# *Evaluating an Online Vehicle Parts Ordering System to Improve the Quality of Service*

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## Abstract

*This research highlights all the necessary components of a successful information system based on the Technology Acceptance Model (TAM). By evaluating Westrac's current inventory ordering system prototype following TAM evaluation in addition to the Delone and McLean Model to improve customer satisfaction. The system needs to fulfill certain key components according to TAM: Perceived Usefulness (PU), Perceived Ease of Use (PEU), Perceived Behavior Control (PBC), Voluntariness (V), and Subjective Norm (SN) to be able to satisfy the customers need and requirements. Similarly, the other criteria created by DeLone and McLean: Information Quality, System Quality, Computer Self-Efficacy, Service Quality, User Satisfaction, Perceived Net Benefit, Complementary Technology*

**Keywords:** Westrac, Management Information System, Parts, TAM, Delone and McLean, Evaluation

## Introduction

Westrac Ltd is a Belizean, multi-branch company which predominantly sells tractors, tractor parts, vehicle parts and accessories. With humble beginnings in 1969 in a 900 sq ft building, Westrac has grown into a sprawling business empire, with 4 main branches and several affiliated companies operating under the Westrac name. While this growth was hugely supported by technological advancement through computers, the need for even more advancement marches on. Enter, Management Information Systems.

Westrac has acquired an open source accounting system "Quasar," which each branch uses. Each branch is fed information from a central server, which has information on inventory, accounts and everything else needed to manage the business. All sales and accounting are done with this software, and the information available is linked with all the branches in real time. The information system also allows for different levels of user privileges, for enhanced security.

In order to be more competitive, as well as to provide customers with the most efficient service possible, Westrac is working on an IS that would allow customers to browse and interact with the inventory available, tracked by "Quasar." The customer can then select which parts they want, and have it shipped to them, all from the palm of their hand. If the customer has a question, they can call Westrac's call centers, where they will be promptly assisted. While still in its very early stages, the potential power and convenience of this system is huge.

The purpose of this project is to assess the demands and needs of mechanics, auto technicians and other customers for such a service. Positive feedback should result in a quicker production period for the service, while negative feedback would result in the service being improved to a point where it would be useful to Westrac's customers.

## Literature Review

Abu-Dalbouh research paper "A Questionnaire Approach Based On The Technology Acceptance Model For Mobile Tracking On Patient Progress Applications" highlights four major components in his mobile tracking model. These include, "Perceived of Usefulness, Perceived Ease of Use, User Satisfaction and Attribute of Usability." These components will be used to evaluate the performance of the system to see if it is acceptable. The perceived usefulness of the system will be used to evaluate how much the system and data is contributing to their field. In Abu-Dalbouh case it would be the healthcare industry and in our case it would be the Westrac parts ordering service. The perceived ease of use is used to evaluate how easy the users can maneuver and work the system on their own. User Satisfaction will evaluate how pleased the users are with the quality of service they get from using the service. Attribute of Usability will look at the problems people are having with having with the system and their outlook to it.

In additional to these components DeLeone and McLean "Model of Information Systems Success: A Ten-Year Update" adds on to Abu-Dalbough idea by stating that the central focus of their research is "assessment of information systems effectiveness and value, the implementation and use of information technology in small and medium-sized businesses, and the global management of information technology." These different aspects will determine how successful the e-commerce system really is. DeLeone and Mclean found out that the use of the system is tied to the quality as the user friendliness of the system contributed to the amount of time the system is used. Information quality of the system proved that the quality of the information contributes greatly to the users of the system. By revolving around these core concepts we can relate them to Westrac's system by looking at the users and how often they use the system, how user friendly it is, and how often the system is updated. These will all contribute to the overall success of the information system.

Venkatesh and David had a similar idea to Deleone and Mclean in their research "A theoretical Extension of the Technology Acceptance Model" by maintaining an information system utilizes "perceived usefulness and usage intentions in terms of social influence and cognitive instrumental processes." The intention and usage of the system focuses on the simplicity of using the system for the users to understand on their own. Perceived usefulness looks at the job relevance to the output quality of the system. These attributes combined together leads to successful information system. Westrac's online parts ordering system should be simple enough for people to navigate on their own and get the tasks done easily. The system also need to be relevant to the people using it and get the service they require. The mechanics will be able to access the system to get the parts they need to compete a job but the service should have readily up to date information for all their needs.

Doherty and Ellis-Chadwick looks to the advantages that can come from an information system is done correctly like stated by other researches. Their research dives into the driving forces behind e-commerce in their research "Exploring the drivers, scope and perceived success of e-commerce strategies in the UK retail sector." In their paper Doherty and Ellis-Chadwick go on to explain the internet and e-commerce can help improve a business and the customers experience (2009). This is done because the internet allows for easier communication. By utilizing the internet Westrac can "customers, collect market research data, promote goods and services, broadening target markets, improving customer communications, extending product lines, improving cost efficiency, enhancing customer relationships …" (Doherty and Ellis Chadwick 2009). Using the internet makes it easier for Westrac to collect data on their customers and the parts they offer to the public. Westrac can easily collect data on the most popular parts and any other parts they do not offer which their customers may need. Also it is easier for them to advertise using the internet. Also by using the internet they can communicate with their customers. This system, if efficient, can help reduce cost and improve the quality of the business, by extension, making customers happier and more loyal to the company.

According to Gefen, Karanhanna & Straub, (2003), there is a separate distinction with the actual e-vendor and its website interface that is at the heart of online shopping. Previous studies before them has found that e commerce or the intent to shop online is the result of both the customer's perception of the website itself, specifically ease of use and usefulness (Technology Acceptance Model, TAM) and the trust in the e-

vendor. In their study, Gefen et al,(2003), studied both these concepts and came to the conclusion that consumer trust is as important to e- commerce as the famous TAM model. The study also gave birth to 4 characteristic or actions that, when present, build online trust. These are: a) A belief that safety mechanisms are built in the website, b) a belief that the vendor has nothing to gain by cheating, c) by having a typical interface and d)one that is more over easy to use. These findings by Gefen et al, (2003), are significant to this research as Westrac will need to ensure that they take into consideration both the TAM model and the impact of consumer trust when creating their website. If customers do not perceive their website as useful and easy or convenient to use, then they will not use it and the website will not be adding value or helping the company improve. If they do see it as convenient and useful but do not trust the site, customers will have second thoughts about using it and might still not use it. Hence, the site must be made in a certain way that customers can perceive it as useful and intuitive as well as safe and secure. After all, the site will be used not only for customers to check for availability of parts but also to order and have these parts delivered to them while accepting payment online. Consumers need to be assured that their financial information will be safe and secure from hackers and identity theft.

According to Heeks, (2002), alongside success, information systems in developing countries can be categorizes as failing totally or failing partially. A system failing totally is one that was introduced and then abandoned shortly after. One partially failing is one that met some of their objectives but not all major objectives were achieved. Heeks lies out some constraints to success and failure and also develops a new model which seeks to explain the high rates of failure by exploring actuality gaps, hard-soft gaps, and the constraints that exist to local information system improvisation in developing countries. Heeks research is important in determining how successful Westrac's website is and identifying constraints that hinders its success rate. In addition, Westrac must utilize the appropriate model (hard/soft model) in relation to creating its website and ensuring its success is aligned with the goals and objectives of the company (hard model) and not personal gains (soft model). Lastly in relation to local improvisation, it all comes down to how much change the website will bring to organizational process and flow of information and how willing the employees and managers are to embrace change. A simple example in Heeks, (2002) speaks of a hospital in Guatemala that wanted to implement a system to make administrative processes more efficient but the directors wanted to keep current procedures and so made them tailor the system to current procedures and not improving the hospital to the full extent that it could have by implementing the original information system. Likewise, if the website will disrupt the current procedure on sales and inventory processes, this may pose a problem for its implementation and success within the organization despite its success with customers.

The paper by Michael D Myers, "Qualitative Research in Information Systems," sheds some very important information on how to conduct research involving information systems. In many cases simple quantitative research is used, but the depth of research could be very much broadened if qualitative methods were used also. Quantitative methods were originally designed to be used in the natural sciences, and include survey methods, formal methods and mathematical modeling. The result being a very rigid system of answers, not allowing much space for discussion or opinions differing from the norm. Qualitative methods came about in the social sciences to enable studies of social and cultural phenomena. Instead of a system of questions and rigid answers, methods could include participant observation, interviews, and fieldwork, even allowing for impressions and reactions to be included as part of the research, a very different approach than the quantitative method. Qualitative differs from quantitative in 1 very noticeable difference: humans' ability to talk.

Since IS are computer systems in most cases, many research papers are based on quantitative research. However, in today's world, and particularly in MIS, it is very important to include a qualitative aspect, as the users of the IS will be interacting with it, and it is key to get their real feelings and thoughts about The paper by Alain Pinsonneault, "Survey Research Methodology in MIS: An Assessment," discusses some issues that come up when doing research on MIS projects. The 3 most significant problems are namely: single method designs where multiple methods are needed, over reliance on cross sectional surveys where longitudinal surveys are really needed, and low response rates. An example of a longitudinal survey would be doing multiple surveys over a period of time and then averaging the information, or, doing a survey that asks about a set period of time to get an averaged answer. Cross sectional surveys do not always give a full answer, as the recipient of the survey may have had a bad day and thus may put a negative answer. Or if the user of an IS is new to the IS, the answer may not be accurate. Therefore, to get a well-rounded

answer especially in the field of IS, longitudinal surveys would best be suited and would deliver a more complete answer. Concerning the number of methods used, Mr Pinsonneault cited some statistics: less than 7% of studies use multiple research methods and less than 10% use multiple data collection methods. This is unfortunate because it severely narrows the perspectives from which the phenomena are studied and limits possibilities for gaining understanding. This is especially evident when only quantitative methods are used, as discussed before. Regarding response rates, again Mr Pinsonneault cites statistics: more than 75% of studies have a response rate of less than 51% (or not reporting it.) This rate is very low, and has to be improved. One solution for better response rates is to get the support of top managers in an organization, who in turn can incite participation at lower levels. In addition, if well-known associations endorse the survey with their logo, response rates may improve also. The IS, rather than a list of numbers, which do not tell the full story.

## Methodology

The methodology used in this research is primarily quantitative. This is because a questionnaire is employed to measure the research variables i.e., information quality, system quality, service quality, usefulness and ease of use, user satisfaction and net benefits. A Quantitative methodology will be employed because the data collected from the questionnaire can be quantified using statistical procedures and presented in graphs, charts or tables.

### a. Subjects

The respondents in this research will be categorized in two sections due to the nature of the information being one that isn't fully available to the public as yet. Consequently, the system will be evaluated based on current users and potential users. The list of current users is very small, 8, however out of this only 4 successfully filled the form out in the end. In order to meet the quota for survey sample, the balance are potential users that can use the system. This sample mainly consist of individuals who work in auto part related businesses or trade such as mechanics, auto part retail stores, farmers with tractor part needs and a couple car owners. The sample size is 20 participants broken down in a 4:16 ratio representing user: potential users.

### b. Procedure

A sample frame with the list of current users was acquired from the company. Then each user was contacted and asked to participate in the research. After accepting to participate, each user was emailed the survey which is used to evaluate the information system that was provided to us based on the Delone and Mclean IS Success Model. After being filled out, the surveys were retrieved and the analysis process follows.

For potential user a group of local mechanics, car owners and auto part stores in the Cayo District, mainly the Twin Towns of Santa Elena and San Ignacio and Belmopan were selected randomly and given the survey provided from the Technology Adaption Model (TAM) to evaluate its probability of success among new potential users. This survey gathered on site information as most of the survey was filled out and retrieved as soon as the user completed the form.

### c. Instrument

Both questionnaires used were provided by the course lecturer. The questionnaire for current users of the information system was based on the Delone and Mclean IS Success Model and highlights questions to evaluate information quality, system quality, service quality, usefulness and ease of use, user satisfaction and net benefits of the information system by the perspective of individuals who currently have access and are using the information system presently. The other questionnaire for potential user of the information system is based on TAM and measures how well the new users would accept the information system. It evaluates usefulness, ease of use, behavior control, subject norm, voluntariness and behavior intention all in the perceive perspective of the potential user.

### d. Data analysis

The first form of analysis will provide a description of the sample from which the data was collected. Descriptive data such as Age, Gender, Education and work experience is extracted from the Questionnaires and placed in easy to understand graphs to describe the sample group. After basic description, the samples' responses are grouped in categories with each questionnaire (user satisfaction, system quality, or perceived usefulness subjective norm, and then presented in easy to understand graphs or tables. After all responses have been placed into easy to understand charts and graphs, an overall evaluation is given based on the responses in the survey and possible explanations of each defect in the system is given.

## Data Analysis and Discussion

Data Analysis for current users of the information system

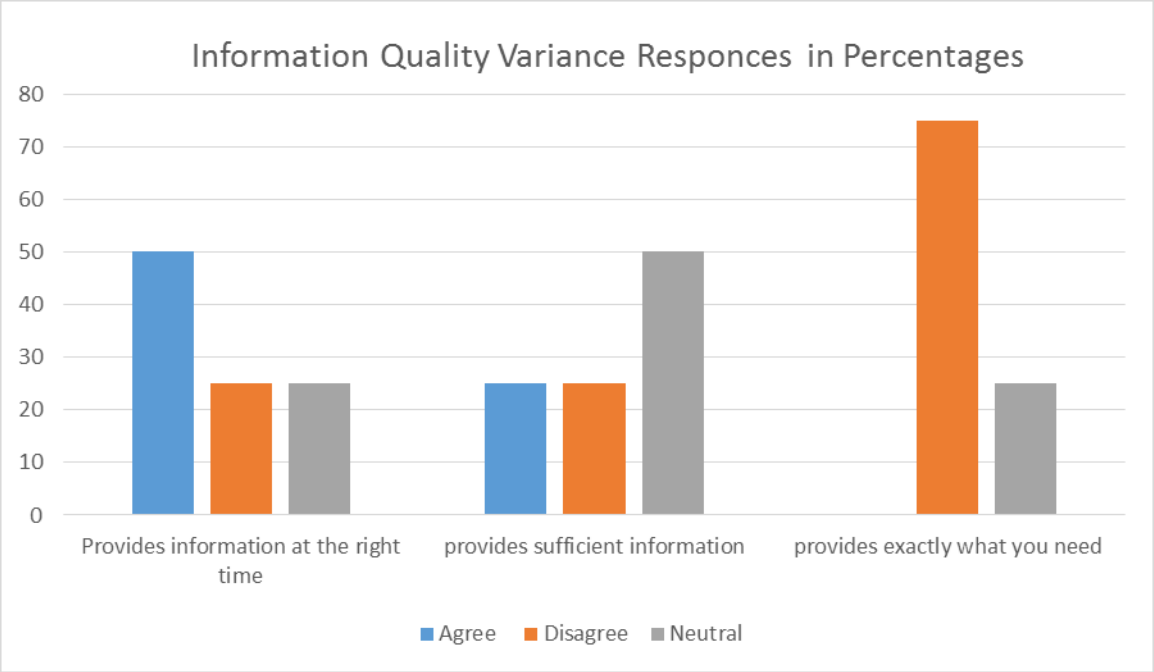
Table 1.

| **Characteristics of sample for current users of the information system** | |
|---|---|
| **Gender** | |
| Category | % |
| Male | 100 |
| Female | 0 |
| **Age** | |
| Less Than 25 | 0 |
| From 25 to 35 | 50 |
| Over 35 to 45 | 25 |
| Over 45 to 55 | 25 |
| Older than 55 | 0 |
| **Education** | |
| High School and less | 50 |
| Diploma | 50 |
| B.A | |
| Master | |
| **Work Experience** | |
| Less than 5 | |
| From 5 to 10 | 50 |
| Over 10 to 15 | 25 |
| More than 15 | 25 |

Information Quality

The information quality section of the survey contains 6 question. Out of these 6, 100% of the sample agreed that the information system provided information that is relevant to the user's job and easy to understand. They all disagreed similarly that the information on the system is up to date. The other 3 questions did not have similar responses and are displayed in the Figure 1 below.

Fig. 1

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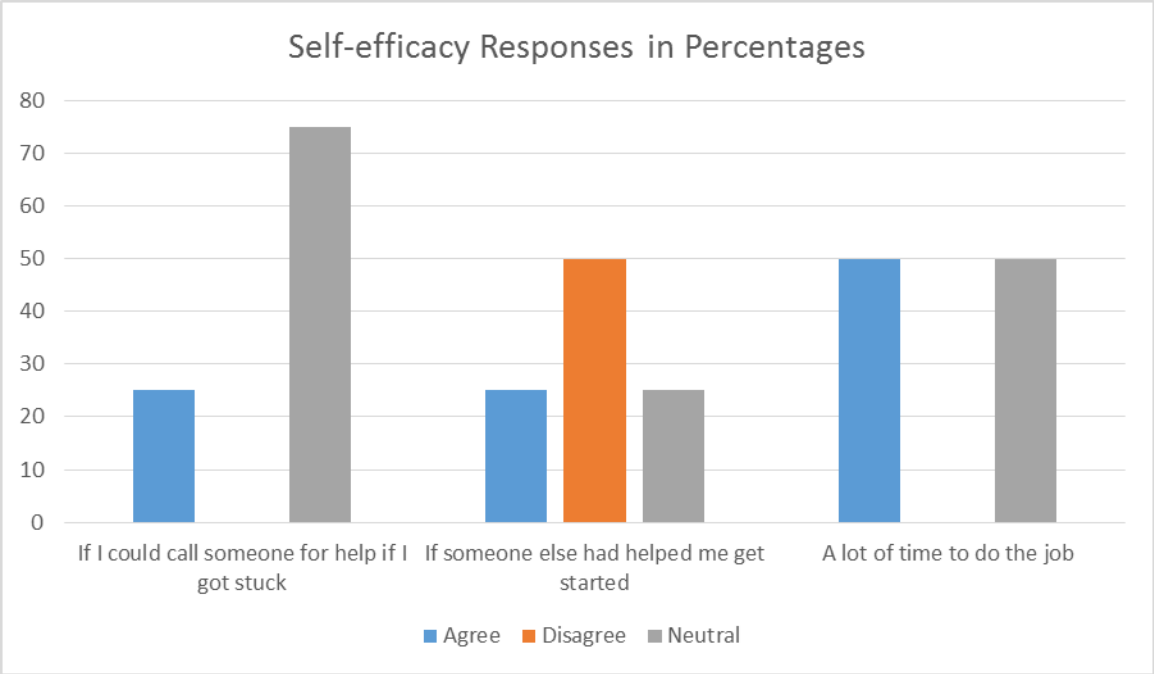
System Quality

The systems quality section of the survey contains 4 questions on systems quality pertaining to the systems ease of use, user friendliness, high speed information access and interactive features. Impressively, all responses in this section came positive from all participants stating that they agree that the information system is easy to use, user friendly provides high speed information access and interactive features between the user and the system.

Computer self-efficacy.

The systems computer self-efficacy section of the survey measures how effectively users would be able to use the system in 10 different scenarios. All respondents agreed that they would be able to use the system and complete the job if: 1) there was no one around to help them as they go, 2) they had never used a similar system before, 3) they see someone use the system before, 4) someone showed them how to use the system and 5) if they had use a similar system like that before. Similarly, all respondents disagreed that they would be able to use the system and complete the task if: 1) they had only the manual for reference and 2) they had just the built in help assistance. The remaining 3 scenarios varied in response and are shown in Figure 2 below.

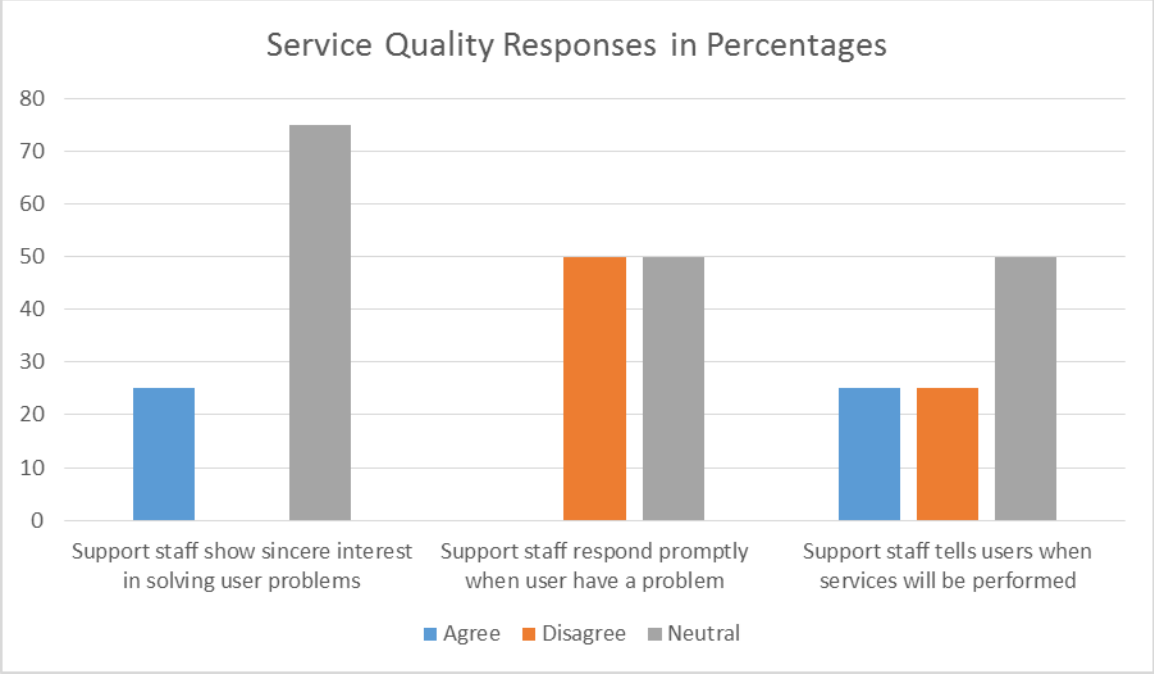
Fig. 2




Service Quality

The service quality section of the questionnaire is primarily based on the support staff's input in the information system. All participants disagreed with the statement that the support staff keeps the system up to date. The other responses in related the support staff are shown in Figure 3 below.

Fig. 3

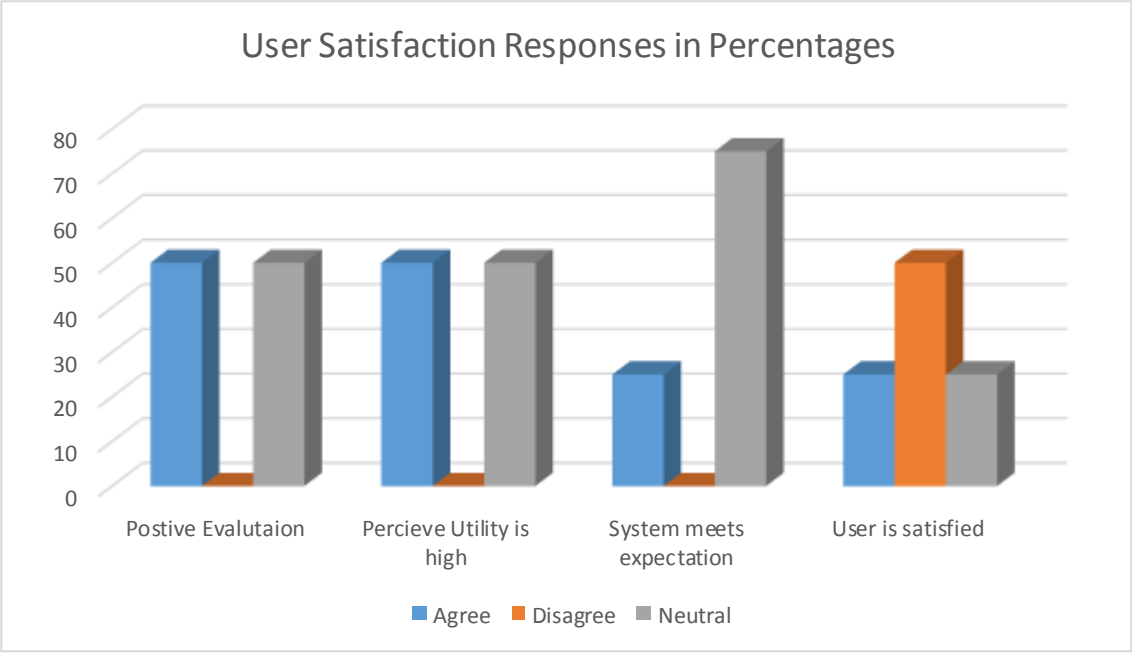


User Satisfaction

Use

This section of the questionnaire pertains to its use by the user. All the users agree that they use the information system often and that they were able to complete a task using the system without any help. The difference in other responses are displayed below in Figure 4.

Fig. 4




Percieved Net Benefits

In this section, all participants agreed to all the percieved net benefits in the questionaire which includes improved job performance, saving organizational cost, improving training , increase productivity and enhance recruitment. The only variation was in the percieved net benefit that states that the system helps achieve organizational goal; 25% agreed to this statement while the remainng 75% were neutral.

Complementary Technology

This section deals with hardware and software devices used to access the information system as well as the internet connection used to access the system. All paricipants agreed that their hardware components softare components and internet conectivity were of adequate status when accessing the system.

Since the information system is not available to the public, the evaluation of current users is highly essential to this research. They are the ones who are currently using the information system and since it is still a work in progress it can be enhanced and improved before its final release.

Firstly, the variance in answers in the first section, information quality, may indicate that the users require more information on the products they are searching for. In addition, the technicians of the company may need to update the system more frequently so as to have the right information at all times for users.

Secondly, the self-efficacy responses hint that the system itself is not very easy to use. Users would not be able to use the system with only a manual or only built in assistance from the system. To improve,

managers and technicians must find a way to effectively explain the process and procedure to using the system in its built in assistance; or they can host small seminars of workshops to teach users.

Thirdly, users don't feel like the system is kept up to date. This issue might also be a factor that influences the information quality. If the system is not kept up to date, then the information within the system is outdated and misleading to the user. So, to improve service quality and information quality, managers must ensure that the system is updated or set up in a way that it auto updates as frequently as possible so as to give users an accurate representation of what is available and what isn't.

Lastly, the users seem to feel somewhat contented with the information system but this may be due to the lack of reliable information and lack of knowledge on how to properly utilize the system. If these aspects are improved, then it is very likely that users will value and be more satisfied with the system. To sum, the system needs improvement in information quality i.e. providing more information and at the right time, self-efficacy i.e. finding ways to make users understand and use the system to its full potential with ease, service quality, mainly ensuring the system is up to date at all times. Since users frequently utilize the system, it is key and in the best interest of the company that they improve in these areas so as to facilitate their customers.

As noted previously, the completed information system from Westrac is not available to the public yet. In order to perform this survey, screen shots of the system were used to explain the abilities of the system and procedures needed to use it. Some of the questions do not apply to everyone, so those were not answered. For example, the individuals who do not use the Westrac IS for their job may not complete all of the Subjective Norm part of the TAM survey. Also, the information system is not complete, so again, not everything may be applicable.

The TAM based survey has 6 sections, namely Perceived Usefulness (PU), Perceived Ease of Use (PEU), Perceived Behavior Control (PBC), Voluntariness (V), and Subjective Norm (SN).

**P**U

For the purpose of conciseness, these options will be referred to as 1-6 respectively. Respondents were able to choose from 1-5, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree. In some cases choices were left blank**.**

For question 1 the results were slightly above neutral. This means that respondents thought that Westrac Part Search does enable them to accomplish tasks somewhat quicker. Two respondents chose agree and strongly agree each, 4 respondents chose neutral, 2 chose disagree, and 4 chose strongly disagree. The discrepancy can be explained by the fact that some of the respondents are mechanics and some are normal customers, whose daily schedule does not involve looking for parts.

For question 2, more respondents disagreed than agreed, meaning that respondents in general did not think that Westrac Part Search improved the quality of their work. This could indicate that either the respondents work does not involve vehicle parts, or, that the system is not efficient and thus does not improve the quality of work. 4 respondents chose strongly disagree, 6 chose disagree and 6 others chose neutral.

Question 3 showed similar results as number 2. More respondents disagreed than agreed, with the most choosing neutral. The same response for 2 applies, either the respondents work does not involve vehicle parts, or, that the system is not efficient and thus does not make it easier to do their job. Four responses were strongly disagree, 2 were disagree, 8 were neutral, and only 2 were agree.

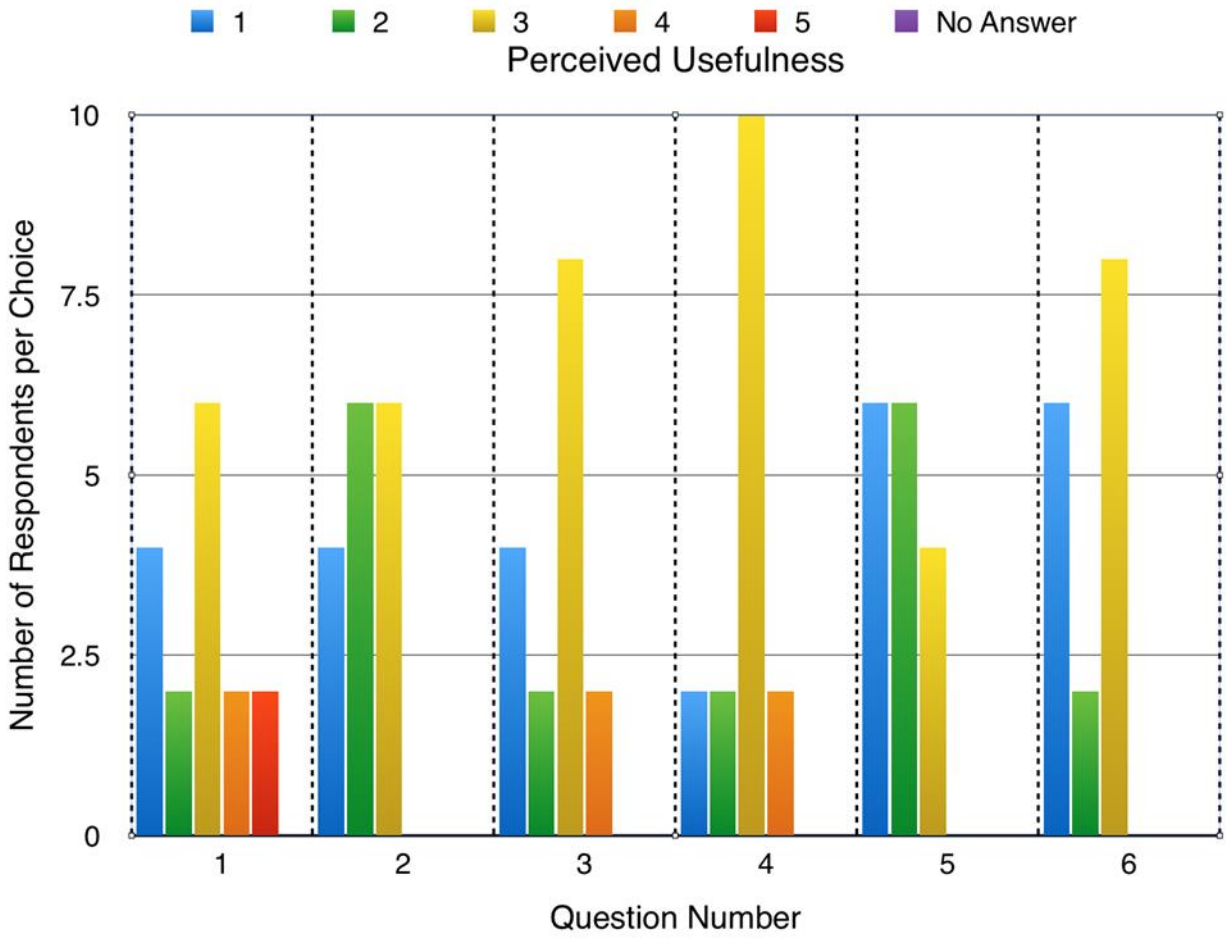
For question 4, the neutral selection was by far the most selected, with 10 respondents choosing neutral. Strongly disagree, disagree and agree each got 2 responses. This indicates that productivity has either marginally increased or not at all. This could mean that customers do not believe that the IS is improving productivity on their job. The purpose of Westrac Parts Search is customers being able to check inventory at Westrac without calling them or physically going to Westrac. However, from the responses it does not appear that the system would be able to fulfill the need of the respondents. If the responses were higher, it could signify that the IS could be really helpful and efficient.

The responses for question 5 are even worse, meaning that very few respondents believed that Westrac Part Search gives greater control over their job. This could imply that potential users do not feel like they

would be dependent on Westrac Part Search during their daily schedule. Twelve respondents chose strongly disagree and disagree and 4 chose neutral.

Question 6 reflects the previous 3 questions, with more respondents disagreeing that Westrac Part Search could enhance the effectiveness on the job. The trend here is that the IS needs more work because most of the answers suggest that it is not very efficient at this point. Eight respondents chose neutral, 2 chose disagree, and 6 chose strongly disagree.

Fig 5.




**PEU**

For the purpose of conciseness, these options will be referred to as 1-6 respectively. Respondents were able to choose from 1-5, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree. In some cases choices were left blank.

Question 1 received most responses for neutral, with 8 hits. Six responses are disagree, and 2 are agree. This suggests that most respondents are not convinced that Westrac Part Search is clear and understandable, and that more work could be done on the GUI to improve usability. The 2 respondents who agreed may be more tech savvy and understood the explanation better.

The responses for question 2 are almost the same as 1; most respondents remain neutral with the rest disagreeing. More work must be done to improve the ease of use for Westrac Parts Search, as the results are mostly unimpressive**.**

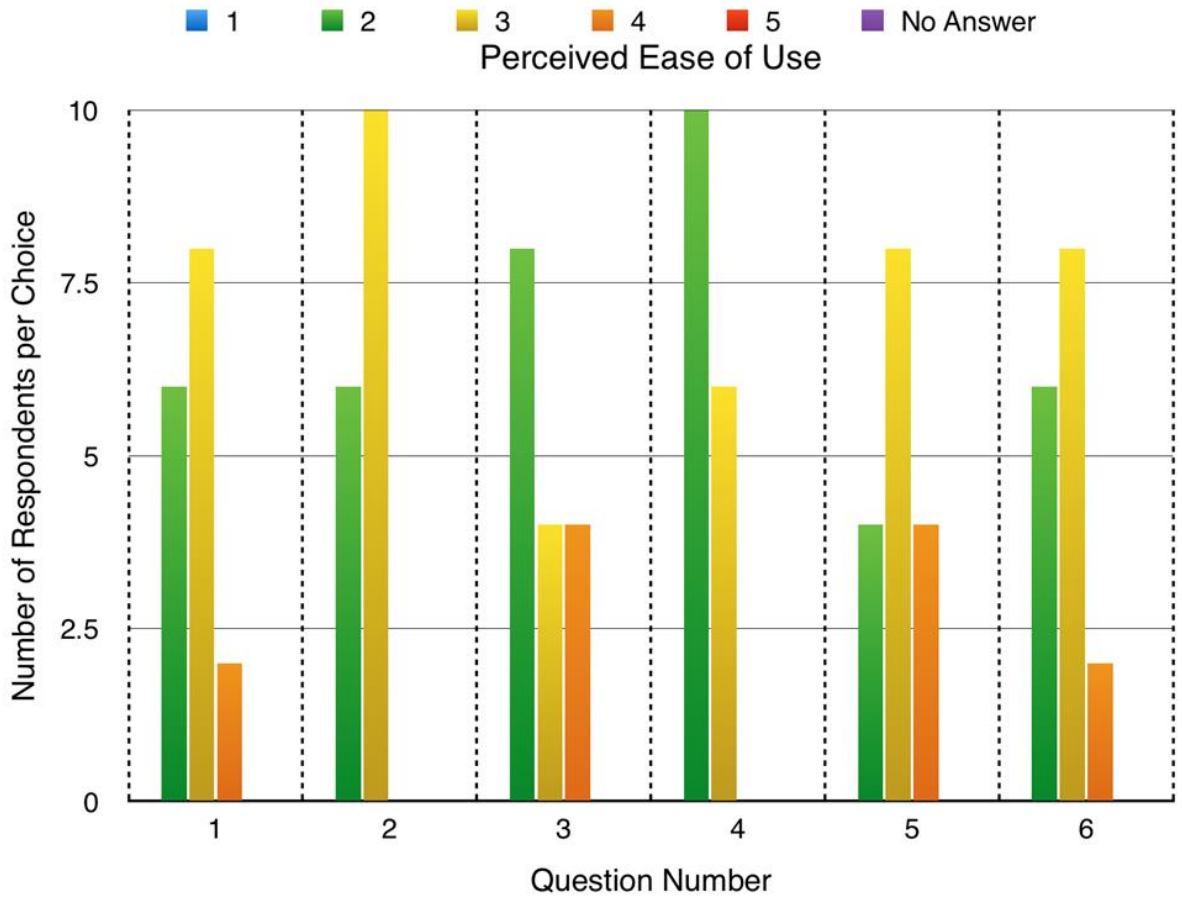
The responses for question 3 are slightly more positive. While 4 respondents agreed that learning the system was easy, the remaining responses were either neutral or disagreeing. This sends a strong signal that the system needs improvement before it is ready to be released to the public.

The response for 4 is even clearer. Respondents became confused when using Westrac Part Search. The same response as 3 and 1 applies, more work, especially GUI improvement needs to be done, before the IS is ready for public use. Ten responses disagreed, and 6 were neutral.

For question 5, the result was mostly neutral. When respondents were able to use the IS, they didn't make many errors, which is a good sign. This could indicate that once users become acquainted with the system it would be easier to use, but beginners would have a difficult time.

For question 6 the results are again more disagreeing to neutral, with 2 agreeing. Respondents in general were more likely to get frustrated when using Westrac Part search. The results indicate that respondents are somewhat easily frustrated and that the system does not bring quite enough benefit for the respondents to not get frustrated.

Fig 6.




PBC

For the purpose of conciseness, these options will be referred to as 1-6 respectively. Respondents were able to choose from 1-5, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree. In some cases choices were left blank.

More respondents disagreed than agreed for question 1. This implies that the respondents do not feel confident with using Westrac Part Search. Of importance to note is that the respondents are not able to use the IS at this point, and that their answers merely reflect screenshots and a verbal explanation of how

the IS works. In real life usage, the answers may be different. For this questionnaire, 10 respondents chose neutral, 4 chose to disagree, and 2 agreed.

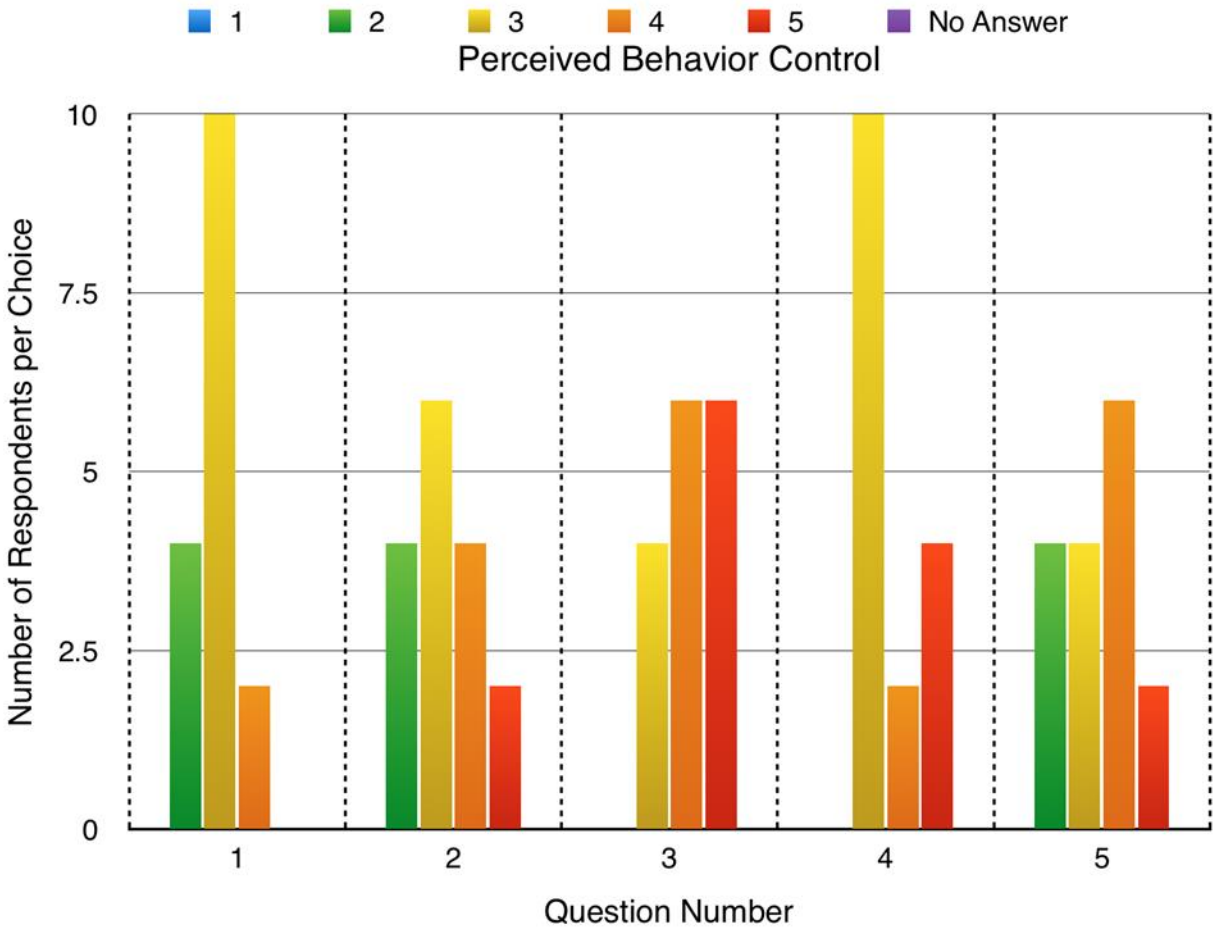
For question 2 respondents were more positive, meaning that the respondents feel that they have the knowledge to use Westrac Part Search. Six chose neutral and 4 chose disagree. However, 4 chose agree, and 2 strongly agreed.

For question 3 the results were yet more positive meaning that respondents have the resources to use the IS. This could mean they have an internet connection, they have a computer, and they have the time to use the IS. Six responses each for strongly agree and agree, with 4 choosing to remain neutral.

Ten respondents chose neutral for question 4, with the remaining choosing agree and strongly agree. The respondents felt that they have the ability to use the IS. Even though there might be a learning curve in the beginning, respondents for the most part believe that they will be able to use Westrac Part Search, even with its short comings and somewhat difficult to use interface.

For question 5 respondents again more leaned toward agreeing than disagreeing. Six choose to agree, 2 to strongly agree, and 4 each to disagree and be neutral. This somewhat indicates that respondents are not required to use Westrac Part Search, and do not need to use it on a daily basis.

Fig 7.



SN

For the purpose of conciseness, these options will be referred to as 1-6 respectively. Respondents were able to choose from 1-5, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree. In some cases choices were left blank.

Most respondents strongly disagreed that people who influence their behavior think they should use Westrac Part Search (Question 1). The others chose not to answer, disagreed or chose to be neutral.

Similar responses were recorded for question 2. This simply indicates that the IS has not been deployed yet and that most people are not aware of its existence as well its possible advantages. These numbers should improve once the system sees a widespread release and people are able to use it.

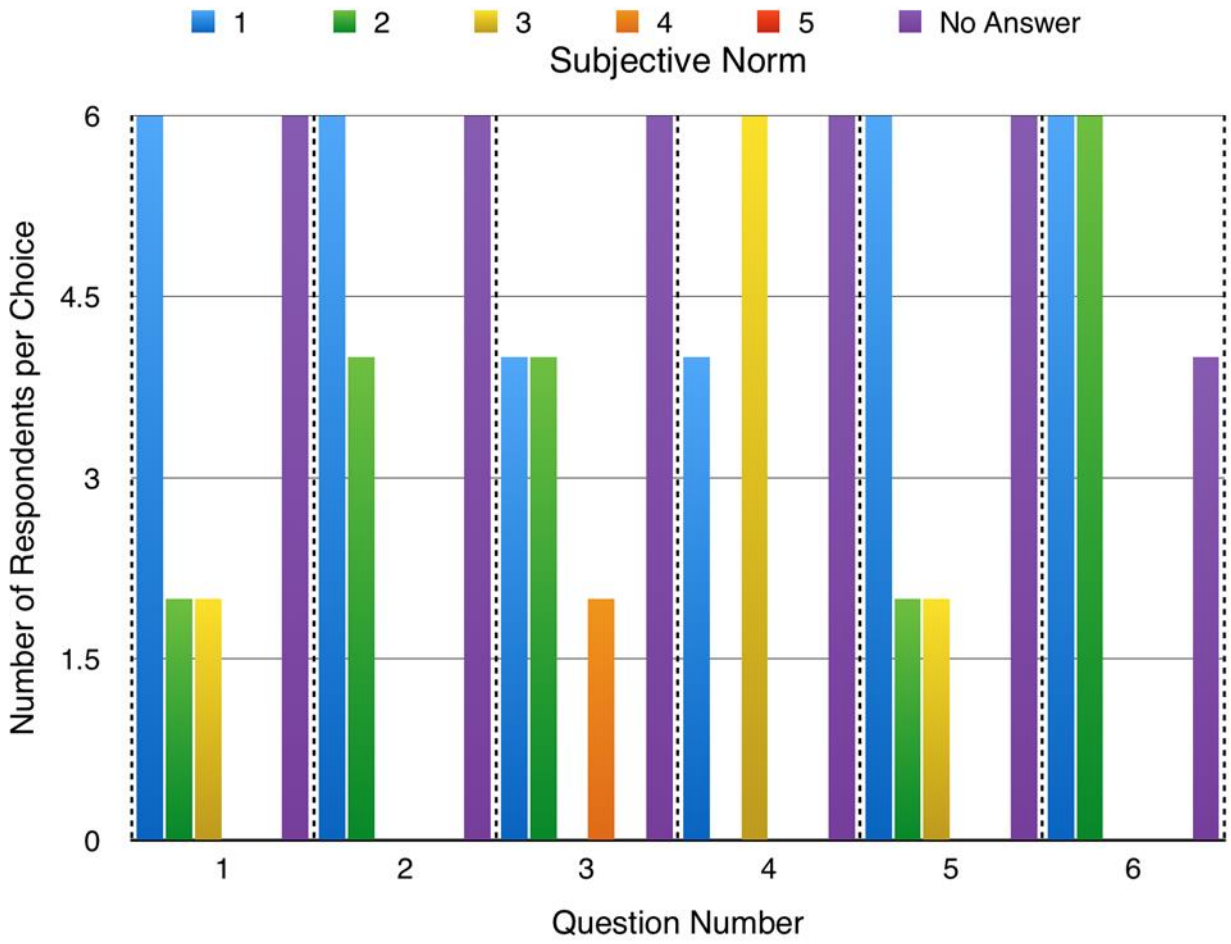
For question 3 the responses are slightly more positive, which likely indicates that the respondents who are employed by mechanics believe that they should use the system once available. Two respondents agreed, 4 strongly disagreed, 4 disagreed, and the remaining 6 chose to not answer.

Question 4 had 6 responses for neutral and 6 chose to not answer. Four responses strongly disagreed. Again, as the system has not been released yet there is not much public exposure to it, so these questions will not see much positive answers.

Question 5 has a similar outcome as the preceding questions, for the same reasons.

Question 6 is a repeat of the same scenarios as the preceding questions. Once the IS is released this section could be answered better.

Fig 8.



V

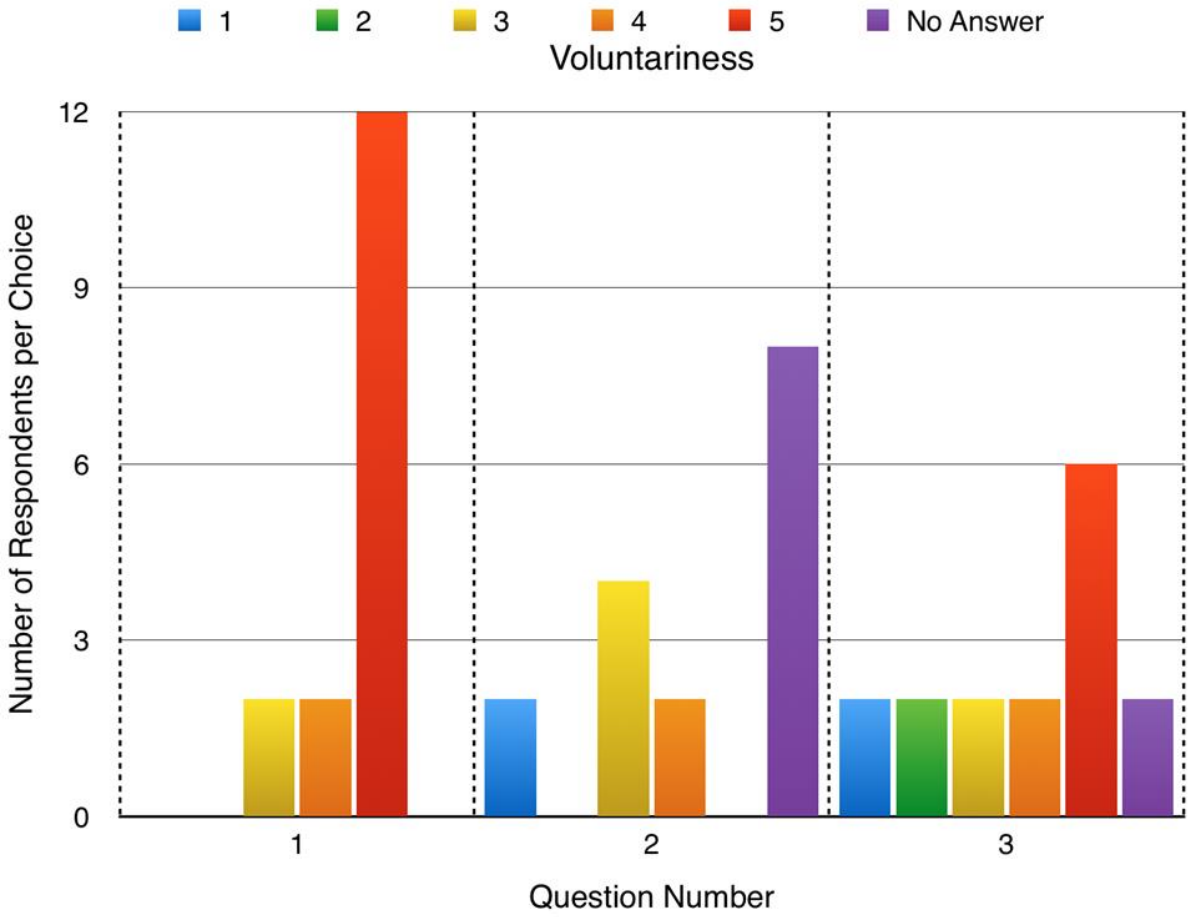
For the purpose of conciseness, these options will be referred to as 1-3 respectively. Respondents were able to choose from 1-5, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree. In some cases choices were left blank.

Question 1 had respondents mostly choosing strongly agree, with 12 hits. Two choose agree and 2 remained neutral.

Question 2 had 2 respondents agreeing, 4 choosing neutral, 2 strongly disagreeing, and the rest choosing not to answer.

Question 3 also showed some positivism, with 6 respondents choosing strongly agree and 2 choosing agree. The remainder of choices were: 2 strongly disagreed, 2 disagreed, 2 remained neutral, and 2 chose to not answer.

Fig 8.



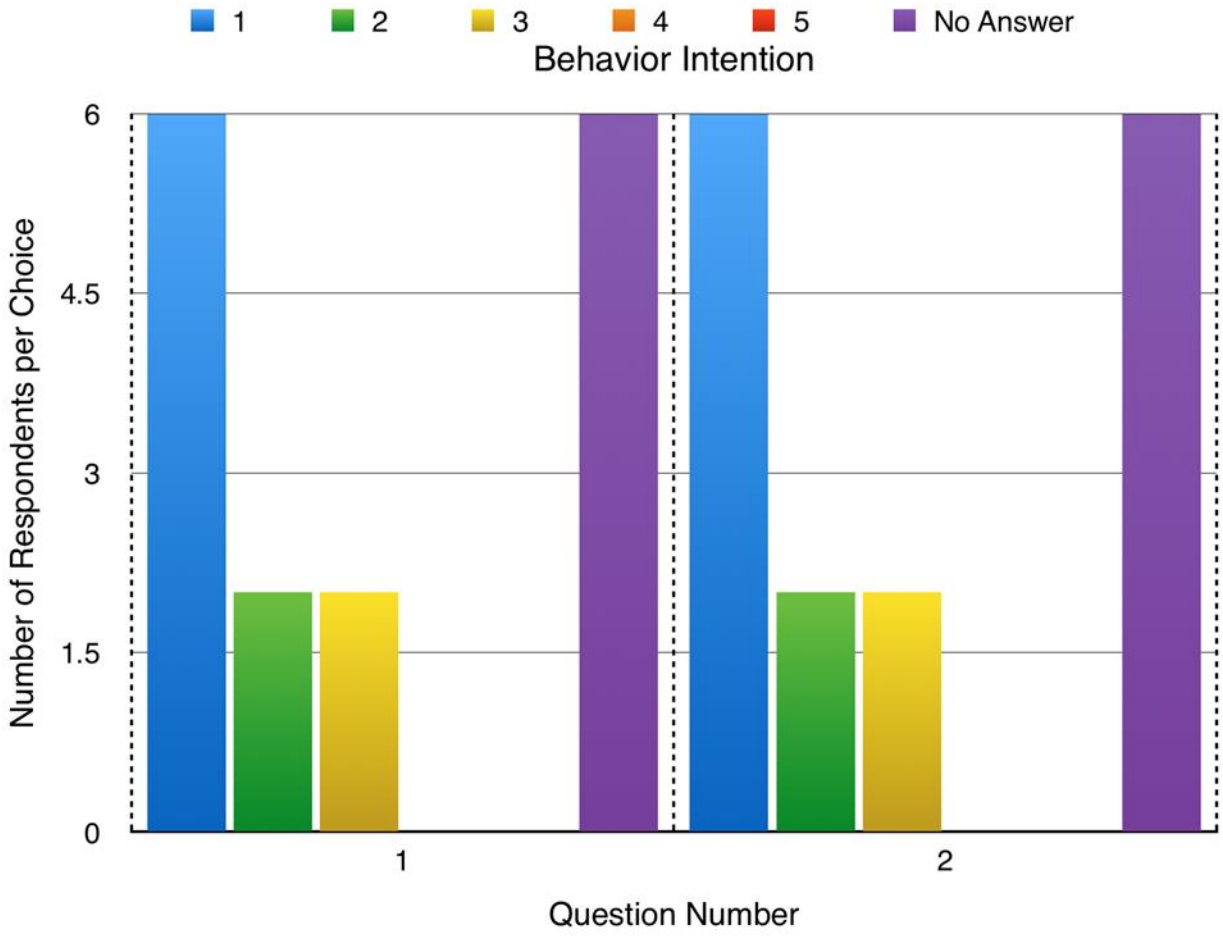

BI

For the purpose of conciseness, these options will be referred to as 1 and 2 respectively. Respondents were able to choose from 1-5, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree. In some cases choices were left blank.

Six respondents strongly disagree that they will use Westrac Parts Search in the future. Two chose disagree, and 2 chose neutral, with the remaining choosing not to answer.

For the second question identical results were collected. If Westrac intends for their IS to take off and be useful, much more improvement isnneeded for it to get traction. In it's current state most respondents, from the brief explanation they received, do not believe that they would use the IS in their job.

Fig 9.



## Limitations

The primary limitation of this research project is lack of sufficient data. Ultimately not all users agreed to help as they were either too busy or did not want to slander the company's system. Another limitation is the time frame. The time was not sufficient to gather required data, analyze and compile the project. If the time frame was extended by another month the research results would yield more conclusive information. Lastly, lack of human resource to efficiently get tasks done due to uncooperative members is another limitation. This hindered the research process as human resources had to be allocated from completing other tasks, to tasks that should have been done before in order to get the project up to date.

## Conclusion

In conclusion, Westrac's Part Search system requires some improvements before it can be released into the public. Feedback from all sources indicate that the information system itself will be useful. It needs to be several improvements, however, before the general public can easily use it without complications or the necessity to call the company itself for help. If the customers need to call the company then the system is not fulfilling its purpose as the user might as well just ask for the necessary information directly instead of trying to figure out the system. Additionally, the limitations outlined in the research project may affect accuracy of the information portrayed.

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# Appendix

The survey you are about to partake in will only consume approximately 10 minutes of your time. This survey is being conducted by students at the University of Belize as a requirement project for the course Management Information system. The objective of this survey is to gain user feedback on Westrac's current Website, "Parts Search", (Information system) that they have recently implemented. All answers will remain anonymous.

| | |
|---|---|
| Gender | ☐Male Female |
| Age | ☐Under 25 ☐ 25-35 ☐ over 35-45 ☐ over 45-55 ☐ older than 55 |
| Education | ☐ High School or less Diploma ☐ B.A ☐ Master ☐ P.H.D |
| Work Experience | ☐ Less than 5 years ☐ 5-10 years ☐ more than 10-15 ☐ More than 15 |

**1) The following questions relate to the quality of Westrac's "Parts Search".**

| | |
|---|---|
| 1.Westrac's "Parts Search" system provides information that is exactly what you need | ☐ Agree ☐ Disagree ☐ Neutral |
| 2. Westrac's "Parts Search" system provides information you need at the right time | ☐ Agree ☐ Disagree ☐ Neutral |
| 3. Westrac's "Parts Search" system provide information that is relevant to your job | ☐ Agree ☐ Disagree ☐ Neutral |
| 4. Westrac's "Parts Search" system provides sufficient information | ☐ Agree ☐ Disagree ☐ Neutral |
| 5. Westrac's "Parts Search" system provides information that is easy to understand | ☐ Agree ☐ Disagree ☐ Neutral |
| 6. Westrac's "Parts Search" system provides up-to-date Information | ☐ Agree ☐ Disagree ☐ Neutral |

**2) The following questions relate to the quality Westrac's "Parts Search"**

| | |
|---|---|
| 1.Westrac's "Parts Search" system is easy to use | ☐ Agree ☐ Disagree ☐ Neutral |
| 2. Westrac's "Parts Search" system is user-friendly. | ☐ Agree ☐ Disagree ☐ Neutral |
| 3.Westrac's "Parts Search" system provides high-speed information access | ☐ Agree ☐ Disagree ☐ Neutral |
| 4. Westrac's "Parts Search" system provides interactive features between users and system. | ☐ Agree ☐ Disagree ☐ Neutral |

The following questions are related to the user friendliness of the system. Answer the following questions by using the statement below as the beginning of each question.

I COULD COMPLETE THE JOB USING WESTRAC'S "PARTS SEARCH" SYSTEM...

| | |
|---|---|
| 1 .... if there was no one around to tell me what to do as I go | ☐ Agree ☐ Disagree ☐ Neutral |
| 2 .... if I had never used an information system like it before. | ☐ Agree ☐ Disagree ☐ Neutral |
| 3 .... if I had only Westrac's "Parts Search" system manuals for reference | ☐ Agree ☐ Disagree ☐ Neutral |

| | |
|---|---|
| 4 …. if I had seen someone else using Westrac's "Parts Search" system before trying it myself. | ☐ Agree ☐ Disagree ☐ Neutral |
| 5 …. if I could call someone for help if I got stuck. | ☐ Agree ☐ Disagree ☐ Neutral |
| 6 …. if someone else had helped me get started | ☐ Agree ☐ Disagree ☐ Neutral |
| 7 …. if l had a lot of time to complete the job for which Westrac's "Parts Search" system was provided. | ☐ Agree ☐ Disagree ☐ Neutral |
| 8 …. if I had just the built-in help facility for assistance. | ☐ Agree ☐ Disagree ☐ Neutral |
| 9 …. if someone showed me how to do it first | ☐ Agree ☐ Disagree ☐ Neutral |
| 10…. if I had used similar information systems before this one to do the same job. | ☐ Agree ☐ Disagree ☐ Neutral |

**3) The following questions are related to the Service quality of Westrac's "Parts Search" system.**

| | |
|---|---|
| 1 The support staff keeps Westrac's "Parts Search" system software up to date. | ☐ Agree ☐ Disagree ☐ Neutral |
| 2 When users have a problem, Westrac's "Parts Search" system's support staff show a sincere interest in solving it. | ☐ Agree ☐ Disagree ☐ Neutral |
| 3 Westrac's "Parts Search" system's support staff respond promptly when users have a problem. | ☐ Agree ☐ Disagree ☐ Neutral |
| 4 Westrac's "Parts Search" system's support staff tell users exactly when services will be performed. | ☐ Agree ☐ Disagree ☐ Neutral |

**4) The following questions are related to the satisfaction of the user.**

| | |
|---|---|
| 1 Most of the users bring a positive attitude or evaluation towards Westrac's "Parts Search" system's function. | ☐ Agree ☐ Disagree ☐ Neutral |
| 2 You think that the perceived utility about Westrac's "Parts Search" system is high. | ☐ Agree ☐ Disagree ☐ Neutral |
| 3 Westrac's "Parts Search" system has met your expectations. | ☐ Agree ☐ Disagree ☐ Neutral |
| 4 You are satisfied with Westrac's "Parts Search" system. | ☐ Agree ☐ Disagree ☐ Neutral |

**5) The following questions are related to the use of Westrac's "Parts Search" system.**

| | |
|---|---|
| 1 The frequency of use with Westrac's "Parts Search" system is high. | ☐ Agree ☐ Disagree ☐ Neutral |
| 2 You depend upon Westrac's "Parts Search" system. | ☐ Agree ☐ Disagree ☐ Neutral |
| 3 I was able to complete a task using Westrac's "Parts Search" even if there was no one around to tell me what to do as I go. | ☐ Agree ☐ Disagree ☐ Neutral |
| 4 I have the knowledge necessary to use Westrac's "Parts Search". | ☐ Agree ☐ Disagree ☐ Neutral |

**6) The following questions are related to the Perceived net benefits of Westrac's "Parts Search" system.**

| | |
|---|---|
| 1 Westrac's "Parts Search" system helps you improve your job performance. | ☐ Agree ☐ Disagree ☐ Neutral |
| 2 Westrac's "Parts Search" system helps the organization save cost. | ☐ Agree ☐ Disagree ☐ Neutral |
| 3 Westrac's "Parts Search" system helps the organization achieve its goal. | ☐ Agree ☐ Disagree ☐ Neutral |
| 4 Using Westrac's "Parts Search" improves the assessment and training | ☐ Agree ☐ Disagree ☐ Neutral |

| | |
|---|---|
| 5 Using Westrac's "Parts Search" in job increases my productivity. | ☐ Agree ☐ Disagree ☐ Neutral |
| 6 Overall, using Westrac's "Parts Search" enhances recruitment and performance management | ☐ Agree ☐ Disagree ☐ Neutral |

**7) Complementary technology quality**

| | |
|---|---|
| 1 The software on the device (desktop computer, laptop, mobile device) used to access the Westrac's "Parts Search" is adequate. | ☐ Agree ☐ Disagree ☐ Neutral |
| 2 The device hardware (desktop computer, laptop, mobile device) used to access the Westrac's "Parts Search" is adequate. | ☐ Agree ☐ Disagree ☐ Neutral |
| 3 The device (desktop computer, laptop, mobile device) used to access the Westrac's "Parts Search" has an adequate internet connection in regards to speed and reliability. | ☐ Agree ☐ Disagree ☐ Neutral |

Dear respondent,

After receiving visual and verbal explanation, please select a response for each question on a scale of 1-5, with 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree.

PU (Perceived Usefulness)

**1 2 3 4 5**

Westrac Part Search enables me to accomplish tasks more quickly.

**1 2 3 4 5**

Westrac Part Search has improved my quality of work.

**1 2 3 4 5**

Westrac Part Search makes it easier to do my job.

**1 2 3 4 5**

Westrac Part Search has improved my productivity.

**1 2 3 4 5**

Westrac Part Search gives me greater control over my job.

**1 2 3 4 5**

Westrac Part Search enhances my effectiveness on the job.

PEU (Perceived Ease of Use)

**1 2 3 4 5**

My interaction with Westrac Part Search has been clear and understandable.

**1 2 3 4 5**

Overall, Westrac Part Search is easy to use.

**1 2 3 4 5**

Learning to operate Westrac Part Search was easy for me.

**1 2 3 4 5**

I rarely become confused when I use Westrac Part Search.

**1 2 3 4 5**

I rarely make errors when using Westrac Part Search.

**1 2 3 4 5**

I am rarely frustrated when using Westrac Part Search.

PBC (Perceived Behavior Control)

**1 2 3 4 5**

I am able to confidently use Westrac Part Search.

**1 2 3 4 5**

I have the knowledge to use Westrac Part Search.

**1 2 3 4 5**

I have the resources to use Westrac Part Search.

**1 2 3 4 5**

I have the ability to use Westrac Part Search.

**1 2 3 4 5**

I have control over using Westrac Part Search.

SN (Subjective Norm)

**1 2 3 4 5**

People who influence my behavior think I should use Westrac Part Search.

**1 2 3 4 5**

People who are important to me think I should use Westrac Part Search.

**1 2 3 4 5**

My immediate supervisor thinks I should use Westrac Part Search.

**1 2 3 4 5**

My close friends think I should use Westrac Part Search.

**1 2 3 4 5**

My peers think I should use Westrac Part Search.

**1 2 3 4 5**

People whose opinions I value prefer that I use Westrac Part Search in my work.

V (Voluntariness)

**1 2 3 4 5**

My use of Westrac Part Search is voluntary.

**1 2 3 4 5**

My supervisor requires me to use Westrac Part Search.

**1 2 3 4 5**

Although it might be helpful, using Westrac Part Search is not compulsory in my job.

BI (Behavior Intention)

**1 2 3 4 5**

I intend to continue using Westrac Part Search to perform my job.

**1 2 3 4 5**

I intend to frequently use Westrac Part Search to perform my job.

Thank you for your valuable input!

Your answers will be kept confidential and you will not be contacted in the future as a result of completing this questionnaire.