamification and real-time feedback mechanisms can greatly enhance user motivation and retention.

Takeaways:

- **AI Adaptability**: Leverage AI to dynamically adjust roadmaps based on ongoing test performance or changing user preferences.
- **Bias mitigation**: Train AI models with diverse datasets to minimize biases that could lead to unfair recommendations.
- **Engagement strategies**: Incorporate gamification, such as rewards or progress tracking, to make the learning and guidance process interactive and enjoyable.

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3. AI and Career Guidance

Source: IAFOR Journal of Education【30】

Key Insights:

- AI enhances career guidance by identifying strengths, weaknesses, and interest areas through structured assessments.
- Emotional support and mentorship play a vital role alongside AI-driven insights to address the emotional and social needs of users.
- Ethical concerns, particularly around the use of AI in decision-making, require systems to maintain transparency and involve human oversight.

Takeaways:

- **Blended guidance**: Combine AI-driven recommendations with human mentorship to provide holistic support to users.
- **Ethical design**: Include features that allow users to understand how decisions are made, empowering them to question or override AI-generated suggestions.
- **Social integration**: Offer a social component, such as community forums or access to virtual mentors, to provide additional support.

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4. Challenges in Workplace Learning Platforms

Source: University of Gothenburg Report【29】

Key Insights:

- LXPs succeed by balancing user autonomy with structured learning paths, using analytics to guide users effectively without overwhelming them with options.
- Integration with external resources and data sources (e.g., APIs for skill databases or job market trends) significantly boosts the platform's value.
- Real-time analytics provide actionable insights for both users and administrators, enhancing the adaptability of the platform.

Takeaways:

- **Guided autonomy**: Offer users flexibility to explore options while providing a clearly defined structure through the personalized roadmaps.
- **Data integration**: Integrate your platform with real-world data sources, such as college admission databases or industry job trends, to ensure recommendations remain relevant.
- **Analytics-driven improvements**: Use analytics to refine roadmap recommendations and improve overall platform performance based on usage patterns.

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5. Personalized Learning Using Gamification and Recommendation Systems

Source: Springer Link

Key Insights:

- Gamification strategies like leaderboards, badges, and challenges enhance user motivation.
- Effective recommendation systems focus not only on what users "like" but also on long-term benefits and goals.
- Accessibility is critical to ensure the platform serves users with diverse needs, including those with disabilities.

Takeaways:

- **Gamified experience**: Add features like quizzes with scoring systems, badges for completing milestones, and personalized challenges aligned with roadmap goals.
- **Goal-oriented recommendations**: Base suggestions on both immediate preferences and long-term aspirations, encouraging users to think strategically about their futures.
- **Accessibility focus**: Ensure compliance with accessibility standards, such as WCAG, to make the platform inclusive.

Summary of Key Focus Areas:

1. **Personalized Content Delivery**:
    - Use AI and analytics to tailor recommendations for colleges and careers based on users' personalities and skills.
2. **User Engagement**:
    - Incorporate gamification, real-time feedback, and intuitive design to enhance user retention and satisfaction.
3. **Ethical and Transparent AI**:
    - Ensure fairness and explainability in AI-driven recommendations to build user trust.
4. **Human Integration**:
    - Combine AI guidance with human mentorship or virtual advisors for emotional and contextual support.
5. **Scalability and Accessibility**:
    - Plan for diverse user bases with varying needs and ensure the platform is accessible to everyone.
6. **Data Privacy and Compliance**:
    - Align with data protection regulations (e.g., GDPR) to safeguard user information and maintain compliance.