# IT Effectiveness in Employment Screening

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*Abstract -*  This research assesses the effectiveness of IT in employment background screening. Statistical analysis of quantitative information obtained from an email survey questionnaire, illustrates the effectiveness. The variables of Usefulness, Ease of use, Satisfactory (USE) and group Benefits have been used to assess the effectiveness. A new contribution to measuring IT effectiveness is the inclusion of group benefits with the USE variables in this setting.

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*Strictly as per the compliance and regulations of:*

# IT Effectiveness in Employment Screening

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*Keywords :* Effectiveness of IT, Employment Screening, Online Background Screening, IT Effectiveness.

## I. INTRODUCTION

The study is an outcome of a PhD thesis and was driven by the need to determine the effectiveness of IT in employment screening that no other research has sort to establish. NAPBS (2006), observed that technology has become an integral part of the screening industry. In such a scenario there is need to seek concrete evidence of the contribution IT is making to these organisations and finding ways to improve upon IT implementation in these organisations. It has been observed that there is also a growing concern among human resource professionals about finding ways to implement an effective pre-employment screening programme that is also cost-effective (Rosen, 2002; Halcrow, 2008). The tendency of some background screening companies to shift towards the use of IT rather than the traditional methods of phone screening and fax communications, dictates the need to assess whether the programme yields the desired results effectively. The shift also seems to result from the fact that background screening companies recognise the potential which IT holds and also because they embraced it to varying degrees.

## II. BACKGROUND TO STUDY

In order to study IT effectiveness, research has shown that the variables of Usefulness, Satisfaction and It has been found out that usefulness and ease of use influence each other and both drive satisfaction and Assessed on this relationship in determining the effectiveness of IT in background screening in this investigation. In addition, these variables are Ease of frequency of use (Lund, 1998). The effectiveness of IT is

use (USE) are employed (Travis, 2008; Frokjaer, Hertzum and Hornbaek, 2000; Lund, 1998). The study focuses on assessment of turnaround time, achievement of accurate screening through information processing efficiency using IT. The other goal of any screening effort is to get the results as quickly as possible depending on the efficiency of the method used. IT effectiveness is therefore measured by the USE variables. The same approach is used to measure the effectiveness of both the software and hardware systems using a questionnaire survey in this study. Each variable has a group of questions measuring the item. Where usefulness defines what is usable and what is not. Ease of use defines what is easy to use and what is not. Satisfaction defines what one is comfortable with and develops positive attitudes towards the use of the system.

There are two commonly used questionnaires in the field of usability (Travis, 2008). Firstly, there is the USE questionnaire and secondly, there is the Computer System Usability Questionnaire (CSUQ). This research uses questions adapted from the USE questionnaire since it is the one most used to assess IT effectiveness in other settings. Further it is easy to use and understand in different settings.

Among other researchers who used the USE variables to measure IT effectiveness are Travis (2008), Frokjaer et al (2000) and Lund (1998). Figure 3.1 illustrates the relationship among these variables.
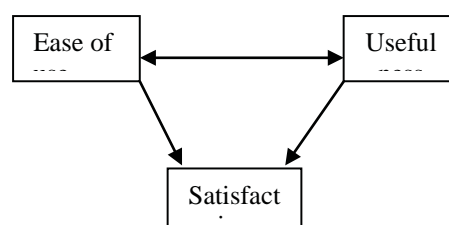


*Figure. 1:* IT effectiveness variable

in vestigated to show how they relate to a new variable benefits in order to determine IT effectiveness. Benefits is taken as a group of statements each describing the perceived advantages of online background screening. The investigation is used to test the significance of the proposed benefits to determine IT effectiveness in this setting.

## III. METHODOLOGY

An email survey method using questionnaires was employed as a model for collecting data.

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Practitioners in the corporate background screening services registered with the National Association of Professional Background Screeners (NAPBS) were the targets of these questionnaires. After sending the questionnaires, 107 responses were successfully collected and analysed.

In order to evaluate the effectiveness of IT in employment screening a relatively small number of hypotheses were formulated as shown in table 1 based on the tool in figure 1.

*Table 1 : Research hypotheses*

| Hypothesis |
| --- |
| H1 Perceived ease of use is positively related to perceived usefulness |
| H2 Perceived ease of use is positively related to satisfaction |
| H3 Perceived ease of use is positively related to benefits |
| H4 Perceived usefulness is positively related to satisfaction |
| H5 Perceived usefulness is positively related to benefits |
| H6 Satisfaction is positively related to benefits |

*The research instrument*

The questionnaire asked the extent of practitioners' agreement using a five point likert scale (with 1 being strongly disagree, to 5 being strongly agree). The first section pertaining to the USE variables (Usefulness, Satisfaction and Ease of use) contained 15 statements measuring IT effectiveness. These statements were formulated and adapted from Lund (1998) to measure the effectiveness of IT in organisations. Further Travis (2008) suggests that usability appears to be restricted to just one variable of satisfaction while it is also an issue of effectiveness and efficiency. In that regard, we have included as well the issues of effectiveness and efficiency in the statements used in this study to close that gap. The second section contained a list of 6 statements formulated by the researcher to assess the benefits of using IT in employment screening. A questionnaire based on the constructs depicted in Table 2 was used to collect the data.

In order to determine the effectiveness of online background screening, the correlations of the variables were determined. The questions in this part of the questionnaire were randomised so that the responses would also be randomized. This removes 'order biases' from the responses, greatly improving the reliability of

*Table 2 : Construct items*

| The Construct Items |
| --- |
| **Perceived usefulness** |
| Online background screening helps me to be more effective |
| Online background screening is useful |
| Online background screening makes the things I want to accomplish easier to get done |
| Online background screening serves time when I use it |
| Online background screening does everything I would expect it to do |
| **Perceived ease-of-use** |
| Online background screening is flexible |
| Using online background screening is effortless |
| I can recover from mistakes quickly and easily |
| I don't notice any inconsistencies as I use Online background screening |
| I can use online background screening successfully every time |
| **Satisfaction** |
| I would recommend online background screening systems to a friend |
| Online background screening works the way I want it to work |
| **Benefits** |
| Enables structured harvesting of employee information |
| Improves turnaround time by obtaining screening results quickly |
| Drives down costs of labour by not wasting anyone's time |
| Provides more robust (or lower cost) systems |
| Enables improved quality & speed of decision making capabilities |
| Closes the gap between reach & richness of information |

## IV. Analysis of Results

The Cronbach Alpha reliability coefficients for each construct are shown in Table 2. The reliability of all measurement scales was above the recommended minimum level of 0.70. Thus, all scales were also reliable and had high internal consistence.

*Table 2 : Cronbach alpha coefficients*

| Construct | Cronbach alpha |
| --- | --- |
| Perceived usefulness | 0.812 |
| Perceived ease-of-use | 0.717 |
| Satisfaction | 0.749 |
| Benefits | 0.759 |

the answers given. The questions were not given any order of importance, which means that they were given equal weighting during analysis. The correlations of the four variables were established. The results shown in Table 3 confirm the effectiveness of IT on background screening.

*Table 3 : Correlation of constructs*

| Constructs | Usefulness | Ease Of Use | Satisfaction | Benefits |
| --- | --- | --- | --- | --- |
| Usefulness | 1.000 | 0.810** | 0.856** | 0.765** |
| Ease Of Use | 0.810** | 1.000 | 0.797** | 0.739** |
| Satisfaction | 0.856** | 0.797** | 1.000 | 0.714** |
| Benefits | 0.765** | 0.739** | 0.714** | 1.000 |

**. Correlation is significant at the 0.01 level (2-tailed)

Figure 2 also depicts diagrammatically the results and the associated ρ-values in accordance with the research tool in the same manner in which r is the correlation coefficient of the sample and ρ the population.
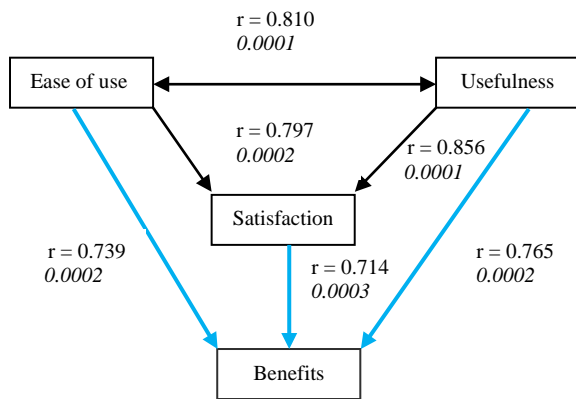


Figure 2 :
Correlations Analysis Performed on the Four Variables

In Figure 2, the thick arrows indicate new relationships in the variables established in this study to determine IT effectiveness. This is a new contribution in IT effectiveness theories that group benefits can be used with USE variables to establish the effectiveness of IT in this setting.

In Table 3, we summarise the findings regarding the stated research hypotheses. From the output, all six hypotheses are supported since all variables have significantly high correlations between them, and provide strong evidence that new online background screening systems effectively support the background screening process. Online background screening (OBS) can replace existing traditional methods of screening candidates for jobs, which tend to be more time consuming, less cost effective and less structured.

Table. 3 : Research hypotheses

| Hypothesis | | Supported |
|---|---|---|
| H1 | Perceived ease of use is positively related to perceived usefulness | Yes |
| H2 | Perceived ease of use is positively related to satisfaction | Yes |
| H3 | Perceived ease of use is positively related to benefits | Yes |
| H4 | Perceived usefulness is positively related to satisfaction | Yes |
| H5 | Perceived usefulness is positively related to benefits | Yes |
| H6 | Satisfaction is positively related to benefits | Yes |

These results reflect two issues. Firstly, the effectiveness issues are supported in the variables that received positive ratings. Secondly, the three variables of Usefulness, Ease of Use and Satisfaction contribute significantly to the Benefits of using IT in employment screening, which can be used to investigate other settings. The usefulness of IT in pre-employment screening is illustrated by the benefits of OBS. The benefits reflect the effectiveness of IT when online background screening is used. Another observation from the output is that the correlations coefficients of group USE are higher than those pointing to Benefits, but all are over 0.7. They are all high and depict a significant association between the USE variables and Benefits. The positive nature of all correlations pointing to Benefits suggests that IT is effective in employment screening. It tends to be less time consuming in reaching out to information sources and accurate in terms of completeness.

### Tests of Significance

Statements in the questionnaire were clustered according to the groups – Usefulness, Ease of Use, Satisfaction and Benefits. A partial correlation analysis was done on the aggregated data of the four groups using the first three groups and the group Benefit as the control variable. A control variable is a variable that is excluded (i.e. set aside) from the analysis and later included in the analysis to show the variable's influence in the experiment (i.e. analysis). The results of the first correlation analysis are presented in Table 4.

Table. 4 : Partial Correlations Analysis of the USE variables Correlations

| | | Usefulness | Ease of use | Satisfaction |
|---|---|---|---|---|
| Benefits is set aside | Usefulness Correlation | 1.000 | 0.564* | 0.686* |
| | Ease of use Correlation | 0.564* | 1.000 | 0.572* |
| | Satisfaction Correlation | 0.686* | 0.572* | 1.000 |

*. Correlation is significant at the 0.05 level (2-tailed)

The null hypothesis states that the correlation is equal to zero (i.e. the variables Usefulness, Ease of Use and Satisfaction have no influence on the benefits of using IT in employment screening).

The analysis of Table 4 results would show whether or not the correlation is significantly different from zero. Therefore, it can be interpreted from the results that:

1. The correlation between Usefulness and Ease of Use was significant, $r_{108} = 0.564$, $p \approx 0$.
2. The correlation between Usefulness and Satisfaction was significant, $r_{108} = 0.686$, $p \approx 0$.

3. The correlation between Ease of Use and Satisfaction was significant, $r_{108} = 0.572$, $p \approx$

It is shown that the correlations are significantly different from zero with Benefits as a control variable. This is when its influence is excluded from the analysis or set aside. Then, the variable Benefits is included in the analysis in order to show the variable's influence and to see how the correlations would change in the presence of the variable. The new correlation coefficients of the four variables are displayed as in Table 5.

*Table. 5 : Partial Correlations Analysis of the four variables Correlations*

|  | Usefulness | Ease of use | Satisfaction | Benefits |
|---|---|---|---|---|
| Usefulness Pearson Correlation | 1.000 | 0.810** | 0.856** | 0.765** |
| EaseOfUse Pearson Correlation | 0.810** | 1.000 | 0.797** | 0.739** |
| Satisfaction Pearson Correlation | 0.856** | 0.797** | 01.000 | 0.714** |
| Benefits Pearson Correlation | 0.765** | 0.739** | 0.714** | 1.000 |

**. Correlation is significant at the 0.01 level (2-tailed).

It can be seen from the above output that the correlation coefficients among the three variables is still significant. It can therefore be concluded that the correlation coefficient is significantly different from zero and the null hypothesis cannot be accepted. That means the variable Benefits has not removed the significant association of the USE variables to measure IT effectiveness but instead, complements the variables or establishes a stronger relationship with the variables. Therefore, the variable Benefits can be included with these variables to determine IT effectiveness. Its inclusion as a new variable is significant since it increases the association between the variables. This is a contribution to IT effectiveness theories in information systems. The effectiveness of IT on employment screening is still supported when group Benefit is present. This means that our use of the four variables in the IT effectiveness model in Figure 2 is further proved to be valid.

## v. Discussion

From the research findings, Usefulness and Ease of Use positively influence each other and both drive Satisfaction. These variables have a direct effect on usefulness of IT in pre-employment screening. Lund (1998), found out that Usefulness and Ease of Use influence each other and both drive Satisfaction and frequency of use. This study also found out that these variables influence the benefits of IT in employment screening since they reflect the type of benefits obtained when IT is used. Usefulness, Ease of Use and Satisfaction drive the benefits of IT and the variable

Benefits impact on the effectiveness of OBS. The fact that the correlations of group USE are higher than those pointing to benefits mean that there is a stronger association between usability variables even in the presents of group benefits. The effectiveness of USE variables outweighs the benefits that accrued but both still demonstrates the advantages of IT. The association of USE variables with benefits is still significant. It illustrates that the benefits obtained have an impact on online employment background screening in this study.

The positive correlation on the benefits of using IT reflects the issues of Usefulness, Ease of Use and Satisfaction. The benefits used are derived from the three group variables to satisfy the perceived requirements of an effective online pre-employment screening programme. It is for the first time that benefits have been successfully used with USE variables to determine IT effectiveness in research.

The findings serve to inform the background screening industry and other companies that IT-based background screening is an effective method of screening, which is also cost effective and offers excellent benefits. The benefits are derived from the statements under group Benefits in the questionnaire that IT enables structured harvesting of employee information. IT improves turnaround time by obtaining screening results quickly. IT reduces the costs of labour by speeding up the execution of the processes. IT provides more robust systems. IT enables improved quality and speed of decision making capabilities and IT closes the gap between reach and richness of information. Lalovich (2008), states that we should draw

conclusions from the IT industry and find ways to embrace it. All businesses are automating their work processes. An automated system needs adequate business processes that operate within the system environment as well as the user's environment. However, OBS systems have not yet developed to full potential for them to be used extensively in most organisations. Currently, different screening methods are being used although large firms tend to use more online background screening than smaller firms. Although the OBSS are effective, there is a general lack of comprehensive approach to take advantage of their full potential. There are two issues to be addressed in order for OBS systems to be universally accepted. Firstly, there is need for an integrated online approach that comprehensively screens data. Secondly, most countries need to develop accessible national online databases (Muderedzwa and Nyakwende, 2010).

On the chain of relationships on USE variables, the findings show how the variables influence each other leading to the benefits of IT on employment screening. In our study, we noticed that participants tended to rate background screening systems highly on the questionnaire. The positive correlations did not come as a surprise because every question got a positive rating from "agreed" and "strongly agreed" from the subjects. According to Travis (2008), experience shows that participants are reluctant to be critical of the system, no matter how difficult they found the task. In our findings, we see the same phenomenon of subjects reluctant to be critical of online background screening products they use. We speculate that the respondents feel that giving a low rating to a product portrays a negative picture of their work and that they are not able to use computer-based technology. It maybe that they do not want to hurt the feelings of the person conducting the research (Wiklund, Thurrott and Dumas, 1992) or it may be that some of the blame for a product's poor performance falls on their clients, when clients make web technology orders. On a large scale, the impression is that it reflects negatively on the background screening industry if results show that the background screening systems are failing to perform satisfactorily.

## VI. Conclusions

The study attempted to determine the effectiveness of IT in employment screening. This was assessed in the form of USE variables and group Benefits in the model used. From the findings, the research provides strong evidence that IT is effective in employment screening. New relationships in the USE variables and group Benefits are established in this study to determine IT effectiveness. This is a new contribution in IT effectiveness theories. The UE variables reflect on the type of benefits obtained when IT. The benefits came up as a result of three issues. Firstly, the quality of the results obtained after screening. Secondly, the efficiency of the method used to reach out to information sources. Thirdly, the perceived cost-effectiveness of the method used.

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