

Varied Classifier User Technology Acceptance Model (Vcutam)

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ABSTRACT

This research paper has shown the usefulness and versatility of Varied Classifier User Technology Acceptance Model (VCUTAM), a novel model design in extending previous user acceptance model through the inclusion of classifier as a means of determining varied user acceptance level. The model encompasses four parameter variables: time usage, swot rate, social publicity and environmental enhancer with three associated labels: age, experience and qualification respectively. The model will enhance organizational resources both material and manpower.

Keywords: Model, User, Acceptance, Technologies, User-Acceptance.

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I. INTRODUCTION

The versatility of computers and its associated peripherals has pursued industries, organizations into adopting and adapting computer information systems and software application in meeting respective organizational needs[1]. This needs varied from employee recruitment, staff registration, staff remuneration, promotional exercises and the management of material resources within the organizations. The aforementioned has pursued organizations into the implementation of these resources[3];[1]. Overtime it has been observed that despite huge investment in these technologies, organization manpower personnel have allowed the obsolete degradation of these novel technologies due to lack of experience, skills, incentives and technical competence[3]. These voluntarily and involuntarily usage has resulted in huge financial and material loss to the organization. This has prompted the adoption and utilization of user technology acceptance models in ascertaining not only user acceptance but utilization of these technological systems[8].

User Technology Acceptance models are developed with the aim of determining user acceptance of novel technologies or systems. These models try to determine user accept and use of technology using predominant parameter variables responsible for user acceptance of a particular system, knowing the usefulness and successful implementation of information system cutting across several applications (word documents, spreadsheet) enhances organization productivity[3];[5]. These models have been designed and implemented by several researchers. Although several models have been designed, implemented and validated, none have really addressed user acceptance of these novel technology from the perspective of varied acceptance levels

This research paper proposes a novel User Acceptance Model: Varied Classifier User Technology Acceptance Model (VCUTAM) with the aim of achieving varieties in user acceptance level.

II. REVIEW OF RELATED WORK

This section spans several researches on User Acceptance Models. It also covers comprehensively user acceptance model application and associated demerits. This section covers authors, goals, strength/finding of research, limitation/weakness/further researches. Table 2.1 provides these literatures.

Table 2.1: Research work on user Acceptance Model

SN	Author (Year) Title	Goal	Strength/ Finding	Limitation/ Weakness	Further Research
1.	Hussain (2013) A Questionnaire Approach Based On The Technology Acceptance Model For Mobile Tracking On Patient Progress Applications	Using questionnaires to ascertain user acceptance of Mobile Health Application	Provide a suitable approach in mobile tracking on patient progress	i. No model was proposed or developed ii. No assessment of user acceptance from varied boundaries	i. Model base implementation of proposed ideas. ii. Varied classification.
2.	Kai et al., (2007) Evaluation of Healthcare IT Applications: The User Acceptance Perspective	Understand the antecedents of end users' IT adoption decisions	Structurally discussed Technology Acceptance Model (TAM)	i. No questionnaires based assessment of user acceptance ii. focuses solely on TAM model	i. The analysis of varied Acceptance Model ii. varied classification
3.	Sahar (2012) Acceptance Theory on Mobile Services and Applications	Investigating sufficiency in User intention and prediction of behavior	Result indicate that conventional acceptance theories will not provide insight into user behaviors	No questionnaires based assessment of user acceptance ii. focuses solely on TAM model	i. Another factors should be considered user service perception and technology characteristics ii. The analysis of varied Acceptance Model iii. varied classification.
4.	Patrícia and Guilherme (2007) Theories About Technology Acceptance: Why The Users Accept Or Reject The Information Technology	Investigative review of Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB) and finally Technology Acceptance Model (TAM), model	Three model were reviewed with associated Acceptance Model	Non indicator of other primary factor in assessing user acceptance	i. Model base implementation of proposed ideas. ii. Varied classification.
5.	Hartmann (2013) User Acceptance of Customer Self-Service Portals	Assessment of users towards an online customer self-service portal,	Perceived usefulness enhances user attitude toward online portal with 50%.	Research result useful only for portal application.	i. Model base implementation of proposed ideas. ii. Varied classification.

The research work reviewed from Table 2.1 captures some fundamental issues which has prompt this research in proposing a novel model. This literature was mostly descriptive with little attention paid to varied classification of user acceptance. Therefore base on the limitation of these literatures, it is the intent of this research paper to provide a model assessing user technology acceptance taking cognizant of relevant point.

III. VARIED CLASSIFIER USER TECHNOLOGY ACCEPTANCE MODEL (VCUTAM)

The proposed Varied Classifier User Technology Acceptance Model (VCUTAM) is an extension of user acceptance model using novel integrals variable, labels and indicator. The model aim at classifying user acceptance of novel technologies based on four fundamental parameter variables: Usagetime, Swot Rate, Social Publicity and Environmental Enhancer. These parameter variables are complemented along predominant labels: Age, experience and Qualification in returning *Aloof system user*, *Relative System User* and *Ardent system User*. Figure 3.1 portrays graphically the Varied Classifier User Technology Acceptance Model (VCUTAM)

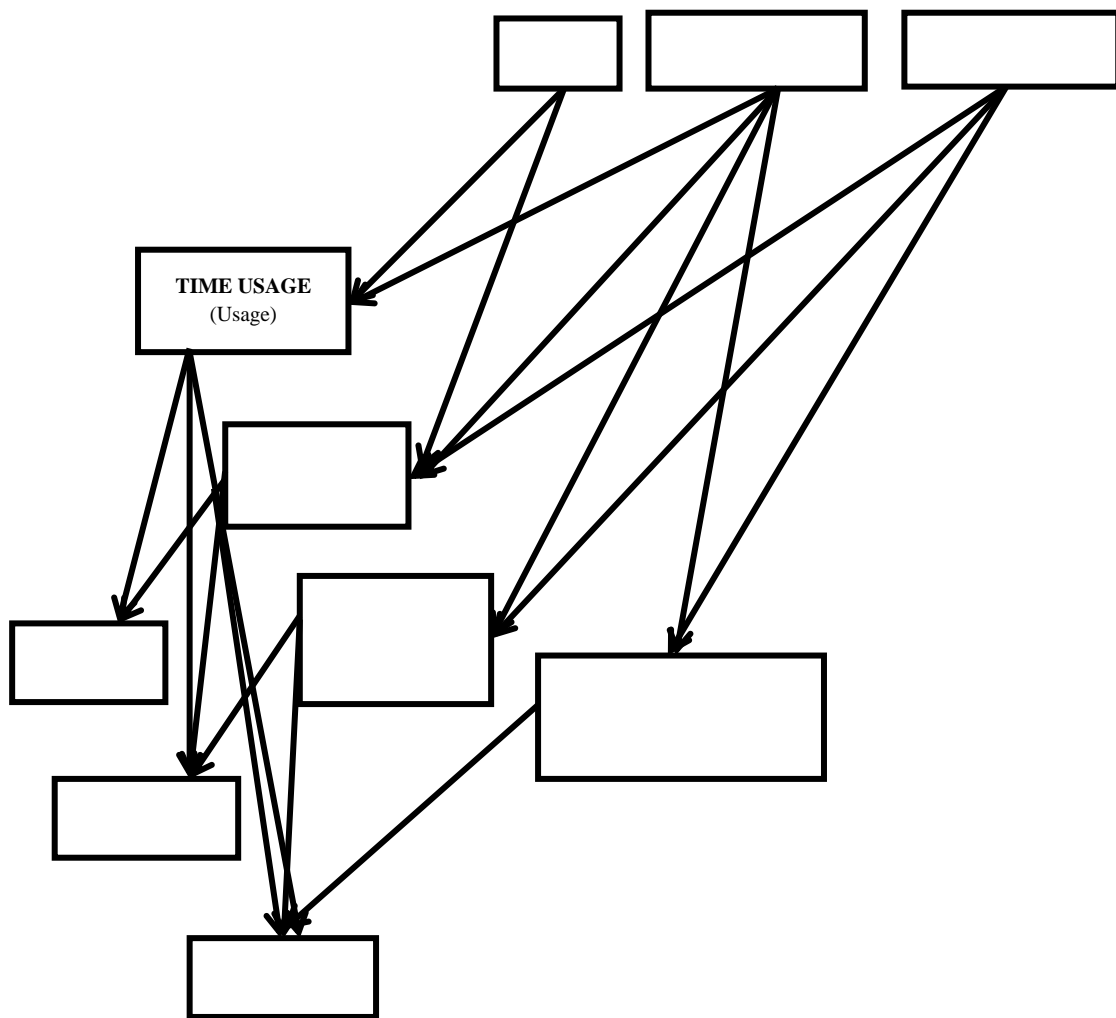


Figure 3.1: Varied Classifier User Technology AcceptanceModel (VCUTAM)

The actual classification of the Varied Classifier User Technology Acceptance Model (VCUTAM) is addressing using classifier rules with associated permutation. Giving the Parameters Variables J and associated label Y, the VCUTAM produces a total of J^Y rules with each rule identifying a cognizance output classification, identifying ALOOF, RELATIVE, and ARDENT. Age as label enhances TimeUsage and SwotRate, Experiences as alabel enhances TimeUsage, SwotRate, Social Publicity and Environmental Enhancer. Qualification as a label enhances SwotRate, Social Publicity and Environmental Enhancer. The parameter variables are explained as follow:

- a. **Time Usage:** Time usage determines the length of time spent using the system. This parameter variable is complemented by age and experiences. Therefore the experience and age of a user determine the length of time, spent suing the system.
- b. **Swot Rate:** The Swot Rate determines the rate of learning the system. This parameter variable is complemented by age, experiences and qualification. Therefore the experience, age and qualification play an integral role in determining how quickly a user will learn a particular system.
- c. **Social Publicity:** Social Publicity determines the ease with which a user publicity the system. This parameter variable is complemented by experiences and qualification. Therefore experience and qualification play an integral role in determining how quickly a user will publicize the system.
- d. **Environmental Enhancer:** Environmental enhancer promote external indicator that enhances the usage of the novel system. This parameter variable is complemented by, experiences and qualification. Therefore the experience and qualification play an integral role in determining how quickly a user will support the system even with external interest.

IV. DISCUSSION

The novel model: Varied Classifier User Technology Acceptance Model (VCUTAM) was designed with the solely aim of classifying user acceptances. This model complemented and extensive previous user acceptance model through the creation of model eccentric parameters, labels and moderators. This model on full implementation will address

- a. Prompt classification of user acceptance technology level
- b. Forecast for novel and existing information system application
- c. Identification of efficient employee
- d. Management of manpower resources

V. CONCLUSION

A novel approach in addressing user technology acceptance has been designed with acceptance level as an added ingredient enhancing user acceptance. The Varied Classifier User Technology Acceptance Model (VCUTAM) encompasses four parameter variables: time usage, swot rate, social publicity and environmental enhancer with associated labels: age, experience and qualification respectively. The associated parameters and label produces three adjoining output: aloof, relative and ardent system users. The associated benefit is indeed notable for this model.

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