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AWARENESS AND USAGE OF EDUCATIONAL APPS IN RELATION TO HEUTAGOGY OF UNDERGRADUATE STUDENTS

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ABSTRACT

Educational apps are mobile applications considered to educate in some way or the other. These are specifically crafted to provide valuable learning experiences and knowledge improvement to their users. There is a vast variety of such apps available in the society. Education apps are a way to inspire student's minds while keeping them interested with fun gamification and creative learning methods. The usage of educational apps such as pictures and videos can complement the study attention outside of the classroom, which in time can imitate on better grades and a development in academic performance. Heutagogy is the organization of learning for self-managed learners. Pedagogy, andragogy, and heutagogy, recreated in an accessible format from teach believed. The study aims were to investigate awareness and usage of educational apps in relation to heutagogy of undergraduate students. In this study 773 undergraduate students from government, government aided, and private colleges in Salem district. Stratified random sampling technique used in the study and survey method was adopted for the study. The awareness and usage of educational apps scale was developed by the investigator. It contains twenty-seven items. The reliability value was 0.859. The heutagogy scale was prepared by the investigator and thirty items. The reliability value was 0.847. The data collected were subjected to statistical technique like percentage analysis, t-test, ANOVA and correlation. The findings of the study there was significant relationship between awareness and usage of educational apps have positive correlation with heutagogy of undergraduate students.

KEYWORDS: *awareness, educational apps, heutagogy, undergraduate students*

INTRODUCTION

Technology has rapidly exploded in education during the global epidemic. With technology on every profession is learning about more development of new knowledge. Technology has been used in education; however, the use of educational applications was restricted. It started out as an option but is now required. This increased adoption of mobile apps for educational software development enabled firms, particularly in the education sector, to new heights. (Dayna Serxner, 2022). Clearly, there was a great demand for technology tools and stages that enabled teachers to part of their courses, maintain records of their students' progress, or communicate with them during required distance learning. Technology-assisted education and learning just accelerated up, simplified, and made the process easier. Using the most of apps has become essential for both teachers and students at many schools. (Itesh Sharma, 2010). The study of self-determined learning is known as heutagogy. Furthermore, it's an effort to challenge some of the teacher-centered learning paradigm's fundamental ideas about education. Considering the rapid pace of innovation and the ways that societies and workplaces are changing, heutagogy expects a time when learning will be an essential capacity. For highly motivated, self-directed learners who do best in an exploratory, open-ended learning environment, this is the appropriate learning method.

REVIEW OF LITERATURE

According to Lara Hoareau and Youssef Tazouti (2024) stated that effect of teachers' acceptance of an educational apps on students' primary knowledge and early proficiency skills. Results revealed a significant difference between the students' post-test e primary knowledge and early proficiency skills scores and their teachers' awareness of the app's usability. The results also showed that taking teachers' acceptance into account is an interesting opportunity to better understand the potential effectiveness of educational apps in school settings. Aadi Swadipto Monda (2023) analyzed user reviews of collaborative educational apps of a sentiment investigation method. The results indicated that education apps that do not integrate augmented truth are receiving higher user approval than apps that integrate these developing knowledges. According to Silvia Handayani; Lewes Peddell; Tony Yeigh (2023) revealed that the participants' skills in heutagogy teacher professional instruction. Conclusion of the study there were significant difference between for enhancing

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teachers' professional education in Indonesia, mostly in terms of the efficiency of heutagogy-informed methods compared to traditional approaches of teacher training programme. Handayani, et al (2022) conductive study on heutagogy approach to promoting teacher capabilities. The findings obtained that the heutagogy technique in this study was probable to be significant for improving teacher capabilities.

Operational definitions of the key terms

Awareness and Usage of educational apps

The educational apps are is software that facilitates it possible to teach virtually. It is not only for students; it is also for applicants, teachers, experts, virtual classrooms, and anyone else looking to enhance their knowledge or abilities. Education apps offer the following benefits of online learning: a controlled environment, no physical communication, flexibility in learning, and simple use.

Heutagogy

Heutagogy is an innovative method to education that inspires students to take care of their own education by encouraging the self-directed learning. The needs of students in the twenty-first century can be met by heutagogy, especially when it comes to enhancing their own abilities.

Undergraduate Students

Undergraduate students are individuals enrolled in a college or university who are pursuing their first degree, typically a bachelor's degree. The term undergraduate distinguishes them from graduate students, who are pursuing advanced degrees like a master's or doctorate. Undergraduate programs usually last three to four years and cover a broad range of subjects, including general education and courses specific to a student's chosen major or field of study.

OBJECTIVES OF THE STUDY

- To study the level of awareness and usage of educational apps and heutagogy of undergraduate students
- To assess the significant difference in the awareness and usage of educational apps and heutagogy of undergraduate students with respect to sub samples gender, locality, types of device
- To find out the significant relationship between awareness and usage of educational apps and heutagogy of undergraduate students.

HYPOTHESES OF THE STUDY

- The level of awareness and usage of educational apps and heutagogy of undergraduate students was moderate
- There is no significant difference in the awareness and usage of educational apps and heutagogy of undergraduate students with respect to sub samples gender, locality, types of device
- There is no significant relationship between awareness and usage of educational apps and heutagogy of undergraduate students.

RESEARCH METHODOLOGY

Method

The survey method adopted for the study

Sampling Technique

The stratified random sampling technique method was used. The data was collected from boys and girls of arts and science colleges.

Population and Sample

Population of the study consisted undergraduate students in Salem district. They were selected randomly from each college.

Sample Size

773 undergraduate students were taken for this investigation. They were from government, government-aided and private colleges.

Tools Used for the Present Study

Investigator used the following tools for the collection of data.

- Awareness and usage of educational apps scale
- Heutagogy Scale

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Pilot Study

Awareness and usage of educational apps scale consists of 27 items. The Heutagogy Scale consists of 30 items intended for the pilot study was administrated to the sample of 100 undergraduate students studying arts and science colleges in Salem District, Tamil Nadu. Then, the responses have been scored carefully, and the marks secured by all the undergraduate students have been noted.

Awareness and usage of educational apps scale

Awareness and usage of educational apps scale was developed by the investigator of undergraduate students containing twenty seven items and six dimensions viz, performance expectancy, effort expectancy, social influence, voluntariness of use, facilitating conditions, perceived playfulness. The maximum scale value: 135, Minimum value: 27. The reliability value is 0.859.

Heutagogy scale

Heutagogy scale was developed by the investigator of undergraduate students containing thirty items and six dimensions viz, explore, create, collaboration, connect, share, reflect. The maximum scale value: 150, Minimum value: 30 The reliability value is 0.847.

DATA ANALYSIS AND RESULTS

Ho:1 To study the level of awareness and usage of educational apps and heutagogy of undergraduate students

Table -4.1 showing level of awareness and usage of educational apps and heutagogy of undergraduate students

Dimensions	Total Sample	Low		Moderate		High	
		N	%	N	%	N	%
Awareness and usage of educational apps	773	143	18.49	463	59.89	167	21.60
Heutagogy		152	19.66	415	53.68	206	26.64

- Low level of undergraduate students 143 (18.49%), moderate level of undergraduate students 463 (59.89%) while high level of undergraduate students 167 (21.60%) in the awareness and usage of educational apps of undergraduate students.
- Low level of undergraduate students 152 (19.66%) moderate level of undergraduate students 415 (53.68%) while high level of undergraduate students 206 (26.64%) in the heutagogy of undergraduate students.

Ho:2 There is no significant difference between awareness and usage of educational apps and heutagogy of undergraduate students with respect to sub samples gender, locality, types of device

AWARENESS AND USAGE OF EDUCATIONAL APPS

[A] Gender

Table – 4.2 showing awareness and usage of educational apps of undergraduate students with respect to gender (Male – 353, Female – 420)

AUEA	Mean	S D	t value	p value
Performance expectancy	27.30	4.617	2.242	0.015**
	28.63	4.920		
Effort expectancy	20.70	3.272	2.502	0.023**
	22.25	4.523		
Social influence	16.77	3.558	2.546	0.017**
	17.57	4.778		
Voluntariness of use	24.26	4.663	0.259	0.865*
	24.29	4.927		
Facilitating conditions	16.43	3.385	2.156	0.027**
	16.86	4.043		
Perceived playfulness	22.17	4.517	3.162	0.005**
	23.45	5.288		

Interpretation

The results showed that above table a significant difference between male and female undergraduate students with respect to performance expectancy, effort expectancy, social influence, facilitating conditions, perceived playfulness at <0.05 level. Hence, the formulated null

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hypothesis is not accepted. But not a significant difference is observed between male and female undergraduate students with respect to voluntariness of use at >0.05 level. Hence, the formulated null hypothesis is accepted.

Conclusion

- Male and female undergraduate students do differ in the dimensions performance expectancy, effort expectancy, social influence, facilitating conditions, perceived playfulness of awareness and usage of educational apps
- Male and female undergraduate students do not differ in the dimension voluntariness of use of awareness and usage of educational apps

[B] Locality

Table – 4.3 showing awareness and usage of educational apps of undergraduate students with respect to locality (Rural – 508, Urban – 265)

AUEA	Mean	S D	t value	p value
Performance expectancy	30.81	5.264	17.850	0.000**
	25.87	2.525		
Effort expectancy	22.28	4.155	6.827	0.000**
	23.39	3.766		
Social influence	18.36	4.274	8.421	0.000**
	15.72	4.034		
Voluntariness of use	26.24	3.923	14.267	0.000**
	22.15	4.639		
Facilitating conditions	18.61	3.727	16.935	0.000**
	14.90	2.856		
Perceived playfulness	24.26	4.527	15.424	0.000**
	20.59	4.487		

Interpretation

The results showed that above table a significant difference between rural and urban undergraduate students with respect to performance expectancy, effort expectancy, social influence, voluntariness of use, facilitating conditions, perceived playfulness at <0.05 level. Hence, the formulated null hypothesis is not accepted.

Conclusion

- Rural and urban undergraduate students do differ in the dimensions performance expectancy, effort expectancy, social influence, voluntariness of use, facilitating conditions, perceived playfulness skill of awareness and usage of educational apps

[C] Types of Device

Table – 4.4 showing the awareness and usage of educational apps of undergraduate students with respect to types of device

Dimensions	Sum of Squares	Df	Mean Square	F	Sig.
Performance expectancy	1760.677	2	930.339	43.973	0.000**
	19234.378	770	21.167		
	21355.055	772			
Effort expectancy	371.703	2	186.341	11.530	0.000**
	14779.354	770	15.162		
	15202.056	772			
Social influence	557.604	2	277.756	15.349	0.000**
	16587.142	770	17.149		
	17234.826	772			
Voluntariness of use	167.423	2	839.693	39.218	0.000**
	18702.983	770	21.416		
	21272.379	772			

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Facilitating conditions	617.863	2	309.432	22.603	0.000**
	13594.442	770	12.690		
	12213.304	772			
Perceived playfulness	810.085	2	404.041	16.549	0.000**
	21530.784	770	23.490		
	22350.869	772			

Interpretation

The results showed that above table a significant difference between different types of device undergraduate students with respect to performance expectancy, effort expectancy, social influence, voluntariness of use, facilitating conditions, perceived playfulness skill at <0.05 level. Hence, the formulated null hypothesis is not accepted.

Conclusion

- Undergraduate students from different types of device do differ in the in the dimensions performance expectancy, effort expectancy, social influence, voluntariness of use, facilitating conditions, perceived playfulness of awareness and usage of educational apps.

HEUTAGOGY

[D] Gender

Table – 4.5 showing heutagogy of undergraduate students with respect to gender (Male – 353, Female – 420)

Heutagogy	Mean	S D	t value	p value
Explore	27.63	4.452	1.344	0.067**
	28.22	5.035		
Create	21.06	4.143	1.012	0.548**
	22.30	3.993		
Collaboration	17.86	4.085	0.468	0.321**
	16.23	4.523		
Connect	24.75	4.347	0.045	0.113**
	23.28	5.186		
Share	15.89	3.672	0.303	0.421**
	16.73	3.870		
Reflect	21.71	4.956	1.688	0.284**
	23.37	5.086		

Interpretation

The results showed that above table not a significant difference between male and female undergraduate students with respect to explore, create, collaboration, connect, share, reflect at >0.05 level. Hence, the formulated null hypothesis is accepted.

Conclusion

- Male and female undergraduate students do not differ in the dimensions explore, create, collaboration, connect, share, reflect of heutagogy.

[E] Locality

Table – 4.6 showing heutagogy of undergraduate students with respect to locality (Rural – 508, Urban – 265)

Heutagogy	Mean	S D	t value	p value
Explore	28.27	4.524	4.630	0.001**
	28.47	5.356		
Create	22.52	3.987	0.854	0.317*
	22.38	4.490		
Collaboration	16.54	3.847	4.952	0.002*
	18.63	5.431		
Connect	24.38	4.383	1.688	0.530*

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	24.76	6.126		
Share	16.50	3.391	2.365	0.002**
	17.54	4.954		
Reflect	22.87	4.667	3.613	0.001**
	24.32	5.984		

Interpretation

The results showed that above table a significant difference between rural and urban undergraduate students with respect to explore, share, reflect at <0.05 level. Hence, the formulated null hypothesis is not accepted. But not a significant difference between rural and urban undergraduate students with respect to create, create, collaboration, connect at >0.05 level. Hence, the formulated null hypothesis is accepted.

Conclusion

- Rural and urban undergraduate students do differ in the dimensions explore, create, collaboration, connect, share, reflect of heutagogy.
- Rural and urban undergraduate students do not differ in the dimensions create and connect of heutagogy.

[F] Types of Device

Table – 4.7 showing heutagogy of undergraduate students with respect to types of device

Dimensions	Sum of Squares	Df	Mean Square	F	Sig.
Explore	224.650	2	110.725	3.876	0.007**
	20101.456	770	22.925		
	21325.034	772			
Create	426.441	2	218.213	11.931	0.001**
	14825.656	770	15.105		
	15142.076	772			
Collaboration	334.139	2	166.067	8.184	0.003**
	16820.625	770	17.391		
	17254.796	772			
Connect	28.344	2	15.654	1.652	0.542*
	21353.138	770	22.220		
	21372.279	772			
Share	240.996	2	121.995	7.582	0.000**
	12961.320	770	14.098		
	13233.383	772			
Reflect Between Groups	324.523	2	162.261	5.476	0.002**
	23076.327	770	25.018		
	22370.867	772			

Interpretation

The results showed that above table a significant difference between different types of device undergraduate students with respect to explore, create, collaboration, share, reflect of heutagogy at <0.05 level of significance. Hence, the formulated null hypothesis is not accepted. But not a significant difference between different types of device undergraduate students with respect to connect at >0.05 level of significance. Hence, the formulated null hypothesis is accepted.

Conclusion

- Undergraduate students from different types of device do not differ in the dimension connect of heutagogy.
- Undergraduate students from different types of device do differ in the dimensions explore, create, collaboration, share, reflect of heutagogy.

Ho: 3 There is no significant relationship between the awareness and usage of educational apps and heutagogy of Undergraduate Students.

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Table -4.8 showing the correlation coefficient of awareness and usage of educational apps and heutagogy of Undergraduate Students

Variables	Pearson Correlation "r" Value	P value	Level of Significance
Awareness and Usage of Educational Apps and Heutagogy of Undergraduate Students	0.742	0.001**	Significant at 0.01 level

Interpretation

- The awareness and usage of educational apps have positive correlation with heutagogy of undergraduate students.

Conclusion

- There is a significant relationship between educational awareness and usage of educational apps have positive correlation with heutagogy of undergraduate students.

FINDINGS OF THE STUDY

The study titled was awareness and usage of educational apps of undergraduate students in relation to their heutagogy. The researchers adopted survey method. 773 undergraduate students in Salem district were selected and stratified random sampling technique used for the study. Two research questionnaires were used to collect the required data. The study revealed that the awareness and usage of educational apps and heutagogy of undergraduate students was moderate. The findings also showed that the there was a significant relationship between awareness and usage of educational apps have positive correlation with heutagogy of undergraduate students. Technology integration has improved the convenience and enjoyment of learning. Since students may now learn from recognized teachers situated all over the world and have access to a new platform. It is also known as long-distance learning. We've covered a number of these educational technology apps' advantages in the blog. The varying levels of awareness, influenced by factors like the students' fields of study, the availability of technology, and promotional efforts by app developers and identify the most commonly recognized educational apps, such as Duolingo, Khan Academy, Coursera, and Quizlet.

Recommendations

- **Enhancing Awareness**: Institutions should promote educational apps through workshops, orientations, and integrating them into course syllabi.
- **Supporting Usage**: Providing access to devices and internet, especially for underprivileged students, can bridge the digital divide.
- **Encouraging Heutagogy**: Educators should design courses that incorporate heutagogical principles, using apps to facilitate self-directed learning.

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