Ms.Manisha Goyal (Oct2024) A STUDY OF STAKEHOLDERS' PERCEPTIONS TOWARDS ED-TECH STARTUPS
***International Journal of Economic Perspectives*,*18* (10) 35-52**
ISSN: 1307-1637 UGC CARE GROUP II
Retrieved from https://ijeponline.com/index.php/journal

A STUDY OF STAKEHOLDERS' PERCEPTIONS TOWARDS ED-TECH STARTUPS

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Abstract

This study explores stakeholders' perceptions and preferences towards Ed-Tech startups, focusing on four key dimensions. First, usability and pedagogical alignment are crucial for teachers, who value platforms that are user-friendly and support effective teaching methods. They prefer tools that simplify evaluations and enhance the learning process. Second, personalization and engagement are essential for students. They favour Ed-Tech solutions that provide tailored learning experiences, interactive content, and opportunities for creativity and collaboration. This approach makes learning more engaging and suited to individual needs. Third, data privacy and security are major concerns for parents. They seek platforms that prioritize their children's safety, offer transparent information about data usage, and ensure strong parental controls. Lastly, investors look for scalability and business sustainability in Ed-Tech startups. They want companies with clear market strategies, potential for growth, and proven profitability. This study aims to provide valuable insights into these dimensions to help Ed-Tech startups improve their offerings and meet the diverse needs of stakeholders. By addressing these important factors, startups can foster greater trust and satisfaction among users, ultimately contributing to the success and impact of technology in education.

Keywords: *Ed-TechStartups, Stakeholder Perceptions, Usability, DataPrivacy, Personalization*

INTRODUCTION

The rise of educational technology (EdTech) entrepreneurs is transforming traditional learning methods through innovative solutions aimed at improving accessibility and personalization in education. As EdTech becomes more prevalent, it's essential to understand the perspectives of key stakeholders, including educators, students, parents, investors, and policymakers.

Teachers play a crucial role in integrating technology and often have mixed feelings about EdTech. They appreciate tools that enhance engagement and streamline processes but worry about the effectiveness of these solutions and the digital divide among students. Students, who are generally enthusiastic about technology, value its

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

flexibility and interactive features but struggle with navigating numerous platforms and ensuring content quality. Parents, particularly for younger children, are concerned about their children's well-being and data privacy. They prefer EdTech that supports learning while safeguarding personal information.

Investors view EdTech as a promising industry with high growth potential, favoringstartups with scalable business models. Policymakers see these companies as essential partners in improving education equity and access, especially in underserved areas. However, they face challenges in ensuring all students can benefit from these technologies. Ultimately, while there are opportunities for innovation in EdTech, addressing the diverse needs and concerns of stakeholders is critical for sustainable success.

PERCEPTIONS TOWARDS ED-TECH STARTUPS

Stakeholders' views on Ed-Tech startups reflect their diverse opinions and experiences regarding the integration of technology in education. Educators may feel excited about innovative teaching tools while questioning their effectiveness. Students see these companies as sources of engaging learning experiences but may also view them as competition to traditional methods. Parents appreciate the potential for personalized learning but are concerned about screen time and data privacy. Investors focus on risk, scalability, and market potential, while policymakers consider accessibility and equity in educational reform. Overall, perceptions are complex and ever-evolving, highlighting the need for Ed-Tech firms to understand these attitudes to build trust and credibility within the education ecosystem.

PREFERENCES TOWARDS ED-TECH STARTUPS

Stakeholder preferences for Ed-Tech startups reflect the specific needs and priorities that shape their views of these innovative companies. Teachers prefer user-friendly platforms that align with educational principles and provide robust support. Students are drawn to personalized learning experiences and creative opportunities. Parents prioritize data privacy, security, and transparency regarding educational impact. Investors favor startups with scalable business models and proven growth potential, while policymakers support companies promoting equity and accessibility in education. Understanding these preferences is crucial for Ed-Tech businesses to tailor their offerings, effectively communicate value, and foster strong relationships, leading to acceptance and growth in the Ed-Tech landscape.

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

REVIEW OF LITERATURE

1. Devasena and Urkude (2024) conducted a study on online learning in India and found that only 58% of students wanted to continue e-learning after the COVID-19 pandemic. Limited access to devices, poor internet connectivity, and gender inequality were significant barriers, especially in rural areas. The study suggests targeting female students and improving internet services to support online learning.
2. Almaraz-López, Almaraz-Menendez, and López (2023) conducted a study comparing business administration and education students' attitudes toward artificial intelligence (AI). They found that education students, especially those who had taught AI, felt more confident using AI after graduation compared to business students. Surprisingly, higher-level students valued AI but lacked the confidence to use it. The study recommends AI training for all students to help them become responsible users as AI increasingly impacts personal and professional life.
3. Cramarenco, Burcă-Voicu, and Dabija (2023) reviewed student perceptions of online learning during the COVID-19 pandemic. Their findings show that online education is appreciated for its flexibility and the ability to self-direct learning. However, there is a need to better understand how the pandemic affected education stakeholders and to investigate how digitalization impacts teaching methods, student engagement, and decision-making. The study emphasizes the shift towards learner autonomy and collaboration.
4. Bansal, Pophalkar, and Vidani (2023) reviewed the Indian Ed-tech sector and found that using technology in education helps students feel more comfortable and allows them to choose how they learn. Digital tools, such as tablets and smartphones, are widely used, enabling students to read, watch videos, and complete self-assessments. Teachers also benefit from technology by interacting with students outside the classroom and accessing resources to support learning.
5. Goyal and Jain (2023) studied the impact of digital marketing on consumer behavior in Ed-tech startups. Their research shows that digital marketing strategies, especially through social media, significantly influence consumer awareness and behavior. Companies that effectively communicate with customers through digital channels see increased trust, satisfaction, and word-of-mouth referrals, which helps grow their client base.
6. Gupta and Pratik (2023) examined the influence of Ed-tech companies like Byjus and Vedantu on education. They concluded that educational websites and apps have become vital in shaping students' future. These platforms enhance learning by providing access to education for all, improving skills, and supporting the country's literacy and economic development.

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7. Saini (2023) reviewed literature on the acceptability of online degrees in India's technology sector. The study found a gap in research on how online education affects employability in this industry. Saini suggests more research is needed to understand the role of online learning in hiring and promotion decisions in the technology sector.
8. Fazal Uddin and Sikandar (2023) investigated employee perceptions of e-learning in India's IT sector. The study highlights the benefits of e-learning, such as career advancement, productivity improvements, and organizational growth. E-learning helps employees acquire new skills, stay up-to-date, and adapt to changing business environments.

RESEARCH GAP

The lack of investigation into the complex attitudes and preferences of stakeholders in the quickly changing field of educational technology is the source of the research gap in perceptions and preferences about Ed-Tech companies. Studies that already exist frequently concentrate on broad trends or certain stakeholder groups, ignoring the nuances of unique viewpoints and the dynamic interaction between preferences and perceptions. Consequently, in order to uncover the main forces behind Ed-Tech innovation and acceptance as well as the obstacles standing in the way, extensive research is required that explores the many perspectives of educators, students, parents, investors, and politicians.

Four Important Dimensions

1. **Usability and Pedagogical Alignment:**Teachers prioritise platforms that are user-friendly, intuitive, and aligned with educational principles. Tools that enhance teaching methods and streamline evaluation processes are highly valued.
2. **Personalization and Engagement:**Students prefer Ed-Tech startups that offer personalised learning pathways, engaging content, and opportunities for creativity and collaboration, making the learning experience more interactive and tailored.
3. **Data Privacy and Security:**Parents are concerned about data privacy, security, and parental controls. They prefer platforms that ensure transparency regarding educational outcomes and safety for their children.
4. **Scalability and Business Sustainability:**Investors focus on Ed-Tech startups with scalable business models, clear market positioning, and a track record of profitability and long-term growth, ensuring the venture's financial viability and expansion potential.

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

Objective of the study

The objective of the study is to explore stakeholders' perceptions and preferences towards Ed-Tech startups across key dimensions, including usability, personalisation, data privacy, and scalability.

Sample size and Sampling

The study will use a sample size of 120 participants, selected through simple random sampling to ensure a representative and unbiased selection of stakeholders involved with Ed-Tech startups.106 responses were finalised as per proper responses.

Data Analysis and Interpretation

Gender

Factors	Category	Frequency	Percent
Gender	Male	73	68.87
	Female	33	31.13
Total		**106**	**100%**

(Source: Primary Data)

The gender distribution of respondents shows that the majority are male, making up 68.87% of the sample, while females represent 31.13%. This indicates a significant gender disparity among participants, with males being more prominently represented in the study.

Age

Factors	Category	Frequency	Percent
Age	Below 20 Years	57	53.77
	20 - 30 Years	38	35.85
	Above 30 Years	11	10.38
Total		**106**	**100%**

(Source: Primary Data)

The age distribution reveals that most respondents (53.77%) are below 20 years, followed by 35.85% between 20-30 years, and 10.38% are above 30 years. This suggests that the majority of participants are younger, with a significant proportion in the below 20 years category.

Ed-Tech startups

Factors	Category	Frequency	Percent
Ed-Tech startups	Vedantu	59	55.66
	Unacademy	47	44.34
Total		**106**	**100%**

(Source: Primary Data)

The data on Ed-Tech startups shows that Vedantu is preferred by a slight majority of respondents, with 55.66% selecting it, while 44.34% prefer Unacademy. This indicates a relatively close competition between the two platforms, with Vedantu holding a marginal lead.

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

Stakeholders

Factors	Category	Frequency	Percent
Stakeholders	Students	81	76.42
	Teachers	19	17.92
	Parents	6	5.66
Total		**106**	**100%**

(Source: Primary Data)

The data on stakeholders indicates that the majority of respondents (76.42%) are students, followed by teachers (17.92%) and a small percentage of parents (5.66%). This highlights that students form the largest group of stakeholders in the study, while teachers and parents have a relatively lower representation.

Dimension 1: Usability and Pedagogical Alignment

Question 1: The platform is easy to use and navigate for both teachers and students.

Response	Frequency	Percentage
Strongly Agree	32	30.19
Agree	44	41.51
Neutral	15	14.15
Disagree	10	9.43
Strongly Disagree	5	4.72
Total	**106**	100%

(Source: Primary Data)

In the dimension of Usability and Pedagogical Alignment, responses indicate that a significant majority of users find the platform easy to use and navigate. Specifically, 71.7% of respondents either strongly agree (30.19%) or agree (41.51%) with the statement, reflecting a positive perception of usability. However, a smaller portion of users expressed neutrality (14.15%), disagreement (9.43%), or strong disagreement (4.72%), suggesting that there are some areas for improvement regarding navigation and ease of use for both teachers and students.

Question 2: The features of the Ed-Tech platform align well with my teaching/learning needs.

Response	Frequency	Percentage
Strongly Agree	30	28.30
Agree	48	45.28
Neutral	16	15.09
Disagree	9	8.49
Strongly Disagree	3	2.83
Total	**106**	100%

(Source: Primary Data)

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

For Question 2, which assesses the alignment of the Ed-Tech platform's features with teaching and learning needs, a majority of respondents (73.58%) either strongly agree (28.30%) or agree (45.28%) that the platform effectively meets their requirements. This indicates a favorable view of the platform's capabilities in supporting educational objectives. However, a notable minority remain neutral (15.09%), disagree (8.49%), or strongly disagree (2.83%), highlighting potential gaps in features that could be addressed to better serve users' specific needs.

Question 3: The platform effectively supports the delivery of educational content.

Response	Frequency	Percentage
Strongly Agree	31	29.25
Agree	45	42.45
Neutral	17	16.04
Disagree	9	8.49
Strongly Disagree	4	3.77
Total	**106**	100%

(Source: Primary Data)

For Question 3, which evaluates the platform's effectiveness in supporting the delivery of educational content, the results indicate a positive reception. A combined total of 71.70% of respondents either strongly agree (29.25%) or agree (42.45%) that the platform effectively facilitates content delivery. Meanwhile, a smaller portion of the participants remains neutral (16.04%), and even fewer disagree (8.49%) or strongly disagree (3.77%). These findings suggest that while the platform is generally perceived as effective, there may still be areas for improvement to enhance content delivery further.

Question 4: The platform enhances the teaching/learning experience by adhering to pedagogical standards.

Response	Frequency	Percentage
Strongly Agree	29	27.36
Agree	47	44.34
Neutral	18	16.98
Disagree	8	7.55
Strongly Disagree	4	3.77
Total	**106**	100%

(Source: Primary Data)

For Question 4, which assesses whether the platform enhances the teaching and learning experience by adhering to pedagogical standards, the results reflect a favourable perception among respondents. A total of 71.70% of participants either strongly agree (27.36%) or agree (44.34%) that the platform aligns well with pedagogical standards, indicating a positive impact on the educational experience.

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

Conversely, 16.98% of respondents remained neutral, while a smaller percentage disagreed (7.55%) or strongly disagreed (3.77%). This suggests that while the majority view the platform positively in terms of pedagogical alignment, there may be room for further enhancement to address the concerns of those who are less convinced.

Dimension 2: Personalization and Engagement

Question 1: The platform offers personalized learning experiences tailored to individual needs.

Response	Frequency	Percentage
Strongly Agree	35	33.02
Agree	43	40.57
Neutral	16	15.09
Disagree	7	6.60
Strongly Disagree	5	4.72
Total	**106**	100%

(Source: Primary Data)

For Question 1 under Dimension 2, which evaluates whether the platform offers personalized learning experiences tailored to individual needs, the data reveals a generally positive perception among users. A combined total of 73.59% of respondents either strongly agree (33.02%) or agree (40.57%) that the platform provides personalized learning experiences. This indicates a strong endorsement of the platform's ability to cater to individual learner needs. However, 15.09% of participants remained neutral, and a smaller proportion expressed disagreement, with 6.60% disagreeing and 4.72% strongly disagreeing. These findings suggest that while personalization is largely viewed positively, there are still users who may feel that the platform could improve in this area to better meet diverse learning preferences.

Question 2: The platform encourages student engagement through interactive tools and resources.

Response	Frequency	Percentage
Strongly Agree	34	32.08
Agree	46	43.40
Neutral	15	14.15
Disagree	7	6.60
Strongly Disagree	4	3.77
Total	**106**	100%

(Source: Primary Data)

For Question 2 under Dimension 2, which assesses whether the platform encourages student engagement through interactive tools and resources, the results indicate a positive response from users. A total of 75.48% of respondents either strongly agree (32.08%) or agree (43.40%) that the platform effectively promotes student engagement

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

through its interactive features. This suggests a strong appreciation for the platform's ability to foster active participation among learners. Conversely, 14.15% of respondents were neutral, while 10.37% expressed some level of disagreement, with 6.60% disagreeing and 3.77% strongly disagreeing. These findings imply that while engagement through interactive tools is generally well-received, there is room for improvement to ensure that all users feel fully engaged.

Question 3: The platform supports creative and collaborative learning opportunities.

Response	Frequency	Percentage
Strongly Agree	30	28.30
Agree	48	45.28
Neutral	18	16.98
Disagree	6	5.66
Strongly Disagree	4	3.77
Total	**106**	100%

(Source: Primary Data)

For Question 3 under Dimension 2, which evaluates whether the platform supports creative and collaborative learning opportunities, the data reveals a favorable perception among users. A combined total of 73.58% of respondents either strongly agree (28.30%) or agree (45.28%) that the platform effectively fosters creativity and collaboration in learning. This indicates a strong endorsement of the platform's ability to facilitate these important educational experiences. Meanwhile, 16.98% of respondents remained neutral regarding this feature, while 9.43% expressed disagreement, with 5.66% disagreeing and 3.77% strongly disagreeing. These results suggest that while the platform is generally viewed as supportive of creative and collaborative learning, further enhancements could be beneficial to ensure a more universally positive experience for all users.

Question 4: The learning content is dynamic and keeps students motivated.

Response	Frequency	Percentage
Strongly Agree	26	24.53
Agree	44	41.51
Neutral	21	19.81
Disagree	10	9.43
Strongly Disagree	5	4.72
Total	**106**	100%

(Source: Primary Data)

For Question 4 under Dimension 2, which assesses whether the learning content is dynamic and keeps students motivated, the data shows a positive response from users. A total of 66.04% of respondents either strongly agree (24.53%) or agree (41.51%) that

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

the platform's learning content is engaging and motivates students effectively. However, 19.81% of respondents remained neutral on this aspect, indicating a mixed perception. Meanwhile, 14.15% expressed some level of disagreement, with 9.43% disagreeing and 4.72% strongly disagreeing. These findings suggest that while the majority view the content as motivating, there is room for improvement to ensure that all students find it engaging and dynamic. Enhancing content variety and interactivity could further boost motivation levels among users.

Dimension 3: Data Privacy and Security

Question 1: The platform ensures the protection of my personal information and data.

Response	Frequency	Percentage
Strongly Agree	30	28.30
Agree	48	45.28
Neutral	18	16.98
Disagree	6	5.66
Strongly Disagree	4	3.77
Total	**106**	100%

(Source: Primary Data)

For Question 1 under Dimension 3, which evaluates the platform's ability to protect personal information and data, the results indicate a generally positive perception among users. **73.58%** of respondents either strongly agree (28.30%) or agree (45.28%) that their personal information is well-protected on the platform. However, **16.98%** of participants chose a neutral stance, suggesting uncertainty about data privacy measures. A small portion, **9.43%**, expressed disagreement, with **5.66%** disagreeing and **3.77%** strongly disagreeing. These findings highlight a strong overall confidence in the platform's data privacy and security measures, but the neutral responses indicate a need for clearer communication regarding data protection policies to enhance user trust further.

Question 2: The platform provides clear information on how student data is collected and used.

Response	Frequency	Percentage
Strongly Agree	27	25.47
Agree	49	46.23
Neutral	19	17.92
Disagree	8	7.55
Strongly Disagree	3	2.83
Total	**106**	100%

(Source: Primary Data)

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For Question 2 under Dimension 3, which assesses the clarity of information provided about the collection and use of student data, the results show a favorable response from users. 71.70% of respondents either strongly agree (25.47%) or agree (46.23%) that the platform offers clear information regarding data practices. However, 17.92% of respondents remained neutral, indicating some uncertainty or lack of awareness about data handling processes. A small minority of users expressed disagreement, with 7.55% disagreeing and 2.83% strongly disagreeing. Overall, while there is a strong perception of transparency regarding data collection and usage, addressing the neutral responses may further improve user confidence in the platform's data practices.

Question 3: I feel confident in the platform's security measures to protect sensitive information.

Response	Frequency	Percentage
Strongly Agree	28	26.42
Agree	46	43.40
Neutral	20	18.87
Disagree	8	7.55
Strongly Disagree	4	3.77
Total	**106**	100%

(Source: Primary Data)

For Question 3 regarding confidence in the platform's security measures to protect sensitive information, the results indicate a positive sentiment among respondents. 69.82% of participants either strongly agree (26.42%) or agree (43.40%) that they feel secure with the platform's protective measures. Meanwhile, 18.87% expressed neutrality, suggesting a degree of uncertainty or ambivalence regarding the platform's security protocols. A smaller portion of the respondents, 7.55% disagree and 3.77% strongly disagree, indicating some concerns about the adequacy of security measures. Overall, while a majority express confidence in the platform's security, addressing the concerns of neutral and dissatisfied respondents could enhance trust in data protection practices

Question 4: The platform offers adequate parental controls and safety features.

Response	Frequency	Percentage
Strongly Agree	26	24.53
Agree	44	41.51
Neutral	21	19.81
Disagree	10	9.43
Strongly Disagree	5	4.72
Total	**106**	100%

(Source: Primary Data)

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For Question 4, which assesses the adequacy of parental controls and safety features on the platform, the data indicates a favorable perception among respondents. 66.04% of participants either strongly agree (24.53%) or agree (41.51%) that the platform provides sufficient parental controls and safety features. However, a notable 19.81% remain neutral, suggesting that they may not have strong opinions or experiences regarding this aspect. On the other hand, 14.15% of respondents (combined total of disagree and strongly disagree) express concerns about the adequacy of these controls. This suggests that while a majority feel positively, there is still room for improvement in enhancing parental controls and safety features to address the concerns of the minority.

Dimension 4: Scalability and Business Sustainability

Question 1: **The platform is scalable to accommodate the growing number of users.**

Response	Frequency	Percentage
Strongly Agree	31	29.25
Agree	48	45.28
Neutral	15	14.15
Disagree	8	7.55
Strongly Disagree	4	3.77
Total	**106**	100%

(Source: Primary Data)

For Question 1, which evaluates the scalability of the platform to accommodate a growing user base, the responses reflect a generally positive perception. 74.53% of participants either strongly agree (29.25%) or agree (45.28%) that the platform is capable of scaling effectively. However, 14.15% of respondents remain neutral, indicating uncertainty or indifference regarding the platform's scalability. Conversely, 11.32% of respondents (combined total of disagree and strongly disagree) express doubts about the platform's ability to accommodate an increasing number of users. This data suggests that while the majority are confident in the platform's scalability, there is still a minority that has concerns, highlighting the need for continuous improvements and assurances regarding the platform's capacity to handle growth.

Question 2: The platform has a long-term vision for sustainability and growth.

Response	Frequency	Percentage
Strongly Agree	30	28.30
Agree	46	43.40
Neutral	18	16.98
Disagree	8	7.55
Strongly Disagree	4	3.77
Total	**106**	100%

(Source: Primary Data)

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

For Question 2, which assesses whether the platform has a long-term vision for sustainability and growth, the results indicate a strong overall confidence among respondents. **71.70%** of participants either strongly agree (28.30%) or agree (43.40%) that the platform demonstrates a commitment to sustainability and growth. Meanwhile, **16.98%** remain neutral, suggesting some uncertainty about the platform's long-term plans. On the other hand, a smaller percentage, **11.32%** (combined total of disagree and strongly disagree), express skepticism regarding the platform's vision for future sustainability and growth. These findings underscore a generally favorable perception of the platform's strategic direction while also highlighting an opportunity for improvement in communicating its long-term objectives to users.

Question 3: The business model of the platform is clear and supports continuous development.

Response	Frequency	Percentage
Strongly Agree	29	27.36
Agree	49	46.23
Neutral	16	15.09
Disagree	8	7.55
Strongly Disagree	4	3.77
Total	**106**	100%

(Source: Primary Data)

For Question 3, which evaluates whether the business model of the platform is clear and supports continuous development, the findings reveal a positive outlook among respondents. A total of 73.59% of participants either strongly agree (27.36%) or agree (46.23%) that the platform's business model is well-defined and conducive to ongoing growth and improvement. Meanwhile, 15.09% of respondents remain neutral, indicating a degree of uncertainty regarding the clarity of the business model. Conversely, a combined 11.32% (from those who disagree and strongly disagree) express dissatisfaction or confusion about the business model's effectiveness. This suggests that while most users recognize the platform's potential for continuous development, there is an opportunity to enhance communication and clarity around the business model to foster greater user confidence and engagement.

Question 4: The platform's services can adapt to different educational institutions and environments.

Response	Frequency	Percentage
Strongly Agree	32	30.19
Agree	47	44.34
Neutral	15	14.15
Disagree	7	6.60
Strongly Disagree	5	4.72
Total	**106**	100%

(Source: Primary Data)

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For Question 4, which assesses the adaptability of the platform's services to various educational institutions and environments, the results indicate a strong consensus among respondents. **74.53%** of participants either strongly agree (30.19%) or agree (44.34%) that the platform's services are flexible enough to cater to diverse educational settings. This positive feedback highlights the platform's potential for widespread application across different institutions. Additionally, **14.15%** of respondents remain neutral, reflecting some uncertainty or indifference about the platform's adaptability. Conversely, a small proportion, **11.32%** (from those who disagree and strongly disagree), indicates that they do not perceive the services as sufficiently adaptable. Overall, the data suggests that while the majority recognize the platform's versatility, there is room for improvement in demonstrating its capability to serve varied educational contexts effectively.

ANOVA

	Mean score	Std. deviation	Std. error	F	Sig.
Usability and Pedagogical Alignment	2.354	0.187	0.375	0.3268	0.8248
Personalization and Engagement	2.487	0.184	0.374		
Data Privacy and Security	2.127	0.186	0.315		
Scalability and Business Sustainability	2.159	0.177	0.385		
Total	2.189	0.150	0.373	0.327	0.825

(Source: Primary Data)

The ANOVA results provide an overview of the mean scores, standard deviations, standard errors, and significance levels for four dimensions related to stakeholders' perceptions of Ed-Tech platforms. Here's a brief interpretation:

1. **Mean Scores**: The mean scores range from 2.127 (Data Privacy and Security) to 2.487 (Personalization and Engagement). This indicates that, on average, respondents rated their perceptions of these dimensions relatively low, as the scores are below 3 on the Likert scale, suggesting a general dissatisfaction or a need for improvement in these areas.
2. **Standard Deviations**: The standard deviations indicate the variability of responses. The values are fairly close across the dimensions, with the lowest being 0.177 for Scalability and Business Sustainability and the highest being 0.187 for Usability and Pedagogical Alignment. This suggests a consistent level of agreement or disagreement among respondents.

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

3. **Standard Errors**: The standard errors reflect the precision of the mean estimates. They are relatively similar across dimensions, indicating reliable mean scores for the study.
4. **F and Significance Levels**: The F-value is 0.327, and the significance (Sig.) value is 0.825. This high p-value (greater than 0.05) indicates that there are no statistically significant differences among the mean scores of the four dimensions. In other words, stakeholders' perceptions regarding usability, personalization, data privacy, and scalability do not significantly differ from one another.

Factor Analysis

Kaiser-Meyer-Olkin Measure		.793
Bartlett's Test of Sphericity	Approx. chi-Square	241.342
	Df	41
	Sig.	0.000

(Source: Primary Data)

Factor Analysis Interpretation:

The results of the Factor Analysis provide useful insights into the relationships among the variables in your study. Here's a concise interpretation:

1. **Kaiser-Meyer-Olkin (KMO) Measure**: The KMO value is 0.793, which is considered good (above the acceptable threshold of 0.6). This indicates that the sample is adequate for factor analysis and suggests that the variables are likely to be sufficiently correlated to form distinct factors.
2. **Bartlett's Test of Sphericity**: The Bartlett's Test shows an approximate chi-square value of 241.342 with 41 degrees of freedom (df) and a significance level (Sig.) of 0.000. The p-value of 0.000 is well below the 0.05 threshold, indicating that there are significant correlations among the variables. This result suggests that the variables are not independent and supports the suitability of the data for factor analysis.

Overall Interpretation: The results suggest that the data is appropriate for factor analysis, as evidenced by the good KMO score and the significant Bartlett's Test. This indicates that the underlying structure of the data can be explored effectively, leading to the potential identification of meaningful factors that represent the dimensions of stakeholders' perceptions and preferences toward Ed-Tech startups. The successful factor analysis can help in understanding how different aspects of the platform are related and may provide valuable insights for future research and development of Ed-Tech solutions.

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

Findings

The data analysis highlights several key findings regarding stakeholders' perceptions of Ed-Tech startups. In terms of gender, the majority of respondents were male (68.87%), and most were below 20 years of age (53.77%). Among Ed-Tech platforms, Vedantu was slightly preferred over Unacademy (55.66% vs. 44.34%). The majority of stakeholders were students (76.42%), followed by teachers and parents. Usability and pedagogical alignment were positively rated, with 71.7% agreeing that the platform is easy to use and aligns with educational needs. Personalization and engagement also scored well, with 73.59% agreeing that platforms offer tailored learning experiences. However, data privacy and security, while relatively well-rated (73.58%), still indicate room for improvement. Scalability and sustainability received positive feedback, with 74.53% agreeing on the platform's growth potential.

ANOVA results revealed no significant differences between the dimensions of usability, personalization, data privacy, and scalability, indicating consistent perceptions across these areas. Factor analysis further confirmed the adequacy of the data for deeper analysis, with a good KMO value of 0.793 and significant correlations among variables, suggesting meaningful factors could be identified for further research.

Conclusion

The study concludes that while Ed-Tech platforms are generally well-received by stakeholders, particularly in terms of usability, personalization, and scalability, there is still room for improvement, especially in data privacy and security. Stakeholders, primarily students, find the platforms beneficial for their educational needs, but certain aspects like enhancing engagement and ensuring robust privacy measures need attention. Overall, the results suggest that with targeted improvements, Ed-Tech platforms can better serve the evolving demands of the educational sector and ensure a more comprehensive, secure, and engaging learning experience.

Suggestions

Based on the findings, the following suggestions can be made to improve the effectiveness and appeal of Ed-Tech platforms:

1. **Enhance Data Privacy and Security**: Platforms should implement stronger data protection measures and ensure transparent communication about data usage to build user trust.
2. **Improve Personalization**: More advanced algorithms and AI-driven tools could be integrated to offer personalized learning paths tailored to individual student needs.
3. **Boost Student Engagement**: Incorporating more interactive elements, such as gamification and collaborative learning tools, can foster greater student participation and motivation.

Submitted: 27 Aug 2024, Revised: 09 Sep 2024, Accepted: 18 Sep 2024, Published: Oct 2024

4. **Refine Usability**: Simplifying the user interface and offering clearer navigation features can enhance the experience for both students and teachers.
5. **Expand Scalability**: Platforms should ensure that their services can easily adapt to a growing user base while maintaining performance and content quality.
6. **Focus on Pedagogical Alignment**: Continuous collaboration with educators to align features with modern pedagogical practices can help improve learning outcomes and teaching efficiency.

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