Empirical Study of Translation, Localization and internationalization as fundamental variables in user experience

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Abstract

The impetus behind the development of this study is to empirically investigate the impact of translation, localization and adaptation errors on the user experience. The researcher hypothesized there is a significant impact at the level of $\alpha \leq 0.05$. To that end, five Algerian e-commerce websites translated, localized and adapted from Arabic to English were chosen, where A total number of 300 webpages have been determined for the experiment. A content analysis of the sample was conducted, during which Errors were identified, reviewed and classified into categories according to their severity level, data collected have been statistically dealt with. The researcher developed an assessment metric statistically found valid and reliable, based on Lommel's et al, Multidimensional Quality Metrics (MQM) framework. This study is respectively regarded as a first academic attempts to validate the framework for assessing e-commerce Website localization and validate the measurement of the effect of the independent variable represented by 3 constructs (translation error construct, localization error construct, internationalization error construct) on the dependent variable represented by the construct of user experience. Accordingly, the findings showed that there is a Significant negative correlation relationship between the independent variable and dependent variable at the level of $\alpha \leq 0.05$, the findings also revealed that there is a statistically significant effect at the level of $\alpha \leq 0.05$ of the 3 independents variables (translation error, localization error, internationalization error) on the dependent variable: the user experience of the Algerian e-commerce websites translated and localized from Arabic to English.

Keywords; E-commerce Websites, Localization Errors, Multidimensional Quality Metrics (MQM), Translation Errors, User Experience.

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Introduction

The use of new technologies such as internet and smartphones burst forth in a flurry into Algerian daily lives, and suddenly everyone is using them. this great proliferation specifically the internet grows in an exponential way, the International Telecommunication Union indicated (World Bank Open Data 2020) that 49% of the Algerian population use internet, consequently, many Algerian businesses start showing interest in E-commerce and aim to make a strong online presence by creating electronic websites and reinforcing the necessity to appropriately consider it as a compulsory asset. This Interest in e-commerce among a wide spectrum of Algerian Business become prevalent. New multilingual websites and mobile applications are continually being created and designed seemingly come into being out of thin air as online presence is deemed important. It is observed that e-reputation add value to the life span of the company and help offset stagnant sales growth. The truth of the matter is, to reach international customers, and push your online born products towards their physical world as well as bypass retail partners hustle, Algerian companies devoted to export are indebted to translate and localize their website webpages, yet the task is notoriously tough. Many Algerian websites fail to attract traffic from international web users, offering awkward user experience, ostensibly beholden to the numerous linguistics, cultural and design Errors counted on their webpages content, ultimately to hindrance the dissemination of online Arabic web content globally.

A website ; be it static, interactive or dynamic is a crucial source for the capture of information for a wide spectrum of net users. Webpages and their related content fundamentally propagates through hyperlinks which guides users to navigation through them.

Although it's not so easy to know the total number of multilingual websites in Algeria, the researcher observed that many Algerian business discard creating standardized, global websites for their brands, instead they merely translate and localize the existing content of their monolingual website pages according to the language of the targeted local.

The researcher (2020, 248) initially carried out a survey in his doctoral dissertation where he surveyed a total number of 1000 exporting Algerian companies to understand their opinion when translating and localizing their websites. About 73.3% of respondents outline that they don't hire a professional translator or localizer to work on their websites content, additionally 69.2% answered that their websites content are only in french language versus 15.4% in Arabic and English. This notorious practices significantly decreases consumers' purchase intentions and lead to unfavorable user experience attitudes. Tixier (2005) indicated that Effective localization can move web shoppers towards actions. It comes into play to deliver a great user experience and yield more than 200% increase in revenues of online sales if carried out properly and the best strategy is implemented during content creation. Singh and Boughton (2005) pointed out to the fact that net users prefer reading content in their own language, subsequently make purchases online from local websites. This behavior creates an obstacles in front of businesses aiming to target international consumers, consequently creating a multilingual content become a Must.

New research published by CSA research (DePalma & O'Mara 2020) polled 18279 web users across 29 countries to better understand their views on the controversy of using a website or an app of a company based in a different country. The analysis of the responses have citied 8709 participants. Responders identified 3 main problems corporate website need to avoid including : poor content, non-integration of linguistic and cultural aspects of the targeted local into the website content, unavailability of help in the web user native language. The key point one can draw is, understanding the language and culture of your locale creates resonance in them, which lead to a deeper engagement with the website and offer a great user experience, ultimately help offset sales and revenues and attain customer satisfaction. Nowadays, the web shoppers are looking for expectations and appreciation from foreign businesses about their language and culture. They want to feel cyber-segmented, territorialized and their identity included and empowered. Implicit in this statement is that creating multilingual and multicultural websites and

apps require translating the source content in a way that embraces a myriad of factors, notably localization and internationalization.

1. The status quo of websites translation & Localization industry in Algeria

In Algeria, the early initial stages taken to implement and popularize Internet technology was in the year 1993 through the establishment of a national network. The (85-56) act of 1985 authorized the establishment of a national research center namely the center for scientific research in information and communication technologies under the governance of the Ministry of Higher Education and Scientific Research. Among the assigned tasks : to establish a national network and link it to the international networks. Today, Algeria counts more than 25 million internet users (internet world stats 2020), and the Algerian network internet center enumerates more 24 registered internet providers.

According to the International Telecommunication Union data (ITU 2017), Algeria ICT development index rank 102 with IDI index of 4.67 among world economies in term of ICT infrastructure availability and its access. The numbers only show how fledging is Internet and mobile banking in Algeria and exhibits a promising and a great potential.

This potential booms within the infrastructure implementation and accessibility, yet internet is exclusively for advertising and marketing. In her Master thesis, (Fellag Chabra 2018) pointed out that websites in Algeria are merely used to advertise for automobile with (29%) and the marketing for phones and electronics with (24%), other sectors do not have a piece of the pie due to the lack of financial inclusion. The main hindrance is : delays in enacting laws to regulate the activity.

Algerian economy relies mainly on exporting oil and raw materials to EU, America and some other countries. This specific regions and markets require a high efficiency in terms of providing information about products localized into their languages. Many Algerian businesses websites fail to adapt their content and are faulty due to the numerous linguistics, cultural and design Errors counted on their webpages. A substantial reason is deficiency in translation and localization competences. This harsh break-down showed how incipient website translation and localization industry is in Algeria. In fact, information about publicly verified and accredited website translators/localizers is rarely available, and finding an avid language or localization service providers engaged in the service market is inexistent. We corroborate this claim by the top 100 Localization Influencer Watchlist published recently (Nimdzi 2020) about localization experts, and the best 200 world's best translation companies (Samartcat 2019), No Algerian expert or service provider was listed.

The unit of Research on Translation and terminology (URTT)-Oran-Algeria carried out an eager project to build a data base of experts in Translation and terminology. The data base as the project details, it will contain a professional registry of translators/interpreters and terminologists and an inventory of their translation activities and research. The data base is promised to be available and at the common disposal of all.

A good source for hiring a qualified Algerian or Arab speaking translators/interpreters is the Arab professional translator's society, a member of the international federation of translators (FIT). Members are all professionals with proven education and experience in translation or interpreting, they go through rigorous screening and must successfully pass an exam to be listed as a certified qualified translator or interpreter.

Translation and interpreting profession is regulated in Algeria, The Algerian ministry of justice administers the certification program based on its needs. Qualified individuals will be recruited as certified appointed court translators/interpreters to work for their judicial branch and granted a permit to open a translation office. Briefly speaking, the initial passage of the 13-95 act in 1995 enacting the statutes regulating the profession was passed. The decree N 95-436 of 1996

broadened the employment eligibility, ethics standards and the code of professional responsibility. As of September 2, 1996, the decree N 96-292 established the collective-bargaining agreements that regulates the wages and benefits of translators and interpreters.

It is noticeable in Algeria that Freelancing, and much more collaborative translation and localization activities are not confined largely to professionals, neither regulated. Myriads of freelancers and amateur translators emerged, unprofessional, untrained with limited capacities in foreign languages and rally around translation projects and implied crowdsourcing. They use fair bilingual or multilingual skills and less paid. To our knowledge, they can translate thanks to some prominent national websites like (Freehali, Ouedkniss). Moreover, translation and localization process are mainly carried into French language as a multitude of Algerian brands became more entangled to the French culture. Furthermore, there are some Algerian companies that want to target outer market. Their localization strategies are strangely carried out, the researcher (Mammad 2020, 247) in his survey found 69.2% of the businesses he polled report that they have their business websites only in French language, and 73.3% indicated that their web content was produced depending solely on the language skills of their website's engineers.

A relatively another major impediment for the language and localization industry in Algeria is the lack of training for this newly emerged field.

The researcher rack his brain about identifying the number of universities or institutions to teach localization in Algeria. A straightforward search in the website of the universities regional conferences (CRUO EST - CRUO CENTRE - CRUO OUEST) inspecting the three academic level (Licence, Master, Doctorat), from the teaching of foreign languages in universities to training in translation and interpreting institutes and even other fields with economical, technical or scientific profile. No relevant results were evidently produced. A single answer is localization is not included in the higher education curricula, and there is no single Algerian university actively teaching localization skills. Indeed, this seems to have been the case and eschewed for so long since the translation curriculum barely cover technology or machine translation courses, and the time allotted for such modules is nothing but few hours and feature uninteresting. However, there are an impressive number of research about website localization spanning a variety of sectors among master and PhD student, we affirm the statement when venturing national libraries and universities thesis repositories.

2. Relevance of the Study

The relevance of this study stems from the premise that translation, localization and adaptation errors have an impact on potential users of Algerian localized E-commerce website.

It is agreed upon that regardless of who is the beneficiary of translation and localization services, content quality is at first place. The ever-growing spread of e-commerce from one hand changes the way people buy and on the other hand deter how businesses sell. Seemingly, creating a multilingual content to incite broad range of what I call "Net-sumer" users surfing the web to shop-become ever challenging. On the back end, user experience is a decisive element to the dynamicity of a website, in this instance Multicultural Marketing is pivotal.

We attempt to address the issue and indicate the problem of e-commerce websites translated and localized within the language pair Arabic-English. The challenge in doing so will be useful to elicit Algerian translators' horizon to seize strategies and broaden their understanding in dealing with user experience errors when translating and localizing digital content and webpages. the research also highlights the tool and the methodology employed to design the research model. The focus was on companies targeting outer market. In doing so, the following questions were posed: How deep Algerian e-commerce websites are impacted by translation, localization and internationalization errors? And what implications these errors have on the user experience?

3. Literature review

Research on website translation and localization is gaining increasingly attention among different scholars and researchers. Although few studies have been carried out in the field, studies about web, applications and software's localization and translation have been undertaken from many different perspectives and extended in a variety of ways. Brandon (2001) proposes that universities aiming to localize their websites content to recruit international students or promote online learning across boundaries should increase awareness of the interrelation between language, culture and localization. This understanding will help delivering a great content that create engagement among different cross-cultural users. Webb (2001) refers to issues encountered by translators and localizers when localizing applications. He discussed the object of translation and the cross-cultural aspects to look at for a successful content adaptation. The empirical research conducted by (Trevor, amp & Cyr 2004) revealed the importance of websites layout design according to the target local culture. In their experiment they particularly analyzed 30 websites of three different countries. The researchers stressed out that an error free content alongside a layout designed according to the targeted local cultural aspect increases the website surf-ability. Culture can affect the activity of e-commerce web users, Jiménez-Crespo (2013) investigated web internationalization strategies and translation quality by analyzing the websites of 100 US based companies and compare their internationalization strategies in multicultural internet marketing for the Spanish speaking customers. the researcher concluded that there is an increase interest among US marketers' companies in the Hispanic segment, highlighted in creating contents that resonate with their culture and ignite in them a deeper engagement and interactions. Businesses constantly look for streams of revenues, ultimately by targeting outer market. In order to convert virtual potential customer to real buyers, companies must be able to proactively culturalize their web content and make web-user more interconnected and feeling recognized.

Related to the above works, Chao et al. (2012) conceded the need for a framework for website localization, he projected the framework will help companies targeting external markets to grow beyond expectations surpassing revenues made on national markets. In his study on 100 websites of multinational company targeting Chinese local, he validated Singh et al. (2012) framework to localize business to business websites. The study was conducted on 50 websites of US/Korean companies. It was noted that US companies localized their websites employing mainly content translation with no focus on cultural and social aspects.

Lommel (2013) attempted to establish a flexible system for assessing translation quality through Multidimensional Quality Metrics. The framework found to be significantly innovative and correlated to quality evaluation, however it was not tested or previously used. Marina, Cox (2014) extended the use of the framework to the assessment of student translations and studied its application and viability when designed to mirror the ATA certification exam.

As far as web and software's localization is concerned, to our knowledge no attempts have been recorded to test the viability of the framework. This research is considered to be the first attempt to further extend the use of the framework to be exploited in the quality assessment of webpages translation, localization and internationalization.

4. Methodology

In this paper we used the empirical approach. A qualitative and quantitative research strategy consisting of webpages observations, content analysis, and error identification and classification, website benchmarking were used to gather information. The researcher find the approach most

suitable with the nature of the topic and helpful to ascertain the impact and implications of translation, localization and internationalization errors on user experience.

The researcher uses the experimental design of one group to observe and attempts to describe accurately the effect of the proposed variables. The Multilingual websites content quality management is our independent variable of primary interest represented by 3 sub-constructs (translation quality construct, localization quality construct, internationalization quality construct) to measure content total quality and test its impact on the dependent variable represented by the construct of website user experience in the context of online Algerian e-commerce website translated and localized into English. The research seeks to capture both the impact of content poor quality as a whole as well as its relevant sub-constructs : Translation quality, Localization quality and internationalization quality comprising the following dimensions:

Table 1. Independent variables definition

SUB-Constructs	Definition
Translation Quality	It includes Accuracy, Fluency, Terminology
Localization Quality	It includes Locale, Verity
Internationalization Quality	It includes Style, Internationalization

The Translation quality construct addresses issues related to Accuracy, Fluency, Terminology as derived and adapted from the major dimensions of the MQM. The dimensions provide an indication of how well the translation of the webpages was carried out into English. The Localization quality construct specifically measures how appealing is the localization of the webpages into English with the focus on the target culture through issues related to locale and verity. Whereas Internationalization quality construct verifies how accurately the webpages are adapted to the locale of the targeted market. It encompasses the two dimensions style and internationalization.

4.1 Sample

The study population consisted of 11090 Algerian websites with Algerian domain, designed and hosted by Algerian providers approved by the Algerian network internet Center (NIC). The researcher screened the websites and chose only those of private companies in the commercial sector that have their websites equipped with both Arabic and English Webpages. We found only 5 companies have their content webpages localized and translated into English beside Arabic and french language. The finale sample consisted of 5 Algerian websites have webpages content in English and Arabic, the websites have Algerian domain name (DZ), hosted in Algeria and belong to Algerian fortunate companies doing business in Algeria. A total number of 300 webpage were analyzed and examined for errors related to 144 issues included in our metric. The experiment lasted from January 2018 to January 2020.

Table 2. Companies' websites

webpages (N=300)

Website	Domaine	Language	Pages count	User Experience Grading*
www.cevital.dz	DZ	Arabic/English	60	48
www.condor.dz	DZ	Arabic/English	60	67
www.airalgerie.dz	DZ	Arabic/English	60	77
www.imetal.dz	DZ	Arabic/English	60	34
www.saidalgroup.dz	DZ	Arabic/English	60	29

*User experience grading results were based on the outcomes of Woorank audit of the sample websites.

4.2 Data collection procedures & Instruments

Content Analysis : A rigorous analysis of the websites content was used to collect data for the study. Firstly, the analysis comprised the grading and benchmarking of the websites performance to measure user experience in terms of (readability, bounce rate, browsing time, SEO, ranking) and this was done through online tools including: Woorank, Webrank, Alexa, web grader‹Google Analytics. Secondly, the researcher conducted a review of the sample webpages content to identify and count Errors. We content analyzed 120 webpage per website (60 page in Arabic-60 page in English). Errors were identified and classified into categories according to their severity level. The data have been statistically dealt with.

Metric: In order to measure the total quality of the multilingual websites content, the researcher designed a scorecard metric using the MQM Metric (Lommel 2014), which is an aggregation of 7 dimensions and 144 issues related to content, comprising a comprehensive indexing of common recognized error classifications in the field of translation, localization and internationalization. The metric indicates the errors severity according to three levels (Minor, Major, Critical),which are weighted numerically. A weight of 1 would indicate Minor error, A weight of 10 would indicate Major and A weight of 100 would indicate critical error. The numerical indications are quantitative values, thus it can be statically dealt with to test the hypotheses. The final metric made shown in the table below:

Table 3. The Scorecard

Sub-constructs	Issues	Minor	Major	Critical
Translation Quality	Accuracy			
	Total			
	Fluency			
	Total			
	Terminology			
	Total			
Localization Quality	Locale			
	Total			
	Verity			
	Total			
Internationalization Quality	Style			
	Total			
	Internationalization			
	Total			

To check the reliability and accuracy of the metric if consistent and without bias, a reliability test was conducted through Cronbach's alpha. The reliability coefficient for 144 error issue was 0.854 and the individual groupings made shown in the table below:

Table 4. Internal consistency and reliability test of the metric

Major Constructs	Issues	Issues N	Cronbach alpha
Translation Quality	Accuracy, Fluency, Terminology	67	0.844
Localization Quality	Locale, Verity	21	0.993
Internationalization Quality	Style, Internationalization	56	0.993
Total		144	0.854

4.3 Data analysis

Data in this research have been dealt with statistically. Before Analyzing the content, the sample webpages were observed, read and reviewed thoroughly many times. A Scorecard was generated as shown in table 3 based on the research questions. To measure the total quality of the multilingual websites, a rigorous content analysis was conducted, to identify errors, their severity level and to classify them according to their issue types then they were counted and pre-coded. To present a quantitative description and describe what the data shows, descriptive statistics was used. Measuring the impact of the independent variable on the dependent variable was done through factor analysis, Pearson correlation coefficient, regression analysis and Analysis of variance (ANOVA).Excel is used to draw the tables and calculate some analytical solutions.

5. Results

5.1 Error Distribution

Primarily, we investigated the number of errors on the content of the web pages, and their distribution according to their severity level.

Table 5. Minor Errors distribution

Issues	Minor error	Percentage	Median	Mean
Accuracy	31	36%	1	6.2
Fluency	10	12%	1	2
Terminology	37	44%	0	7.4
Locale	1	1%	0	0.2
Verity	0	0%	0	0
Style	0	0%	0	0
Internationalization	6	7%	0	1.2

The table 5 above reveals the distribution of minor errors after analyzing 300 webpages. 44% of the minor errors were related to terminology, 36% related accuracy issues and 12% to fluency. With regard to internationalization, we counted 7%. while 1% was a locale issue, but no error was found related to verity or style issues.

Figure 1. Distribution of errors according to their minor severity
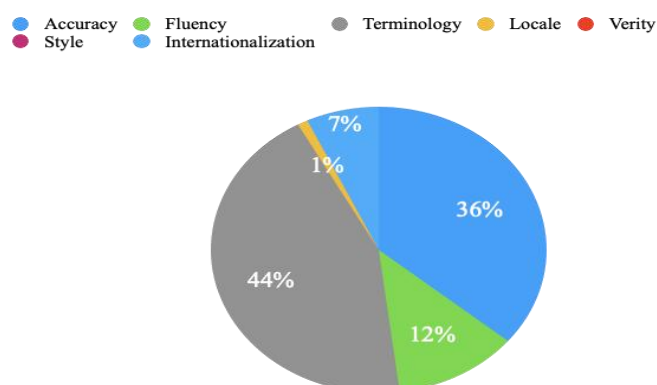
From reading the figure 1 we understand that the content likely was not reviewed before dissemination, and probably no proofreading was conducted before the final webpages. Also, having high percentage of minor errors in Accuracy, terminology and fluency is an indicator of

reliance on poor machine translation and the absence of a translator because revision and proofreading is an important task in the translation process.

Table 6. Major Error distribution

Issues	Major Error	Percentage	Median	Mean
Accuracy	66	49%	7	13.2
Fluency	6	4%	1	1.2
Terminology	37	27%	0	7.4
Locale	4	3%	0	0.8
Verity	0	0%	0	0
Style	2	1%	0	0.4
Internationalization	21	15%	0	4.2

From the data reported above in table 6, 49% of the major errors indicated that were related to Accuracy, while 27% was terminology related issues, while 15% reported as internationalization errors. However we counted 4% fluency errors, and 3% locales and 1% style errors.

### Figure 2. Distribution of errors according to their major severity.
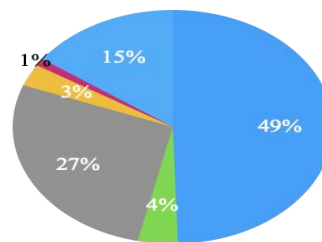
It is obvious from the figure 2 that translation errors were high in the content of the webpages. This likely leads to the production of bad webpages content less coherent and accurate with less structured writing in the target text and debilitating errors. The reasons might be the lack of translation revision knowledge among the transfer who worked on the webpages content. Another possible reason might be that the content translator don't have the necessary knowledge or the basics of quality control and assessment in translation project. As a result, they would not consider quality management as the most important factor in content translation and localization project.

Table 7. Critical Error distribution

Issues	Critical error	Percentage	Median	Mean
Accuracy	1175	49%	140	195
Fluency	434	18%	50	86.8
Terminology	300	13%	37	60
Locale	52	2%	9	10.4
Verity	155	7%	11	31
Style	153	6%	21	30.6
Internationalisation	106	4%	23	21.2

The table 7 shows the distribution of errors according to their critical severity. It was found that 49% were accuracy errors,18% was fluency errors and 13% were Terminology errors. On the other hand, verity critical errors were 7%, then style 6% and internationalization with 4%.

Figure 3. Distribution of errors according to their major severity.
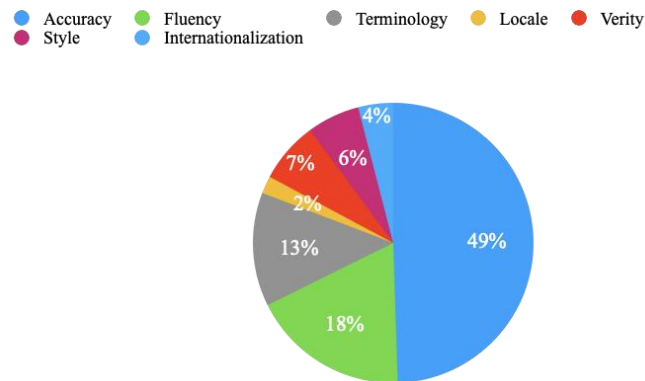
It is shown from figure 7 that critical errors are highly grouped within the translation quality variable. But still few critical errors had their share among other variables. The content analysis outlined concerns about the errors, including the prevalence of the critical and major errors on the webpages, errors were generally considerably higher in severity and tended to increase over major and critical, although at different rates.

5.2 Description of the relationship between variables

Prior to entering into the regression results, the researcher attempted to determine whether each of the sub-constructs of content quality indeed captured distinct phenomena. The researcher conducted Pearson correlations test to determine the association between the three variables: Translation quality, localization quality, and internationalization quality, and the dependent variable represented in user experience. All correlations were significant at the $p < .05$ level.

Table 8. Correlation Matrix (N=300)

Variable	Correlation			
	1	2	3	4
1.Translation quality	1			
2.localization quality	0.97363131*	1		
3.internationalization quality	0.98868046*	0.98925471*	1	
4.User Experience	-0.876537*	-0.8539613*	-0.911285*	1

Note: *$p < .05$

From the table 8 above, the cross-correlation matrix has shown that there is a strong inversely proportional relationship statistically significant at the $p < .05$ level. Internationalization quality variable had the strongest correlation with User Experience. The correlation between User Experience and Translation quality was strong (r =-0.87), In the same dataset, the correlation coefficient of User Experience and localization quality was also strong (r =-0.85).The correlation between User Experience and internationalization quality emerged as very strong (r =-0.91).

5.3 Hypothesis Testing

For the aim of gathering data related to measuring the impact of translation, localization and internationalization errors on the Algerian e-commerce websites user experience, the researcher conducted a hypothesis testing by putting the framed hypothesis to statistical tests. As stated earlier and since we dealing with more then one variable, ANOVA test was used.

The research question implies that there is a significant impact of content poor quality on Algerian e-commerce websites user experience. Clearly, It is reasonable to assume that there are factors involved in impacting the user experience, not the least of which are webpages Translation errors, Content localization and internationalization errors. Building on this hypothesis and in order to better understand the relationship between these variables, the research aims to show how errors in content Translation, localization and internationalization can significantly impact Algerian e-commerce websites user experience.

5.3.1 Content Translation Errors and Website user Experience

It is hypothesized that Content Translation errors will significantly impact Algerian e-commerce websites user experience.

Table 9. Regression results of Content Translation errors.

Hypothesis 1	α = .05	p-value	R-squared	inference
H1	0.05	0.005	0.948	Retain

Based on the result shown in table 9, when the hypothesis stating the impact of Content Translation errors on Algerian e-commerce websites user experience was tested. It was found that 94% of the factors that impact Algerian e-commerce websites and repel their visitors is translation errors with a p-value of 0.005, consistent with the research hypothesis that denote there is a significant impact of errors on user experience. Null hypothesis was rejected at 5% level of significance.

5.3.2 Content Localization Error and Website user Experience

It is hypothesized that Content localization errors will significantly impact Algerian e-commerce websites user experience.

Table 10. Regression results of Content localization errors.

Hypothesis 2	α = .05	p-value	R-squared	inference
H2	0.05	0.015	0.894	Retain

As shown in table 10, when the hypothesis stating the impact of Content localization errors on Algerian e-commerce websites user experience was tested. It was found that 89% of the factors the impact Algerian e-commerce websites and repel their visitors is Localization errors with a p-value of 0.015, consistent with the research hypothesis that denote there is a significant impact of errors on user experience. Null hypothesis was rejected at 5% level of significance.

5.3.3 Content Internationalization Errors & Website user Experience

It is hypothesized that Content internationalization errors will significantly impact Algerian e-commerce websites user experience.

Table 11. Regression results of Content internationalization errors

Hypothesis 3	α = .05	p-value	R-squared	Inference
H3	0.05	0.002	0.964	Retain

When the hypothesis stating the impact of Content internationalization errors on Algerian e-commerce websites user experience was tested. It was found that 96% of the factors the impact Algerian e-commerce websites and repel their visitors is internationalization errors with a p-value of 0.002, consistent with the research hypothesis that denote there is a significant impact of errors on user experience. Null hypothesis was rejected at 5% level of significance.

6. Discussions

The research aims at uncovering the impact of translation, localization and internationalization errors on localized Algerian e-commerce websites. The hypothesis that poor content quality soaring in Translation, localization and internationalization errors would significantly impact Algerian e-commerce websites user experience was supported. More concretely, we find the relationship between Translation errors and user experience appear strong and inversely proportional. Moreover, it was debilitatingly notorious that pragmatic errors (Reiss & Vermeer, 1984) and linguistics and cultural inadequacies on the Algerian e-commerce websites content hindered the delivery of good quality content and consequently repelled website visitors. Given this result, the findings point out to the presence of more than 80% of minor & Major errors associated with the Translation variable. This may be explained by the lack of revision and content review, which are pivotal tasks in the translation process as suggested by Colina (2008) and proved necessary to help easily spot and correct linguistic errors.

The results also indicate that erroneous content may be occurred due to the lack of localization skills and competences among the translators who were involved in the localization and translation process. Handing a website localization & translation projects to an unexperienced translator fully reliant on translation automation outputs would lead to the production of webpages content soaring with potential offensive and contentious issues, consequently the linguistic quality drop. Consistent with extant idea, Bass (2006) suggested, quality assurance and quality control deemed deficient in tracing the cause of errors. Following this malpractices a webpage content may never deliver a good user experience to the targeted locales, and this can result in sales limitation in the case of e-commerce websites and related cost and expenses can accumulate.

Internationalization errors are costly to webpages and digital content in numerous ways. Truism is, automation can be of help to ensure quality, unfortunately it is limited to a number of tasks. The human factor in this stage is valuable as they can test functionality, conduct linguistic Quality Assurance and more importantly avoid any unwittingly laughable in the target texts. Jimenez-Crespo (2009, 70) contested that localization Quality Assurance models are in a dire need of integrating pragmatics errors as an important variable. Knowledgeable Translators and localization experts if able to carry successfully Culturalization proactively and reactively during the design and development stage in an effort to make the end user resonate with website content, may positively foster user experience and significantly facilitate the user interaction with the website. Significantly, these practices would save the business awkward and costly website re-engineering expenses.

Conclusion

Errors are fundamental to quality evaluation, and their occurrence is undeniable. Our findings advance error theory by highlighting their significant impact in the context of both websites and digital content evaluations. Taken together, these results refute the prediction that Translation, localization and internationalization errors don't impact a website user experience, and showed how powerful is the implication of errors in shaping the website user experience. The research findings could also enrich the literature by demonstrating some important nuances regarding how

translation, localization and internationalization quality and website user experience interact, specifically our results suggest that the more errors soar in a content, the less likely a website will have a good user experience, furthermore, the use of the MQM as tool to assess the webpages quality will lay the foundation for future empirical research in translation and may also help improve digital content quality evaluation both in professional and academic setting. Although much remains to be explored, these results may contribute to the achievement of meaningful results in translating and localizing websites as well as inducing Algerian web experts to produce accurate websites. In doing so, the challenge will be useful to elicit Algerian translators' horizon to seize strategies and broaden their understanding in dealing with user experience errors when translating and localizing digital content and websites. When the issue is addressed and the problem is indicated a hopeful possibility is provided to promote Algerian e-commerce and disseminate a better and a quality Algerian web content

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