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Employees' Continued Use Intention of Collaborative System Platforms: Examining Mural and Trello

Buthina Alobidyeen [a,*]

[a] *Business Administration Department, Tafila Technical University, Jordan*

Abstract

This survey investigated the intentions of current users of the project management tools Mural and Trello in the United States. This study focused on small and medium enterprises (SMEs) in the United States. The survey results of 291 employees whose companies had them use either Mural or Trello to coordinate and organize their work were analyzed. Through structural equation modelling (SEM), this study confirmed that the components of effort expectation have direct and meaningful effects in the conceptual model, which in turn affects the staff's actual usage of the Mural and Trello systems. As a bonus, the aspiration to use Mural and Trello in the future affects their actual usage. Moreover, it suggests future research and implementation directions, including the theoretical and practical consideration of technologies in collaboration platform systems.

Keywords
Collaborative, Platforms, Management

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1. Introduction

Collaborative learning emphasizes the benefits of using digital tools to help individuals learn together (Ferreira et al., 2022). Longitudinal research has examined the interplay between education and technology in the context of collaborative learning, focusing on how computers can facilitate the formation of learning communities in which students work together in a planned manner toward the common goal of knowledge acquisition (Han & Trimi, 2022). In other words, someone else has focused on setting up and surveying key socially advanced technologies. Since students' dedication to the learning process greatly affects the level of success that can be achieved through a collaborative learning program, Sahal et al. (2021) and others have focused on students' evaluations of the program (Chandna, 2022). The unique advantages of computer technologies and how those media affect how learners know cooperatively should be the focus of collaborative learning studies say Zheng et al. (2018).

Users of Trello have the flexibility to customize their workflow by adding new columns to their to-do lists and moving tasks between them (Shchetynina et al., 2022). Want to do, doing, and done are the regular columns for tracking progress on tasks. The software has a wide variety of business and non-business applications, such as property management, software project management, classroom management, website design, legal case management, and more (Sahal et al., 2021). Murals are vital because they encourage individual expression among the populace. Because of the time, money, and effort involved in creating a Mural, it is usually commissioned by a sponsor (Ferreira et al., 2022).

*Corresponding author: e-mail addresses: balobidyeen@ttu.edu.Jo (B. Alobidyeen)

As defined by the authors, performance expectancy is "the extent to which individuals believe that using the system will help them to attain gains in job performance" (Figueroa-Armijos et al., 2022). Izuagbe (2021) found that productive teamwork depends on high-quality communication between team members as one of the most highly valued employees of collaborative work. Regarding the intention to use mobile apps like Mural and Trello, the relative advantage is the strongest predictor of behavior, as shown by Shaikh et al. (2021). Before downloading a networking app, users will consider the store's performance in light of their needs for information dissemination and evocative discourse (Ferreira et al., 2022; Shchetynina et al., 2022).

The perceived degree of ease associated with using information systems is known as "effort expectancy" (Fedorko et al., 2021). According to Ryu and Fortenberry (2021), consumers are more likely to have favorable impressions of a technology's usefulness and to plan to adopt it if they perceive that it is easy to use. Since it requires less effort to utilize mobile applications, the ease of use has a positive, substantial impact on their adoption, as found by research by Shaikh et al. (2021). This is because employees' adoption of collaborative devices for teamwork training will be influenced by how convenient it is to access relevant information on the go (Fedorko et al., 2021; Yueh et al., 2015).

Influence from peers is defined as "how much an individual values the fact that other people think he or she should use the new system" (Chatterjee et al., 2021). It was proposed by Ragan et al. (2022) that emotions can be classified as either pleasant or unpleasant. One can look at their pleasure from two different angles (Laursen & Veenstra, 2021; Soh et al., 2018). One of them is the happiness you feel when you help other people. According to Zingora et al. (2020), the desire for fun is a driving force behind people's continued participation in social media. People will likely say they're in a good mood when they have ample opportunities to help others and build relationships. Among these possibilities is the one presented by the spread of information (Chatterjee et al., 2021; Soh et al., 2018).

This research aimed to look at Mural and Trello to see if they were two platforms that employees intended to keep using. These researchers created models of intentional behavior and deliberate choice as part of the current investigation. As "the relationship between attitudes and behaviors within human action," the theory of reasoned action describes what it means to act rationally (Sok et al., 2021). Its primary application is in forecasting individual behavior in light of their motivations. Beliefs and actions are connected in the theory of planned behavior. According to the theory, attitude, subjective norms, and perceived behavioral control are the three central components that work together to shape an individual's behavioral intentions (LaCaille, 2020).

2. Literature Review

This study analyzed US workers' plans to keep using collaborative system platforms like Mural and Trello using the planned behavior theory and the reasoned action theory. This theory underpinned the investigation at hand. "behavior is largely defined by the intention of an individual to get involved in the specific behavior," as stated by the planned behavior theory (Damalas, 2021). A person's attitude reveals whether they view a given action as positive or negative (Sok et al., 2021). To "the relationship between attitudes and behaviors within human action," which is what the theory of reasoned action is all about (Sok et al., 2021). It is frequently employed to foretell how people will act under their underlying behavioral goals. The Theory of Reasoned Action states that a person's behavioral control determines whether or not they will engage in a given behavior and that their performance expectancy is affected by how others view their behavior (LaCaille, 2020). Stronger intent to use and more deliberate action to use both leads to even more use.

2.1. Performance expectancy and actual use of collaborative system platforms

The term "performance expectancy" describes the quality that employees have come to expect from a given product (Ryu and Fortenberry, 2021). According to the literature, performance expectations substantially affect behavioral intentions and teamwork (Izuagbe, 2021; Yueh et al., 2015). Users' confidence that the system will help them do a better job is measured by a metric called "performance expectancy" (Ryu and Fortenberry, 2021). The relationships between workers' hopes and their

cooperation successes have also been examined in previous research. Traditional wisdom holds that when people work together, productivity rises. Good teamwork necessitates good conversations between group members, as found by Shaikh et al. (2021), who investigated what students valued most in collaborative projects. The quality of employees' collaborative work on Mural and Trello may be improved thanks to the predicted results of user feedback, influence on instruction, impact on outcomes, non-intrusive assessments of user activity, and extraordinary circumstances. Students were more likely to use collaborative tools if they believed that doing so would improve their group's ability to work together on assignments, as found in a study by Hamzat and Mabawonku (2018). Employee opinions on the usefulness of Murals and Trello in creating group term reports contribute to the growth of performance expectations in small and medium enterprises (Izuagbe, 2021). As a result, they will have more time to finish the group term report and have higher expectations for their performance. Hamzat and Mabawonku provided empirical support for the link between the perceived usefulness of a customized the in an organization and behavioral intentions to use it (2018). According to the expectation model proposed by Shaikh et al. (2021), the degree to which a system is used is directly related to how satisfied its users are with their system with it. For this reason, the following hypotheses are advanced in this investigation.

H1: Performance expectancy significantly impacts on actual use of collaborative system platforms (Mural, Trello).

2.2 Effort Expectancy and actual use of collaborative system platforms

The "user perception of how easily they can use a technology" is what we mean when we talk about the "effort expectancy" (Fedorko et al., 2021). By "effort expectancy, " we mean the degree to which an employee anticipates their work will be straightforward. Users are more likely to adopt a strategy toward information when they perceive that it is easy to use and does not require much effort (Yueh et al., 2015). According to Shaikh et al., people are more likely to adopt digital tools such as Mural and Trello if they perceive that doing so will be simple (2021). The level of perceived effort associated with making a payment via a computerized system. A. Rahi et al. (2019). Davis (1993) claims that users are more likely to have favorable impressions of a system's utility and functionality if they perceive that it is easy to use. According to studies by Figueroa-Armijos et al. (2022), consumers prefer easy-to-use technologies that yield optimal results to those that are complicated to use. However, access to traditional online apps such as Mural and Trello and access to web apps may require less exertion. Past studies, however, have claimed that effort expectancy is less important than performance expectancy in determining collaboration since it has a more significant impact on comment utilization (Ferreira et al., 2022; Yueh et al., 2015). (Ferreira et al., 2022; Yueh et al., 2015). Also, studies have shown that customers are more likely to use an app for educational purposes if it is easy to navigate. While using Mural and Trello for teamwork, Hamzat and Mabawonku (2018) found that the Mural and Trello interface regulated how the dispersed individuals interacted with one another. To effectively complete their collaborative work, employees can now use Mural and Trello to link to previous pages, apply functionality (Han & Trimi, 2022), and apply rudimentary system security. As a result, how employees use tools like Mural and Trello—and more specifically, how quickly they learn and adapt to new technologies—will influence their effort expectations. The study's authors, Ferreira et al. (2022), also discovered a positive system between the two measures of success when it came to collaboration platforms. This leads the research to propose the following hypothesis.

H2: Effort expectancy significantly impacts on actual use of collaborative system platforms (Mural, Trello).

2.3. Effort expectancy and actual use of collaborative system platforms

A person's peer influence is proportional to how seriously they believe their peers think they should adopt the new system (Chatterjee et al., 2021). The actual collaboration system platforms result from a

technique known as "peer influence," in which an individual encourages her online contacts to complete a specific task (Yueh et al., 2015). Under the influence of peers, it may be effective to identify influential individuals and promote the desired outcome among them so that it spreads through socialization processes. Social spreading activities in the real world, such as Mural and Trello, may contain a unique blend of peer influence strategies because these strategies are only sometimes mutually exclusive and can complement each other (Rahi et al., 2019; Shchetynina et al., 2022 Team members now have a centralized online space, thanks to tools like Mural and Trello, where they can store documents, exchange information, and collaborate on projects. It also facilitates public access to data. When data is made available to more users, it may entice contributors willing to make changes or add to what has already been established. Many technical writers, for example, those working on team programming projects, use Mural and Trello to coordinate their efforts (Soh et al., 2018). Zingora et al. (2020) found that SMEs with employees who visit Mural and Trello for teamwork and begin updating have a greater chance of having employees who know how Mural and Trello are used in the workplace. In addition, Laursen and Veenstra (2021) found that working together is fun whenever necessary to give the impression that a business's online presence is dynamic and frequently interacting with customers.

Further, studies have shown that social effects are crucial to an effective collaboration platform (Ragan et al., 2022). Based on their assumptions about what their teammates and colleagues (those in other groups) think about them using a Mural and Trello, participants may interpret the creation of peer influence in SME, as they did in this study. Peer influence shapes people's perspectives and their use of technology, an idea proposed by Zingora et al. (2020). As a result, the following hypotheses are advanced by this investigation.

H3: Peer influence significantly impacts on actual use of collaborative system platforms (Mural, Trello).

2.4. Technical support and actual use of collaborative system platforms

As defined by Techopedia, "technical support" is "a service offered by a hardware or software company to registered users in exchange for feedback and suggestions about the company's products" (Alshammari, 2020). Once only accessible by phone, technical support is now offered via chat and email (Subramaniam et al., 2018). Today's small and medium enterprises typically outsource technical support. Many companies host discussion boards for their customers, which helps them save money on upkeep while still capitalizing on feedback (Qiu et al., 2021). The increasing prevalence of technology in today's society has resulted in a corresponding rise in the demand for technical support. Many multinational corporations have set up service or technical support operations in developing countries to cut costs. Dell was one of the first companies to outsource its technical support and customer service (Hemavathi et al., 2021). Outsourcing is an excellent option for businesses to provide technical support. Such a requirement may arise from daytime call peaks, increased activity due to the introduction of new products or annual maintenance bundles, or the aspiration to provide superior service to customers while keeping operational costs to a minimum (Guedes & Buest, 2022). Companies that require technical support personnel can save time and effort by exporting their services. It also allows businesses to hire specialists whose technical knowledge and experience may be outside the scope of the business, allowing the company to provide a higher level of technical support to its employees (Hemavathi et al., 2021). Support from professionals or other technical assistance can improve employees' use of technology.

Making resources available to those who can benefit from them has been shown to have positive outcomes in previous research (Qiu et al., 2021; Subramaniam et al., 2018). One factor that affects how computer networks are utilized is "support/resistance," as stated by Alshammari (2020). Inadequate user and technical support are cited as another reason for the failure of Mural and Trello by Hemavathi et al. (2021). It has been argued by Ferreira et al. (2022) that managers require technical support from trained assistants, instructional designers, and computer experts. Technology aids the introduction and use of challenging or unfamiliar tools like Mural and Trello, which are essential for instructors to manage teamwork and achieve various organizational objectives successfully. Hemavathi et al., 2021; Shchetynina et al., 2022), or they immediately implement the online course design made by the experts.

Thus, we propose the following:

H4: Technical support significantly impacts on actual use of collaborative system platforms (Mural, Trello).

2.5. Actual use of collaborative system platforms and continued use of

A user's intent to perform a specific task is a definition of actual usage (Chandna, 2022). The "degree to which an individual will embrace the application in the future" is one definition of organizational collaboration, which can predict the future use of a computer-specific technology (Han & Trimi, 2022). Employees in this SME followed the trainer's instructions and used the system in the company context, which they may or may not encounter again. Therefore, the employees' performance expectation of alternative uses was compiled from their specific intent to use a personal Mural and Trello teamwork platform or strategies to use a Mural and Trello system to aid in their teamwork report and collaborative learning and to stretch their knowledge to other products in the next task or the future (Guedes & Buest, 2022; Rahi et al., 2019; Shchetynina et al., 2022). The average weekly amount of time understudies reported spending in good faith using the Mural and Trello system was used to measure their actual usage. After considering past actions, the impact of effort expectancy on future activities is much smaller, according to the literature (Sahal et al., 2021). As stated by Subramaniam et al. (2018), users' future activities may be influenced by past actions. These investigators also found signs that future use could be predicted based on users' intentions and past habits (Rahi et al., 2019; Yueh et al., 2015). This study aims to evaluate current usage patterns and apply those findings and other indicators to predict future behavior regarding maintaining the system's upkeep. Prior works attempted to use a technique for predicting people's future actions to assess whether or not they would accept a new technology (Singh et al., 2020). So, in this study, we defined users' behavioral intention of future usage as their intention to continue using the Mural and Trello systems. In contrast, actual usage was defined as users' habitual use of the teamwork system (Shchetynina et al., 2022). Here's the hypothesis:

H5: Actual use of collaborative system platforms significantly impacts on continued use of (Mural, Trello).

2.6. Conceptual Framework

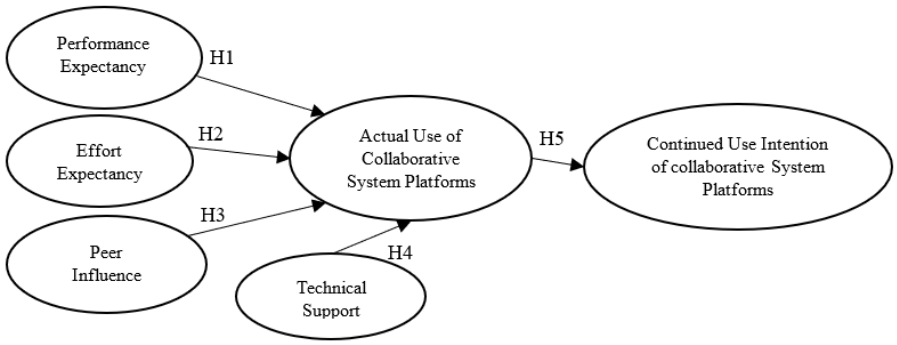

Figure 1: Conceptual Framework

3. Methodology

The conceptual framework was established, and hypotheses were presented based on a careful analysis of the existing literature, the reasoned action Theory, and the Theory of Planned Behavior**.** The study model we developed was validated with the use of data acquired through a survey. The context, the platforms, the sample, the measurements, the data analysis, and the findings of our research are outlined in this part**.**

3.1. Participants and Procedure

Employees of small and medium enterprises (SMEs) in the United States who use either Trello or Mural participated in the study. A total of 370 surveys were sent out via the online platforms Mural and Trello for this investigation. As a result, 291 total responses served as the sample for this analysis. Participants' views on expected effort, peer influence, expected performance, and the use of technical support at a threshold level are uncovered using a cross-sectional study design, as are their intentions and behaviors regarding the use of collaborative system platforms going forward. Since English is a common academic language among healthcare and business employees, all respondents were native English speakers. Some selected participants declined to participate in the survey because they felt awkward or were otherwise unavailable. In this investigation, the researcher used a " practical sampling method." The researcher employed a Likert-type scale with five options for the accompanying questionnaire, 1= Strongly Disagree to 7 = strongly agree. Information was gathered in September 2021. People who took part in the online surveys did so of their free will. They had been briefed on the study's goals and made aware that they could revoke their consent at any time. A 24-item questionnaire was devised to analyze the SME employee's from USA companies using Mural and Trello. The detailed survey with the item adaptation and the source articles available is shown below in Table 1.

Table 1. Survey Items

Variables	Items	Source
Performance expectancy	I would find the Mural and Trello useful in my job/study. Using Mural and Trello enables me to accomplish tasks more quickly. Using Mural and Trello increases my productivity. If I use the Mural and Trello, I will increase my chances of getting a raise	(Zeng et al., 2013)
Effort expectancy	My interaction with the Mural and Trello would be clear and understandable. It would be easy for me to become skilful at using the Mural and Trello. I would find the Mural and Trello easy to use.	(Zeng et al., 2013)
Peer Influence	Learning to operate the Mural and Trello is easy for me. People who influence my behavior think that I should use the Mural and Trello. People who are important to me think that I should use the Mural and Trello. In general, the organization has supported the use of the Mural and Trello	(Zeng et al., 2013)
Technical Support	When I have difficulty using the software, I can. Exchange information with others who know how to better use the software functions. Talk to other more knowledgeable people. Discuss with others who know how to make better use of the software features.	(Zheng et al., 2018)

Actual use of collaborative system platforms	I feel confident to use digital collaboration platforms as media sharing or discussion in the learning process. I find it easier to learn on my own with a digital collaboration platform, without much involvement from faculty. I am confident to use digital collaboration platforms for my education. I am motivated to use digital collaboration platforms for my education.	(Singh et al., 2020)
Continued use intention of collaborative system platforms	For the future, I want to continue to use digital collaboration platform to help my learning process. For the future, I plan to increase the intensity of using digital collaboration platform to help my learning process. For the future, I plan to use the digital collaboration platform as my top priority in helping the learning process. For future, I intend to use the digital collaboration platform for continuously improving my grades. For future, I intend to use the digital collaboration platform for completing my academic tasks in time without any fail.	(Singh et al., 2020)

3.2. Mural and Trello

Using directed methodologies and change competence, Mural enables teams to work together in real-time or sequentially around a digital board collaboration environment, taking ideas and information from the realm of possibility into reality. Trello is a visual tool for organizing projects and tracking progress toward professional goals. Any team can use it to coordinate the completion of any work. Just throw in some forms, a checklist, or some technology: Modify everything to fit the way your group works best. Sign up, create a board, and you're good to go!

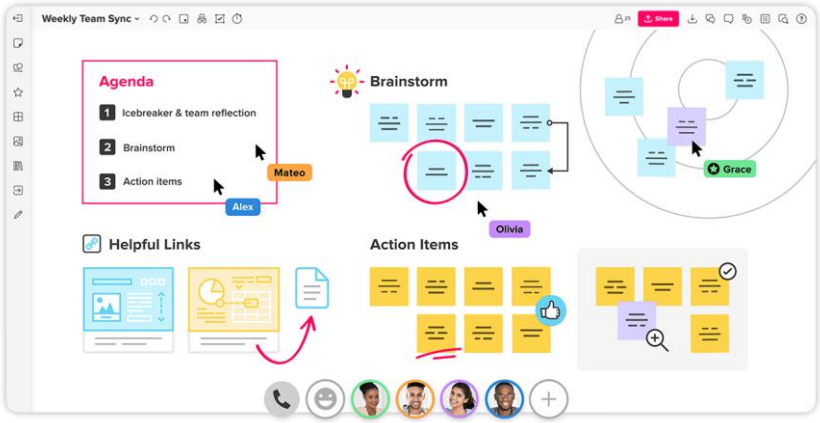

Figure 2: (Mural, 2022) Retrieved from https://www.mural.co

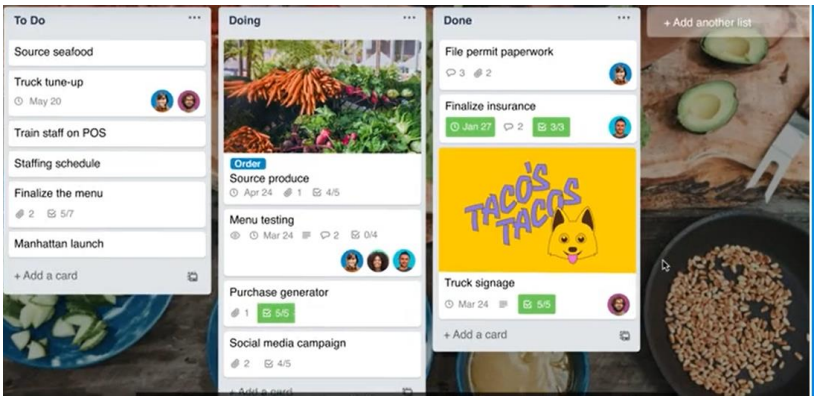

Figure 3: (Trello, 2022) Retrieved from https://trello.com/tour

4. Results

Table 2 presents, from a preliminary analysis of respondent data, the demographic features and descriptive statistics of the sample for the current study (N=291). Structure and metric models were evaluated using SmartPLS3. The model evaluation conducted on employees in the United States that have employees using Mural and Trello found that gender, age, and qualification significantly influenced the impact of continued intention to use and actual use of the collaborative system platforms, as well as effort expectancy, peer influence, performance expectancy, and the use of technical support.

Table 2: Demographic profile

Demography	**Description**	**No. of Responses**	**%**
Gender	Male	180	62
	Female	111	38
Age	20-35	190	65
	Above 35	101	35
Qualification	Bachelors	210	72
	Master	81	28

Men made up 62% of the responders in the table above, while women made up 38%. 65% of respondents were between the ages of 20 and 35, while 35% were above 35. 72% of respondents with a bachelor's degree and 28% with a master's were qualified.

Table 3: Descriptive Statistics

	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
PE	291	1	6	3.61	0.93
EE	291	1	6	3.33	0.87
PI	291	1	6	3.42	0.91
TS	291	1	6	3.53	0.81
ACSP	291	1	6	3.45	0.89
CCSP	291	1	6	3.56	0.87

In the above table 3, descriptive analysis refers to "the type of analysis of data that helps describe, show or constructively summarize data points such that patterns might emerge that fulfil every condition of the data". Five variables in the current study's descriptive analysis are shown by their means, standard deviations, maximum, and minimum values.

4.1. Measurement model

The data collected from 291 employees were first analyzed using PLS-SEM to determine the collected information's factor loadings, validity, and reliability. The PLS measurement model's findings for the items' factor loadings, validity, and reliability are shown in Table 4. Cronbach's alpha, a measure of item internal consistency, should be 0.70 or higher as a rule of thumb (Fornell & Larcker, 1981). Cronbach's Alpha and CR values for the variables under review were more significant than 0.70. There was evidence of convergent validity, and the demonstrated reliability was based on the fact that AVE values for discriminant validity were more significant than 0.50. (Fornell & Larcker, 1981). The CR values ranged from 0.90 to 0.719, higher than the minimum requirement of 0.70. (Zaman et al., 2022).

Table 4: Composite reliability, Cronbach's Alpha and AVE values

Constructs/Items	CA	Rho-A	CR	AVE
Continued use intention of collaborative system platforms	0.868	0.872	0.904	0.655
Effort expectancy	0.707	0.712	0.836	0.629
Peer influence	0.703	0.734	0.809	0.520
Performance expectancy	0.805	0.813	0.873	0.633
Technical support	0.657	0.667	0.719	0.517
actual use of collaborative system platforms	0.772	0.775	0.803	0.508

Note: CR=composite reliability; AVE=average variance extracted; CA= Cronbach's Alpha

Further, it is essential to demonstrate the discriminant validity of any research methodology. Fornell and Larcker (1981) defined discriminant validity as "the degree to which a given latent variable differs from other latent variables." After ensuring all of the variables met the criteria for reliability and validity as shown in Table 5, we did some additional research for structural path analysis.

Table 5: Discriminant validity

	CCSP	EE	PI	PE	TS	ACSP
CCSP	0.809					
EE	0.501	0.793				
PI	0.210	0.209	0.721			
PE	0.589	0.386	0.327	0.796		
TS	0.654	0.479	0.324	0.451	0.746	
ACSP	0.562	0.398	0.199	0.398	0.447	0.713

Note: CCSP= Continued use intention of collaborative system platforms, ACSP= actual use of collaborative system platforms, EE= Effort expectancy, PI= Peer influence, PE= Performance expectancy, TS= Technical support

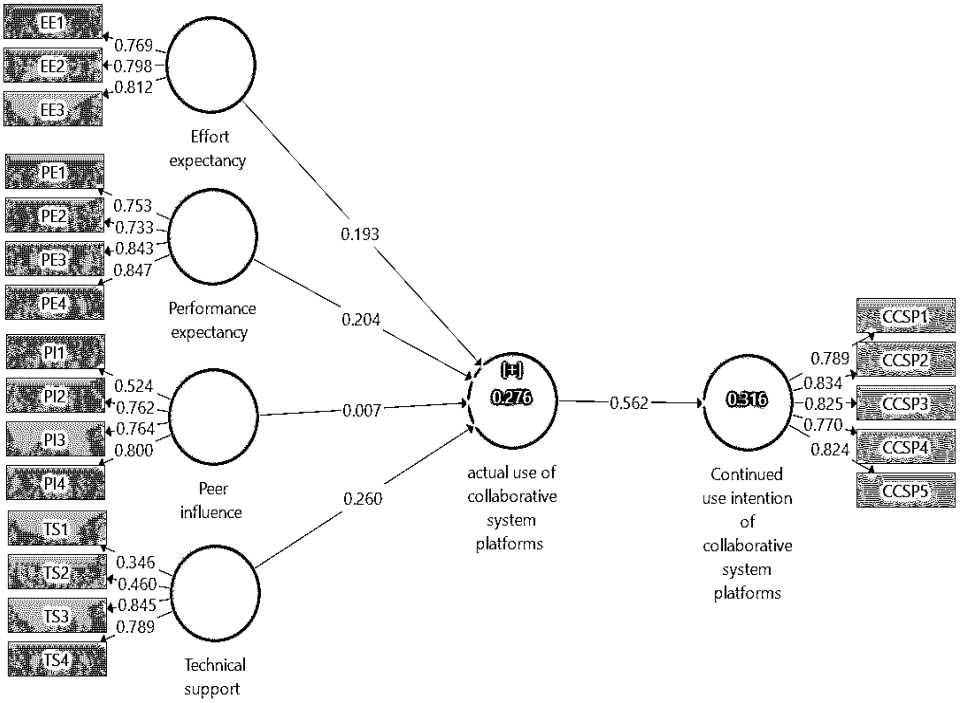

Figure 4: Structural Relationships

R^2 has a value between zero and one. In addition, Chin (1998) suggested that R^2 values of 0.13 be regarded as poor, 0.33 as moderate, and 0.67 as strong. The table provides the endogenous constructs' coefficient of determination. Continued use of collaborative system platforms R square value of 0.316 indicates moderate and actual usage of collaborative system platforms R square value of 0.276 indicates poor relation, according to Table 6 below.

Table 6: Assessment of R square

	R^2
Continued use intention of collaborative system platforms	0.316
Actual use of collaborative system platforms	0.276

4.2. Structural Equation Model

Statistical determinations of the structural model route coefficients reflecting the hypothesized correlations were made using the PLS-SEM bootstrapping method, see Table 7. The PLS-SEM analysis of the relationship between the respondent's expected level of effort, the influence of their peers, the anticipated level of performance, the availability of technical support, and their testing options for the hypotheses are all displayed. As can be seen from the results, there is a statistically significant correlation between perceived effort and actual use of collaborative system platforms (β= 0.193, t = 2.930, p = 0.004). Consequently, we accept H1. Findings indicate a statistically significant link between peer pressure and the actual use of collaborative system platforms (β= 0.219, t = 2.133, p = 0.008). This supports H2 being accepted. Data demonstrates a statistically significant (β= 0.204, t = 2.949, p = 0.003) correlation between levels of performance expectations and actual participation in collaborative system

platforms. So, we must agree with H3. A statistically significant correlation (β= 0.251, t = 3.012, p = 0.003) was found between Technical support and actual use of the collaborative system platform. So, we must agree with H4. The findings reveal a highly significant (β= 0.562, t = 10.172, p = 0.000) correlation between respondents' reported frequency of platform use and their stated intent to keep using collaborative systems. In light of this, we accept H5.

Table 7: Direct Relation

		Original Sample	T Statistics	P Values	Decision
Effort expectancy -> actual use of collaborative system platforms	0.193	2.930	**0.004**		Supported
Peer influence -> actual use of collaborative system platforms	0.197	2.133	**0.008**		Supported
Performance expectancy -> actual use of collaborative system platforms	0.204	2.949	**0.003**		Supported
Technical support -> actual use of collaborative system platforms	0.260	4.013	**0.000**		Supported
actual use of collaborative system platforms -> Continued use intention of collaborative system platforms	0.562	10.172	**0.000**		Supported

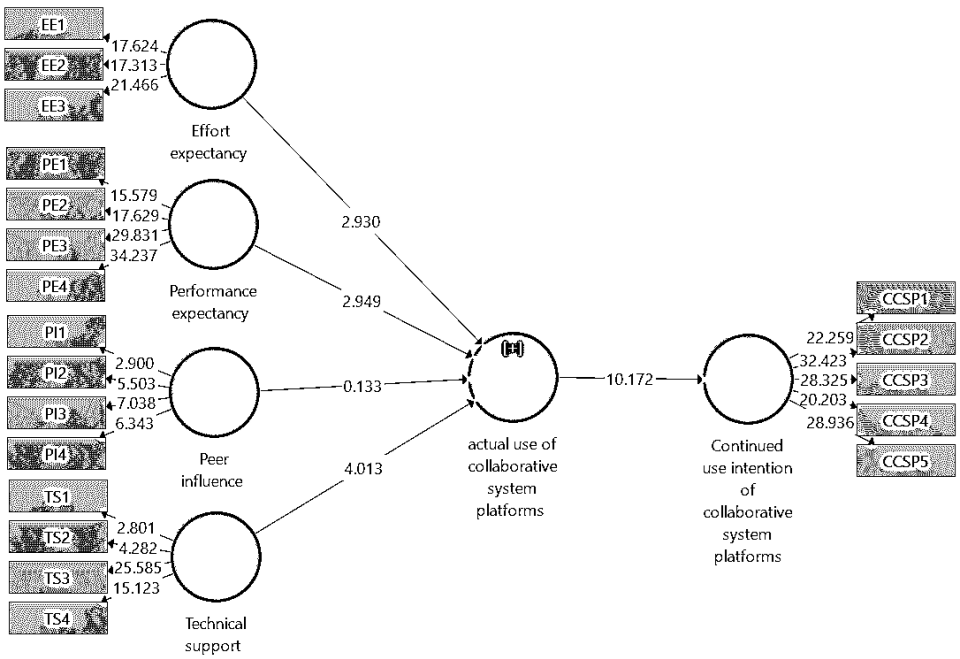

Figure 5: Significance Analysis through PLs Bootstrapping

5. Discussion

The purpose of this study was to investigate whether or not Mural and Trello SME employees in American businesses intend to keep using these collaborative system platforms, and the planned behavior theory and the reasoned action theory were used to do so. There was evidence to back up every single one of the hypotheses.

The current study's findings suggest that small and medium enterprise (SME) workers have low expectations regarding their work effort. To test this hypothesis, the researchers looked into the connections between participants' future intentions to use collaborative system platforms, their current use of these platforms, their expectations of effort, the influence of their peers, the expected quality of their performance, and the availability of technical support. As can be seen from the results, there is a statistically significant correlation between perceived effort and actual use of collaborative system platforms (β= 0.193, t = 2.930, p = 0.004). Hence You can go with H1. According to the survey results, the expected effort, To begin with, the staff saw a Mural and Trello as a means of collaborating on their education and performance. Findings also show that the more valuable a Mural or Trello is, the more likely workers are to use one for individual and team projects (Fedorko et al., 2021).

Findings indicate a statistically significant link between peer pressure and the actual use of collaborative system platforms (β= 0.219, t = 2.133, p = 0.008). This supports H2 being accepted. Worker evaluations are based on social connections, adoption patterns, and social circles (Soh et al., 2018). Chandna (2022) will affect their attitudes and behaviors toward cutting-edge technologies. However, using the Mural and Trello system to lessen the impact of employees' assumed social influence on others for individualized and group education could lead to a decline in group identity due to the limited contact between study groups.

Data demonstrates a statistically significant (β= 0.204, t = 2.949, p = 0.003) correlation between levels of performance expectations and actual participation in collaborative system platforms. So, we must agree with H3. The use of the Mural and Trello systems affected employee performance expectations, as Hamzat and Mabawonku (2018) found actual usage and respondents' intention to change their behavior persisted, despite the large sample size. Earlier studies have shown that the undertaking concept of "expectation of performance," as stated by Ryu and Fortenberry (2021), can help users accomplish challenging goals such as task performance and quality.

A statistically significant correlation (β = 0.251, t = 3.012, p = 0.003) was found between Technical support and actual use of the collaborative system platform. So, we must agree with H4. Mural and Trello have been lauded for their ease of use, but Guedes and Buest (2022) argued that this is irrelevant because only some workers are proficient or competent ICT users. In the first week of class, employees of the companies participating in the study were given a crash course in using the Mural and Trello systems, both of which were recommended by the study's authors, Hemavathi et al. (2021). Some people may still need to find the Mural and Trello system more collaborative to use effectively. If adapted to the individual, it will continue to be more complex, especially for those not accustomed to working in a group.

The findings reveal a highly significant (β= 0.562, t = 10.172, p = 0.000) correlation between respondents' reported frequency of platform use and their stated intent to keep using collaborative systems. In light of this, we accept H5. Users' future actions may be influenced by their past actions, as stated by Subramaniam et al. (2018). These investigators also found signs that future use could be predicted based on users' intentions and past habits (Rahi et al., 2019; Yueh et al., 2015). This study aims to evaluate current usage patterns and apply those findings and other indicators to predict future behavior concerning maintaining the system's upkeep. In the end, this study used planned behavior theory. It reasoned action theory to better analyze Mural and Trello SME employees from American companies to understand their future intentions regarding these collaborative system platforms.

5.1. Practical Implications

The goal of this research was to raise people's level of consciousness. However, there are numerous

ways in which this research aids managers, practitioners, and policymakers. Web 2.0 proponents regularly promote ideas and uses of simple web applications, such as utilizing an internet protocol, and encourage users to share their expertise to further tap into information sharing. According to (Yueh et al., 2015), the Mural and Trello are metaphors for Internet tools that allow for collaborative editing and complex organization. It represents the current, modern approach to interacting with the Internet. Incorporating a logic of invasion into the learning process, using a Mural and Trello in a corporate setting is expected to increase the prevalence of peer-to-peer collaborative platforms and other websites. The Mural and Trello system did motivate group members to offer suggestions and perceptions about their productions, add overviews of their opinions from the assignment, document their actual work, and develop existing research developments in their groups related to their studies. More technological methods, such as Links, chat systems, or visual imagery of instructional strategies, could be integrated into Mural and Trello systems to promote standard connectivity and enhance contact between many group members in the collaborative platforms. U.S. small and medium enterprise (SME) employees who use Mural and Trello were surveyed for this study to determine the long-term effects of their intention to keep using these collaboration platforms. This study fills a gap in the literature by focusing on the individual level of analysis.

5.2. Theoretical Implications

Because of the far-reaching implications of these findings for SME workers in the United States and policymakers, the current study's focus may be widened to incorporate future intentions to use collaborative system platforms, actual use of collaborative system platforms, effort expectancy, peer influence, performance expectations, and technical support. Therefore, the foundation of the present investigation rests on the theories of deliberate action planning and rational choice. Additional support is provided in this study for the claim that managers may use Mural and Trello to build online working environments, disseminate course data, and supply collaboration platforms. Mural and Trello could be helpful for users in organizational networks who need to keep track of the ever-changing stages of ideas and discuss novel problems. In addition, this research recommends additional development of Mural and Trello applications in organizational contexts to aid managers in efficiently managing organizations. For instance, Mural and Trello have configuration management and record-tracking features that help managers keep tabs on their staff's collaborative platforms. However, keep in mind that clearing away early barriers to using a Mural and Trello system is critical.

5.3. Limitations and future research

Because this research was conducted as part of a specific class, its results should be interpreted cautiously if applied to unrelated situations. And even if the sample size was adequate for this study, there needed to be more employees working at the company to make a significant difference. Due to the small sample size, it is possible that many of the observed phenomena could have been more genuinely significant. Future research should investigate the potential benefits of using Mural, Trello, and other organizational tools in a dynamic, instructor-led work setting. It's possible for lecturers to keep their staff members inspired and encourage them to continue utilizing the Mural and Trello. Successes in both quality and quantity could be measured in future research. How do employees perceive the effects of their peers on their interactions, level of engagement, and use of the Mural and Trello systems to facilitate learning in a collaborative setting? There's also the intriguing question of how employees' social presence on Trello and Mural affects their actual usage behavior in collaborative platforms, their goals for continuous use, and other platforms. Experts should look into factors that could moderate or mitigate impacts to get more meaningful results from future studies. The data were collected using a cross-sectional approach, but the researchers may use a longitudinal study design to establish causation better. More research is needed to see if the theory holds up in other developed and developing nations.

5.4. Conclusion

This research focuses on the intentions of small and medium enterprise (SME) employees at American organizations to keep using collaborative work platforms like Mural and Trello. The current system was developed with the following aims: collaborative intention to use collaborative system platforms; actual use of such platforms; anticipated effort; anticipated peer influence; expected performance; and anticipated level of technical support. Knowing that their participation in the Mural and Trello system benefits others, such as their coworkers and groups, will motivate employees to use the system. Because of their favorable experiences with the Mural and Trello system during production, workers are more collaborative about adopting the tools for use in future solo and team platforms. The results also show that the more encouragement there is for workers to use Mural and Trello, the more often they will use these tools. Peer influence while using the Mural and Trello can also be used to predict future employee behavior, which could inform the development of technological features for collaboration platforms.

References

Alshammari, S. H. (2020). The Influence Of Technical Support, Perceived Self-Efficacy, And Instructional Design On Students'use Of Learning Management Systems. *Turkish Online Journal of Distance Education*, *21*(3), 112-141. https://doi.org/10.17718/tojde.762034

Chandna, V. (2022). Social entrepreneurship and digital platforms: Crowdfunding in the sharing-economy era. *Business Horizons*, *65*(1), 21-31. https://doi.org/10.1016/j.bushor.2021.09.005

Chatterjee, S., Bhattacharjee, K. K., Tsai, C.-W., & Agrawal, A. K. (2021). Impact of peer influence and government support for successful adoption of technology for vocational education: A quantitative study using PLS-SEM technique. *Quality & Quantity*, *55*(6), 2041-2064. https://doi.org/10.1007/s11135-021-01100-2

Damalas, C. A. (2021). Farmers' intention to reduce pesticide use: The role of perceived risk of loss in the model of the planned behavior theory. *Environmental Science and Pollution Research*, *28*(26), 35278-35285. https://doi.org/10.1007/s11356-021-13183-3

Fedorko, I., Bačik, R., & Gavurova, B. (2021). Effort expectancy and social influence factors as main determinants of performance expectancy using electronic banking. *Banks and Bank Systems*, *16*(2), 27. https://doi.org/10.21511/bbs.16(2).2021.03

Ferreira, L., Putnik, G. D., Varela, M. L. R., Manupati, V. K., Lopes, N., Cunha, M., Alves, C., & Castro, H. (2022). A Framework for Collaborative Practices Platforms for Humans and Machines in Industry 4.0–Oriented Smart and Sustainable Manufacturing Environments. In *Smart and Sustainable Manufacturing Systems for Industry 4.0* (pp. 1-24). CRC Press. https://doi.org/10.1201/9781003123866-1

Figueroa-Armijos, M., Clark, B. B., & da Motta Veiga, S. P. (2022). Ethical Perceptions of AI in Hiring and Organizational Trust: The Role of Performance Expectancy and Social Influence. *Journal of Business Ethics*, 1-19. https://doi.org/10.1007/s10551-022-05166-2

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50. https://doi.org/10.1177/002224378101800104

Guedes, G., & Buest, A. (2022). Technology-Based Tools for an Online, a Collaborative Learning Experience in Fashion Design. Advances in Science and Technology,

Hamzat, S. A., & Mabawonku, I. (2018). Influence of performance expectancy and facilitating conditions on use of digital library by engineering lecturers in universities in south-west, Nigeria. *Library philosophy and practice*, 1-16. https://digitalcommons.unl.edu/libphilprac/1620

Han, H., & Trimi, S. (2022). Towards a data science platform for improving SME collaboration through Industry 4.0 technologies. *Technological Forecasting and Social Change*, *174*, 121242. https://doi.org/0.1016/j.techfore.2021.121242

Hemavathi, D., Kumar, V. R., Regin, R., Rajest, S. S., Phasinam, K., & Singh, S. (2021). Technical Support for Detection and Prediction of Rainfall. 2021 2nd International Conference on Smart Electronics and Communication (ICOSEC),

Izuagbe, R. (2021). Faculty research performance expectancy of online databases: System design characteristics as facilitating conditions. *The Journal of Academic Librarianship*, *47*(2), 102318.

https://doi.org/10.1016/j.acalib.2021.102318

LaCaille, L. (2020). Theory of reasoned action. *Encyclopedia of behavioral medicine*, 2231-2234. https://doi.org/10.1007/978-3-030-39903-0_1619

Laursen, B., & Veenstra, R. (2021). Toward understanding the functions of peer influence: A summary and synthesis of recent empirical research. *Journal of Research on Adolescence*, *31*(4), 889-907. https://doi.org/10.1111/jora.12606

Qiu, Z., Li, Z., Yan, Q., Li, Y., Xiong, W., Wu, K., Li, X., Fan, S., Zhao, M., & Ding, H. (2021). Development of diagnostic tests provides technical support for the control of African swine fever. *Vaccines*, *9*(4), 343. https://doi.org/10.3390/vaccines9040343

Ragan, D. T., Osgood, D. W., Ramirez, N. G., Moody, J., & Gest, S. D. (2022). A comparison of peer influence estimates from SIENA stochastic actor–based models and from conventional regression approaches. *Sociological Methods & Research*, *51*(1), 357-395. https://doi.org/10.1177/0049124119852369

Rahi, S., Mansour, M. M. O., Alghizzawi, M., & Alnaser, F. M. (2019). Integration of UTAUT model in internet banking adoption context: The mediating role of performance expectancy and effort expectancy. *Journal of Research in Interactive Marketing*. https://doi.org/10.1108/JRIM-02-2018-0032

Ryu, j. S., & fortenberry, S. (2021). Performance Expectancy and Effort Expectancy in Omnichannel Retailing. *The Journal of Industrial Distribution & Business*, *12*(4), 27-34. https://doi.org/10.13106/jidb.2021.vol12.no4.27

Sahal, R., Alsamhi, S. H., Brown, K. N., O'Shea, D., McCarthy, C., & Guizani, M. (2021). Blockchain-empowered digital twins collaboration: smart transportation use case. *Machines*, *9*(9), 193. https://doi.org/10.3390/machines9090193

Shaikh, A. A., Glavee-Geo, R., & Karjaluoto, H. (2021). How relevant are risk perceptions, effort, and performance expectancy in mobile banking adoption? In *Research Anthology on Securing Mobile Technologies and Applications* (pp. 692-716). IGI Global. https://doi.org/10.4018/978-1-7998-8545-0.ch038

Shchetynina, O., Kravchenko, N., Horbatiuk, L., Alieksieieva, H., & Mezhuyev, V. (2022). Trello as a Tool for the Development of Lifelong Learning Skills of Senior Students. *Postmodern Openings*, *13*(2), 143-167. https://doi.org/10.18662/po/13.2/447

Singh, A., Sharma, S., & Paliwal, M. (2020). Adoption intention and effectiveness of digital collaboration platforms for online learning: the Indian students' perspective. *Interactive Technology and Smart Education*. https://doi.org/10.1108/ITSE-05-2020-0070

Soh, P. C.-H., Chew, K. W., Koay, K. Y., & Ang, P. H. (2018). Parents vs peers' influence on teenagers' Internet addiction and risky online activities. *Telematics and Informatics*, *35*(1), 225-236. https://doi.org/10.1016/j.tele.2017.11.003

Sok, J., Borges, J. R., Schmidt, P., & Ajzen, I. (2021). Farmer behaviour as reasoned action: a critical review of research with the theory of planned behaviour. *Journal of Agricultural Economics*, *72*(2), 388-412. https://doi.org/10.1111/1477-9552.12408

Subramaniam, S., Aggarwal, P., Dasgupta, G. B., & Paradkar, A. (2018). Cobots-a cognitive multi-bot

conversational framework for technical support. Proceedings of the 17th International Conference on Autonomous Agents and MultiAgent Systems,

Yueh, H.-P., Huang, J.-Y., & Chang, C. (2015). Exploring factors affecting students' continued Wiki use for individual and collaborative learning: An extended UTAUT perspective. *Australasian Journal of Educational Technology*, *31*(1). https://doi.org/10.14742/ajet.170

Zeng, Z., Hu, X., & Mei, S. (2013). Factors affecting a mobile application's acceptance: An empirical study of user acceptance of WeChat in China. In.

Zheng, Y., Wang, J., Doll, W., Deng, X., & Williams, M. (2018). The impact of organisational support, technical support, and self-efficacy on faculty perceived benefits of using learning management system. *Behaviour & Information Technology*, *37*(4), 311-319. https://doi.org/10.1080/0144929X.2018.1436590

Zingora, T., Stark, T. H., & Flache, A. (2020). Who is most influential? Adolescents' intergroup attitudes and peer influence within a social network. *Group Processes & Intergroup Relations*, *23*(5), 684-709. https://doi.org/10.1177/1368430219869460