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Technology Adoption Models – Systematic Review

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1 Introduction

The aim of the TE(A)CHADOPT project is to provide guidelines for assessing the accessibility of technologies used by children with neurodevelopmental disorders. A major goal of the project is to close the knowledge gap among technology developers by promoting awareness and competence in designing accessible technologies. By teaching key accessibility principles to students - future developers - we aim to ensure that technological solutions are better aligned with the wants and needs of this user group.

In this context, understanding how users adopt and interact with technology is critical. Numerous theoretical models have been developed to explain the factors that influence technology adoption across different domains and user groups. However, the increasing complexity of technology ecosystems and the diversity of users - especially those with special needs - call for a critical examination of how these models are applied, extended, and validated.

This report presents the results of a systematic literature review of technology adoption models published since 2010. The aim is to synthesize current knowledge by addressing five research questions regarding: (1) the most commonly used technology adoption models, (2) the domains in which they are applied, (3) the targeted user groups, (4) the constructs and moderating variables used, and (5) the statistical validation methods employed. This review provides a comprehensive overview of current practices and lays the groundwork for tailoring adoption models to the context of accessibility for children with neurodevelopmental disorders.

2 Research method

A systematic literature review was conducted to capture the state of the art in the domain of technology adoption models. The process involved the following steps: (1) formulating the research questions, (2) selecting appropriate search engines and defining inclusion and exclusion criteria, (3) specifying keywords and constructing the search string, (4) extracting and selecting relevant papers, and (5) analyzing the selected papers to answer the research questions. This study follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines [2].

2.1 Research questions

The aim of this study was to identify key prior research addressing various aspects of technology adoption models. This led to the formulation of five research questions:

RQ1. What are the known and used technology adoption models?
RQ2. Where have technology adoption models been used?
RQ3. Which technology adoption models are applied to different user groups?
RQ4. What constructs and moderating variables are used in technology adoption models?
RQ5. What statistical methods and validation measures are used to develop and evaluate technology adoption models?

The first research question aims to identify the range of existing technology adoption models and their prevalence. The second and third questions address the contexts in which these models have been applied, focusing on application domains and target user groups, respectively. Given our emphasis on understanding the key components of technology adoption models, the fourth question explores the constructs and moderating variables used within them. The fifth research question aims to identify the statistical methods and validation measures employed in the development and evaluation of these models. Through these questions, the study aims to synthesize current knowledge on technology adoption models and their practical applications in the existing literature.

2.2 Search engines and inclusion criteria

Five scientific databases were used to ensure comprehensive coverage of technical and medical literature: Scopus, Web of Science, IEEE Xplore, PubMed, and the ACM Digital Library. The first three are widely used in the engineering sciences, while the latter two are well established in the medical research community. Inclusion criteria were defined to consider journal articles and peer-reviewed conference papers published since 2010. The year 2010 was chosen as a starting point in order to focus on the most recent developments and to provide an up-to-date overview of the field. In addition, the large volume of earlier publications made it impractical to include older studies in the scope of this review. Papers written in languages other than English were excluded. Also excluded were studies that focused on technology adoption in organizational or industrial contexts, short communications, and research on non-interactive technologies.

2.3 Keywords and search string

The defined keywords were grouped into clusters related to technology (technology; software; systems), adoption (adoption; adaptation; adopt; acceptance), models (model; framework; theory) and users. Due to the vast number of search results – tens of thousands – when searching the entire content, the search was narrowed to article titles to ensure a more manageable and relevant set of results.

```
(technology OR software OR systems)
AND (adoption OR adaptation OR adopt OR acceptance)
AND (model OR framework OR theory) and user
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Each scientific database uses its own search engine, which results in different query formats. For example, the query for IEEE Xplore is formatted as follows:

```
("Document Title":technology OR
 "Document Title":software OR
 "Document Title":system* OR
AND ("Document Title":adoption OR
     "Document Title":acceptance
AND ("Document Title":model OR
     "Document Title":framework* OR
     "Document Title":theor*
 AND ("Document Title":user* ))
```

The number of records obtained for each database and search field in the initial search and after removing duplicates is shown in the Table 1.

Table 1. Number of results obtained for each database

Database	Search results	After duplicates removed
Scopus	293	90
Web of Science	204	182
IEEE Explore	54	36
ACM Digital Library	25	8
PubMed	24	0
Total	**602**	**346**

2.4 Papers extraction and selection

The paper extraction and selection process was carried out in three distinct phases. The first two phases were conducted in February 2025 to identify the most recent and relevant studies, while the third phase was conducted in March 2025. In the first phase, papers were manually screened based on their titles. In the second phase, screening was based on abstracts. Each paper was independently rated by five reviewers (authors of this study) using a three-point relevance scale: 2 - definitely include, 1 - uncertain, and 0 - definitely exclude. Decisions to advance papers to subsequent stages were based on the sum of the individual scores.

During the first phase, papers with a cumulative score of 9 or higher were automatically advanced to the third phase, while those with a score of 3 or lower were excluded. The remaining papers were re-evaluated in the second phase. In this phase, papers with a cumulative score of 5 or higher were accepted into the third phase, while those with a score below 5 were excluded.

After the second phase, a total of 230 papers were considered relevant. In the third phase, the full texts were evaluated. Thirty-one articles were excluded at this stage due to lack of access to the full manuscript, non-English language or inappropriate document type (e.g. dissertations). As a result, 199 articles were selected for in-depth analysis.

2.5 Tagging phase

Tagging of the selected papers was conducted in March 2025 by thirteen independent raters, all of whom were co-authors of this report. All articles that passed the selection process were listed in a shared spreadsheet, which included relevant metadata and access links. Each rater was assigned a subset of papers for analysis. For each article, data were extracted based on the content of the paper across eight predefined dimensions aligned with the research questions. Each dimension was documented in a separate sheet within the shared spreadsheet to facilitate organized data collection and subsequent analysis.

To address RQ1 the selected articles were analyzed in terms of the acceptance models the described. Each article was categorized as 1) applying one or more acceptance models 2) extending an existing model or 3) being a review article. To facilitate this process, the most used acceptance models were first identified and listed as column in a spreadsheet. Reviewers than indicated whenever each article addressed one or more of the listed models. If an article discussed a model. that was not already included its name was added in the “Other” column.

To explore RQ2, the chosen articles were examined with respect to the fields in which acceptance models have been implemented. The most frequently occurring fields were recognized and organized as columns in a spreadsheet. Reviewers then marked each article to indicate whether it covered one or more of these specified fields. If an article referred to a field not previously captured, it was documented in the “Other” column.

In response to RQ3, the selected articles were reviewed based on the specific user groups to which the adoption models were applied. The most frequently studied user groups were compiled and entered as columns in a spreadsheet. For each article, reviewers noted the relevant user group(s) by marking the appropriate columns. If a particular article did not specify a user group, the corresponding column was left unchecked.

In addressing RQ4, the selected articles were evaluated based on the constructs and external factors they incorporated. To facilitate this analysis, the most used constructs, along with four primary moderating variables (gender, age, experience, and voluntariness), were initially identified and added as columns in a spreadsheet. Reviewers then marked each article to indicate which constructs or variables were considered. If an article introduced a construct or moderating variable not already listed, it was recorded in the “Other” column.

To address RQ5, the selected articles were reviewed with a focus on the statistical methods and validation procedures employed. The most frequently used methods were identified and organized as columns in a spreadsheet. Reviewers then indicated which statistical, or validation approaches were applied in each article. If an article utilized a method not already included in the list, it was documented under the "Other" column.

3 Results

The following section presents the findings of the analysis, structured according to the Research Questions posed in this study.

3.1 RQ1. What are the known and used technology adoption models?

Over the past decade, substantial progress has been achieved in understanding and predicting the user acceptance of technology. Technology acceptance research has yielded numerous competing models, each proposing different determinants of acceptance. Among these, the Technology Acceptance Model (TAM) has emerged as the most widely adopted framework for evaluating and enhancing the predictive power of technology usage behaviors.

Below, before presenting the results of the literature review, the most popular models of technology adaptation are described.

TAM – Technology acceptance model. Davis (1989) introduces the Technology Acceptance Model (TAM) with two theoretical constructs, perceived usefulness and perceived ease of use, which are theorized to be fundamental determinants of system use [57], [58]. While TAM being the most well known technique for technology acceptance, understanding and creating the conditions under which information systems are adopted by human organizations still remains as an area of high priority research [185]. For this reason, TAM2 was introduced as an extention to TAM. TAM2 expands upon the original TAM by integrating two key categories of determinants such as Social Influence Processes (subjective norm, voluntariness, and image), and Cognitive Instrumental Processes (job relevance, output quality, result demonstrability, and perceived ease of use).

UTAUT – Unified theory of acceptance and use of technology. The Unified Theory of Acceptance and Use of Technology (UTAUT) model was proposed as a unification of eight prominent models related to technology acceptance (including TAM/TAM2, TRA, TPB/DTPB, MPCU, IDT, SCT, C-TAM-TPB)[186]. The UTAUT model identifies four core determinants of user intention and usage behavior: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). These relationships are moderated by up to four key factors: gender, age, experience, and voluntariness of use.

UTAUT2 – Unified theory of acceptance and use of technology. UTAUT model was more focused on the workplace setting. UTAUT2 is developed as an extension of the UTAUT model, to better explain technology acceptance in a consumer context as opposed to UTAUT [187]. The new model adds three new constructs, Hedonic Motivation (HM), Price Value (PV), and Habit (HT) and drops the variable "voluntariness of use" as it is less relevant in consumer contexts.

TTF – Task-Technology Fit. The Task-Technology Fit (TTF) model, introduced by Goodhue and Thompson (1995), suggests that technology enhances individual performance positively only when its functionalities align closely with the specific requirements of supported tasks [76]. This alignment between task characteristics and technological capabilities not only facilitates improved performance, but also increases the likelihood of technology utilization. The model emphasizes three core components: task characteristics, technology characteristics, and the resultant task-technology

fit. A high degree of task-technology fit suggests that users are more inclined to adopt the technology, leading to more effective and efficient task execution.

TRA – Theory of reasoned action. The Theory of Reasoned Action (TRA) model proposed by Fishbein and Ajzen (1975) aims to explain the relationship between attitudes, intentions, and behaviors [10, 69]. According to TRA, the best indicator of an individual's engagement in a behavior is their intention to engage in it, and this behavioral intention is primarily influenced by their attitudes toward that behavior and by subjective norms about that behavior. While attitudes are influenced by beliefs about the consequences of the behavior and how those consequences are evaluated, subjective norms are shaped by the expectations of the individual's social environment and their motivation to comply with them. TRA suggests that stronger intentions lead to greater effort to engage in a behavior, so the model is often used to study the voluntary behavior of individuals.

TPB – Theory of planned behavior. The Theory of Planned Behavior (TPB) is an extension of the TRA proposed by Ajzen (1985) who recognized the importance of the volitional control in forming intentions and engaging in a behavior. He suggested to include the perceived behavioral control as a third construct for behavioral intention [9]. Perceived behavioral control represents an individual's perception of how much control they have over their behavioral performance, which is determined by control beliefs about facilitating/hindering factors to perform and the perceived power over these factors. Consequently, perceived control is expected to have a direct effect on behavioral intention when it accurately reflects actual control over the behavior and when volitional control is reduced [123].

IDT – Innovation diffusion theory. First published by Rogers in 1962 and later updated in 1995, Innovation Diffusion Theory (IDT) is a theory that investigates how, why, and at what rate technological innovations spread throughout social systems and the process from their introduction to widespread adoption [157]. Rogers defines the innovation-decision process for an individual (or a social organization) as the time period from first encountering an innovation (knowledge), to forming an attitude towards it (persuasion), to deciding to adopt or reject it (decision), to starting to use it (implementation), and to approving its use (confirmation) [157]. The author also suggests that the length of the adoption period depends on the characteristics of the adopters: Adoption begins with innovators and early adopters, then continues with the early majority and late majority of society, and spreads to the laggards characterized by their reluctance to change.

TRI – Technology readiness index. The Technology Readiness Index (TRI) is a multidimensional scale proposed by Parasuraman (2000) to measure and assess technology readiness, a construct defined as the tendency of people to adopt and use new technologies to achieve specific goals in their work or daily life [139]. The construct consists of four dimensions: optimism and innovation (as motivators), discomfort and insecurity (as inhibitors). Consisting of 36 belief statements, the TRI provides general measures of technology readiness as well as dimension-specific ones. Higher levels of technology readiness are associated with higher rates of technology adoption, more intensive use, and greater perceived ease of use [140]. While the TRI has been widely adopted by technology providers, an updated version (TRI 2.0) was proposed by Parasuraman and Colby (2015), consisting of 16 statements with more technology-neutral items [140].

3.1.1 Models applied. As presented in Table 2, a total of eight models were applied across the reviewed papers. TAM emerged as the most frequently employed framework, serving as the basis for analyzing a diverse range of topics, including online shopping [73], health applications [8, 132, 143], and educational contexts [11, 29, 126]. The UTAUT was ranked second with respect to usage frequency. However, due to the wide range of applications, no dominant thematic

focus could be identified. In comparison, there were only five articles using UTAUT2, with applications centered on financial technologies [44, 151], healthcare [197], tourism [155], and mobility service [194].

Table 2. Models applied

Model	Count	Paper(s)
TAM – Technology acceptance model	65	[126], [101], [108], [48], [100], [3], [4], [78], [128], [124], [165], [162], [50], [189], [195], [36], [143], [147], [56], [183], [73], [21], [149], [175], [191], [14], [20], [109], [168], [19], [177], [7], [153], [97], [92], [131], [110], [118], [112], [127], [208], [167], [79], [104], [25], [213], [41], [11], [29], [180], [114], [111], [46], [134], [43], [8], [198], [206], [72], [132], [133], [45], [164], [66], [62]
UTAUT – Unified theory of acceptance and use of technology	22	[141], [89], [119], [87], [170], [27], [137], [18], [52], [115], [19], [161], [37], [38], [60], [193], [205], [196], [152], [201], [46], [116]
UTAUT2 – Unified theory of acceptance and use of technology 2	5	[197], [44], [155], [151], [194]
TTF – Task-Technology Fit	4	[4], [161], [127], [156]
TRA – Theory of Reasoned Action	1	[128]
TPB – Theory of planned behavior	1	[124]
IDT – Innovation diffusion theory	1	[164]
TRI – Technology Readiness Index	1	[197]

3.1.2 Extending existing models. Besides to the direct application of technology adoption models, 112 papers presented extensions of these models to more effectively address the characteristics of the technology (Table 3). Additionally, Table 4 displays the particular combinations of the models. Due to the broad and varied applications, this section provides a selection of illustrative examples rather than an exhaustive overview. As in the previous section, the Technology Acceptance Model (TAM) remained the most frequently extended framework, with the majority of studies focusing on health [16, 30, 68, 120, 204], financial technologies [82, 88, 96, 146], and education [5, 54, 55, 99, 158, 182, 200].

Concerning the healthcare domain, for example, researchers from Iran established a new health information technology acceptance model by integrating a set of models, namely TAM, UTAUT, TRA, IDT, and TIB [68]. A study conducted in Indonesia published an enhanced version of TAM – TAM3 - to evaluate a health platform [30]. They combined TAM2 with the assessment of motivation and content quality. Another study on the acceptance of wearable intelligent medical devices combined TAM, UTAUT, and TPR [204].

With regard to financial technologies, the reviewed articles tended to extend TAM by single domains rather than combining TAM with other technology adoption models. For instance, one paper included domains of trust (user innovativeness, support, brand image, perceived risk) for the evaluation of bank services [88]. Another article incorporated perceived use efficiency, perceived use effectiveness, innovation designs, as well as innovation adoption [96].

Within the field of education, both types of model-enhancement - model combination and incorporation of determinants - were represented. A biometric recognition technology was assessed at a Thai college by an integration of TRA to the TAM [158]. In comparison, the adoption of online teaching by Chinese college teachers was assessed by combining TAM, U&G, and the communication privacy management theory [200]. Futhermore, an educational platform in Taiwan was analyzed using TAM and the Big Six, an information-seeking model [54]. In conclusion, all reviewed

papers reported an increased comprehensive view by their extension of technology adoption models, regardless of the extension.

Table 3. Extending existing models

Model	Count	Paper(s)
TAM – Technology acceptance model	64	[74], [23], [68], [88], [158], [99], [207], [200], [63], [202], [204], [145], [91], [5], [181], [32], [42], [26], [96], [211], [54], [55], [30], [16], [120], [83], [6], [81], [210], [61], [28], [142], [169], [82], [182], [174], [199], [138], [160], [31], [51], [178], [64], [209], [122], [154], [49], [102], [107], [98], [47], [105], [35], [84], [146], [40], [75], [103], [93], [173], [172], [192], [135], [95]
UTAUT – Unified theory of acceptance and use of technology	21	[68], [1], [207], [63], [171], [86], [53], [204], [15], [212], [176], [13], [188], [22], [70], [184], [94], [98], [17], [12], [148]
TPB – Theory of planned behavior	5	[99], [122], [94], [47], [40]
D&M-IS-SM – DeLone and McLeans IS Success Model	5	[1], [63], [176], [55], [6]
IDT – Innovation diffusion theory	4	[68], [59], [32], [94]
UTAUT2 – Unified theory of acceptance and use of technology 2	3	[34], [130], [203]
TTF – Task-Technology Fit	3	[1], [212], [188]
TRA – Theory of Reasoned Action	2	[68], [158]
SCT – Social cognitive theory	1	[91]
DOI – Diffusion of Innovations Theory	1	[98]
TIB – Theory of Interpersonal Behavior	1	[68]
U&G – Uses and Gratification Theory	1	[200]
TRI – Technology Readiness Index	1	[146]

3.1.3 Models analyzed in SLRs. Furthermore, as displayed in Table 5, a total of nine papers specifically reviewed the application of technology adoption models. Among these, one paper exclusively examined UTAUT [179], while two reviews focused solely on TAM [65, 125]. The remaining six studies conducted comparative analyses with at least three distinct models [33, 67, 71, 80, 90, 121], thereby offering a broader perspective on model selection and applicability. A paper from Turkey evaluated technology-related anxiety as an influencing factor of technology adoption models [65]. Furthermore, three reviews investigated the use of technology adoption models in the healthcare sector [33, 80, 121]. Another article presented information centered on educational context [125], while a further focused on social media platforms [90]. The remaining reviews provided a more general perspective of technology adoption models usage, without focusing on a specific technological field [67, 167, 179].

3.2 RQ2. Where are technology adoption models used?

To address Research Question 2, we analyzed the fields in which technology adoption models have been applied. These fields were categorized into areas, technologies, and countries, with each subcategory reviewed based on the frequency of its occurrence in the papers.

3.2.1 Areas. The reviewed articles repeatedly mentioned eleven areas in which technology adoption models were applied (Table 6). However, six papers did not specify an area and 30 could not be clearly matched to any of the identified

Table 4. Combination of models

Models	Count	Paper(s)
TAM	40	[74], [23], [88], [145], [5], [181], [42], [96], [211], [30], [16], [120], [28], [142], [82], [182], [174], [199], [138], [160], [31], [51], [178], [64], [209], [154], [49], [102], [107], [105], [35], [84], [75], [103], [93], [173], [172], [192], [135], [95]
UTAUT	9	[53], [15], [13], [22], [70], [184], [17], [12], [148]
UTAUT2	3	[34], [130], [203]
TAM + TPB	4	[99], [122], [47], [40]
TAM + D&M	2	[55], [6]
TAM + End User Computing Satisfaction (EUCS)	2	[83], [81]
TAM + TRA	1	[158]
TAM + UTAUT	1	[207]
TAM + TRI	1	[146]
TAM + SCT	1	[91]
TAM + IDT	1	[32]
TAM + UTAUT + DOI	1	[98]
TAM + UTAUT + TRA + IDT + TIB	1	[68]
TAM + U&G + communication privacy management theory	1	[200]
TAM + UTAUT + D&M + Technology Acceptance Framework	1	[63]
TAM + UTAUT + Theory of Perceived Risk (TPR)	1	[204]
TAM + Component of user-experience (CUE)	1	[202]
TAM + The user-usage model	1	[26]
TAM + Big Six	1	[54]
TAM + social capital theory	1	[61]
TAM + flow theory	1	[169]
TAM + grounded theory + DEMATEL method + Kano model + TOPSIS method	1	[210]
UTAUT + TTF	1	[212]
UTAUT + D&M	1	[176]
UTAUT + D&M + TTF	1	[1]
UTAUT + TPB + IDT	1	[94]
UTAUT + TTF + Symbolic Adoption	1	[188]
UTAUT + the expectation confirmation model (ECM)	1	[171]
UTAUT + IS continuance model	1	[86]
IDT + domestication theory	1	[59]
Delphi Method	1	[159]
Disruptive technology acceptance model (DTAM)	1	[150]
Quality-in-Use	1	[144]

categories. Among these, for instance, internet usage [117], emergency response [137], and e-government [21] were mentioned. The most popular area was education with over 30 papers referencing it. Education included not only formal institutions such as schools and universities, but also acquiring new skills through YouTube [105] or job trainings within the workplace [166]. Financial technologies, such as payment systems [111], were often referred to as FinTech, and

Table 5. Models analyzed in SLRs

Model	Count	Paper(s)
TAM – Technology acceptance model	8	[121], [71], [80], [33], [67], [125], [65], [90]
UTAUT – Unified theory of acceptance and use of technology	5	[179], [71], [80], [33], [67]
TRA – Theory of Reasoned Action	5	[71], [80], [33], [67], [90]
SCT – Social cognitive theory	5	[71], [80], [33], [67], [90]
TPB – Theory of planned behavior	5	[121], [71], [80], [67], [90]
UTAUT2 – Unified theory of acceptance and use of technology 2	3	[71], [33], [90]
IDT – Innovation diffusion theory	3	[71], [33], [67]
MPCU – Model of PC Utilization	3	[71], [33], [67]
DOI – Diffusion of Innovations Theory	3	[121], [80], [67]
TRI – Technology Readiness Index	2	[80], [67]
MM – Motivational Model	1	[71]
TIB – Theory of Interpersonal Behavior	1	[80]
PCIT – Perceived Characteristics of Innovating Theory	1	[67]
U&G – Uses and Gratification Theory	1	[90]

ranked second. Health emerged as the third most frequently studied area, encompassing health information websites [68, 85], personal devices [197, 204], and software systems [15, 22, 132]. Interestingly, technology adoption models were used equally often in mobile health (mHealth) as in the general health area (referred to as Health). Social Media, Tourism, Sport/Fitness, and Library services were the least explored areas in the context of technology adoption models. While papers addressing social media primarily focused on Facebook [107, 110] and messenger services [207, 211], those mentioning Sport/Fitness described apps with [106] and without the application of virtual reality [31, 50, 71].

3.2.2 Technologies. We identified five major types of technologies that were evaluated by means of technology adoption models: mobile apps, websites, payment systems, enterprise resource planning (ERP), and AI chatbots (Table 7). In total, eleven papers did not specify an area and 71 articles are not assignable to the mentioned technological fields. The most frequently mentioned technology type displays a wide range of mobile apps, containing, among others, health apps [18, 30, 31, 63], banking apps [13, 44, 71, 88], and an emergency app [137]. In contrast, papers addressing websites primarily focused on shopping [74, 135], education [54, 168, 177], and banking [13, 44, 96]. Banking was defined as a service providing more than payment possibilities, such as checking the account balance. Concerning the articles that were not assignable to the mentioned technological fields, for example, mobile phones [117], destination management systems [100], and biometric recognition technologies [158] were mentioned.

3.2.3 Countries. As displayed in Table 8 and Figure 1 the majority of the papers was written within the Asian region. Especially Indonesia and China were represented, contributing to a total of 51 papers. In contrast, 41 articles were published collectively by all non-Asian countries. 26 articles did not mention any country.

3.3 RQ3. Which technology adoption models are applied to different user groups?

To address the third research question, the reviewed articles were analyzed in terms of the user groups to which technology adoption models were applied. Four main groups repeatedly appeared in the literature: adults, students,

Table 6. Areas

Area	Count	Paper(s)
Education	34	[141], [126], [4], [27], [165], [71], [162], [158], [99], [200], [52], [36], [5], [168], [115], [177], [7], [54], [55], [6], [79], [11], [70], [29], [180], [182], [138], [51], [125], [166], [47], [105], [206], [103]
FinTech	29	[170], [71], [88], [171], [159], [204], [145], [73], [44], [19], [96], [153], [13], [92], [205], [39], [127], [167], [82], [67], [111], [130], [150], [151], [116], [136], [113], [146], [148]
Health	20	[108], [121], [68], [1], [100], [71], [147], [15], [85], [37], [193], [30], [120], [201], [8], [77], [190], [132], [133], [24]
mHealth	20	[71], [18], [197], [63], [143], [80], [56], [33], [42], [34],[22], [16], [152], [28], [43], [154], [203], [72], [35], [62]
Management, HR & ERP systems	18	[119], [128], [27], [189], [195], [86], [14], [155], [176], [60], [188], [81], [163], [104], [134], [194], [49], [93]
Games & Entertainment	14	[89], [71], [175], [161], [97], [213], [174], [160], [64], [102], [203], [164], [84], [192]
eCommerce	11	[129], [78], [71], [183], [109], [196], [163], [122], [94], [12], [135]
Social Media	9	[101], [124], [71], [207], [211], [110], [107], [45], [90]
Tourism	7	[3], [71], [212], [20], [155], [131], [25]
Sport/Fitness	6	[48], [87], [71], [50], [106], [31]
Library service	4	[193], [28], [104], [206]

Table 7. Technology

Technology	Count	Paper(s)
Mobile apps	45	[129], [101], [124], [137], [165], [71], [88], [18], [207], [63], [143], [80], [56], [44], [212], [20], [161], [34], [153], [13], [97], [131], [196], [30], [110], [16], [83], [6], [208], [174], [31], [150], [151], [43], [154], [94], [136], [72], [90], [75], [144], [173], [172], [156], [62]
Websites	41	[141], [74], [126], [124], [71], [88], [86], [36], [147], [73], [21], [44], [149], [181], [14], [168], [177], [96], [13], [193], [211], [54], [55], [30], [120], [112], [169], [41], [70], [178], [150], [134], [209], [107], [105], [113], [45], [90], [84], [12], [135]
Payment systems	17	[129], [170], [78], [71], [88], [171], [159], [145], [44], [153], [13], [39], [111], [130], [150], [116], [146]
Enterprise Resource Planning (ERP)	8	[119], [128], [27], [189], [155], [60], [188], [163]
AI chatbots	6	[63], [191], [59], [127], [114], [51]

elderly individuals, and teachers (Table 9). In addition, a few papers focused on less common groups, such as visually impaired users. A significant number of articles did not explicitly state the target group. Analysis of these articles indicates that in most cases the target group was also adults. However, due to the lack of such information from the authors, these articles were not included in the following analysis.

Models used within each group are presented in Table 10 and discussed in the following subsections.

3.3.1 Adults. Adults represented the largest group of users, appearing in 71 publications. The most frequently applied model for this group was TAM (46 papers), highlighting its versatility in assessing technology acceptance among adults

Table 8. Countries

Country	Count	Paper(s)
Indonesia	37	[108], [124], [56], [21], [91], [149], [20], [115], [7], [161], [155], [176], [34], [153], [60], [22], [193], [97], [92], [205], [131], [196], [30], [83], [6], [39], [82], [79], [163], [104], [130], [151], [209], [116], [49], [77], [72]
China	24	[88], [207], [197], [200], [204], [212], [181], [109], [37], [211], [110], [112], [210], [61], [213], [41], [29], [180], [174], [114], [201], [194], [47], [62]
Malaysia	17	[126], [89], [119], [170], [4], [165], [18], [44], [112], [167], [178], [134], [43], [8], [136], [190], [90]
South Korea	10	[101], [100], [99], [50], [106], [143], [94], [105], [206], [164]
India	9	[171], [145], [26], [177], [127], [150], [154], [203], [144]
Taiwan	8	[3], [195], [85], [96], [54], [55], [198], [40]
Saudi Arabia	6	[129], [78], [27], [162], [28], [12]
The Netherlands	5	[63], [59], [168], [19], [152]
USA	5	[128], [147], [64], [66], [156]
Germany	4	[63], [19], [31], [64]
Greece	4	[74], [63], [73], [138]
Iran	4	[68], [159], [132], [133]
Philippines	4	[137], [14], [38], [118]
UK	4	[117], [63], [19], [120]
Spain	3	[71], [111], [51]
Thailand	3	[158], [32], [42]
Turkey	3	[36], [208], [103]
Australia	2	[166], [90]
Belgium	2	[63], [19]
France	2	[19], [160]
Italy	2	[63], [19]
Japan	2	[164], [84]
Jordan	2	[11], [17]
Czech	1	[52]
Austria	1	[19]
Brazil	1	[146]
Cambodia	1	[113]
Finland	1	[152]
Lebanon	1	[182]
Libya	1	[122]
Mongolia	1	[102]
Portugal	1	[63]
Romania	1	[189]
Serbia	1	[63]
UAE	1	[120]
Uganda	1	[35]
Vietnam	1	[135]
Yemen	1	[13]

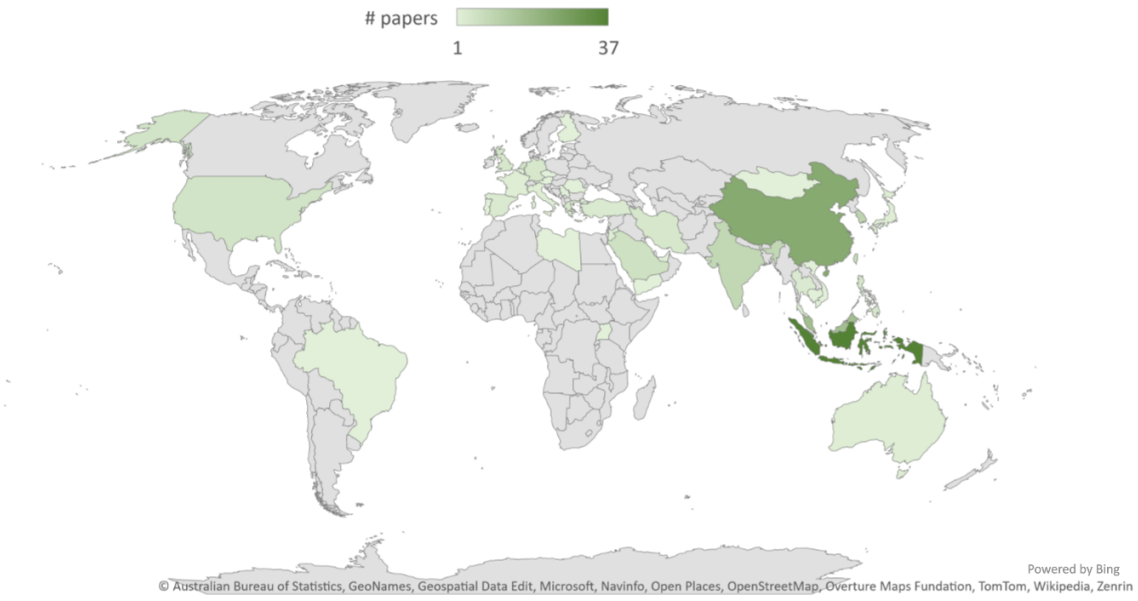

Fig. 1. Number of papers focusing on technology adoption models according to countries

– regardless of the specific technology type or area of use. Several studies involving adults extended TAM by integrating it with other models to capture more complex behavioral or contextual dimensions.

UTAUT was the second most commonly used model in studies involving adults, appearing in 18 publications. Like TAM, it was frequently combined with other models, reflecting a trend toward hybrid model configurations that enable researchers to capture a broader spectrum of factors influencing adult technology adoption.

Models such as TTF, TRA, IDT, TPB, D&M-IS-SM, UTAUT2, TIB and U&G were used less frequently, with only a few references in the literature.

3.3.2 Students. Students represented the second most frequently studied user group, appearing in 39 publications. The most widely applied model in this group was again TAM, used in 29 studies. Due to its focus on perceived usefulness and ease of use, TAM proved particularly effective in capturing how students evaluate educational technologies across different learning settings. In several studies, TAM was extended with complementary theoretical models to incorporate additional behavioral dimensions. For example, in [47, 99], TAM was combined with TPB to include subjective norms and perceived behavioral control – social and motivational aspects.

UTAUT was the second most used model in this group, but it appeared in only 4 publications, followed by TRA, which was applied in 2 publications. In addition, SCT, IDT, UATUT2 and D&M-IS-SM were each reported only once.

3.3.3 Elders. Elderly individuals were the focus of 12 publications. The most commonly used model in this group was again TAM, applied in 8 studies. Several studies also employed alternative models that allowed researchers to capture psychological and social factors specific to older adults. UTAUT2 [197, 203] introduced additional variables such as hedonic motivation and price value. One study applied TRI and one IDT ([59]).

3.3.4 Teachers. Teachers were the focus of 8 publications. The most commonly used model in this group was TAM, applied in 5 studies. In one study [200], TAM was combined with the U&G, which allowed researchers to examine not only the perceived functionality of educational technologies but also the internal motivations behind their adoption by educators. Finally, UTAUT was used in 3 studies within this target user group.

In addition, some articles focused on other target groups, such as specialists in various fields, employees of specific organizations, farmers, healthcare professionals, children, or users of specific technological solutions (applications, services).

Table 9. Target groups

Target group	Count	Paper(s)
Adults	71	[117], [74], [126], [101], [87], [170], [68], [100], [4], [78], [128], [124], [27], [137], [71], [207], [50], [189], [200], [63], [171], [86], [36], [80], [204], [56], [145], [73], [149], [15], [85], [212], [59], [181], [14], [109], [42], [26], [7], [161], [37], [34], [60], [22], [55], [110], [83], [61], [127], [142], [25], [41], [138], [31], [201], [178], [194], [43], [154], [49], [102], [113], [72], [45], [24], [12], [66], [40], [93], [144], [156]
Students	39	[129], [141], [89], [27], [165], [71], [162], [158], [99], [106], [195], [36], [73], [91], [59], [168], [26], [177], [96], [34], [83], [6], [208], [79], [104], [11], [70], [29], [180], [182], [138], [160], [178], [209], [166], [47], [206], [103], [62]
Elders	12	[117], [197], [36], [147], [73], [191], [59], [26], [210], [178], [64], [203]
Teachers	8	[27], [200], [52], [54], [79], [11], [70], [51]

3.4 RQ4. What constructs and moderating variables are used in technology adoption models?

To address RQ4, we examined which constructs and moderating variables are most frequently used in studies applying technology adoption models. This analysis identifies both the core constructs (Table 11) derived from theoretical frameworks and the external variables (Table 12) that potentially influence or moderate user behavior.

3.4.1 Constructs. The most frequently used constructs in the reviewed studies are Perceived Usefulness (PU), which appeared in 124 papers, and Perceived Ease of Use (PEOU) in 120. This is expected given that these two constructs form the core of the Technology Acceptance Model (TAM), which was the most frequently utilized model in the selected papers. However, it is important to emphasize that not all studies referring to the TAM included both PU and PEOU in their research models. Several studies adapted or extended the TAM by introducing additional constructs, while others selectively focused on specific factors based on the particular research context.

The construct Behavioral Intention (BI), which plays a central role in models such as the TAM, TRA, TPB, and UTAUT, was identified in 69 papers, making it the third most frequently employed construct in the reviewed literature.

The next commonly identified constructs, Social Influence, Facilitating Conditions, Performance Expectancy, and Effort Expectancy, originate from the UTAUT model. These constructs were frequently incorporated into the studies, either individually or in combination, to capture additional factors influencing technology acceptance beyond the original TAM framework.

Attitude Toward Behavior (ATB) and its related construct Attitude Toward Using were also identified, although less frequently, appearing in 18 and 14 studies, respectively. These constructs, primarily associated with TRA and the original version of TAM, capture users' positive or negative evaluations of system use and typically act as antecedents

Table 10. Target groups – models

Target group	Models	Count	Paper(s)
Adults	TAM	46	[74], [126], [101], [68], [100], [4], [78], [128], [124], [207], [50], [189], [200], [63], [36], [204], [56], [145], [73], [149], [181], [14], [109], [42], [26], [7], [55], [110], [83], [61], [127], [142], [25], [41], [138], [31], [178], [43], [154], [49], [102], [72], [45], [66], [40], [93]
	UTAUT	18	[87], [170], [68], [27], [137], [207], [63], [171], [86], [204], [15], [212], [161], [37], [60], [22], [201], [12]
	TTF	5	[4], [212], [161], [127], [156]
	TRA	2	[68], [128]
	IDT	2	[68], [59]
	TPB	2	[124], [40]
	D&M-IS-SM	2	[63], [55]
	UTAUT2	2	[34], [194]
	TIB	1	[68]
	U&G	1	[200]
Elders	TAM	8	[36], [147], [73], [191], [26], [210], [178], [64]
	UTAUT2	2	[197], [203]
	TRI	1	[197]
	IDT	1	[59]
Students	TAM	29	[165], [162], [158], [99], [195], [36], [73], [91], [168], [26], [177], [96], [83], [6], [208], [79], [104], [11], [29], [180], [182], [138], [160], [178], [209], [47], [206], [103], [62]
	UTAUT	4	[141], [89], [27], [70]
	TPB	2	[99], [47]
	TRA	1	[158]
	SCT	1	[91]
	IDT	1	[59]
	UTAUT2	1	[34]
	D&M-IS-SM	1	[6]
Teachers	TAM	5	[200], [54], [79], [11], [51]
	UTAUT	3	[27], [52], [70]
	U&G	1	[200]
Visually impaired users	TAM	1	[202]

to Behavioral Intention. Additionally, Affect Toward Use, reflecting emotional responses toward using a system, was found in 7 papers. Although these constructs are conceptually related, they differ in their emphasis: while Behavioral Intention measures the readiness to engage in behavior, Attitude and Affect reflect users' cognitive and emotional evaluations of that behavior. In addition to the explicitly defined constructs, 24 papers referred broadly to an "Attitude" construct without providing a detailed definition or specifying its conceptual basis. As a result, it is unclear whether these instances relate to Attitude Toward Behavior, Attitude Toward Using, or Affect Toward Use, all of which have distinct theoretical origins and roles within technology adoption models.

Subjective Norm (SN) and Satisfaction frequently co-occurring with core TAM and UTAUT constructs. SN often mediates social influences on adoption, while Satisfaction is tied to post-adoption evaluations. In contrast, Actual Use (AU), occurs only in 13 papers, what may highlight a gap between theoretical predictions and empirical validations of

Table 11. Constructs

Construct	Count	Paper(s)
Perceived usefulness (PU)	124	[129], [126], [89], [108], [119], [48], [68], [100], [4], [78], [124], [165], [71], [88], [162], [158], [99], [207], [50], [106], [189], [200], [63], [195], [86], [36], [143], [80], [147], [56], [145], [183], [73], [21], [149], [85], [5], [191], [59], [33], [181], [32], [14], [20], [42], [168], [19], [177], [7], [153], [97], [92], [131], [54], [55], [30], [110], [16], [120], [118], [83], [6], [81], [112], [210], [61], [127], [28], [208], [167], [142], [169], [82], [79], [104], [25], [213], [41], [11], [29], [180], [182], [174], [114], [199], [67], [138], [160], [31], [111], [51], [150], [134], [43], [209], [122], [166], [154], [8], [65], [49], [102], [94], [107], [198], [47], [105], [113], [206], [72], [132], [133], [45], [35], [90], [24], [146], [66], [40], [75], [103], [93], [62], [135]
Perceived ease of use (PEOU)	120	[129], [126], [101], [89], [108], [119], [68], [100], [4], [78], [124], [165], [71], [88], [158], [99], [207], [50], [189], [200], [63], [202], [195], [86], [36], [143], [80], [147], [204], [56], [145], [183], [73], [21], [149], [85], [5], [191], [59], [33], [181], [32], [14], [20], [42], [168], [19], [177], [7], [153], [97], [92], [131], [54], [55], [30], [110], [16], [120], [118], [83], [6], [112], [210], [61], [28], [208], [167], [142], [82], [79], [104], [25], [213], [41], [11], [29], [180], [182], [174], [114], [199], [67], [138], [160], [31], [111], [51], [64], [150], [134], [43], [209], [122], [154], [8], [65], [49], [102], [94], [107], [198], [47], [105], [113], [206], [72], [132], [133], [45], [35], [90], [24], [66], [40], [75], [103], [93], [62], [192]
Behavioral intention (BI)	69	[179], [141], [74], [119], [48], [87], [1], [4], [78], [27], [165], [71], [158], [99], [197], [200], [52], [202], [53], [143], [204], [145], [73], [21], [149], [85], [5], [33], [181], [20], [168], [115], [7], [161], [155], [176], [34], [153], [13], [60], [97], [205], [196], [30], [152], [208], [79], [104], [11], [182], [174], [114], [138], [46], [130], [151], [194], [154], [116], [49], [94], [203], [198], [47], [105], [45], [90], [24], [12]
Social influence	59	[179], [129], [141], [101], [89], [119], [170], [1], [78], [128], [137], [71], [18], [197], [52], [86], [53], [80], [204], [44], [15], [212], [59], [42], [115], [19], [161], [37], [155], [176], [34], [13], [60], [188], [22], [193], [97], [92], [205], [196], [152], [127], [67], [201], [46], [130], [151], [194], [122], [154], [184], [116], [77], [203], [17], [90], [84], [12], [148]
Facilitating conditions (FC)	49	[179], [129], [89], [119], [87], [170], [68], [1], [27], [137], [71], [18], [197], [52], [86], [80], [44], [15], [33], [115], [19], [161], [37], [155], [176], [34], [38], [13], [60], [188], [22], [193], [205], [196], [118], [81], [152], [70], [67], [201], [46], [130], [151], [194], [184], [116], [203], [17], [148]
Performance expectancy	48	[179], [141], [89], [119], [87], [170], [68], [1], [27], [137], [71], [18], [197], [52], [171], [53], [80], [44], [15], [212], [115], [161], [37], [155], [176], [34], [38], [13], [60], [188], [22], [193], [92], [196], [152], [70], [67], [201], [46], [130], [151], [194], [184], [116], [203], [17], [12], [148]
Effort expectancy	47	[179], [141], [89], [119], [87], [170], [68], [1], [137], [71], [18], [197], [52], [171], [53], [80], [44], [15], [212], [115], [161], [37], [155], [176], [34], [38], [13], [60], [188], [22], [193], [205], [196], [152], [70], [67], [201], [46], [130], [151], [194], [184], [116], [203], [17], [12], [148]
Intention to use	36	[124], [88], [162], [50], [63], [86], [147], [183], [73], [175], [191], [32], [42], [19], [177], [205], [131], [16], [120], [112], [142], [169], [25], [213], [41], [199], [160], [178], [150], [107], [198], [206], [17], [146], [93], [62]
Attitude	24	[117], [68], [124], [165], [71], [88], [99], [50], [143], [80], [73], [91], [175], [177], [131], [208], [142], [169], [199], [150], [49], [107], [62], [192]
Subjective norm (SN)	24	[89], [119], [68], [124], [71], [99], [207], [21], [5], [191], [33], [32], [167], [182], [67], [31], [111], [94], [47], [113], [90], [40], [103], [93]
Satisfaction	19	[108], [119], [1], [162], [171], [86], [85], [33], [14], [54], [55], [110], [83], [208], [178], [166], [105], [206], [40]
Attitude toward behavior (ATB)	18	[74], [48], [52], [85], [33], [161], [110], [79], [213], [41], [134], [122], [8], [198], [47], [206], [90], [24]
Attitude toward using	15	[36], [181], [19], [153], [92], [54], [30], [118], [112], [11], [111], [46], [113], [45], [66]
Actual Use (AU)	13	[165], [158], [18], [189], [143], [145], [168], [19], [131], [30], [104], [11], [182]
Ease of use	13	[74], [108], [119], [162], [106], [175], [161], [211], [83], [81], [146], [93], [156]
Actual behavior	11	[4], [200], [53], [147], [33], [153], [196], [79], [114], [198], [47]
Affect toward use	10	[78], [71], [158], [56], [21], [168], [55], [81], [138], [184]
Compatibility	9	[74], [89], [71], [80], [32], [96], [81], [67], [94]
Social factors	9	[89], [119], [23], [27], [71], [159], [38], [70], [90]
Complexity	8	[89], [119], [27], [71], [189], [80], [26], [96]
Image	6	[89], [191], [32], [67], [94], [93]
Relative advantage	6	[89], [119], [68], [71], [80], [42]
Technical anxiety	6	[18], [21], [33], [205], [152], [154]
Perceived behavioral control	5	[71], [99], [122], [94], [90]
Job-fit	4	[89], [119], [71], [67]
Use behaviour (UB)	3	[179], [141], [27]
Expectations-performance	2	[119], [53]
Outcome expectations	2	[67], [90]
Value	1	[33]

behavior. Similarly, Ease of Use (13 papers), though conceptually aligned with Perceived Ease of Use (PEOU), appears in contexts emphasizing usability over theoretical frameworks.

Less frequent constructs include Compatibility (9 papers), Social Factors (9 papers), and Complexity (8 papers), which primarily emerge in studies grounded in Innovation Diffusion Theory (IDT) or Model of PC Utilization (MPCU). Social Factors encompass broader cultural or organizational influences beyond UTAUT's Social Influence. The scarcity of these constructs suggests niche applications or potential redundancy with more dominant variables (e.g., Complexity vs. PEOU).

The remaining constructs – Technical Anxiety (6), Relative Advantage (6), Image (6), Perceived Behavioral Control (5), Job-fit (4), Use Behaviour (3), Expectations-Performance (2), Outcome Expectations (2), and Value (1) – appear rarely, reflecting niche or context-specific applications. Technical Anxiety and Perceived Behavioral Control emerge primarily in studies integrating TAM with stress or control theories, while Relative Advantage and Image align with Innovation Diffusion Theory (IDT). Job-fit and Outcome Expectations are narrowly applied in organizational or expectancy-value frameworks. Notably, Value and Expectations-Performance are the rarest (1–2 papers), suggesting either emerging relevance or limited generalizability.

3.4.2 Modifiers. The reviewed studies often included various external variables, also referred to as modifiers, to explore how individual or contextual factors influence technology adoption. These variables typically moderate relationships between core constructs in adoption models and user intentions or behaviors. The results of the analysis of external variables is presented in Table 12.

Among the external variables analyzed, Gender and Age were the most frequently examined modifiers. Gender was included in 61 papers, while Age appeared in 59. These demographic variables are commonly used to assess whether user characteristics influence technology adoption, with prior models such as UTAUT also proposing their moderating role.

Experience and Education were also prominent among the modifiers, mentioned in 33 and 26 papers respectively. These variables often serve as proxies for technological familiarity or cognitive preparedness, potentially influencing constructs like self-efficacy, performance expectancy, or effort expectancy. For instance, users with greater prior experience may perceive systems as easier to use, while higher levels of education may correlate with a more favorable attitude toward digital tools.

A number of other modifiers were less frequently examined but still noteworthy. Income, Nationality or cultural background, and Occupation each appeared in 6 studies, indicating a limited but present interest in exploring how socioeconomic or cultural factors might moderate technology acceptance. Additionally, Voluntariness was identified in 5 studies, aligning with its theoretical role in UTAUT as a contextual factor influencing user intention.

It is important to note, however, that the majority of papers did not report any such modifiers. This may reflect a focus on core constructs rather than contextual factors, limitations in data collection, or the use of simplified models in specific research settings. The absence of reported modifiers could also indicate a preference for universal applicability over tailored analysis, though it may limit insights into differential user responses.

3.5 RQ5. What statistical methods and validation measures are used to develop and evaluate technology adoption models?

Given the abundance of different study aims and scenarios, we encountered a variety of different validation concepts. Nevertheless, most evaluations rely on a subset of the most common statistical tools to evaluate the results of a study.

Table 12. Modifiers

Validation method	Count	Paper(s)
Gender	61	[141], [117], [119], [1], [100], [4], [137], [207], [106], [52], [171], [53], [159], [143], [204], [56], [85], [212], [191], [168], [115], [19], [96], [161], [37], [38], [22], [97], [16], [83], [152], [127], [208], [25], [213], [41], [11], [180], [182], [174], [114], [31], [201], [46], [150], [151], [194], [43], [209], [166], [116], [102], [94], [206], [72], [132], [12], [103], [62], [192], [135]
Age	59	[129], [117], [119], [1], [137], [106], [52], [171], [53], [159], [143], [204], [56], [212], [191], [59], [168], [115], [26], [19], [161], [37], [38], [22], [97], [196], [16], [83], [152], [127], [208], [25], [213], [41], [11], [180], [174], [31], [201], [46], [64], [150], [151], [194], [43], [209], [122], [116], [102], [94], [72], [132], [12], [103], [93], [172], [62], [192], [135]
Experience	33	[129], [141], [101], [119], [170], [1], [27], [52], [53], [143], [204], [73], [85], [19], [161], [37], [196], [152], [127], [169], [41], [174], [46], [64], [151], [194], [166], [116], [94], [72], [17], [103], [135]
Education	26	[100], [4], [207], [171], [159], [56], [73], [212], [26], [19], [97], [127], [180], [174], [114], [201], [194], [43], [102], [94], [72], [132], [12], [103], [62], [192]
Income	6	[171], [16], [201], [150], [194], [102]
Nationality or cultural background	6	[117], [204], [16], [114], [166], [164]
Occupation	6	[100], [204], [56], [127], [194], [102]
Voluntariness	5	[1], [96], [152], [116], [135]

Table 13 provides an overview of the most commonly used statistical methods and validation measures observed in this work. Generally, they can be categorised into measures that aim to measure:

- the validity and reliability of the investigated constructs such as Cronbach's α test, Average Variance Extracted (AVE) and, Composite Reliability (CR);
- how well a certain statistical model fits the data, which can again be used to derive the validity and reliability of the investigated constructs, such as Structural Equation Modeling (SEM), Confirmatory, Factor Analysis (CFA), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Goodness of Fit Index (GFI), Incremental Fit Index (IFI), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Squared Residual (SRMR);
- the predictive power of simple statistical models, which can help in understanding the relationship between variables such as Regression, Analysis, Partial Least Squares (PLS), R^2
- the likeliness of a certain hypothesis as in the case of the t-test.

Amongst them, the two most used measures, Cronbach's α test and AVE fall in the first category being applied in 104 and 76 cases out of a total of 230 papers, respectively. Amongst the many measures investigated in the second category, only SEM has a reasonably high amount of appearances with a total of 66 mentions. The predictive power is overall evaluated less frequently with R2 leading the list being applied in 42 papers. Hypothesis testing with the t-test was only applied in 31 papers.

Overall, our systematic literature review shows that while there are differences across studies, several statistical measures are particularly common when evaluating studies for technology adoption models. For the highest possible consistency with the literature, it is thus recommended to employ the same measures if applicable under the consideration of what needs to be evaluated.

Table 13. Validation methods

Validation method	Count	Paper(s)
Cronbach's α test	104	[126], [101], [119], [48], [87], [3], [78], [124], [137], [165], [88], [162], [158], [18], [99], [207], [106], [197], [189], [63], [171], [195], [86], [36], [56], [145], [183], [73], [21], [44], [91], [5], [181], [32], [20], [168], [115], [19], [177], [96], [37], [155], [34], [38], [153], [60], [97], [131], [196], [211], [54], [55], [30], [110], [120], [118], [112], [39], [127], [208], [82], [79], [163], [213], [11], [29], [182], [174], [114], [199], [138], [201], [111], [46], [178], [150], [151], [134], [194], [43], [209], [122], [166], [154], [116], [102], [107], [77], [203], [47], [105], [113], [190], [132], [133], [17], [45], [164], [146], [12], [103], [62], [135]
Average variance extracted (AVE)	76	[101], [78], [124], [88], [158], [18], [99], [207], [50], [106], [197], [189], [63], [86], [36], [145], [183], [73], [21], [44], [5], [32], [**?**], [168], [177], [96], [37], [34], [60], [188], [97], [92], [205], [131], [196], [83], [6], [81], [112], [39], [167], [213], [41], [29], [180], [182], [174], [114], [199], [138], [160], [201], [46], [130], [150], [151], [209], [122], [166], [154], [116], [102], [107], [136], [47], [105], [113], [132], [17], [45], [164], [12], [40], [103], [62], [192]
Structural Equation Model (SEM)	68	[74], [87], [170], [23], [124], [88], [162], [207], [50], [197], [189], [171], [195], [143], [145], [183], [21], [44], [91], [149], [212], [32], [14], [**?**], [177], [7], [37], [155], [34], [13], [92], [205], [211], [30], [110], [81], [112], [61], [39], [127], [167], [142], [25], [213], [41], [29], [182], [114], [199], [138], [201], [178], [130], [150], [166], [154], [116], [49], [136], [113], [206], [45], [90], [84], [24], [173], [172], [95]
Composite reliability (CR)	55	[101], [124], [88], [162], [158], [99], [207], [106], [197], [63], [171], [36], [145], [73], [21], [44], [5], [168], [19], [37], [34], [60], [188], [97], [92], [131], [30], [6], [81], [39], [167], [213], [41], [182], [174], [114], [199], [138], [160], [130], [150], [151], [209], [122], [166], [154], [116], [102], [107], [47], [113], [45], [12], [103], [62]
R^2	42	[87], [23], [78], [137], [18], [99], [207], [197], [63], [195], [86], [204], [145], [183], [21], [175], [5], [168], [115], [161], [37], [155], [13], [60], [22], [92], [131], [30], [81], [39], [82], [163], [41], [29], [199], [51], [130], [151], [116], [198], [47], [72]
Goodness of Fit Index (GFI)	37	[119], [48], [23], [78], [18], [52], [195], [86], [145], [73], [91], [181], [32], [155], [34], [211], [112], [127], [167], [169], [29], [180], [182], [114], [201], [46], [178], [154], [198], [105], [132], [133], [17], [45], [146], [40], [95]
Confirmatory Factor Analysis (CFA)	32	[101], [48], [23], [88], [158], [18], [99], [50], [63], [195], [86], [36], [212], [32], [177], [37], [211], [194], [102], [198], [105], [133], [17], [45], [90], [40], [103], [93], [173], [192], [95]
Correlation analysis	32	[179], [117], [137], [50], [195], [145], [183], [21], [91], [175], [191], [181], [20], [37], [153], [205], [54], [120], [118], [208], [180], [160], [46], [122], [65], [94], [77], [203], [17], [84], [66], [135]
Partial Least Square (PLS)	31	[121], [124], [162], [18], [99], [207], [21], [44], [19], [177], [155], [34], [13], [92], [205], [30], [16], [39], [114], [199], [130], [150], [151], [166], [154], [116], [47], [206], [164], [90], [192]
Root Mean Square Error of Approximation (RMSEA)	31	[48], [23], [50], [106], [189], [86], [143], [145], [91], [181], [32], [37], [211], [112], [167], [169], [29], [182], [114], [201], [46], [194], [122], [154], [198], [105], [132], [133], [17], [45], [40]
t-test	31	[141], [124], [18], [207], [197], [189], [63], [86], [36], [191], [96], [34], [60], [188], [196], [83], [6], [81], [28], [163], [11], [199], [46], [151], [166], [116], [136], [47], [72], [132], [40]
Comparative Fit Index (CFI)	28	[48], [23], [50], [106], [195], [86], [145], [91], [32], [37], [211], [112], [167], [169], [180], [182], [114], [31], [201], [46], [178], [122], [154], [105], [132], [133], [146], [40]
Regression Analysis	22	[141], [108], [119], [23], [78], [137], [165], [63], [36], [191], [115], [38], [196], [55], [167], [82], [163], [182], [51], [64], [122], [90]
Standardized Root Mean Squared Residual (SRMR)	15	[23], [18], [99], [50], [143], [19], [167], [29], [182], [114], [178], [154], [17], [45], [95]
The Tucker Lewis Index (TLI)	13	[23], [50], [106], [143], [91], [181], [112], [167], [114], [31], [201], [46], [122]
Incremental Fit Index (IFI)	9	[23], [195], [181], [211], [167], [46], [122], [105], [17]

4 Conclusions

This systematic literature review highlights the Technology Acceptance Model (TAM) as the most widely used and extended model in the last decade, followed by UTAUT. However, a number of studies are increasingly extending these models to include contextual and user-specific variables.

The review also reveals a strong thematic focus on education, financial technologies, and health, with adults and students being the most commonly studied user groups. However, limited attention is given to children, especially those with specific accessibility needs, underscoring the importance of the TE(A)CHADOPT project.

The findings of this review will serve as a basis for future work on adopting technology adoption models to ensure inclusivity and accessibility, especially for children with neurodevelopmental disorders.

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