

MASTER

Emailing strategies in maximizing marketing effectiveness for online informative websites

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Award date:
2013

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Eindhoven, September 2013

**Emailing strategies in maximizing
marketing effectiveness for online
informative websites**

by
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MSc Innovation Management — ITEM 2013
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in partial fulfilment of the requirements for the degree of

**Master of Science
in Innovation Management**

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TUE. School of Industrial Engineering.
Series Master Innovation Management

Subject headings: Personalized Emails, Marketing Strategy, Personalization Degree,
Customer Response, Marketing Effectiveness

Management Summary

StudyPortals is the most comprehensive European online study choice platform targeted to prospective students who look for higher education possibilities at different institutions. The company has rapid growth of visitors over the past years. StudyPortals closed the gap between students and educational institutions that lack of proper communication to each other. The goal of StudyPortals is to make the information about international study programmes accessible to people interested to study. The management of StudyPortals is constantly looking for possibilities to increase their marketing effectiveness and efficiency and help international students to look for education, while ensuring organizational long-term success.

The company strives to establish good relationships with students and educational institutions. Therefore StudyPortals thinks that each of the webpage visitors is unique. For this reason the company explores the possibilities to find the strategy how to improve the marketing process and to retain more satisfied visitors.

Personalized emailing is the solution discussed in this project. Email marketing offers greater exposure than other channels, which is highly targeted and focused. It generated leads and builds relationship. Return on investment is very good as email marketing works everywhere.

Literature review revealed that email messages can be personalized on content, design or specific data. Moreover, it was explored that customer response can be influenced by the degree of email personalization. Furthermore, personalization can have negative effects depending on the degree to which the personal information used in the message uniquely identifies or characterizes. A little is known about these degrees and their impact in practice. Most of the studies are not up to date and have focused on a laboratory environment, which does not reflect real businesses (in particular project – online advertorial / informative industry). Thus, the project focused on the following elements:

- Personalization degrees impact on customer response;
- Personalized emails and moderating customer characteristics;
- Personalized emails based on design;
- Personalized emailing strategy to increase marketing effectiveness.

Data collection was based on experiment conducted within a company. Customer response on emails that contain different degrees of personalized message was measured. Quantitative research was conducted to answer research questions and sub-questions raised in the project. Three types of analysis were used: cross-comparisons based on chi-square and z-test; logistic regression and C&R Trees.

Cross-comparison analysis explored the impact of email personalization degree on customer response. It has also answered how different moderating customer characteristics respond on the different degrees of personalization. Later in the project the analysis was used to compare responses on personalized email based on design factors: use of illustrations, writing style, use of incentives, email length.

Logistic regression created the model containing a *set* of customer characteristics (*education, continent of origin and gender*) and predicted response when all the characteristics are present. C&R Tree analysis was used as a practical extension of the research to visualize the findings and to provide a marketing plan suggestion, which is based on personalized emailing.

The project is important, because good marketing strategy increases return of investment, but the wrong strategy could hurt the brand. Many businesses do not have sufficient research, what emailing strategy fits their customers and industry the best. The project focuses on a real online advertorial industry, which gets increasing attention in the literature. The results provide explicit findings that can be used as a key to achieve long-term organizational success, achieved by the right personalized emailing strategy.

Acknowledgements

Thanks to my best friends and colleagues in Eindhoven - Feng Fang and Eduardo J. Guerrero L. for their support and inspiration throughout my studies.

Special thanks to my supervisors Dr. Umut Konus and Dr. Ad de Jong for their guidance and flexibility, allowing me to shape the project such that it could be applied not only to theoretical research but also linked to practical needs of StudyPortals B.V.

I would also like to say thanks to my team at StudyPortals, who managed and supported me: Joran and Sissy who significantly contributed to my research and shared many valuable information with me; Eefje and Edwin for the possibilities to fulfill my personal and organizational goals while working with the team.

Finally, thanks to my family, who believed in me, for their moral support throughout my international study experience.

Eindhoven, September 13, 2013

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1. Introduction

The scope of the project is to explore the impact of personalized emailing as a marketing tool, and to find a strategy, which maximizes emailing effectiveness in terms of customer response to marketing actions. Hartman et al (2005) **defined customer response** as perceptions, preferences and behavior arising from marketing activities. A literature review revealed that personalized emailing increases marketing effectiveness as personalized communications stimulate customer response (Blattberg et al, 2008). **Personalization is defined** as the extent to which the communication between consumers and sellers is shaped to the consumers' preferences and needs. It ensures that consumers receive the most relevant and appropriate message (Boateng et al, 2013). Under the context of email communication, personalization is the change in emailing in terms of design, timing, degree of personalization or content that can influence marketing effectiveness, Ellis-Chadwick (2012), Pradhan (2010). So far most of studies have focused on a laboratory environment and did not consider the degree of personalization that is linked to customer characteristics. Personalized emailing communication may be essential to marketing effectiveness as it helps to better link to and address important factors to be included in personalized messaging. However various literature sources discuss that highest degrees of personalization have negative effect to marketing effectiveness that comes from privacy concerns. Therefore it is interesting and important topic to explore in how far personalization increases the effectiveness of customer responses.

Personalized communication involves messages, based on the use of text, images and data depending upon the targeted person and the product or service (Pradhan, 2010)

It is relevant not only for researchers, but also for practitioners. Companies tend to have databases with customer characteristics, which can be used for marketing. These businesses are constantly looking for strategies to increase marketing effectiveness and enhance their profits. Therefore the project explores the effect of email personalization degrees and customer characteristics, which help to apply the marketing effectiveness maximizing emailing strategy for online informative webpages. Hawkins et al (2010) discussed that appropriate emailing strategy helps the sender to construct an email that results in recipients taking a requested action.

Personalized emailing gets more and more attention in the scientific literature and is getting widely applied in online businesses. StudyPortals B.V. is a Dutch company, which business profile is online advertising. Academic literature defines online advertising as deliberate messages placed on third party websites including search engines and directories available through Internet access (Ha, 2008). Guha et al (2011) state that online advertising is a major economic force in the Internet industry, which funds a wide variety of websites and services.

The project explores the effect of email personalization degrees and customer characteristics on customer responses. This helps to optimize the marketing effectiveness of emailing strategy in online settings

Marketing effectiveness can be reflected by customer response, which is the “number of people who respond to an offer based on a group of people that have been targeted with a product or service” (Pradhan, 2010) **The project measures marketing effectiveness or customer response (discussed by Pradhan, 2010) by tracking the number of email recipients, who submit the survey.** The request to submit the survey is sent by personalized emails to different groups (see further sections). Schubert et al (2003) identified different degrees of personalization. The first degree is applied to all customers, the second one is applied in terms of customer group preferences and the third one is based on individual details. The company does not know how their email communication should be organized in terms of personalization and customer base they have in order to increase marketing effectiveness. The company believes that effective emailing strategy will increase their long term profits as their existing customers will receive more informative content of information. The management expects that successful emailing strategy will contribute to stimulation of visitors interest in services offered by StudyPortals, and it will positively affect number of referrals, leads and brand awareness. Blattberg et al (2008) discuss that companies strive to take the advantage of personalization, which empowers businesses to enhance their success by linking the product or service directly to the target, creating customer awareness and finding a good position in the market. As a final point, it will help to ensure long-term success in managing the relationships and taking a stable competitive position. In order to conduct a meaningful research, which solves the issues mentioned earlier, the structure has to be defined. Next section introduces to the main scope of the research.

1.1. Research Scope

The research explores the effect of personalized emailing under different degrees (extent), which factors based on emailing design, degree of personalization, customer preferences and moderating personal characteristics. The second phase considers the most effective emailing strategy, which is based on the findings derived from the first phase of the research.

The core aspects of the project:

- 1) Personalization degrees and customer response (emailing context).
- 2) Customer characteristics and relationship to personalized emailing.
- 3) Personalized email design factors and effective marketing.
- 4) Marketing effectiveness optimization.

The research is based on a real online informational / advertorial work environment, which has a goal to achieve long-term success by knowing the customers better. First, the company and its problematic is discussed, later literature review on personalized emailing is processed. Next research questions are developed and methodology is presented. Later analysis is conducted and conclusion is discussed. Before starting discussing business and academia problematic, the background of the company is reviewed in the next section, which links the research to literature review.

1.2. Company overview

StudyPortals is the most comprehensive European online study choice platform targeted to prospective students who look for higher education possibilities at different institutions across Europe. The company started in 2007 with its first flagman webpage *Mastersportal.eu*. The webpage contains a centralized database of European Master's degree programmes, which aimed to be promoted to worldwide prospective students. Rapid growth of visitors has shown a great interest in the service empowered StudyPortals. Thus, the study choice platform extended its services by creating webpages such as *Bachelorportal.eu*, *Phdportal.eu*, *Scholarshipportal.eu*, *Stexx.eu*, *Shortcoursesportal.eu* and *Distancelearningportal.eu*. Different portals were combined by establishing an enterprise StudyPortals B.V. in 2009. By the end of 2012, StudyPortals reached more than 2.5 million unique visits per month and have been considered as the most popular study choice webpage in Europe. The company office is located in Eindhoven, the Netherlands and it employs 40 people with 13 different nationalities. As the official page of the company states,

StudyPortals currently has 1,200 participating universities in 40 European countries. The goal of StudyPortals is to make the information about international study programmes accessible to students. The mission of StudyPortals states: “*Taking you further*”. The company provides a great tool for students to get relevant information about the study programmes people are interested in. Lots of prospective students have insufficient knowledge about possibilities to study abroad as there was no central study choice platform before 2006 in Europe. StudyPortals closed the gap between students and educational institutions that lack of proper communication to each other.

1.2.1. Operations

StudyPortals is a European study choice platform, which currently has 7 different portals. The definitions of these portals are provided in Table 1 and illustrated in Figure 1.

Table 1. Portals of the company

The portal	Description
Masters Portal www.mastersportal.eu	An online Master’s degree programmes advertising portal containing over 20,300 study programmes.
Bachelors Portal www.bachelorsportal.eu	The portal contains around 6,500 Bachelor’s degree programmes advertised by various European higher degree institutions.
PhD Portal www.phdportal.eu	PhD portal promotes European PhD programmes. It contains over 2,200 PhD programmes and positions.
Short courses Portal www.shortcoursesportal.eu	The portal contains more than 2,000 short-courses offered to the webpage visitors.
Distance Learning Portal www.distancelearningportal.eu	Distance Learning Portal contains around 1,500 worldwide courses.
Scholarship Portal www.scholarshipportal.eu	The portal provides information about scholarships to the prospective international students (around 1,600 scholarships).
Student Experience Exchange Portal www.stexx.eu	Stexx.eu has a database of international study experience shared by students. It has more than 41,000 experiences.



Fig 1. StudyPortals - European Study Choice Platform: Range of Webpages

The summary of key activities within the company is depicted in Table 2.

Table 2. Summary of StudyPortals activities

Activity	Description
Online study programmes advertising	The online promotion of Bachelor's degree, Master's degree, PhD degree, Distance learning programmes and Short courses. The priority is to have the most comprehensive information on study opportunities in Europe: 29,000 studies, advanced searching and filtering.
Online scholarships advertising	The online promotion of scholarships offered by educational institutions in Europe. It presents scholarship information in a comprehensive, structures and transparent way. The goal is to boost worldwide visibility of and access to scholarship programmes in Europe. The webpage unifies the dispersed information on all kinds of funding opportunities: grants, fellowships, awards, exchanges and scholarships.
Storage of students' study feedback	The company has a database of students' feedback, experiences and recommendations to study based on the programme, university, country, etc. The main purpose of the project is to inform other prospective students about the study life in a particular country or educational institution. The students can write reviews and rate their experiences.

As the company focused on informing prospective students, the business model is based on study interest on the webpages. The next section discusses the business model of StudyPortals, which is important to understand problem description of the company.

1.2.2. Business Model

The business model of StudyPortals is based on selling online advertising campaigns to educational institutions, which show their interest to increase the number of new international students. Educational institutions pay for different students - schools interactions on the webpage. These interactions are classified in three categories:

- Referrals;
- Leads;
- Banner impressions.

These products are a part of Result-Based Partnership (RBP) business model, which started in 2010. The company still has a non-RBP business model where the educational institutions pay for the individual programme listings. However StudyPortals is focusing strongly on the RBP business model. The summary of the business model is indicated in the Table 3.

Table 3. Products for the RBP business model

Product	Payment scheme	Explanation
Referral	CPC (cost-per-click)	Referrals refer to the interaction moment when the student is redirected from the study programme page on MastersPortal to the official study programme page of educational institution.
Lead	CPL (cost-per-lead)	Leads indicate the moment when the student leaves a question about a specific study programme promoted on Mastersportal. The educational institutions receive the questions and other personal details about the student.
Banner impression	CPM (cost-per-thousand impressions)	Banner impressions refer to the interaction moment, when the image redirecting to the official study programme website is displayed.

The RBP business model is illustrated in Figure 2.

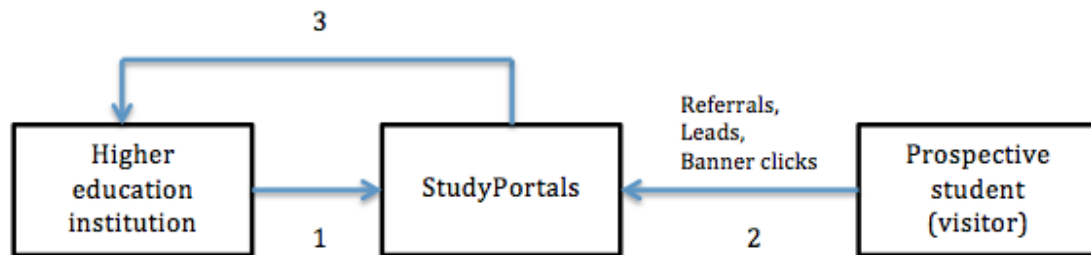


Fig 2. Business model of StudyPortals

First of all the higher education institution buys an online advertising product. It spends a particular budget for their advertising campaign (arrow 1). A prospective student visits a webpage and creates an interaction moment (arrow 2), which has a particular price. StudyPortals reports the statistics to the higher education institution and runs the campaign until the budget is delivered. The arrow 2 is critical for the company, as the webpage visitors generate revenue. StudyPortals thinks that effective marketing will increase their programme interest and generates greater future revenue. Therefore the company considers emailing activities which helps to keep in touch with visitors. The management believes, that personalized emailing can have a high added value in terms of marketing effectiveness. StudyPortals provisions possibilities, which contribute to increased emailing effectiveness, which generates greater future revenue in a long term. However a good emailing strategy is needed to be handled, where a proper personalized emailing strategy is developed. A little is known about the customer response to emailing activities within an online advertising industry, especially when these visitors are different in terms of their education, continent of origin and gender. Moreover, StudyPortals does not know to what extent / degree email messages have to be personalized, as the reality and literature shows, high degrees of personalization sometimes have negative effects. Finally, the company wants to classify website visitors based on these characteristics and to have a plan with predictions, how do the customer are going to respond on their marketing activities in the future. It is expected that a proper strategy would lead to increased number of: referrals, leads, banner clicks, brand awareness, customer loyalty, etc. Degrees of personalized emailing are not discussed much in the past researches. Moreover, there are no strict boundaries to classify degrees of personalization.

However the main concepts and effects of personalized email communication have to be explored, which will lead to further research development. Therefore a literature review is conducted in order to explore these issues, which contribute to formulate research questions of the project. As the research is based on online advertising industry, the literature review discusses this concept which is gradually transitioned to the main point of the research – personalized emailing. Online advertising is defined as the use of Internet as a medium where promotional messages appear on a computer screen (Duguay, 2013). However there are terms of online advertising that are linked to business goals.

2. Literature review

Klever (2009) defined online advertising as a placement of advertising material on the Internet in order to support marketing and communication objective. Ratliff et al (2011) discuss that in general businesses advertise to achieve one or more of several possible goals: to inform, persuade, remind, or to build brand awareness or brand loyalty. Robas (2012) found a definition, which links online advertising and personalization. According to this paper, personalized online advertising has a definition of the persuasive messages, which are directed to a particular person personalization it incorporates recognizable aspects of a person in the content information of a persuasive message or clearly indicates “this information is for you”. *Personalization is defined as the extent to which the communication between consumers and sellers is shaped to the consumers’ preferences and needs (Boateng et al, 2013)*. Personalized messages have generally been found to increase response rates in mail surveys as well as Internet surveys (Sauermaun et al, 2013). Personalized online advertising offers marketers a way to direct their marketing efforts at very specific audiences (Lindell et al, 2011). Therefore this phenomenon is interesting to explore, as StudyPortals is the online advertising company, who is interested in exploring the potential benefits offered by personalization phenomena. As personalization is a core element in the research, it has to be discussed more extensively in the next section.

2.1. Personalization

Personalization is a widely used term in electronic commerce literature. There is a huge interest in reality as well, as most of the online webpages strive to personalize their activities for their customers.

Personalization is defined as the extent to which the communication between consumers and sellers is shaped to the consumers' preferences and needs (Boateng et al, 2013)

Coelho (2012) found that personalization increases perceived service quality, customer satisfaction, customer trust, and ultimately customer loyalty toward a service provider. Personalization has both direct and mediated effects on customer loyalty and interacts with the effects of customer satisfaction and customer trust on loyalty. Kwon et al (2010) discuss that personalized messages have a positive effect on customer loyalty and customer retention.

Kim et al (2009) argues that a very important factor, which influences the quality of e-services is firm's ability to provide individual attention and caring for the customers. Therefore personalization is getting more and more popular among web-based service businesses. Personalization, in this case, can help to make products offered online more suited to the unique and individual needs of each user" (Ntawanga et al, 2013). To summarize the section, personalization is also defined as "the ability to provide content and services tailored to individuals based on knowledge about their preferences and behavior," or "the use of technology and customer information to tailor electronic commerce interactions between a business and each individual customer" (Lin et al, 2013). Pradhan (2010) discussed, that personalized communication involves messages, based on the use of text, images and data depending upon the targeted person and the product (service). These definitions helped to develop the use of personalization in this research, which is email message used as a marketing communication, that provides information based on *individual preferences*, adjusted *content* and *design* (as a practical translation of the definition discussed by Pradhan (2010). The way personalized message was constructed is discussed in Methodology chapter. This chapter also discusses degrees used in the research. Next section reveals theoretical aspects used to understand different extent (degrees of personalization).

2.2 Degrees of personalization

Personalization can be classified into different degrees. Sunikka et al (2012) discuss that personalization can be *individualized* and *categorized*. Highly personalized online advertising can address online users on a “*one-to-one*” basis (Postma and Brokke, 2002). Generic online advertising is considered a communication that uses a generalized verbal copy to direct a broad targeted message to all potential users or viewers, therefore, resulting in a standard communication (Nowak et al., 1999; Dijkstra, 2008). Schubert et al (2003) identified the following degrees of personalization. The first degree is applied to all customers, the second one is applied in terms of customer group preferences and the third one is based on individual details.

2.3. Personalized marketing communications

Personalization is seen as an important element for marketing purposes. Montgomery et al (2009) argue that personalization is closely related to a marketing strategy, which is highly customer-oriented. The authors explored different literature sources and found the common elements where personalization is a way to apply marketing mix to individual customers based on the information about them.

**Personalized communication involves messages, based on the use of text, images and data depending upon the targeted person and the product or service
(Pradhan, 2010)**

Wedel et al (2009) discuss that personalized emailing is an effective marketing tool and can indeed attract more customers to visit the websites. This is the main objective of StudyPortals, as it is directly linked to profit the company generates. Therefore emailing and its personalization are discussed in the next section.

2.4. Emailing

Email marketing (emailing) is one of the most affordable and potentially engaging ways in which to market a new product or service (Lewis, 2012). Emailing is a form of direct marketing, which uses electronic mail as a means of communicating commercial or fundraising messages to an audience (Vasudaven, 2010). It is one of the oldest and still one of the most powerful of all E-marketing tactics (Mehrdad, 2012). Email marketing is a form of direct marketing where the

communication channel is the email. This kind of campaign is easy to manage, requires few resources and allows companies to have a timely response, which is 24–48 h after the launch of the campaign) (Diamantini et al, 2012). Corporate executives see email as a low-cost approach to building brand relationships, retaining loyal customers and generating revenue (Westlund et al, 2009).

Emailing is an important medium of marketing communication especially for companies constructing closer relationships with consumers (Chadwick et al, 2012).

Stearns (2012) identified the main reasons to use emailing:

1. Email marketing offers greater exposure than other channels.
2. Email marketing is highly targeted and focused.
3. Email marketing lists have more committed users.
4. Return on investment is very good.
5. Email marketing works everywhere.
6. Email marketing compliments your other content marketing efforts.
7. Email marketing generates leads and builds relationships.

Due to the relatively lower operational cost, even a modest response rate on email marketing ad campaigns is sufficient to break even (Bagherjeiran et al, 2012). There are two important concepts to understand for email success measurement, which have a similar nature: click (through) rate and conversion rate. Click rate is the amount or percentage of people that click on a link or image in your email. This is very important for email marketing analytics because it tells you who your recipients are and what they want from the emails in the future (Baum, 2012). Conversion rate is the ratio of the number of people who clicked on the message and those who end up following through and performing the desired action and goal of the sender. (Park, 2012). Whether the email recipient is downloading a free e-book, webinar, or coupon, this number tells the amount of leads the email generated. (Baum, 2012).

The literature defines a system of emailing which eliminates spamming that is known as emailing disadvantage. This system is intended to eventually result in a high degree of satisfaction between consumers and marketers and it is known as Opt-in emailing. Opt-in e-mail advertising, or

permission marketing, is a method of advertising via e-mail whereby the recipient of the advertising has consented to receive it (Vasudaven, 2010). Organizations that have built up opt-in email lists have a large base of customers who have already expressed an interest in learning about new offers (Lewis, 2012).

Stearns (2012), Baum (2012) discuss that emails should be made personal, clear and straightforward. Emailing is a practical way to contact someone. It does not feel as intrusive as a call and does not interrupt the workflow or the life of the target person. However a lot of people do not read emails, making this form of contact less effective (Sousa et al, 2011). Effective use of personalized communication has helped get better response in marketing campaigns as compared to a static communication piece (Pradhan, 2010). This is why personalized emailing becomes more effective and it is discussed in the next section.

2.5. Personalized emailing strategies and success factors

Effective use of personalized messages in terms of adjusted content, design and customer data has helped get better response in marketing campaigns as compared to static communication piece (Gorelick, 2010). Effectiveness can be reflected by customer response / response rate / conversion rate. Response rate is the “number of people who respond to an offer based on a group of people that have been targeted with a product or service”. Response rate is used to evaluate the effectiveness of the marketing campaign. (Pradhan, 2010). Researchers have found that personalized text generates a higher email response: “When messages are closely linked to an aspect of the self “me-ness” matching, they can exert persuasive effects” (Bizer et al., 2002). Dillman (2007) found that “certain types of personalization do or do not influence response rate to mail surveys. According to the author this influence varies by nature of the population.

Personalization can have negative effects depending on the degree to which the personal information used in the message uniquely identifies or characterizes the (Malheiros et al, 2012). The author explored untargeted / targeted rich media ads and personalized ads with photo and name personalized. The findings revealed that greater personalization of ads might achieve higher level of attention, but the most personalized ads are least acceptable, because many users are concerned about their privacy. It is discussed that compared to email personalization relatively low levels of personalization are currently used in targeted display ads. White et al (2007) discuss

that consumers experience personalization reactance to highly personalized messages when the fit between the offer and customers' moderating personal characteristics is not justified. Personalization reactance occurs when highly personalized messages lead consumers to feel too identifiable. The author discusses that permission based use of personal information can reduce negative effects, when the degree of personalization is perceived to be inappropriate. Miceli et al (2007) discussed that information on relationship quality can drive the choice of the degree of personalization consistent with customer willingness to be involved and to cooperate. The authors discuss that firms should customize the degree of personalization to each customer by analyzing their preferences. White et al (2008) found that highly personalized messages had lower response to the offer. The author discussed future research possibilities, as the research about the degree of personalization demonstrated relatively small effects. According to the author more research has to be conducted in a non-laboratory environment, where the results might be generalized. White et al (2008) discuss that they did not endeavor to compare highly distinctive personalization to no personalization in this research, and they researched emailing click-through intentions at varying levels of personalization. Moreover the research did not know about the customer's personal preferences, which would moderate with consumer reactions to personalized emails.

Pradhan (2010) found that from 18 to 25 year old people are influenced when products or services are relevant to the products and services they are actually looking for, but when the products and services are not relevant, they tend to ignore or dislike the advertising attempts by these companies. Boatwright et al (2005) prove the fact in general that emails that mentioned the consumer's product preference drew more favorable response than those without personalization. Pradhan (2010) found only 31% of respondents receive personalized messages based on highly personalized characteristics such as gender, personal preferences and other and most of the message focus on other characteristics such as telephone number and address. Boatwright et al (2005) found that high personalization cause concerns about the privacy. Park (2012) found that wall posts on social media have a higher response rate than messages even if it has a lower personalization degree. Pappas (2012) found that personalization affects positively enjoyment and intention, but has no effect on privacy. Additionally, privacy affects negatively both enjoyment and purchase intentions, while enjoyment has a positive influence on purchase intentions.

2.6 Emailing strategies

Marketing strategy is defined as the integrated pattern of decisions that specify the crucial choices concerning marketing activities, which enable the organization to achieve specific objectives (Varadarajan, 2010). Slater and Olson (2001) defined marketing strategy as a “set of integrated decisions and actions by which a business expects to achieve its marketing objectives and meet the value requirements of its customers.” Hawkins (2010) discusses that understanding and practicing effective emailing strategies contributes to successful communication.

Electronic environment enables businesses to interact with customers and to improve their services, develop new products and marketing strategies (Goldsmith et al, 2007). Park (2012) discusses that effective emailing strategies increase customer response including the benefits of personalized content and the manipulation of the audience. Hawkins (2010) found that email recipients most importantly look for: a familiar sender, the presence of a descriptive subject line, having been personally addressed by the sender, and a short and concise email message that communicates relevant content. However the author notes that email recipients are not a homogeneous group and therefore may have varying email preferences and thus using certain emailing strategies will not guarantee success in reaching all parties. The research by Hawkins (2010) was conducted for the effective email strategy in the non-profit organization, however not in the particular industry). Westlund et al, (2009) discussed that the right emailing will bring the increased return of investment; however the wrong strategy could seriously hurt the brand. Park, 2012 discussed that email strategies can influence different levels of response rate by online audiences. The researching company performed an experiment based on the email’s subject line, which usually includes the topic of the email. It was found that when a recipient’s first name was added to the subject line, the response rate doubled. Jason Stearns indicated the Top marketing trends in 2013, which are always evolving. The main focus points, which are linked to emailing are: Deep Content, Visual Content, In-Person Relationships. The author discusses that we will see more small businesses reaching out to clients and customers with highly personalized emails, phone calls, letters, public presentations, trade events, and other in-person networking. Rossiter et al (2005) found that pictures may be the most powerful way to attract the attention of a consumer. However Ellis-Chadwick et al (2012) discuss that the pictures without text do not provide good customer response for the advertising campaigns. The author also found personalization and

hyperlinks to be effective. Moreover the subject line has to grab the initial attention. According to the author, there are two parts which grab consumer attention in terms of the subject line: sender and the subject. Sender is the email source, which has to create interest for the customer. The subject line has to make the receiver motivated and intrigued to read the email. Despite exploration of email success factors, Ellis-Chadwick (2012) discussed that future research has to be done from consumers' or retailers' perspective in order to understand combinations of specific executional elements, which offer the greatest potential for effective attention attraction. Table 4 provides the summary of the most important factors affecting the customer response. Consideration of these factors is a part of emailing strategy.

Table 4. Summary of the main factors discussed in the literature

Factors	Literature
Degree of personalization	Sunikka et al (2012); Schubert et al (2003); (Postma and Brokke, 2002); (Nowak et al., 1999; Dijkstra, 2008); Malheiros et al, 2012; White et al (2007); White at al (2008); Boatwright et al (2005); Park (2012); Pappas (2012); Ellis-Chadwick et al (2012)
Customer data	(Pradhan, 2010); (Gorelick, 2010); White et al (2007); Miceli et al (2007); White at al (2008); Ellis-Chadwick et al (2012)
Familiar sender, subject line	Stearns (2012); White et al (2007); Ellis-Chadwick et al (2012); Park (2012);
Email content (text), email design	(Pradhan, 2010); (Gorelick, 2010); White et al (2007); Miceli et al (2007); Ellis-Chadwick et al (2012); Stearns (2012).
Visual Content (design, images)	(Pradhan, 2010); Stearns, 2013, Rossiter et al (2005); Ellis-Chadwick et al (2012)
Incentives	(Baum, 2012); Ellis-Chadwick et al (2012)

The literature review helps to develop theoretical framework used to capture research questions asked in the project.

2.7. Theoretical framework

Theoretical framework is based on the literature review and depicted in Figure 3. Email marketing strategy is defined as a set of integrated decisions to achieve firm objectives. It is discussed that personalization influence marketing effectiveness, however a little is known about different degrees of personalization and moderating factors (customer characteristics), which influence the relationship.

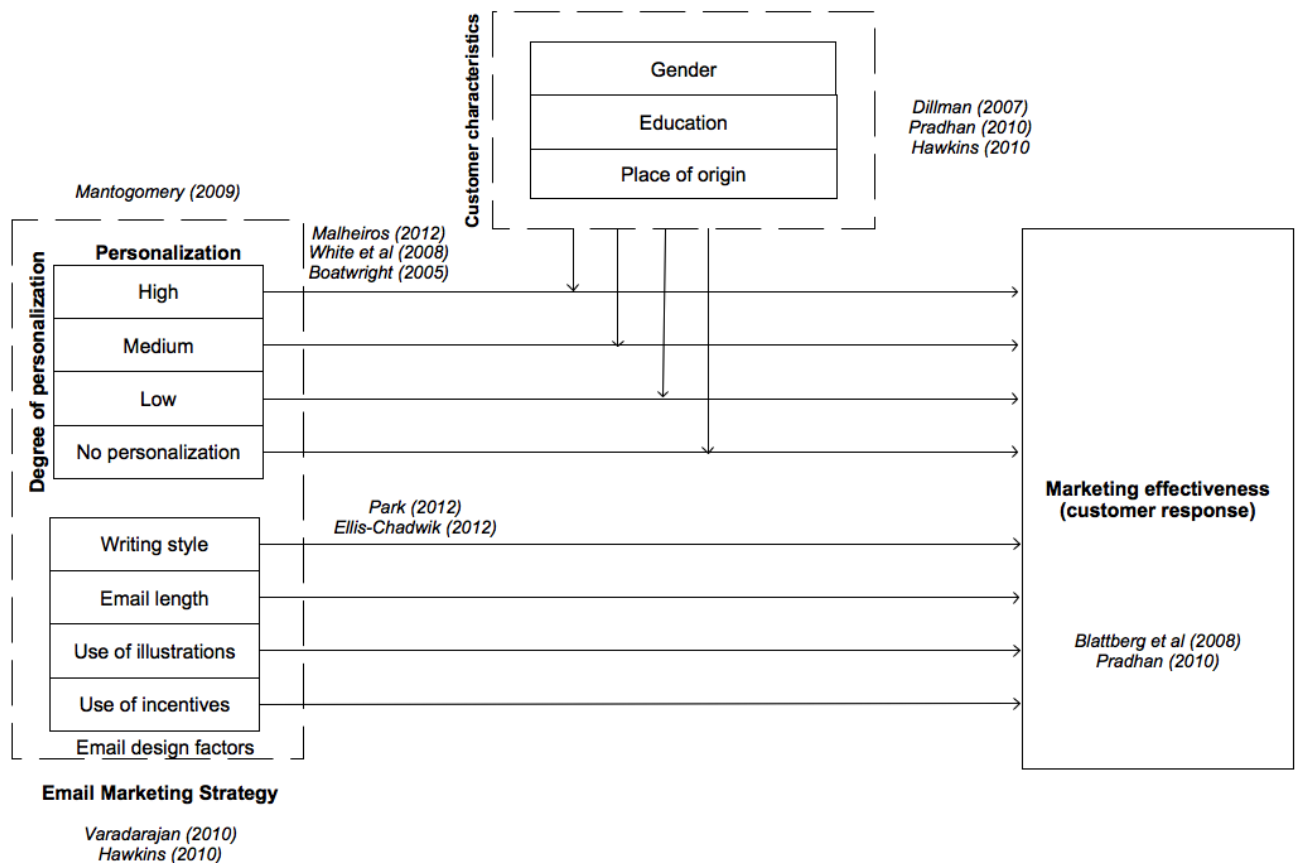


Fig 3. Theoretical framework

Malheiros (2012) discusses about privacy concerns that reduce marketing effectiveness at high degrees of personalization. It is interesting for researchers and practitioners to test if there is the point, which drops the response down.

2.8. Literature gap and academia interest

The literature review shows that there is little research on email personalization of individual characteristics of customers and how this affects their responses. The degree of personalization was discussed in the previous researches; however the authors did not link the degree of personalization to customer characteristics which might influence response between different degrees of personalization, as recipients are not homogeneous group and they may have varying email preferences. By knowing more about personalization degrees more knowledge will be acquired about the impact of emailing nowadays. Most of the studies explored emailing many years ago and do not consider this marketing tool as social media penetrates the market. However emailing still offers greater exposure than other channels. Therefore sufficient knowledge in this field is the key element to explore marketing effectiveness and customer response which comes from a proper personalized emailing strategy. There is no discussion which links marketing strategy with degree of personalization and moderating factors which come from customer characteristics. A strategy has to be set in order create awareness to these customers. Literature claims that personalized emailing gives customer attention, however high email personalization can cause privacy concerns. Moreover, many authors measured customer response (click through rate) as an intention, but not as an actual outcome. Another important issue is that there are not enough researches conducted in the non-laboratory environment, which reflect the real industry. It is interesting to test personalized emailing effect under the online informative webpage context where the targeted customers are prospective students? Wu et al (2002) suggested looking into the degree of personalization and other external variables. Heerwegh (2005) discuss that future research has to be do regarding personalization across different samples. As there are different factors affecting successful personalized emailing future research has to be done from consumers' or retailers' perspective in order to understand combinations of specific executional elements, which offer the greatest potential for effective attention attraction (Ellis-Chadwick, 2012) and the strategy has to be conformed which reflects what personalization to adapt.

3. Problem description and Research Questions

3.1. Business interest in research

As it was discussed earlier, the management of StudyPortals is constantly looking for solutions how to increase future revenues generated by referrals, leads, banner impressions and customer response. The research is interesting for business, because:

- It will help to increase marketing effectiveness.
- Increased marketing effectiveness will generate more knowledge how to adjust messages in terms of content and design in terms of customer characteristics.
- It will contribute to long-term success and competitive advantage.
- Emailing is one of the least costly marketing activities.
- The company does not effectively use their visitors' database.
- StudyPortals does not have a personalized emailing strategy, as the company has not tested the effect of different factors, which influence visitor response.

The company has a database of people, who subscribe newsletters. The database contains visitors' moderating personal characteristics depicted in Table 5.

Table 5. Visitors' information

Data Variable	Possible options
Customer desired education degree	<ul style="list-style-type: none">• Master's Level• Bachelor's Level• PhD Level
Customer gender	<ul style="list-style-type: none">• Male• Female
Customer continent of origin	<ul style="list-style-type: none">• Europe• Asia• Latin America• North America• Oceania

These moderating personal characteristics will be used to construct emails, which contain different degree of personalization.

3.2. Problem description and research relevance

A problem emerges from the discussion in the previous sections. The problem is considered as actual not only in a single company environment, but it is also important for academy. Therefore a problem is summarized and uncovered in the following section.

3.2.1. Problem description

StudyPortals is using a results-based partnership (RBP) business model, which is discussed in a previous chapter. This model has guaranteed constantly growing financial revenue delivered referrals, leads and banner clicks. However the company thinks that revenue can be increased by tackling personalized emailing campaigns which can be personalized based on various factors. There are various webpage visitors, who have individual characteristics: preferred degree, continent of origin and gender. StudyPortals believes that each customer is unique and has treated in a certain way in order to increase service awareness, customer loyalty and at the same time enhance profit. However, literature studies have shown, that too much of personalization might cause negative effects, such as privacy issues. StudyPortals are listing premium and not premium programmes. Premium programmes grant higher revenue compared to non-premium programmes. The management is looking for solutions: “How to link more existing customers to be interested in premium listed programmes, which have a higher quality and greater revenue?”. In a broad way: **how to effectively market online services in efficient and effective way**. The management knows that emailing is still the most effective and the least expensive marketing tool, which has 1350% higher response than social media (Wise, 2013). The company does not know how to link personalization activities to certain groups of people in order to have the highest customer response. Therefore we can define the problem question within the company

**What personalized emailing strategy suits the webpage visitors best.
What strategy increases marketing effectiveness, ensures long-term
income, successful customer attraction, and increased customer
response.**

StudyPortals does not know to what extent the employees should invest their time in tackling marketing activities. The management assumes that different scenarios have to be measured and personalized emailing strategy has to be developed, which is the most effective in terms of

customer response. This problematic helps to formulate the relevance of the research to other businesses and managers, what makes this project meaningful. These issues are revealed in the next section.

3.2.2. Research Relevance and Importance

As it was discussed earlier, the research contributes to the interests of practitioners and academia. Table 6 summarizes the factors, why this research is relevant and important

Table 6. Research relevance and importance to business

Relevance and Importance to Business
<ul style="list-style-type: none"> • Online advertising businesses are customer driven and dependent on information about them. • Therefore personalized emailing is a marketing tool to increase marketing efficiency. • However successful personalized emailing highly depends on different design factors, customer characteristics and preferences, industry, degree of personalization. • Specific personalized emailing strategy, which combines all the factors has to be investigated. • As a result – increased long-term success and competitive position via knowledge about the customers acquisition. • Good marketing strategy increases return of investment, but the wrong strategy could hurt the brand (Westlund et al, 2009). Many businesses do not have sufficient research, what emailing strategy fits their customers and industry the best. • Pradhan (2010) claim that current personalization techniques marketers are using are not very effective or appealing. • The research provides not only predictions, but also classification based on these predictions.

Table 7. Research relevance and importance to researchers

Relevance and Importance to Researchers
<ul style="list-style-type: none">• Lack of personalized emailing research under the non-laboratory environment.• Contradicting literature about the effect of personalization.• Not sufficient literature on personalized emailing strategies, which consider multiple factors affecting marketing effectiveness. Future research proposals from authors (Ellis-Chadwick, 2012).• No clear boundaries at what extent of personalization customer response drops down.• Existing researches on emailing are not up to date.

This research is a guideline to other electronic commerce businesses, who look for solutions who consider personalized emailing as a marketing tool or are interested in the effect of appropriate strategy as well as researchers, who are willing to fill the gap, discussed in the literature review. For this reason, the following research questions are defined in the next section.

3.3. Research questions

From the problem analysis in the previous section the following research questions were designed:

1. What is the impact of email personalization on marketing effectiveness within an online informative webpage?

- To what extent different levels of personalization affect customer response?
- How do moderating personal characteristics such as gender, continent of origin and level of education influence customer response under the different levels of personalization?

2. What emailing strategy considering the set of moderating personal characteristics is the most effective under the different levels of personalization within an online informative electronic commerce industry?

- Which of the moderating personal characteristics such as gender, continent of origin and level of education influences customer response probability, when these characteristics are considered as a set of variables?
- What is the customer response maximizing classification of the moderating personal characteristics such as gender, continent of origin and level of education under the different personalization degrees?

3. To what extent factors such as email length, writing style, use of incentives, and use of illustrations influence customer response to email marketing within an online informative webpages?

- Do informal emails have a higher response than formal emails under the context of online informative webpages?
- Do short emails have a higher response than long emails under the context of online informative webpages?
- Do illustrated emails have higher response than non illustrated emails under the context of online informative webpages?
- Do emails with incentives have a higher response than the emails without incentives under the context of online informative webpages?

The first question is important for the email personalization factors. A little is known about the levels of email personalization, which is based on customer characteristics and other factors, discussed in the literature review. The audience of the webpage is prospective students looking for the information. Insufficient research has been done on behavior for this type of users. Different emailing techniques have to be tested on this target group within an online informative webpage industry. Therefore the research has to be done to measure response of customers under the levels of personalization. The second question discusses a set of moderating personal characteristics that are active under the different levels of personalization. As the first question is more theoretical, the second question is based on a real application in a real business context, which can be a guideline for the companies to construct their successful email marketing campaigns. The third question looks into the email design factors, which are discussed specifically under the context of online informative webpages, where target customers are looking

for information and may respond differently than to other marketing campaigns. For this reason we provide the action plan to process the project, the research structure is discussed in the next section.

4. Empirical study

This chapter includes a review of the research method, discusses analysis selection and elaborates research design.

4.1 Methodology selection and conceptual framework

Methodology selection is based on customer response variable, which represents emailing effectiveness. The research focuses on a real online informative webpage environment, which has a customer base. It empowers the research to measure actual customer response within different conditions, where independent variables can be easily identified and measured. Samples sizes used in the research are sufficient to draw conclusions and quantifiable graphs and charts out of this research type. These techniques are used for customer behavior measurements, that is linked to this research as well. Quantitative research is used, when a large amount of numeric data is collected, where the data can be analyzed and generalized (Blazevic, 2013) Quantitative research uses a projectable data for future predictions - online informative webpages can use this research as an action plan to maximize customer response in a long-term perspective. Moreover, quantitative research is used to test hypothesis in experiments and to process it statistically, which reflect results more objectively than qualitative research and focuses on answering the question ‘what’ (van Riemsdijk, 2012). Therefore experiment with a quantitative approach is a desired way the research has to be conducted.

4.2. Methodology design

4.2.1. Conceptual framework

The research is divided in two parts: Step A and Step B. Step A initiates experiment regarding the Research Question 1 and Research Question 2, where emailing personalization degrees are considered. The third research question refers to Step B, which conducts an experiment with different email design factors and measures customer response. Figure 3 illustrated the conceptual framework of the Step A. Personalization factor plays dominant role in this step. Therefore 4 different emails are prepared regarding different levels of personalization. The degrees of personalization are constructed based on literature and the elaboration under the context of this research is depicted in the chapter “2.3 *Emails design*”. In a broad context, no

personalization refers to “one to all” and high personalization “one to one” or individual. Low and medium personalization are based on categories or groups of people. The emails based on personalization degrees are sent to customers who reside in 4 different samples. These customers have moderating personal characteristics such as gender, continent of origin and level of education (degree).

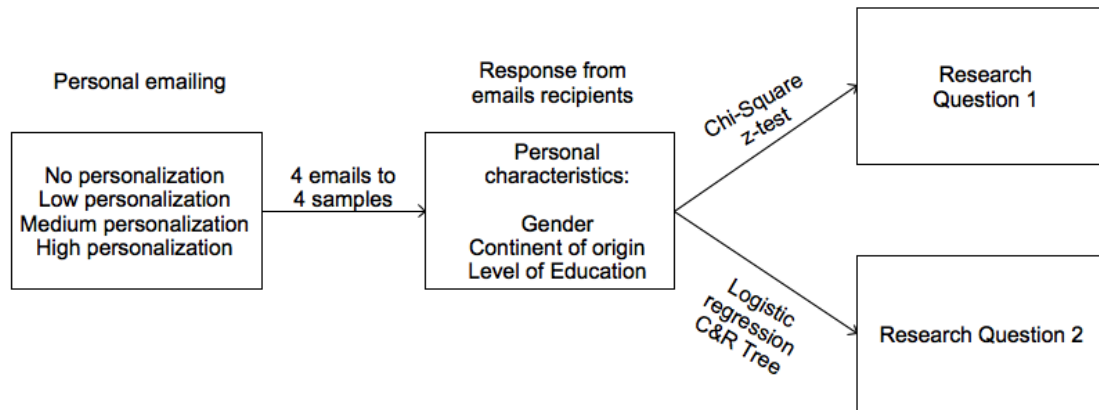


Fig 3. Conceptual framework of the Step A

Chi-square and z-test is used to answer Research Question 1. In order to answer Research Question 2, logistic regression and C&R Tree analysis are used, which extend the findings to the practical level. The conceptual framework of the Step B is illustrated in Figure 4.

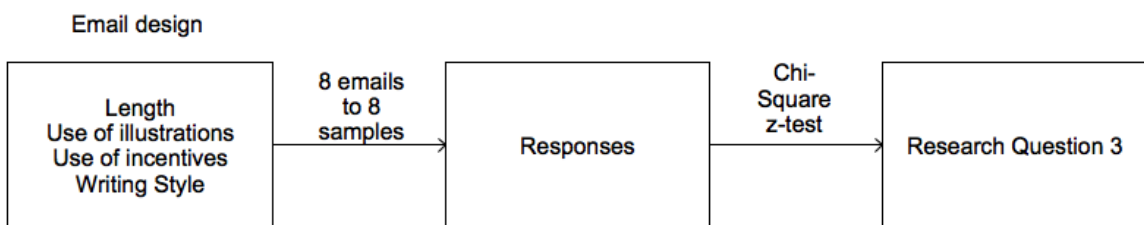


Fig 4. Conceptual framework of the Step B

As it can be seen, there are email design factors, such as length, use of illustration, use of incentive and writing style that can be used to construct an email. Each of these factors has 2 groups. Email length is split into *short* and *long* email, use of illustrations is separated into

illustrated and *not illustrated email*, use of incentives has *email with incentives* and *email without incentives* groups, and writing style can be split into *formal* and *informal* emails. Therefore 8 emails are sent to 8 samples. Responses are measured and the results are compared for each factor in order to answer Research Question 3.

4.2.2. Step A: Research design, samples and variables

The research design of the Step A is illustrated in Figure 5. As it can be seen, 4 different samples: Sample I, Sample J, Sample K and Sample L are randomly selected and has 1000 people per sample. Each sample gets email, which has the main objective to make a recipient to submit the form (respond). Different emails are design for each sample.

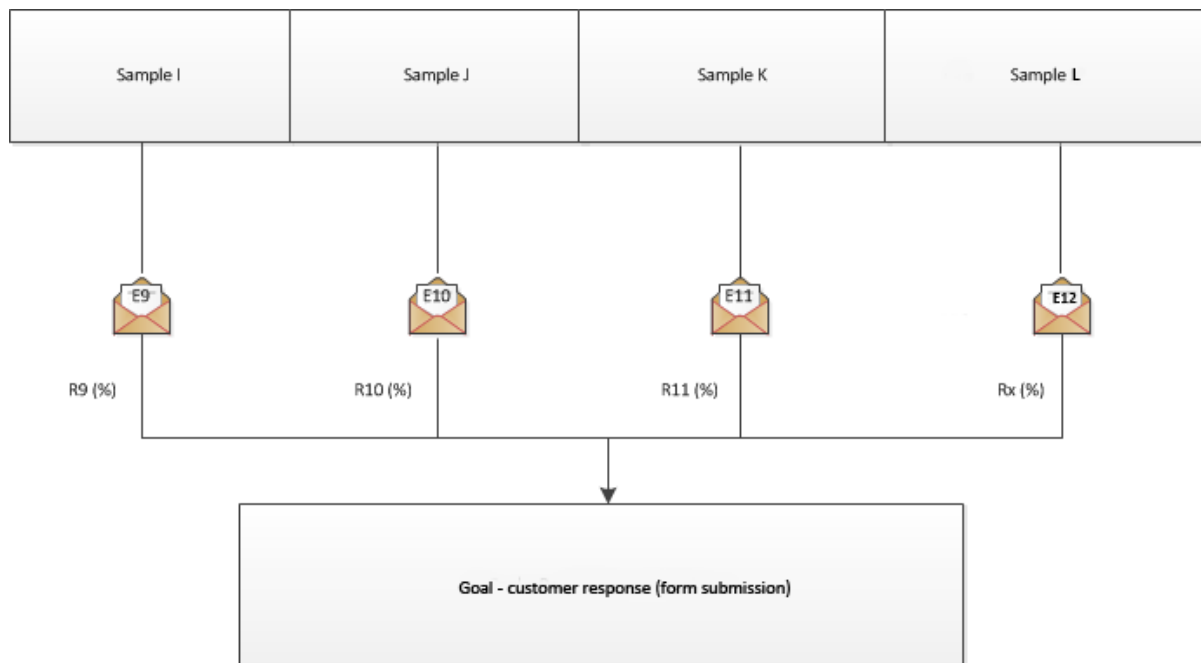


Fig. 5. Research design (Step B)

Email E9 was sent to Sample I (see Table. This email was not personalized and can be seen in Appendix A. Sample J received an email, which was designed based on Low personalization (Appendix B). Medium personalized emails (E11) (Appendix C) were linked to the Sample K, while Sample L received emails based on the high degree of personalization (Appendix D) (see chapter 2.3. Email design for more details on personalization degree”. The samples are defined in

Appendix J. Next chapter explains the differences between these emails. Response R9-R12 measures the number of people who clicked on the link in the email and submitted the form.

The dependent variable Y is Customer response, which is binary: 0 (the form was not submitted) or 1 (the form was submitted).

Step A considers the following independent variables reflecting email recipients:

- **X_G = Customer Gender**
- X_{G0}=Male (reference)
- X_{G1}=Female
- **X_C = Customer Continent of Origin**
- X_{C0}=Europe (reference)
- X_{C1}=Africa
- X_{C2}=North America
- X_{C3}=Latin America
- X_{C4}=Asia
- X_{C5}=Oceania
- **X_E =Customer education degree**
- X_{E0}=Bachelor
- X_{E1}=Master
- X_{E2}=PhD

The final expression of the logistic regression model:

$$P = \frac{e^{b+b1*xG1+b2*xc1+b3*xc2+b4*xc3+b5*xc4+b6*xE1}}{1+e^{b+b1*xG1+b2*xc1+b3*xc2+b4*xc3+b5*xc4+b6*xE1}}$$

The samples contain 1387 people, where gender was known and 1325 where continent of origin was known and 3996 people where degree was known (see Appendix E). Appendix F, G and H illustrate distribution of different desired degrees, gender and continent of origin in the samples. As it was discussed before, 4 different samples reflect levels of personalization (1000 people each). Email reminders were sent to these people who have not submitted the forms in 5 days after the first email was sent.

2.2.3. Step B: Research design, samples and variables

Figure 6 illustrates the research design, which reflects the way research of the Step B was initiated. Rationale behind is to answer the research question 3.

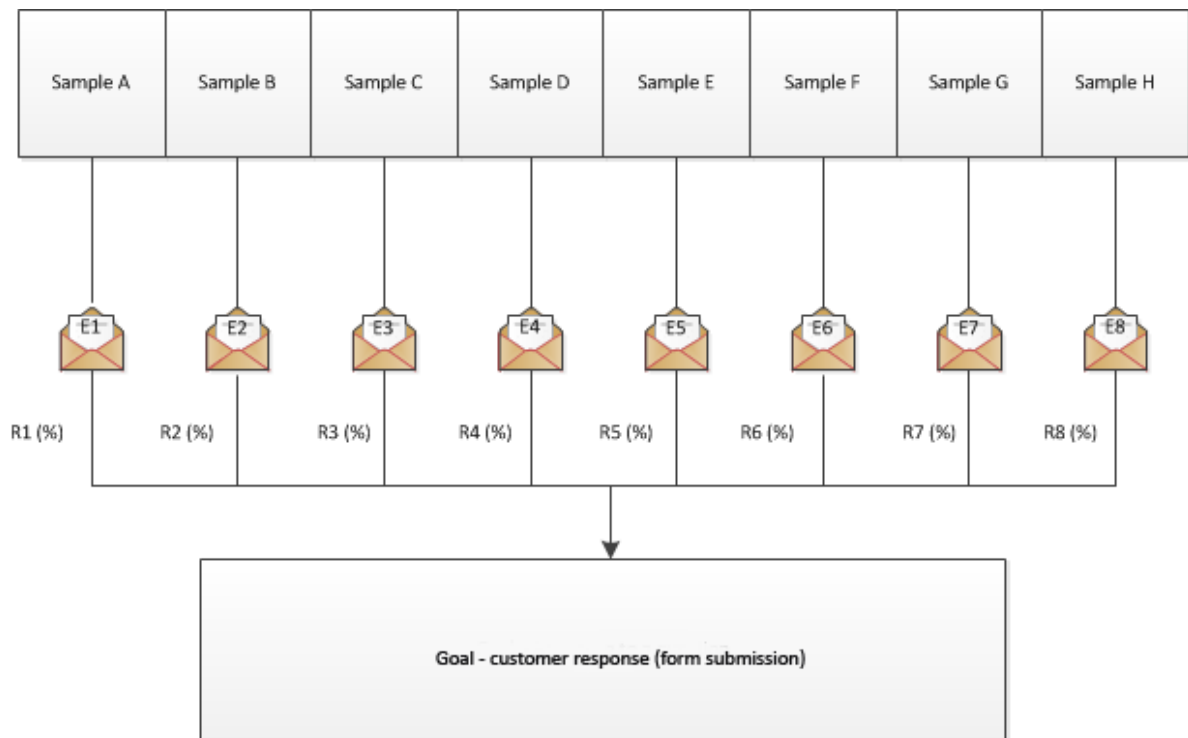


Fig 6. Research procedure (Step B)

As it can be seen in Figure 6, Step B contains 8 different samples. Each of the samples contain 300 people, who are prospective students interested in higher education possibilities (see Appendix I).

These samples discussed before received the emails with a request to click on the relevant answer about their study choice and to submit a short form. The recipients who have not submitted the form received email reminder in 5 days.

As it can be seen in Appendix I, the samples are selected randomly. Each of the sample received emails, which are designed on specific criteria. Figure 6 illustrated the research design in of a Step B. As it can be seen in the figure, Sample A received email E1, that was based on formal writing style (see Appendix K). Email E2, which was designed according to informal language style was linked to the Sample B (see Appendix L). Sample C and Sample D were based on email length: long email (E3) and short email (E4) respectively (see Appendix M and Appendix N). Emails E5 and E6 were based on illustrations, where Sample E received illustrated email and not illustrated email was linked to the Sample F (see Appendix O and Appendix P respectively). Finally, email E7 and E8 were linked to the samples G and H. The emails were based on the incentives factor (Appendix R). Email E7 contained an incentive – a possibility to download a “Study in Europe guide”, while the email E8 did not contain any incentives (Appendix S). Responses R1-R8 indicate the number of people who submitted the form. The Step B aims answer the Research Question 3 and all the sub questions:

- Do informal emails have a higher response than formal emails under the context of online informative webpages?
- Do short emails have a higher response than long emails under the context of online informative webpages?
- Do illustrated emails have higher response than non-illustrated emails under the context of online informative webpages?
- Do emails with incentives have a higher response than the emails without incentives under the context of online informative webpages?

All the questions are linked to online informative webpage environment. In order to test the hypothesis variables have to be identified. Variable R is dependent variable, which is binary: 1 (when an email recipient submits the form sent in the email) or 0 (when visitor ignores the email and does not submit the form). The following factors are considered as predictor variables in a Step B:

- Email length (Long / Short),
- Writing style (Formal / Informal),

- Use of incentives (yes / no),
- Use of illustrations (yes / no).

Cross group comparison based on chi-square and z-test are used to answer the Research Question discussed above. Before the analysis part, the experiment was conducted which is defined in the next section.

4.3 Emails design

4 emails were constructed for the Step A and 8 emails were designed for Step B. Different layouts of emails are depicted in Appendix and the Table 8 (see below).

Table 8. Degrees of personalization

Degree of personalization used in the research	Elements included	Degree of personalization in the literature
No personalization	General greeting, general company logo.	One-to-all (Postma and Brokke, 2002); Generic (Dijkstra, 2008); All customers personalization Schubert et al (2003).
Low personalization	Greeting with a name, general company logo	Categorized (Sunikka et al 2012); One-to-all (Postma and Brokke, 2002) / Generic (Dijkstra, 2008), All customer / customer group personalization Schubert et al (2003).
Medium personalization	Greeting with a name, general company logo, education degree in the text and subject line.	Categorized (Sunikka et al 2012); One-to-one (Postma and Brokke, 2002); Customer group personalization Schubert et al (2003).
High personalization	Greeting with a name, specified company logo, education degree in the text and subject line, name in the subject line, country of origin in the text.	Categorized-Individualized (Sunikka et al 2012); One-to-one (Postma and Brokke, 2002), Customer group-individual personalization Schubert et al (2003).

In general the emails contain a greeting, and the request to answer a question in order to help to improve the questions. There are 5 questions related to study choice status. Once a recipient clicks on a question, the person gets redirected to a short questionnaire, which has to be submitted. After that a free Study in Europe guide is offered to download (see Appendix T). Email recipients have an option to submit an extra form which is not mandatory, after completing the first one. Not personalized email does not contain any personal information and can be sent to all the people looking for a study programme to choose (see Appendix A). It contains a general logo of a service platform StudyPortals, which can be applied to all the portals, discussed in a company overview. Low personalization based email has the same elements as not personalized email has, except a greeting reflects the name (see Appendix B). Email that contains medium personalization reflects the degree recipients are interested in (see Appendix C). The degree is reflected in the email text and a subject line of the email. Email text also claims the number of people who found their education of a particular degree by using the webpage. Finally highly personalized email includes an additional mention of a recipient's name in a subject line (see Appendix D). The text also reflects the country of recipient and the webpage logo is personalized based on degree the recipient is interested in. Email of Step B contain design factors: Long email (Appendix M); Short email (Appendix N); Email with incentives (Appendix R); Email without incentives (Appendix S); Illustrated email (Appendix O); Not Illustrated email (Appendix P); Formal email (Appendix K); Informal email (Appendix L). The responses of those emails were measured and analyzed. The next section introduces to the analysis used in the research.

4.4. Analysis selection

The research uses the following analysis:

- Column proportions comparison (based on Chi-Square and z-test)
- Logistic regression
- C&R Tree

Column proportions comparison tests are used to compare the values of customer response across different personalization degrees. Chi-square test analyses if relationship between two variables is significant. This test is used for the Research Question 1 and 2. For the Research Question 3 logistic regression is used. Logistic regression function always take values between 0 and 1. The analysis determines the impact of multiple independent variables presented simultaneously to predict behavior of dependent variable. The regression is suitable for the current research, as

dependent variable is not linear and can be expressed in a log function as a probability that the value of the dependent variable will become “1”. Logistic regression has coefficient B, which expressed a partial IV contribution to variations in DV. The equation of logistic regression:

$$\text{logit}(p)=\log[p/(1-p)]=\ln[p/(1-p)]$$

Probability function can be derived:

$$P=(\exp^{b+b1*xG+b2*xc+b3*xE..}) / (1 + \exp^{b+b1*xG+b2*xc+b3*xE.})$$

$$P= \frac{e^{b+b1*xG+b2*xc+b3*xE}}{1+e^{b+b1*xG+b2*xc+b3*xE}}$$

As logistic regression calculates the probability of 1 over the probability of 0, the results of the analysis are in the form of an odds ratio. The research will focus on a dependent variable (Y) customer response, which can be form submitted = 1, for not submitted (no response) = 0. X variables or predictors are the following customer characteristics:

Table 9. Variable codings

<u>Coding</u>	<u>Variable</u>
X_G	Customer Gender
X _{G0}	Male (reference)
X _{G1}	Female
X_C	Customer Continent of Origin
X _{C0}	Europe (reference)
X _{C1}	Africa
X _{C2}	North America
X _{C3}	Latin America
X _{C4}	Asia
X _{C5}	Oceania
X_E	Customer education degree
X _{E0}	Bachelor
X _{E1}	Master
X _{E2}	PhD

Finally C&R tree is used, which is known as a classification and regression tree. The algorithm looks for impurities within a model and splits the parent node into two nodes, which provide the best prediction of response. It is useful in practice because it also classifies the variables and the tree can be used as an action plan in company activities. Classification and Regression trees are analytical tools that can be used to explore relationships. They can be used to analyze either categorical (resulting in classification trees) or continuous outcomes (resulting in regression trees) (Speybroeck, 2012). It has an added value as different paths of decisions are easily visualized. Outcomes of C&R tree analysis can be easily applied in business perspective to develop strategies and action plans.

5. Results

The chapter provides the results derived by using SPSS and SPSS Modeler software. Step A and Step B are split into different sections based on the conceptual framework.

5.1. Results Step A

5.1.1. Degrees of personalization

This chapter depicts the results derived from the Step A of the research, where personalization took a dominant role. Customer response is illustrated in Figure 7.

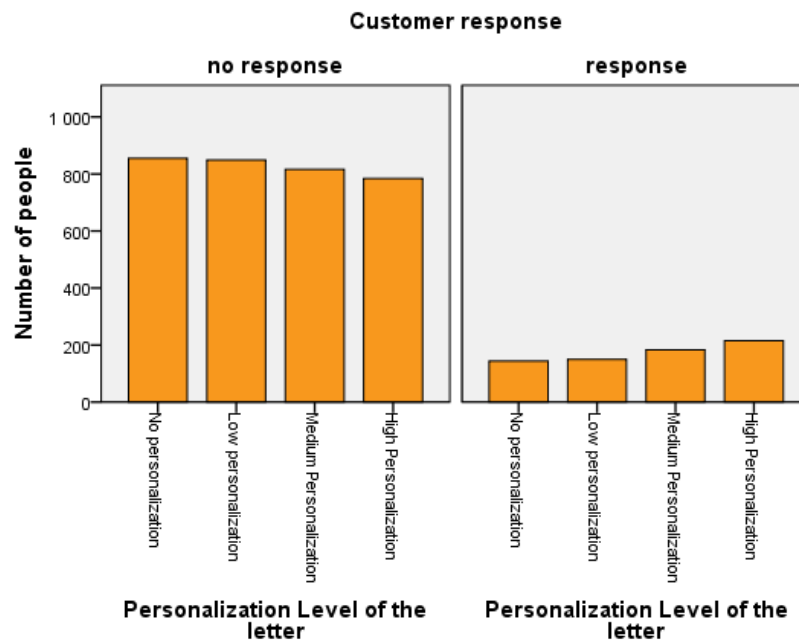


Fig. 7 Customer response and degrees of personalization – results

3996 people participated in the research. Among them, 82.7% of the people have not submitted the form. That is 3304 email recipients. 657 people were willing to submit the first form, however the second form was not submitted sufficiently, therefore we consider only total form submissions in analysis. It results in 17.5% of the total sample. Not personalized emails result in 855 people who have not responded on email, 132 people who submitted one form and 12 people who submitted two forms (144 responses overall). Email that have low personalization degree result in

849 no responses, 143 one form submission and 7 two forms submissions (150 responses overall). Medium personalized emails had 816 people who have not responded, while 173 recipient submitted one form and 10 people submitted two forms (183 responses overall). Emails containing high personalization degree received 784 no responses, 209 one form submissions and 6 two form submissions (215 responses overall). Pearson Chi-Square Tests are illustrated in Table 10.

Table 10. Pearson Chi-Square Test for customer response and personalization degree

Pearson Chi-Square Test (Customer response and Personalization degree)		
Chi-square	df	Sig.
28.255	6	.000*

The test is based on two variables: Customer response and Personalization degree. Results indicate significant results: $0 < .05$

As Pearson Chi-Square Test is significant, z-test was considered, which compares column proportions (see Table 11).

Table 11. Cross-group comparisons (Customer response)

	No personalization	Low personalization	Medium personalization	High personalization
No response	855 _a	849 _a	816 _{a,b}	784 _b
Forms submitted	144 _a	159 _a	183 _{a,b}	215 _b

The results show that regarding no personalized and low personalized emails have significantly higher no response results than highly personalized emails (no response = 855, 849 and 784 respectively). Highly personalized emails result in significantly higher number in people who submitted the forms, compared to not personalized and low personalized emails.

3.1.2. Moderating personal characteristics and degrees of personalization

The rationale to use this test is linked to the last sub-question of the first research question. Considering male response Pearson Chi-Square Tests are illustrated in Table 12. The test is based on two variables: Customer response per emailing round and Personalization degree when the gender is male.

Table 12. Pearson Chi-Square Test: customer response (gender=male)

Pearson Chi-Square Test (Customer response and Personalization degree): gender = male		
Chi-square	df	Sig.
16.664	3	.001*

Results indicate significant results: $.001 < .05$. As Pearson Chi-Square Test is significant, z-test was considered, which compares column proportions (see Table 13).

Table 13. Cross-group comparisons based on counts when gender = male

Customer response (gender = male)	No personalization	Low personalization	Medium personalization	High personalization
No response	123 _a	116 _{a,b}	96 _{b,c}	100 _c
Response	89 _a	96 _{a,b}	119 _{b,c}	141 _c

Table 14. Click through rate when gender = male

Customer response (gender = male)	No personalization	Low personalization	Medium personalization	High personalization
Click through rate	0.420	0.452	0.553	0.585

The results show that regarding male response, no personalized and low personalized emails have significantly different results than highly personalized emails. Medium personalized email have significantly lower no response results compared to not personalized emails.

Considering female response Pearson Chi-Square Tests are illustrated in Table 15. The test is based on two variables: Customer response per emailing round and Personalization degree when the gender is female.

Table 15. Pearson Chi-Square Test: customer response (gender=female)

Pearson Chi-Square Test (Customer response and Personalization degree): gender = female		
Chi-square	df	Sig.
11.294	3	.010*

Results indicate significant results: $.01 < .05$. As Pearson Chi-Square Test is significant, z-test was considered, which compares column proportions (see Table 16).

Table 16. Cross-group comparisons based on counts when gender = female

Customer response (gender = female)	No personalization	Low personalization	Medium personalization	High personalization
No response	49 _{a,b}	74 _a	87 _a	50 _b
Response	55 _{a,b}	54 _a	64 _a	74 _b

Table 17. Click through rate when gender = female

Customer response (gender = female)	No personalization	Low personalization	Medium personalization	High personalization
Click through rate	0.529	0.422	0.423	0.600

The results depict that regarding female response, low personalized and medium personalized emails have significantly different results than highly personalized emails.

Regarding bachelor response Pearson Chi-Square Tests are illustrated in Table 18. The test is based on two variables: Customer response per emailing round and Personalization degree when the desired degree is bachelor.

Table 18. Pearson Chi-Square Test: customer response (degree=bachelor)

Pearson Chi-Square Test (Customer response and Personalization degree): degree=bachelor		
Chi-square	Df	Sig.
5.475	3	.140

Results indicate not significant results: $.140 > .05$. As Pearson Chi-Square Test is not significant, z-test, which compares column proportions was not considered.

To analyze master response, Pearson Chi-Square Tests are illustrated in Table 19. The test is based on two variables: Customer response per emailing round and Personalization degree when the desired degree is master.

Table 19. Pearson Chi-Square Test: customer response (degree=master)

Pearson Chi-Square Test (Customer response and Personalization degree): degree = master		
Chi-square	df	Sig.
10.794	3	.013*

Results indicate significant results: $.013 < .05$. As Pearson Chi-Square Test is significant, z-test was considered, which compares column proportions (see Table 20).

Table 20. Cross-group comparisons based on counts when degree = master

Customer response (desired degree=master)	No personalization	Low personalization	Medium personalization	High personalization
No response	431 _{a,b}	443 _a	430 _{a,b}	416 _b
Response	75 _{a,b}	63 _a	76 _{a,b}	102 _b

Table 21. Click through rate when degree = master

Customer response (desired degree= master)	No personalization	Low personalization	Medium personalization	High personalization
Click through rate	0.148	0.125	0.150	0.197

The results depict that regarding master response, low personalized emails have significantly different results from highly personalized emails.

Considering PhD response, Pearson Chi-Square Tests are illustrated in Table 22. The test is based on two variables: Customer response per emailing round and Personalization degree when the desired degree is PhD.

Table 22. Pearson Chi-Square Test: customer response (degree=PhD)

Pearson Chi-Square Test (Customer response and Personalization degree): degree=PhD		
Chi-square	df	Sig.
13.308	3	.004*

Results indicate significant results: $.004 < .05$. As Pearson Chi-Square Test is significant, z-test was considered, which compares column proportions (see Table 23).

Table 23. Cross-group comparisons based on counts when degree = PhD

Customer response (desired degree= PhD)	No personalization	Low personalization	Medium personalization	High personalization
No response	294 _a	286 _{a,b}	265 _b	246 _{b,c}
Response	51 _a	59 _{a,b}	80 _b	78 _{b,c}

Table 24. Click through rate when degree = PhD

Customer response (desired degree= PhD)	No personalization	Low personalization	Medium personalization	High personalization
Click through rate	0.148	0.171	0.232	0.241

The results depict that regarding master response, low personalized emails have significantly different results from highly personalized emails.

Considering European people response, Pearson Chi-Square Tests are illustrated in Table 25. The test is based on two variables: Customer response per emailing round and Personalization degree when the continent of origin is Europe.

Table 25. Pearson Chi-Square Test: customer response (continent=Europe)

Pearson Chi-Square Test (Customer response and Personalization degree): continent = Europe		
Chi-square	df	Sig.
6.513	3	.089

Results indicate not significant results: $.089 > .05$. As Pearson Chi-Square Test is not significant, z-test, which compares column proportions was not considered.

Considering African people response, Pearson Chi-Square Tests are illustrated in Table 26. The test is based on two variables: Customer response per emailing round and Personalization degree when the continent of origin is Africa.

Table 26. Pearson Chi-Square Test: customer response (continent=Africa)

Pearson Chi-Square Test (Customer response and Personalization degree): continent=Africa		
Chi-square	df	Sig.
10.197	3	.017*

Results indicate significant results: $.017 < .05$. As Pearson Chi-Square Test is significant, z-test was considered, which compares column proportions (see Table 27).

Table 27. Cross-group comparisons based on counts when continent = Africa

Customer response (continent = Africa)	No personalization	Low personalization	Medium personalization	High personalization
No response	63 _a	44 _{a,b}	52 _b	36 _{a,b}
Response	27 _a	39 _{a,b}	50 _b	17 _{a,b}

Table 28. Click through rate when continent = Africa

Customer response (continent = Africa)	No personalization	Low personalization	Medium personalization	High personalization
Click through rate	0.3	0.470	0.490	0.32

The results depict that regarding master response, not personalized emails have significantly different results from highly personalized emails.

Considering Asian people response, Pearson Chi-Square Tests are illustrated in Table 29. The test is based on two variables: Customer response per emailing round and Personalization degree when the continent of origin is Asia.

Table 29. Pearson Chi-Square Test: customer response (continent=Asia)

Pearson Chi-Square Test (Customer response and Personalization degree): continent=Asia		
Chi-square	df	Sig.
8.343	3	.039*

Results indicate significant results: $.039 < .05$. As Pearson Chi-Square Test is significant, z-test was considered, which compares column proportions (see Table 30).

Table 30. Cross-group comparisons based on counts when continent = Asia

Customer response (continent = Asia)	No personalization	Low personalization	Medium personalization	High personalization
No response	97 _a	76 _a	67 _a	62 _a
Response	76 _a	76 _a	92 _a	47 _a

Table 31. Click through rate when continent = Asia

Customer response (continent = Asia)	No personalization	Low personalization	Medium personalization	High personalization
Click through rate	0.439	0.500	0.579	0.431

However z-test did not find any difference between proportions, when different personalization degrees are used.

Considering people from Oceania response, Pearson Chi-Square Tests was performed. However the results were insufficient to run a test. Pearson Chi-Square tests for Latin America and North America (see Table 32 and Table 33) depict insignificant results $.387 < .05$ and $.417 < .05$ respectively. However these continents are not considered as there are not many people in the sample.

Table 32. Pearson Chi-Square Test: customer response (Continent = North America)

Pearson Chi-Square Test (Customer response and Personalization degree): continent N.America		
Chi-square	df	Sig.
2.839	3	.417

Table 33. Pearson Chi-Square Test: customer response (Continent=Latin America)

Pearson Chi-Square Test (Customer response and Personalization degree):continent=L.America		
Chi-square	df	Sig.
3.032	3	.387

3.1.3. Logistic regression

A logistic regression analysis was conducted to predict customer response under the different levels of personalization, where predictors are gender, continent of origin and preferred degree of the website visitors. A test of a full model against a constant only model was statistically significant, indicating the predictors as a set were reliably separated between binary values of the dependent variables (customer response). Chi-square:

- 1) No personalization Chi-square: 30,224 ; $p < .000$; $df = 7$
- 2) Low personalization Chi-square: 48,033 ; $p < .000$; $df = 8$
- 3) Medium personalization Chi-square: 74,233 ; $p < .000$; $df = 7$
- 4) High personalization Chi-square: 28,650 ; $p < .000$; $df = 7$

Other results are depicted in Appendix U. Moreover, classification table depicts that Block 1 has a higher overall accuracy compared to Block 0. Therefore, the table shows that the model is good (see Table 34)

Table 34. Model improvement

Personalization degree	Overall percentage Block 0	Overall percentage Block 1
No personalization	54,1	62,1
Low personalization	55,9	67,4
Medium personalization	50,0	68,9
High personalization	63,6	69,7

The table below expresses variable coding in SPSS:

Table 35. Variables coding in SPSS.

Categorical Variables Codings								
Personalization Level of the letter			Frequency	Parameter coding				
				(1)	(2)	(3)	(4)	(5)
No personalization	Customer continent of origin	Europe	78	,000	,000	,000	,000	
		Africa	78	1,000	,000	,000	,000	
		North America	5	,000	1,000	,000	,000	
		Latin America	9	,000	,000	1,000	,000	
		Asia	144	,000	,000	,000	1,000	
	Customer desired degree	Bachelor	32	,000	,000			
		Master	197	1,000	,000			
		PhD	85	,000	1,000			
	Customer gender	male	210	,000				
		female	104	1,000				
Low personalization	Customer continent of origin	Europe	75	,000	,000	,000	,000	,000
		Africa	82	1,000	,000	,000	,000	,000
		North America	14	,000	1,000	,000	,000	,000
		Latin America	15	,000	,000	1,000	,000	,000
		Asia	152	,000	,000	,000	,000	1,000
	Customer desired degree	Bachelor	45	,000	,000			
		Master	203	1,000	,000			
		PhD	92	,000	1,000			
	Customer gender	male	212	,000				
		female	128	1,000				
Medium Personalization	Customer continent of origin	Europe	85	,000	,000	,000	,000	
		Africa	102	1,000	,000	,000	,000	
		North America	11	,000	1,000	,000	,000	
		Latin America	9	,000	,000	1,000	,000	
		Asia	159	,000	,000	,000	1,000	
	Customer desired degree	Bachelor	44	,000	,000			
		Master	219	1,000	,000			
		PhD	103	,000	1,000			
	Customer gender	male	215	,000				
		female	151	1,000				
High Personalization	Customer continent of origin	Europe	56	,000	,000	,000	,000	
		Africa	49	1,000	,000	,000	,000	
		North America	17	,000	1,000	,000	,000	
		Latin America	8	,000	,000	1,000	,000	
		Asia	101	,000	,000	,000	1,000	
	Customer desired degree	Bachelor	25	,000	,000			
		Master	181	1,000	,000			
		PhD	25	,000	1,000			
	Customer gender	male	149	,000				
		female	82	1,000				

After creating dummy variables, the probability function is expressed in the following way:

$$P = \frac{e^{b+b1*xG1+b2*xc1+b3*xc2+b4*xc3+b5*xc4+b6*xE1}}{1+e^{b+b1*xG1+b2*xc1+b3*xc2+b4*xc3+b5*xc4+b6*xE1}}$$

Table 36. Logistic regression results.

			Variables in the Equation					
Personalization Level of the letter			B	S.E.	Wald	df	Sig.	Exp(B)
No personalization	Step 1 ^a	degree			11,018	2	,004	
		degree(1)	-,896	,404	4,928	1	,026	,408
		degree(2)	-,114	,440	,067	1	,796	,892
		gender(1)	,314	,262	1,442	1	,230	1,369
		continent			8,614	4	,072	
		continent(1)	-,337	,352	,918	1	,338	,714
		continent(2)	-20,805	17743,164	,000	1	,999	,000
		continent(3)	1,489	,848	3,085	1	,079	4,433
		continent(4)	,373	,297	1,577	1	,209	1,451
		Constant	,214	,444	,232	1	,630	1,239
		Low personalization	Step 1 ^a	degree			32,457	2
degree(1)	-1,396			,356	15,391	1	,000	,248
degree(2)	-,004			,392	,000	1	,991	,996
gender(1)	-,066			,247	,072	1	,789	,936
continent					7,203	5	,206	
continent(1)	,608			,351	3,013	1	,083	1,838
continent(2)	-1,005			,825	1,485	1	,223	,366
continent(3)	-,368			,663	,307	1	,579	,692
continent(4)	-21,544			28420,539	,000	1	,999	,000
Constant	,344			,400	,739	1	,390	1,410
continent(5)	,381			,306	1,552	1	,213	1,464
Medium Personalization	Step 1 ^a	degree			45,096	2	,000	
		degree(1)	-1,135	,353	10,356	1	,001	,322
		degree(2)	,710	,402	3,122	1	,077	2,035
		gender(1)	-,381	,248	2,365	1	,124	,683
		continent			2,810	4	,590	
		continent(1)	,377	,335	1,272	1	,259	1,458
		continent(2)	-20,284	11978,301	,000	1	,999	,000
		continent(3)	-,263	,756	,121	1	,728	,769
		continent(4)	,444	,306	2,098	1	,147	1,558
		Constant	,410	,411	,997	1	,318	1,507
High Personalization	Step 1 ^a	degree			12,365	2	,002	
		degree(1)	-,499	,459	1,183	1	,277	,607
		degree(2)	1,181	,617	3,663	1	,056	3,257
		gender(1)	,887	,340	6,812	1	,009	2,427
		continent			12,741	4	,013	
		continent(1)	,814	,465	3,068	1	,080	2,256
		continent(2)	-,574	,733	,615	1	,433	,563
		continent(3)	,441	,819	,289	1	,591	1,554
		continent(4)	1,217	,400	9,230	1	,002	3,376
		Constant	-1,349	,522	6,682	1	,010	,259

a. Variable(s) entered on step 1: degree, gender, continent

From Table 36 we derive the following equations, which express the effects of variables on probability to have a positive customer response.

Logistic regression function for no personalization:

$$P = \frac{e^{0,214 + 3,14 * xG1 - 0,337 * xc - 20,805 * xc2 + 1,489 * xc3 + 0,37 * xc4 - 0,896 * xE1 - 0,114 * xE2}}{1 + e^{0,214 + 3,14 * xG1 - 0,337 * xc - 20,805 * xc2 + 1,489 * xc3 + 0,37 * xc4 - 0,896 * xE1 - 0,114 * xE2}}$$

Logistic regression function for low personalization:

$$P = \frac{e^{0,344 - 0,066 * xG1 + 0,608 * xc1 - 1,005 * xc2 = 0,368 * xc3 = 21,544 * xc4 - 1,396 * xE1 - 0,004 * xE2}}{1 + e^{0,344 - 0,066 * xG1 + 0,608 * xc1 - 1,005 * xc2 = 0,368 * xc3 = 21,544 * xc4 - 1,396 * xE1 - 0,004 * xE2}}$$

Logistic regression function for medium personalization:

$$P = \frac{e^{0,410 - 0,381 * xG1 + 0,377 * xc1 - 20,284 * xc2 - 0,263 * xc3 + 0,444 * xc4 - 1,135 * xE1 + 0,710 * xE2}}{1 + e^{0,410 - 0,381 * xG1 + 0,377 * xc1 - 20,284 * xc2 - 0,263 * xc3 + 0,444 * xc4 - 1,135 * xE1 + 0,710 * xE2}}$$

Logistic regression function for high personalization:

$$P = \frac{e^{-1,349 + 0,887 * xG1 + 0,814 * xc1 - 0,574 * xc2 + 0,441 * xc3 + 1,217 * xc4 - 0,499 * xE1 + 1,1818 * xE2}}{1 + e^{-1,349 + 0,887 * xG1 + 0,814 * xc1 - 0,574 * xc2 + 0,441 * xc3 + 1,217 * xc4 - 0,499 * xE1 + 1,1818 * xE2}}$$

As we can see, no personalization model explains that only master degree visitors have significant contribution compared to Bachelor students. We can interpret that there is a negative effect between Master students and the dependent variable (customer response) under the context of no personalization. Furthermore, there is a negative effect between Master students and the dependent variable (customer response) under the context of low personalization. Moreover, negative effect resides in medium personalization between Master students and the dependent variable (customer response). Regarding high personalization degree, there is a positive effect

between Female visitors and dependent variable (customer response) compared to male people. Besides this, there is a positive effect between Asian visitors and dependent variable (customer response) compared to Europe an people.

3.1.4. Classification and regression tree

Classification and regression tree is used to extend the findings and to provide practical results, which can be used in business and finally answers the research question 2.

C&R Tree (Classification and Regression tree) depicts higher predictive accuracy compared to logistics regression (see Table 37 and Appendix V,W,X,Y).

Table 37. Predictive Accuracy C&R tree

Personalization degree	Predictive accuracy C&R tree
No personalization	87,29
Low personalization	85,49
Medium personalization	84,38
High personalization	82,98

The analysis splits the nodes based on impurities and predicts the response characteristics within each degree of personalization. The results are depicted in Table 38 and Table 39

Table 38. C&R Tree results. No personalization.

Personalization level	Factors	Response probability	Appendix
No personalization	Continent = North America and Africa + Degree = PhD	52,9%	V
No personalization	Continent = Latin America and Asia + Gender = female	66%	V

Table 39. C&R Tree results: low, medium and high personalization

Personalization level	Factors	Response probability	Appendix
Low personalization	Continent = Europe, North America, Latin America and Oceania + Degree =Bachelor	56,2%	W
Low personalization	Continent = Europe, North America, Latin America and Oceania + Degree =PhD	60,9%	W
Low personalization	Continent = Africa + Gender = male + Degree = PhD	80,0%	W
Low personalization	Continent = Africa and Asia + Gender =Female + Degree = Bachelor	60,0	W
Medium personalization	Continent = Europe, Africa and Latin America + Gender = Female + Degree = Bachlor	61,5%	X
Medium personalization	Continent = Europe, Africa, North America and Latin America + Gender = female + Degree = PhD	72,5%	X
Medium personalization	Continent = Asia + Degree =Bachelor	62,5%	X
High personalization	Continent = Africa + Degree = Bachelor and Master	62,9%	Y
High personalization	Continent = Europe, Africa, North America and Latin America + Degree = PhD	54,5%	Y
High personalization	Degree = PhD + Gender = Female + Continent =Asia	94,7%	Y

5.2. Results Step B

The chapter discusses the results relevant to Step B of the research. All the numbers are illustrated in the SPSS output in the following chapters.

Rationale to conduct the test based on comparisons was linked to the Research question 3 which looks into the fact, if there is effect in customer response when email are different in length, use of illustrations, use of incentives and writing styles.

5.2.1. Email length

Pearson Chi-Square Test and Proportion Analysis on email length reflects the following numbers (see Table 40)

Table 40. Cross-group comparisons based on counts when design factor = length

Customer response (factor = length)	Short	Long
No response	278 _a	285 _a
Response	22 _a	15 _a
Pearson Chi-Square Test (Customer response and Email Length)		
Chi-square	df	Sig.
1.411	1	.235

22 people responded on short emails and 15 people responded on long emails. The difference is not significant (.234 > .05).

5.2.2 Use of illustrations

Illustrated and not illustrated emailing is reflected by Pearson Chi-Square Test and Proportion Analysis. The number are in Table 41

Table 41. Cross-group comparisons based on counts when design factor = use of illustrations

Customer response (factor = use of illustrations)	Not illustrated	Illustrated
No response	280 _a	273 _a
Response	20 _a	27 _a

Pearson Chi-Square Test (Customer response and Use of Illustrations)		
Chi-square	df	Sig.
1.131	1	.288

20 people responded on emails with no illustrations and 27 people responded on illustrated emails. The difference is not significant (.288 > .05).

5.2.3. Use of incentives

Pearson Chi-Square Test and Proportion Analysis on email use of incentives reflects the following numbers (see Table 42)

Table 42. Cross-group comparisons based on counts when design factor = use of incentives

Customer response (factor = use of incentives)	No incentives	Incentives
No response	280 _a	278 _a
Response	20 _a	22 _a
Pearson Chi-Square Test (Customer response and Use of Incentives)		
Chi-square	df	Sig.
.102	1	.749

20 people responded on emails with no incentives and 22 people responded on emails with incentives. The difference is not significant (.749 > .05).

5.2.4. Writing style

Emails based on writing style are reflected by Pearson Chi-Square Test and Proportion Analysis. The number is depicted in Table 43

Table 43. Cross-group comparisons based on counts when design factor = writing style

Customer response (factor = Writing Style)	No incentives	Incentives
No response	280 _a	280 _a
Response	20 _a	20 _a
Pearson Chi-Square Test (Customer response and Writing Style)		
Chi-square	df	Sig.
.000	1	1.000

20 people responded on emails with a formal writing style and 20 people responded on emails with informal writing style. The difference is not significant ($1.000 > .05$).

6. Discussion

This research aims to investigate the impact of personalization on marketing effectiveness, taking into account the role of customer background characteristics. To examine this, we have formulated a set of research questions and tried to address them by performing an empirical study.

The first research question asked what is the impact of email personalization marketing effectiveness within an online informative webpages. Therefore we started with the first sub question, that asks to what extent different levels of personalization affect customer response. The experiment depicts that high level of personalization have a higher response than no personalization and low personalization. There is no significant difference in response between no personalization, low personalization and medium personalization. It confirms Ellis –Chadwick et al (2012) discussion, that in general personalization should improve customer response, but there is appropriate level of personalization which affects marketing effectiveness. High level of personalization in this research contained the following factors: personalized email subject line with a name and customer interest specified. It might have encouraged the recipient to open an email, that was also discussed in general by Ellis-Chadwick et al (2012). Moreover, the brand logo was personalized based on customer interest. White et al (2008) explains the fact that when the fit between offer and customer preference is justified, degree of personalization positively influences customer response.

The second sub question asks how do moderating personal characteristics such as gender, continent of origin and level of education influence customer response under the different levels of personalization? When the gender is male the level of personalization positively affects customer response. The response on the high level of personalization is significantly different from the emails with no personalization and low personalization factor. Medium level of personalization is different from no personalization. As it can be seen, the finding at the first sub question can be applied to male people. When the gender is female the response for no personalization is higher than low and medium personalization, however the difference is not significant. High personalization has the highest response compared to the other degrees of personalization and have the same findings as males. The next objective was to look into the

education characteristic, to see if there is difference between the degrees of personalization. When the desired degree is bachelor, personalization level does not affect customer response significantly. When the desired education degree is master, high level of personalization has the highest response. It is significantly different from no personalization and low personalization. Z-test analysis did not find any significant difference between no personalization, low personalization and medium personalization though. When the desired education degree is PhD, there is a positive relationship between the level of personalization and customer response. High level of personalization has a significantly higher response than no personalization. The latter one does not have any difference in response with low personalization and medium personalization. The outcome suggests, that lower education does not respond better on a higher level of personalization, while people with higher education tend to respond better when the level of personalization is high – a subject line reflects their name and interest and email reflects additional details linked to their interest. Regarding the continent of origin, personalization level does not affect customer response significantly people who are from Europe, North America and Latin America. When the continent is Africa, email recipients respond best on medium personalization. There is a significant difference between medium personalization and no personalization. However no personalization, low personalization and high personalization have no significant difference. The drop of response in High personalization can be explained as a privacy concerns. High personalization contained a subject line with a name indicated, that might have caused personalization reactance phenomenon (White, et al 2008). The concert might come from cross-cultural aspect, where African countries are more collectivistic than individualistic. However further research has to be done based on answering the question why do African people respond lower on high personalization than the other types.

The research question two asked what emailing strategy considering the set of moderating personal characteristics is the most effective under the different levels of personalization within an online informative electronic commerce industry. The first sub question aims to predict the tendency of response and is formulated in this way: which of the moderating personal characteristics such as gender, continent of origin and level of education influences customer response probability, when these characteristics are considered as a set of variables? Therefore logistics regression reveals that when the degree of personalization is high, female people tend to

respond better than male people. Moreover under the high degree of personalization Asian people tend to respond better than European people. Under the levels of no personalization, low personalization and medium personalization logistics regression depicts that people who have a preferred education degree master have a lower probability to respond compared to the email recipients whose desired education degree is bachelor. It can be explained that more educated people have less time as their average age is higher. The second sub question asks what is the customer response maximizing classification of the moderating personal characteristics such as gender, continent of origin and level of education under the different personalization degrees? Classification and regression tree depicts the following categorization derived from analysis. Regarding not personalized emailing, African and North American people have the highest response when their desired education degree is PhD. People from Latin America and Asia have the highest probability to respond when they are females. Low personalized email recipients are categorized in the following way. People from North America, Latin America, Europe and Oceania has the highest response probability when their desired degree is Bachelor and PhD. The findings reflect that African people have the highest response when their gender is male and preferred degree is PhD. Moreover when visitors are from continents Africa and Asia low personalized emails have the highest probability to be responded when their gender is female and desired education degree is bachelor. Regarding medium personalization when visitors are from continents Europe, Africa and Latin America emails have a greater response probability than no response when the gender is females and their desired degree is bachelors. The same findings appear when the continents are Europe, Africa, Latin America and North America, the gender is female and the desired degree is PhD. When visitors are from Asia medium personalized emails have the highest probability to be responded when their desired degree is bachelor. Regarding high personalization, when visitors are from Africa these emails have the probability to be responded when the desired degree is bachelors and masters. If visitors are from continents Europe, Africa, North America and Latin America high personalized emails have the probability to be responded together with a PhD desired degree. When visitors are from Asia high personalized emails have the probability to be responded when their desired degree is PhD and gender is female. Research question 3 asked to what extent factors such as email length, writing style, use of incentives, and use of illustrations influence customer response to email marketing within an online informative webpages? Regarding all the sub questions, no difference was found

between long and short emails, illustrated and not illustrated emails, with incentives and without incentives, formal and informal emails. All hypotheses raised regarding email length, writing style, use of incentives and use of illustrations were rejected. The findings contradict to literature discussed before. Regarding email length, shorter emails were not significantly higher in response because the redirecting link was at the beginning for both of the emails. Emails with incentives were not significantly more successful as there is a probability that many of the visitors found were to study and there was no need for them to download a study guide. Illustrated emails were not that successful as expected because modern email providers require to click “display images” in order to see visual content of the email. It is expected that most of the visitors have not clicked on this and that results in a same response compared to the emails without illustrations.

6.1 Managerial implications

The aim of the research was not only to fill in the academic gap, but also to acquire practical knowledge in the field of email marketing. The research considered several types of analysis in order to enrich the findings, which can be used as the action plan within online advertorial businesses. It is relevant for the companies looking for the marketing strategy improvements, marketing strategy is defined as integrated parts of company decisions needed to achieve business objectives (Varadarajan, 2010) As customer information are getting at the center of marketing field, companies need solution to find the best approaches to deal with the existing customer information effectively (Blattberg et al, 2008). For this reason we have considered including classification and regression trees, which has a greater added value for managers in practice. The findings considered the most common data the companies have – customer education, gender and location of origin (related to nationality). Therefore other companies can easily apply the findings in their business as a part of marketing strategy.

Email marketing is not a new field and the existing literature has significantly contributed to the knowledge of it. However the presence of personalization and online industry growth evolve customer behavior. This tendency requires updated studies in this field that reconsiders business needs and tools, needed to achieve these objectives. Internet industry has surrounded different people, who have their own individual moderating characteristics that make impact on marketing success. Therefore this project is meaningful for managers, which considers customer variety and

looks for individual solutions and strategies that can be easily applied in modern business across the world.

Emailing is still the most effective and the least expensive marketing tool, which has 14.5 times higher response than social media (Wise, 2013). It proves the need of emailing strategies and contributes to the essence of this study. The results, reflecting the impact of email personalization on customer response should encourage managers to analyze their customers and apply their strategies, which are align to organizational goals.

6.2 Limitations and future research

One important limitation of this research is the presence of missing data, related to moderating personal characteristics. Therefore analysis had to deal with missing values regarding the sample. It restricted to have a high level of personalization, which contains even more personalization elements, which can be used to make further changes of the message regarding the email content.

Another limitation is linked to the degrees of personalization. There were difficulties to identify the extent of personalization within each of the degree, as the literature does not clearly define what the high level of personalization includes. The literature defines that there is a certain degree of personalization, when the response starts decrease because of privacy concerns. However there is no information at which point this phenomena starts occurring / to what extent companies can personalize their messages. Future research could focus more on personalization degrees identification. Our results have revealed that in many ways customers respond differently on the various degrees of personalization. Therefore future research should focus more on defining the personalization elements included and linking them to customer behavior, which has to be explained based on cultural studies.

Next limitation is linked to the variable desired education degree, which is based not on the actual education, but on the expected one. This limitation comes from the data, as the webpage contains customer interest to study abroad in the future. This might have caused some biases generalizing the findings. The research focused on personalized email design, such as writing style, use of

illustrations, use of incentives and email length. However customer response was not sufficient to draw concrete conclusions. Future research should focus on this issue where sample sizes are greater.

During the research, customer response was measured by tracking the people, submitted the question form. Future research could elaborate customer response by including the track of people who have clicked on the email link, but have not submitted the form. It would contribute to exploration of customers' behavior who receive emails based on different degrees of personalization.

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8. APPENDIX

APPENDIX A: No personalization

StudyPortals - Taking You Further

Hi,

We'd like to ask you to answer a quick question to help us to improve our services and help prospective students choose their education. **Please answer the question and you can then download a free Study in Europe Guide!**

Have you already found a suitable study programme?

- [Yes, I have already started studying](#)
- [Yes, I applied and got accepted](#)
- [Yes, I applied and I am waiting for the results](#)
- [No, but I am still looking at study options](#)
- [No, I have decided not to study](#)



We appreciate your feedback!

Thanks for your time!

Best wishes,

The StudyPortals team

If you do not want to receive this newsletter anymore, please unsubscribe by clicking [this link](#).

This message was sent to test@test.com by StudyPortals B.V. | Torenallee 45 | 5617BA Eindhoven, The Netherlands

SUBJECT: Have you found a study programme?

APPENDIX B: Low personalization


StudyPortals - Taking You Further

Hi NAME,

We'd like to ask you to answer a quick question to help us to improve our services and help prospective students choose their education. **Please answer the question and you can then download a free Study in Europe Guide!**

Have you already found a suitable study programme?

- Yes, I have already started studying
- Yes, I applied and got accepted
- Yes, I applied and I am waiting for the results
- No, but I am still looking at study options
- No, I have decided not to study



We appreciate your feedback!

Thanks for your time!

Best wishes,

The StudyPortals team

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StudyPortals B.V. | Torenallee 45 | 5617BA Eindhoven, The Netherlands

SUBJECT: Have you found a study programme?

APPENDIX C: Medium Personalization

StudyPortals - Taking You Further

Hi NAME,

We'd like to ask you to answer a quick question to help us to improve our services and help prospective students choose their education. Last month, we already helped almost **1.5 million people** (like you!) to choose their **DEGREE** programme. **Please answer the question and you can then download a free Study in Europe Guide for your **DEGREE** programme!**

Have you already found a suitable study programme?

- Yes, I have already started studying
- Yes, I applied and got accepted
- Yes, I applied and I am waiting for the results
- No, but I am still looking at study options
- No, I have decided not to study



We appreciate your feedback!

Thanks for your time!

Best wishes,

The StudyPortals team

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SUBJECT: Have you found a **DEGREE study programme?**

APPENDIX D: High Personalization

StudyPortals - Taking You Further

Hi **NAME**,

We'd like to ask you to answer a quick question to help us to improve our services and help prospective students from **COUNTRY** choose their education. Last month, we already helped almost **1.5 million** people (like you!) to choose their **DEGREE** programme. **Please answer the question and you can then download a free Study in Europe Guide for your **DEGREE** programme!**

Have you already found a suitable study programme?

- Yes, I have already started studying
- Yes, I applied and got accepted
- Yes, I applied and I am waiting for the results
- No, but I am still looking at study options
- No, I have decided not to study



The logo for mastersportal.eu features a stylized building icon with three columns and a pediment, followed by the text 'mastersportal.eu' in a sans-serif font.

We appreciate your feedback!

Thanks for your time!

Best wishes,

The StudyPortals team

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SUBJECT: **NAME. Have you found a **DEGREE** study programme?**

Appendix E: Valid and Missing values: Desired degree, Gender, Continent of origin

Statistics

		Customer desired degree	Customer gender	Customer continent of origin
N	Valid	3996	1387	1325
	Missing	0	2609	2671

Appendix F: Descriptive statistics: Desired degree

Customer desired degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor	601	15.0	15.0	15.0
	Master	2036	51.0	51.0	66.0
	PhD	1359	34.0	34.0	100.0
	Total	3996	100.0	100.0	

Appendix G: Descriptive statistics: Gender

Customer gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	880	22.0	63.4	63.4
	female	507	12.7	36.6	100.0
	Total	1387	34.7	100.0	
Missing	unknown	2609	65.3		
Total		3996	100.0		

Appendix H: Descriptive statistics: Continent of origin

Customer continent of origin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Europe	309	7.7	23.3	23.3
	Africa	328	8.2	24.8	48.1
	North America	48	1.2	3.6	51.7
	Latin America	45	1.1	3.4	55.1
	Oceania	2	.1	.2	55.2
	Asia	593	14.8	44.8	100.0
	Total	1325	33.2	100.0	
Missing	Unknown	2671	66.8		
Total		3996	100.0		

Appendix I: Step A sample selection

Sample	Email design factors	Sample size	Response
Sample A, random	E1: Formal style	300	R1
Sample B, random	E2: Informal style	300	R2
Sample C, random	E3: Long text	300	R3
Sample D, random	E4: Short text	300	R4
Sample E, random	E5: Illustrated	300	R5
Sample F, random	E6: Not illustrated	300	R6
Sample G, random	E7: Incentives	300	R7
Sample H, random	E8: No incentives	300	R8

Appendix J: Step B sample selection

Sample	Email personalization	Sample size	Response
Sample I, random	E9: No personalization	1000	R9
Sample J, random	E10: Low personalization	1000	R10
Sample K, random	E11: Medium personalization	1000	R11
Sample L, random	E12: High personalization	1000	R12

APPENDIX K: Formal email:

StudyPortals - Taking You Further

Dear StudyPortals visitor,

Thank you for your interest in our services. We are constantly looking for ways to improve our visitors' user experience. For this reason we would like to ask you to answer a short question about your study choice. Your answer is valuable to help us improve our services and help prospective students to choose their education. It will only take a moment to complete.

Please answer the following question

Have you already found a suitable study programme?

- [Yes, I have already started studying](#)
- [Yes, I applied and got accepted](#)
- [Yes, I applied and I am waiting for the results](#)
- [No, but I am still looking at study options](#)
- [No, I have decided not to study](#)

We greatly appreciate your feedback

By the way, we have 6 important criteria to help you choose the best university for your studies if you have not yet decided where to study.

1. Programme of studies
2. Official language(s)
3. Duration of your studies
4. Central or more suburban areas?
5. Tuition fees/financial aspects
6. Weather/climate

Thanks for taking the time to help us.

Yours sincerely,

The StudyPortals team

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StudyPortals B.V. | Torenallee 45 | 5617BA Eindhoven, The Netherlands

APPENDIX L: Informal email:

StudyPortals - Taking You Further

Hi!

Thanks for your interest in our services. We're always looking for ways to make the user experience better for our visitors. We'd like to ask you to answer a quick question about your study choice to help us with this. Your answer is really useful in helping us improve our services and help prospective students (like you!) choose their education. It'll only take a minute!

Please answer this question

Have you already found a suitable study programme?

- [Yes, I've already started studying](#)
- [Yes, I've applied and got accepted](#)
- [Yes, I've applied and I'm waiting for the results](#)
- [No, but I'm still looking at study options](#)
- [No, I've decided not to study](#)

We're really looking forward to getting your feedback.

Haven't decided where you're going to study yet? Here are some tips on what to consider:

1. Programme of studies
2. Official language(s)
3. Duration of your studies
4. Central or more suburban areas?
5. Tuition fees/financial aspects
6. Weather/climate

Thanks for your time!

Best wishes,

The StudyPortals team

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APPENDIX M: Long email:

StudyPortals - Taking You Further

Dear StudyPortals visitor,

Thank you for your interest in our services. We are constantly looking for ways to improve the user experience for our visitors. For this reason we would like to ask you to answer a question about your study choice. Your answer is valuable to help us improve our services and help prospective students (like you) to choose their education. It will take less than a minute.

Please answer the following question

Have you already found a suitable study programme?

- [Yes, I have already started studying](#)
- [Yes, I applied and got accepted](#)
- [Yes, I applied and I am waiting for the results](#)
- [No, but I am still looking at study options](#)
- [No, I have decided not to study](#)

We appreciate your feedback!

By the way, we have 6 important criteria to help you choose the best university for your studies if you have not yet decided where to study.

Choosing the course or university for your Bachelor's, Master's or PhD degree is not as easy as you might think and it often takes longer than expected. If you already have an idea or actually know what you want to do in the future and want to build a career on it later, the decision is not that difficult. But there are other factors you should consider.

1. Programme of studies
2. Official language(s)
3. Duration of your studies
4. Central or more suburban areas?
5. Tuition fees/financial aspects
6. Weather/climate

A little advice

Apply to many different universities, even if you are not that interested in going. Things don't always come the way we would like them to. You might not get accepted by your first choice of the university, but maybe you will get in to your second choice. Minimise the search by excluding universities which don't have the programmes you are looking for. Start by putting the most crucial factors in order, taking into account the priorities you want to set. For example, you might have programme of studies as the most important, language second, and then tuition fees... This may clear some things up and help you make a decision.

This process is sometimes hard and exhausting, but it is really worth it! Having a diploma in something you really enjoy, is something huge and has great value and importance! Aside from the diploma you receive in the end, you gain so much more. You learn about different cultures and have the chance to have multicultural experiences, you meet new people in your life and you see the world with a different view than you did to in the past!

Thanks for your time!

Kind regards,

The StudyPortals team

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APPENDIX N: Short email

StudyPortals - Taking You Further

Dear StudyPortals visitor,

Please answer the following question to help us improve our services and help prospective students (like you) to choose their education.

Have you already found a suitable study programme?

- [Yes, I have already started studying](#)
- [Yes, I applied and got accepted](#)
- [Yes, I applied and I am waiting for the results](#)
- [No, but I am still looking at study options](#)
- [No, I have decided not to study](#)

We appreciate your feedback!

Thanks for your time!


Kind regards,

The StudyPortals team

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APPENDIX O: Illustrated email

 **StudyPortals - Taking You Further**


Dear StudyPortals visitor,

Thank you for your interest in our services. We are constantly looking for ways to improve the user experience for our visitors. For this reason we would like to ask you to answer a question about your study choice. Your answer is valuable to help us improve our services and help prospective students (like you) to choose their education. It will take less than a minute.

Please answer the following question:

Have you already found a suitable study programme?

- [Yes, I have already started studying](#)
- [Yes, I applied and got accepted](#)
- [Yes, I applied and I am waiting for the results](#)
- [No, but I am still looking at study options](#)
- [No, I have decided not to study](#)



We appreciate your feedback!

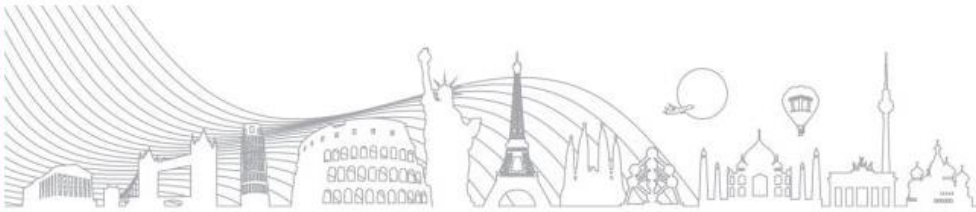
By the way, we have 6 important criteria to help you choose the best university for your studies if you have not yet decided where to study.

1. Programme of studies
2. Official language(s)
3. Duration of your studies
4. Central or more suburban areas?
5. Tuition fees/financial aspects
6. Weather/climate

Thanks for your time!

Kind regards,

The StudyPortals team



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APPENDIX P: Not illustrated email

Dear StudyPortals visitor,

Thank you for your interest in our services. We are constantly looking for ways to improve the user experience for our visitors. For this reason we would like to ask you to answer a question about your study choice. Your answer is valuable to help us improve our services and help prospective students (like you) to choose their education. It will take less than a minute.

Please answer the following question

Have you already found a suitable study programme?

- Yes, I have already started studying
- Yes, I applied and got accepted
- Yes, I applied and I am waiting for the results
- No, but I am still looking at study options
- No, I have decided not to study

We appreciate your feedback!

By the way, we have 6 important criteria to help you choose the best university for your studies if you have not yet decided where to study.

1. Programme of studies
2. Official language(s)
3. Duration of your studies
4. Central or more suburban areas?
5. Tuition fees/financial aspects
6. Weather/climate

Thanks for your time!

Kind regards,

The StudyPortals team

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Appendix R: Email with incentives:

StudyPortals - Taking You Further

Dear StudyPortals visitor,

Thank you for your interest in our services. We are constantly looking for ways to improve the user experience for our visitors. For this reason we would like to ask you to answer a question about your study choice. Your answer is valuable to help us improve our services and help prospective students (like you) to choose their education. It will take less than a minute.

Please answer the following question. **You can then download a free Study in Europe Guide!**

Have you already found a suitable study programme?

- [Yes, I have already started studying](#)
- [Yes, I applied and got accepted](#)
- [Yes, I applied and I am waiting for the results](#)
- [No, but I am still looking at study options](#)
- [No, I have decided not to study](#)

We appreciate your feedback!

By the way, we have 6 important criteria to help you choose the best university for your studies if you have not yet decided where to study.

1. Programme of studies
2. Official language(s)
3. Duration of your studies
4. Central or more suburban areas?
5. Tuition fees/financial aspects
6. Weather/climate

Thanks for your time!

Kind regards,

The StudyPortals team

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Appendix S: Email without incentives:

StudyPortals - Taking You Further

Dear StudyPortals visitor,

Thank you for your interest in our services. We are constantly looking for ways to improve the user experience for our visitors. For this reason we would like to ask you to answer a question about your study choice. It will take less than a minute.

Please answer the following question.

Have you already found a suitable study programme?

- [Yes, I have already started studying](#)
- [Yes, I applied and got accepted](#)
- [Yes, I applied and I am waiting for the results](#)
- [No, but I am still looking at study options](#)
- [No, I have decided not to study](#)

We appreciate your feedback!

By the way, we have 6 important criteria to help you choose the best university for your studies if you have not yet decided where to study.

1. Programme of studies
2. Official language(s)
3. Duration of your studies
4. Central or more suburban areas?
5. Tuition fees/financial aspects
6. Weather/climate

Thanks for your time!

Kind regards,

The StudyPortals team

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Appendix T: Thank you page

Thank You!

As a token of appreciation you may download a free [Study-in-Europe guide](#).

Also, could you please fill in a [second survey](#) to help other students in their study choice.

Appendix U: Logistics regression

Classification Table^a

Personalization Level of the letter	Observed	Predicted				
		Customer response		Percentage Correct		
		no response	response			
No personalization	Step 1	Customer response	no response	122	48	71,8
			response	71	73	50,7
		Overall Percentage				
Low personalization	Step 1	Customer response	no response	145	45	76,3
			response	66	84	56,0
		Overall Percentage				
Medium Personalization	Step 1	Customer response	no response	145	38	79,2
			response	76	107	58,5
		Overall Percentage				
High Personalization	Step 1	Customer response	no response	131	16	89,1
			response	54	30	35,7
		Overall Percentage				

a. The cut value is ,500

Model Summary

Personalization Level of the letter	Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
No personalization	1	402,917 ^a	,092	,123
Low personalization	1	418,590 ^b	,132	,176
Medium Personalization	1	433,151 ^c	,184	,245
High Personalization	1	274,183 ^d	,117	,160

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found for split file Personalization Level of the letter = No personalization.

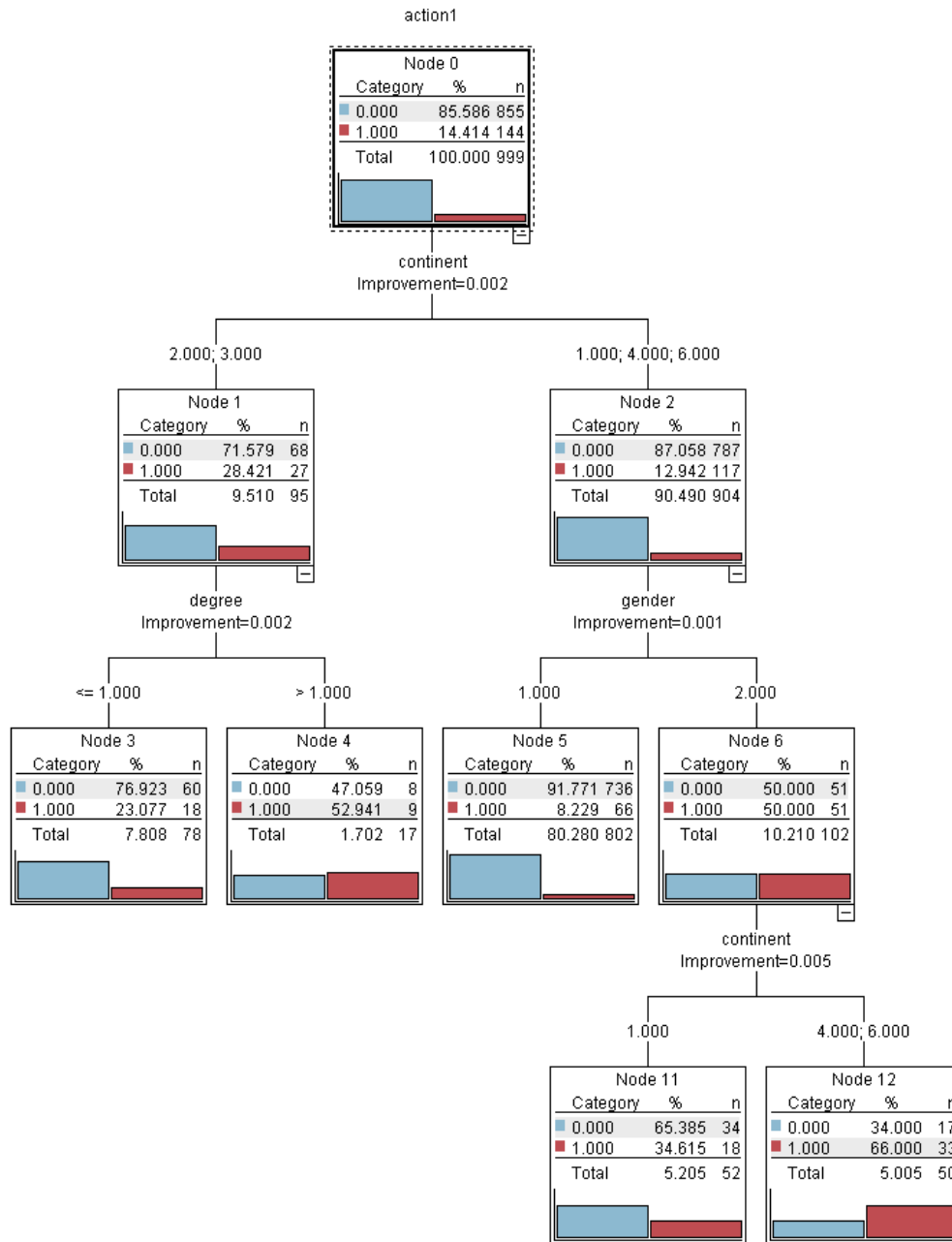
b. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found for split file Personalization Level of the letter = Low personalization.

c. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found for split file Personalization Level of the letter = Medium Personalization.

d. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001 for split file Personalization Level of the letter = High Personalization.

Appendix V: C&R Tree results, No personalization

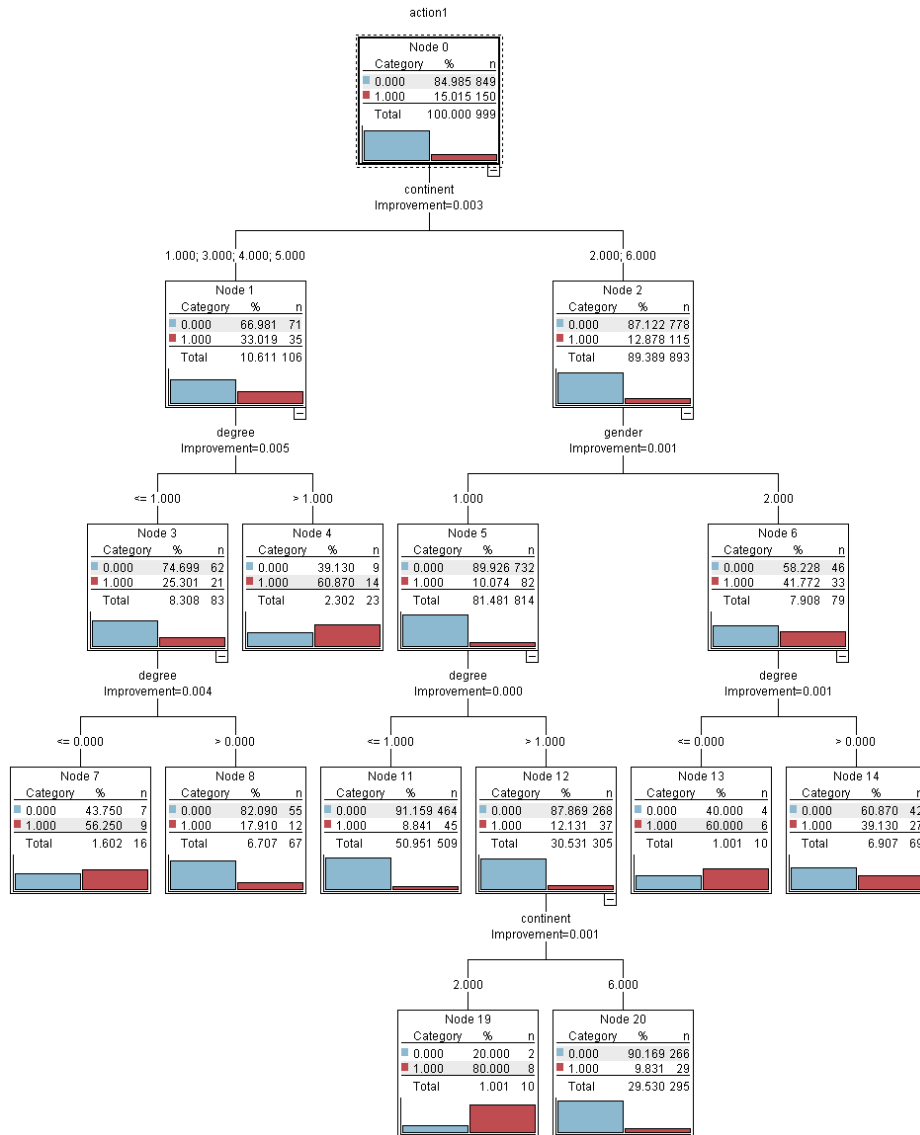
- continent in [2,000 3,000] [Mode: 0] (95)
 - degree in [0,000 1,000] [Mode: 0] ⇒ 0,0 (78; 0,769)
 - degree in [2,000] [Mode: 1] ⇒ 1,0 (17; 0,529)
- continent in [1,000 4,000 6,000] [Mode: 0] (904)
 - gender in [1,000] [Mode: 0] ⇒ 0,0 (802; 0,918)
 - gender in [2,000] [Mode: 0] (102)
 - continent in [1,000] [Mode: 0] ⇒ 0,0 (52; 0,654)
 - continent in [4,000 6,000] [Mode: 1] ⇒ 1,0 (50; 0,66)



Appendix W: C&R Tree results, Low personalization

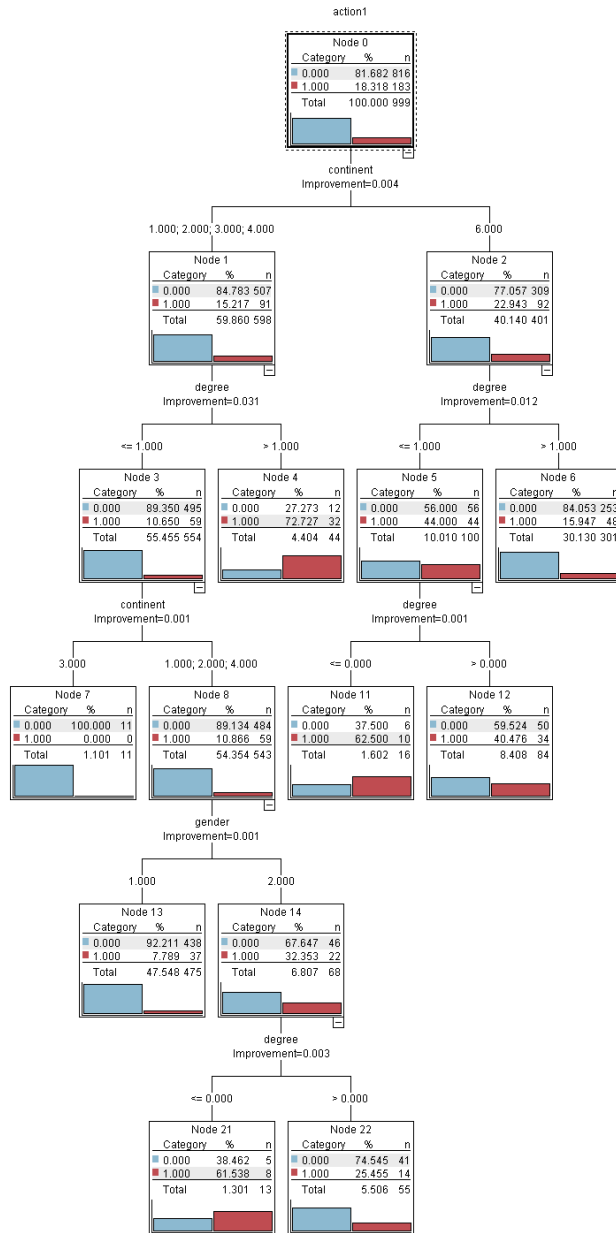
```

continent in [ 1,000 3,000 4,000 5,000 ] [ Mode: 0 ]
├── degree in [ 0,000 1,000 ] [ Mode: 0 ]
│   ├── degree in [ 0,000 ] [ Mode: 1 ] ⇒ 1,0
│   └── degree in [ 1,000 2,000 ] [ Mode: 0 ] ⇒ 0,0
└── degree in [ 2,000 ] [ Mode: 1 ] ⇒ 1,0
continent in [ 2,000 6,000 ] [ Mode: 0 ]
├── gender in [ 1,000 ] [ Mode: 0 ]
│   ├── degree in [ 0,000 1,000 ] [ Mode: 0 ] ⇒ 0,0
│   └── degree in [ 2,000 ] [ Mode: 0 ]
│       ├── continent in [ 2,000 ] [ Mode: 1 ] ⇒ 1,0
│       └── continent in [ 6,000 ] [ Mode: 0 ] ⇒ 0,0
└── gender in [ 2,000 ] [ Mode: 0 ]
    ├── degree in [ 0,000 ] [ Mode: 1 ] ⇒ 1,0
    └── degree in [ 1,000 2,000 ] [ Mode: 0 ] ⇒ 0,0
    
```



Appendix X: C&R Tree results, Medium personalization

- continent in [1,000 2,000 3,000 4,000] [Mode: 0] (598)
 - degree in [0,000 1,000] [Mode: 0] (554)
 - continent in [3,000] [Mode: 0] ⇒ 0,0 (11; 1,0)
 - continent in [1,000 2,000 4,000] [Mode: 0] (543)
 - gender in [1,000] [Mode: 0] ⇒ 0,0 (475; 0,922)
 - gender in [2,000] [Mode: 0] (68)
 - degree in [0,000] [Mode: 1] ⇒ 1,0 (13; 0,615)
 - degree in [1,000 2,000] [Mode: 0] ⇒ 0,0 (55; 0,745)
 - degree in [2,000] [Mode: 1] ⇒ 1,0 (44; 0,727)
 - continent in [6,000] [Mode: 0] (401)
 - degree in [0,000 1,000] [Mode: 0] (100)
 - degree in [0,000] [Mode: 1] ⇒ 1,0 (16; 0,625)
 - degree in [1,000 2,000] [Mode: 0] ⇒ 0,0 (84; 0,595)
 - degree in [2,000] [Mode: 0] ⇒ 0,0 (301; 0,841)



Appendix Y: C&R Tree results, High personalization

- continent in [1,000 2,000 3,000 4,000] [Mode: 0] (591)
 - degree in [0,000 1,000] [Mode: 0] (580)
 - continent in [2,000] [Mode: 1] ⇒ 1,0 (97; 0,629)
 - continent in [1,000 3,000 4,000] [Mode: 0] ⇒ 0,0 (483; 0,917)
 - degree in [2,000] [Mode: 1] ⇒ 1,0 (11; 0,545)
- continent in [6,000] [Mode: 0] (408)
 - degree in [0,000 1,000] [Mode: 0] (95)
 - degree in [0,000] [Mode: 0] ⇒ 0,0 (17; 0,824)
 - degree in [1,000 2,000] [Mode: 0] (78)
 - gender in [1,000] [Mode: 0] ⇒ 0,0 (56; 0,625)
 - gender in [2,000] [Mode: 1] ⇒ 1,0 (22; 0,545)
- degree in [2,000] [Mode: 0] (313)
 - gender in [1,000] [Mode: 0] ⇒ 0,0 (294; 0,816)
 - gender in [2,000] [Mode: 1] ⇒ 1,0 (19; 0,947)

