COMPARISON OF EMPLOYERS' AND STUDENTS' PERCEPTIONS REGARDING COMMUNICATION SKILLS

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Abstract. *Internationalization and fierce competitiveness have become the benchmarks of the modern labor market. Ever increasing demands have widened the roles of engineers in such a way that hard skills are insufficient and have to be complemented with transferable generic skills. This research aimed to compare the students' and employers' perceptions on demanded communication skills. 99 students studying at the Faculty of Electrical Engineering, Computer Science and Information Technology Osijek and 61 employers closely cooperating with the Faculty participated in the anonymous online survey. The results were processed with SPSS where the chi-square test for independence was performed. The results point to great discrepancies between the employers' demands and the students' perceptions on prospective employers' demands. The employers demand well-rounded listeners and speakers who will pay a lot of attention to both verbal and non-verbal communication. They aim to create a productive working atmosphere expecting that their employees professionally collaborate, which the students are not fully aware of. Both the students and employers perceive conforming to business writing etiquette and skillful presenting as extremely important for achieving business success. The results point to the necessity of revising curricula and implement communication skills to meet the needs of the labor market.*

Key words: *employers, students, perceptions, communication skills, comparison*

1. INTRODUCTION

Education is one of the fundamental elements for sustainable development. As a consequence of never-ending development brought by globalization, there is a need for updates of curricula to keep up with current trends and labor market needs. Higher education institutions are expected to produce employable graduates who will, in addition to being tech-savvy, possess transferable generic soft skills which are recognized as indispensable by the industry and academia alike. Demonstrating effective communication skills makes an engineer an asset for the company. A multifaceted nature of communication skills, which consist of listening, writing, speaking, presenting and teamwork skills, makes their development challenging. A modern engineer is expected to possess developed communication skills, i.e. to actively cooperate with fellows, virtually exchange ideas and materials, disseminate results in both a written and presentation form in order to maintain relevance and visibility on the labor market. Hence, in order to educate engineers to meet the labor market needs, higher education institutions should cooperate with potential employers,

identify their requests and update curricula accordingly. Also, students should be presented with the labor market needs and awaken regarding the importance of soft skills they might not perceive as important as technical expertise or at all for that matter.

2. THEORETICAL OVERVIEW

In order to ensure sustainable development, innovative approaches to teaching, continual updates to curricula, the interplay and cooperative endeavor of higher education institutions as well as the labor market have become imperatives. Today's labor market seeks for employees equipped with transferable generic soft skills thus demanding that higher education institutions equip graduates with knowledge, skills, competencies and attributes. It has become essential that higher education institutions provide avenues for graduates to acquire both subject specific and employability skills and meet the emerging needs of a world economy. Aiming to study employers' demands, North and Worth (2004) recorded that communication skills are the most frequently required competencies in newspaper ads for entry-level jobs. In a similar fashion, Cline (2005) conducted a survey including 330 employers and found that 96% of them rated communication and interpersonal skills as the most important employee attributes.

Furthermore, Bacon and Anderson (2004) survey found that employers highly value communication skills, especially writing skills. However, since improving writing skills requires a considerable amount of teacher time and effort, it can be a problem considering the amount of content that must be covered in university courses. In order to overcome such problems, Kirby and Romine (2009) recommended embedding developing communication skills in a course content. The application of pedagogical approaches such as communication-across-the-curriculum and communication laboratories are also suggested as useful in improving students' communication skills by Ellis and the associates (2000), Dannels (2001) and Helsel and Hogg (2006).

Communication education turns out to be an essential part of higher education nowadays (Barret, 2002; Wilkinson, 2002; Dannels et al., 2003; Haslam, 2003; Young and Murphy, 2003). University graduates are expected to possess both field and non-field abilities. Bath and the associates (2004) pointed out three aspects that have influenced the increasing importance of graduate qualities, namely the idea of education as a lifelong process, putting a greater emphasis on graduates' employability and the development of outcome measures to justify the quality of higher education.

When speaking about engineering education, technical expertise is unquestionably significant. However, an engineer should also be capable of communicating one's ideas and sharing knowledge with colleagues. Recent studies indicate that the modern industry demands an engineer not only proficient in technical but also in non-technical skills such as communication, interpersonal and team-work skills (North and Worth, 2004; Raybould and Sheedy, 2005; Raftopoulos et al., 2009; Hinchliffe and Jolly, 2011; Ahmad et al., 2014). Nowadays, employers put an even greater emphasis on their employees' communication skills than they do on their technical skills (Matturro, 2013; Clement and Murugavel, 2015; Halil Gerek i Efe Efeoglu, 2015). Some studies demonstrate that communication skills are critical to success in professions such as engineering (Darling and Dannels, 2003; Gamauf, 2004).

Notwithstanding the labor market needs, Nair et al.'s (2009) findings suggested that university graduates are not developing the skills required by the industry such as

communication, decision-making, problem solving, leadership, emotional intelligence and social ethics. They recognized the "competency gap" between engineering graduate competencies and employers' expectations. The greatest difference between employers' expectations and graduate abilities are discovered in oral and written communication skills as well as interpersonal skills. These findings are in agreement with previous research showing that engineering university graduates lack skills expected by employers (Wellington et al., 2002; Patil, 2005; Radcliffe, 2005; Adams and Missingham, 2006; Gray, 2010).

In approach to this issue, we should also be aware of the context in which todays' generation of university students, so called "millennials", were born in and raised. Hartman and McCambridge (2011) explained that this generation is stereotypically perceived as technologically sophisticated but seriously deficient in oral, written, and interpersonal communication skills. The authors underlined our responsibility as teachers to address these issues to be both appealing to students and effective in the global labor market.

There is an evidently growing need for higher education institutions to change engineering curricula to be more in accordance with labor market needs. Research findings continue to show insufficiently qualified entry-level employees regarding their communication skills (The National Commission on Writing, 2004; Radcliffe, 2005; Nair et al., 2009; Gray, 2010). Moreover, even university graduates themselves perceive inadequacies in their communication education (Brodowsky and Anderson, 2003). Hence, new approaches to this matter are needed in order to achieve a communication ability level required by today's labor market and much needed by today's university graduates.

3. METHODOLOGY

Our research was two-fold. On the one hand, we conducted a survey aimed to find out the students' opinion on communication skills their potential employers might be looking for. Total of 81 male (73%) and 18 female (82%) students attending the course *Communication skills* and studying at the Faculty of Electrical Engineering, Computer Science and Information Technology Osijek, Croatia voluntarily participated in the anonymous survey. The rest of the population did not attend the class, which is the reason for them not participating in the survey. On the other hand, potential employers interested in electrical and computer engineers were also surveyed on communication skills they demand from their prospective employees. The Faculty of Electrical Engineering, Computer Science and Information Technology Osijek established a portal STUP where employers can publish open calls for traineeships, scholarships, vacancies and research opportunities. There were 61 employers from the STUP database, which represented 50% of the population at the time the survey was carried out, voluntarily participated in the online survey.

Both the students and employers were asked the same questions with a slight difference in the perspective (what do the students think the employers request and what are the employers looking for). The survey was composed of 40 closed-ended questions branched out in five fields – listening skills, speaking skills, teamwork skills, writing skills and presentation skills. The questions were created in the form of a Likert-type scale ranging from 1 (not important at all/not bothered at all) to 5 (absolutely essential/intolerable). The participants were asked to rate the importance level of a certain subskill. The questions were thoughtfully designed to include the widest possible range of subskills. Taking into account the participants' lack of time and desire to participate in time-consuming activities, we opted for closed-ended

questions which can be upgraded to an interview form. The results were processed with the software for statistical analysis SPSS. Since we were interested in examining a relationship between two categorical variables (interviewees and Likert-type scale answers), we performed the chi-square test for independence, also known as the Pearson's chi-square test.

We aimed to study one general research question – is there a statistically significant difference between the interviewees' perceptions, i.e. what do the students expect the employers are looking for and what are the employers actually looking for in their prospective employees regarding communication skills.

4. RESULTS AND DISCUSSION

As a prerequisite for addressing more specific questions, the interviewees were asked to rate the general importance of developed communication skills for engineers. Even though the interviewees generally agree that communication skills are important for engineers (88.9% of the students and 88.5% of the employers think they are very important or absolutely essential), there is a subtle difference in their answers $\chi(3) = 12.06$, $p = .007$. Namely, in comparison to 63.6% of the students, 39.3% of the employers think that developed communication skills are very important ($p = .000$). Additionally, 25.3% of the students think that developed communication skills are absolutely essential compared to 49.2% of the employers ($p = .000$), i.e. the employers are more demanding regarding developed communication skills than the students expect them to be. Our results are in agreement with those obtained by Grapsas and Ilić (2001), Dunbar et al. (2006), Schnell (2006) and Morreale et al. (2009) whose research results point to the necessity of graduates developing soft skills in order to be competitive, eligible and marketable in the labor market.

Since the survey was divided in five sections, the research results will be classified and discussed accordingly with a selection of survey questions presented.

4.1. Listening skills

Listening is a conscious way of receiving and interpreting one's message, which makes it vital for interpersonal communication. According to Adler et al. (2001), people spend 70% of their time engaged in some kind of communication. Contrary to common belief, 45% is spent on listening, 30% on speaking, 16% on reading and only 9% on writing, which points to the necessity of acquiring listening skills.

Interpersonal communication has a broader scope than just a conveyed message; rather, it includes implicit messages expressed through non-verbal behavior. Non-verbal communication includes facial expressions, head nodding, voice tone and pitch, gestures, etc. Since non-verbal signals can provide additional meaning to spoken communication, we were interested in the interviewees' opinion on the use of non-verbal signals. The interviewees generally agree that it is important to use non-verbal signs to show that one is listening to a speaker; yet, there is a difference of opinion $\chi(4) = 8.45$, $p = .050$. 29.5% of the employers believe it is absolutely essential for a listener to exhibit non-verbal signs of listening to a speaker while only 14.1% of the students share their opinion, which is significantly different ($p = .010$). Similarly, 50.5% of the students believe it is absolutely essential not to show signs of boredom (yawning, staring through the window) during someone's speech compared to 75.4% of the employers who think that way ($\chi(3) = 11.40$, $p = .010$). Listening is a complex activity involving paying attention to verbal messages

as well as focusing on their non-verbal aspects. Mehrabian's (2009) research showed that 55% of conveyed messages come from body language, 38% from the tone of voice and only 7% from expressed words. To put it differently, 70-90% of communication is non-verbal and thus vital to be mastered (Mehrabian, 2009; Blahova, 2015; Bonaccio et al., 2016; Burgoon et al., 2016). Obviously, our student interviewees are less aware of the importance of sending non-verbal signs and communicating subliminal messages than the employers are. In addition to being polite, by making an eye-contact with a speaker, making facial expressions and nodding, a listener provides feedback, which the employers seek.

One of our survey questions was related to body language and non-verbal communication when in a speaker's position so we were interested in the correlation of non-verbal communication in the listening and speaking mode. Thus, 70% of the employers think that developed non-verbal communication skills are absolutely essential regardless of an employee performing a listening or a speaking role while only 33.3% of the students agree that it is absolutely essential to show signs of non-verbal communication in both a listening and speaking position, which is a statistically significant difference ($p = .000$). It is clear that the employers look for well-rounded engaged listeners who will communicate in a back-and-forth manner thus engaging themselves and their audience.

Hearing cannot be equalized to listening because listening is an active process of understanding and interpreting both verbal and non-verbal messages. Non-verbal communication predates verbal one because we express ourselves non-verbally since birth. This innate character of non-verbal communication is vital, i.e. sending and receiving non-verbal messages give us hints on how utterances are supposed to be understood. Our results on listening skills indicate that the employers are aware of the importance of active listening while the students are yet to grasp it.

4.2. Speaking skills

Notwithstanding the common belief that engineers primarily interact with technology, they have to communicate with colleagues, supervisors and clients, which means that they have to work on developing speaking skills. There is a growing body of research studying speaking skills of graduate students. In a survey of workplace speaking skills in Monash University, Crosling and Ward (2002) revealed that 84% of employers demand highly developed speaking skills from their employees. Similarly, in a research of speaking skills for accountancy graduates in New Zealand, Gray (2010) found that 91% of employers consider developed skills extremely important. Numerous other sources (Certo, 2000; Roebuck, 2001; Young and Murphy, 2003; Du-Babcock, 2006; Bean and Watanabe, 2011) have reported that speaking skills are highly valued by employers and indeed critical for career success. Moreover, some researchers (Sageev and Romanovski, 2001; Riemer, 2002) claim that technical expertise is useless if not presented efficiently.

Given the fact that the Croatian language is a native and an official language used by the interviewees, we wanted to know how important the use of the standard Croatian language is. 51.5% of the students and 41% of the employers believe that the use of the standard Croatian language in oral communication is very important; however, the significant difference was recorded ($\chi(4) = 11.66$, $p = .020$). Therefore, 24.6% of the employers think that the use of the standard Croatian language is absolutely essential whereas only 7.1% of the students share their opinion. When added, 65.6% of the employers and 58.6% of the students think that the use of the standard Croatian language is very important or absolutely

essential, which comes as a bit of surprise given the highly anglicized field electrical and computer engineering is. However, in spite of the global labor market, the Croatian language is still the official language of business communication. As our results show, the employers are more appreciative of the business communication and professionalism that stems from the use of standard language.

Furthermore, we were interested in the interviewees' opinion on the use of the advanced English language level skills. As expected, the percentages are higher for the advanced English language skills than Croatian. As opposed to 81.9% of the employers who think it is very important or absolutely essential for employees to use the advanced level of English, 69.7% of the students think that way. Our research result on highly demanding employers regarding the advanced English language skills are in accord with the recent research done by Kassim and Ali (2010), Seetha (2012), Rajprasit et al. (2014), Cambridge report (2016) and the United States-Mexico Cultural and Educational Foundation and Harrison Maldonado Associates (2016). All current research studies point to the importance of acquiring advanced English language skills and the necessity of demonstrating these skills due to employers' and labor market requirements. However, as is clear from the percentages, the employers are more demanding than the students expect. The difference of opinion is more obvious for their "absolutely essential" answers. Namely, 34.4% of the employers believe it is absolutely essential for employees to use English at the advanced level while only 12.1% of the students agree with them, which is a statistically significant difference ($\chi(3) = 12.29$, $p = .006$). It is clear that the students are becoming aware of the importance of English; however, they still do not perceive it as important as they should. Since the questions on the use of the standard Croatian and advanced level English language are possibly connected, we decided to examine their correlation. 48.1% of the employers opted for "absolutely essential" for both questions, i.e. 48.1% of the employers perceive using the standard Croatian and advanced English language as absolutely essential, which is a fairly high percentage. Surprisingly, 0% of the students opted for the "absolutely essential" option for both questions. 0% of the students think that it is absolutely essential to use both the standard Croatian and advanced English language simultaneously, i.e. those students who think it is important to use the standard Croatian language do not believe it is important to use the advanced English language and vice versa. Given the fairly high percentage of the employers who demand both, it is urgent to awake graduates that the professional business use of both native and the English language is not on either-or basis.

The next question was related to the use of jargon and slang language during speaking activities. Only 17.2% of the students believe it is absolutely essential not to use jargon or slang when speaking in comparison to 32.8% of the employers who would not allow it, which is a statistically significant difference ($\chi(4) = 12.44$, $p = .023$). Additionally, only 3.3% of the employers perceive the use of jargon and slang as of little importance compared to a relatively high 18.2% of the students, which is also significantly different ($p = .005$). Our results, which are in line with Patoko and Yazdanifard's (2014), show that the employers seek to ensure professional and efficient communication and are aware that unprofessionalism and consequently miscommunication may be detrimental to organizational success. Furthermore, a potential correlation of the use of the standard Croatian language and jargon and slang intrigued us so we ran a test to examine it. Given the previously reported results, we were not surprised to find out that only 23.5% of the students believe that it is absolutely important to use the standard Croatian language and avoid using jargon and slang compared to 65% of the employers who demand strictly professional and the highest standardized

linguistics forms ($p = .000$). This finding further supports our hypothesis that the employers demand professionalism regarding communication skills, which the students are not fully aware.

Communication is indeed a complex process whose preparation comprise of several facets such as organization, clarity and conciseness. Unprepared speech is frequently unclear and vague, which results in the audience losing interest. Our chi-square results ($\chi(3) = 2.77$, $p = .391$) point to the similarity of the employers' and students' opinion on speech clarity. More specifically, 45.5% of the students and 52.5% of the employers believe that speech clarity is absolutely essential. Speech clarity is a more complex activity than one imagines. On the one hand, it includes intrapersonal communication displayed as a clear idea in speaker's mind before actually putting forward the idea. On the other hand, it encompasses interpersonal communication realized as considering the audience and adjusting linguistic expression for them to comprehend it. Therefore, it is a process to be thoughtfully prepared and a positive feedback from our interviewees is encouraging. However, several research warn that in spite of being aware of the issue importance, graduate students severely lack the skills of speech clarity (Haworth and Garrill, 2003; Longnecker, 2009; Edmondston et al., 2010). Another related concept is conciseness so we asked the interviewees to rate the importance of delivering concise speech. Only 33.3% of the students think that the ability to efficiently summarize speech is absolutely essential to employers when in fact 54.5% of the employers rate conciseness as absolutely essential, which is a statistically significant difference ($\chi(3) = 8.35$, $p = .010$). A further test of these two variables correlation show that only 40% of the students think that both clarity and conciseness are absolutely essential to employers compared to 75% of the employers who feel that way ($p = .000$). Business leaders know that time is money so they need employees who will state their points in a clear and straightforward manner. Our research results prove that clear and concise communication is essential to the employers for achieving business success thus being in accord with Jaderstrom and Schoenrock's (2008) research.

Being successful in any branch is closely associated with efficient communication. Contrary to stereotypical beliefs of engineers communicating solely with technology, research (Trevelyan, 2010) has recorded that engineers spend 60% of their working hours communicating with other people. Therefore, acquiring communication skills is vital. Our speaking skills results demonstrate that the employers are fully aware of the importance of developing professional speaking skills thus corroborating the previous research done by Sjursen (2006), Riemer (2007) and Sheth (2015). Additionally, our results demonstrate that the employers do not appreciate time wasting and wish for their employees to be as unambiguous and straightforward as possible. The students, on the other hand, perceive speech clarity as an important feature of successful speech; however, they do not fully recognize the importance of speech straightforwardness.

4.3. Teamwork skills

Developed teamwork skills are fundamental for business success. They can be characterized as the ability to efficaciously function as a team member apprehending and respecting the team dynamics. Every team member has a specific assigned task and not performing it can be reflected on other team members and consequently teamwork assignment. Since teamwork implies collaboration and developing relationships, the following subskills are to be developed:

- ability to collaborate with other team members;
- think ahead, prepare, organize and timely deliver;
- put forward original ideas and recommendations for improvements;
- respect different opinion, solutions and preferences;
- take part in team decision-making.

In cases of disputes or differences of opinion, the best case scenario is to reach a general agreement by team members. Therefore, communicating, discussing issues and sharing ideas are imperatives for a productive teamwork environment.

An ever increasing number of current research studies have investigated employers' perceptions of employability skills graduate students should possess. There is a growing tendency of employing independent national agencies to conduct research studies and examine employers' perceptions on sought employability skills. A national study carried out by the UK Commission for Employment and Skills (2009) discovered that employers greatly value transferrable skills such as teamwork skills. Two American associations, namely American Management Association (AMA) and National Association of Colleges and Employers (NACE), reported that teamwork skills were highly valued by executives in 2010. The following year, the University of Glasgow SCRE Centre and Edge Foundation conducted interviews with higher education institution managers and employers learning that the latter group of interviewees require a combination of transferrable skills the top of whose list are teamwork skills (Lowden et al., 2011). Finally, two annual studies carried out by the Australian Association of Graduate Employers (2012; 2014) proved that teamwork skills are one of the top three skills required by Australian employers. Moreover, demonstrated teamwork skills are conclusive competence during the selection and recruitment process.

In addition to national associations' reports, studies on literature overview (Clarke, 2008), job advertisements (Bennet, 2002) and comparative study including employers and employees (Abas and Ombra, 2016) witness the rationale for developing strong teamwork skills. However, in spite of the abundant amount of evidence, research studies (Seibu et al., 2006; Bridgstock, 2009; Hunter et al., 2010) point to employers' considerable dissatisfaction with graduates' teamwork skills.

In order to examine the importance of teamwork skills from the perspective of the interviewees, we asked a set of specific questions related to developing interpersonal workplace relationships and consequently teamwork skills. Despite demanding highly standardized linguistics forms, 41% of the employers believe that it is absolutely essential that employees are relaxed during their speeches with both coworkers and superiors. One unanticipated finding is that only 14.1% of the students think that way, which is significantly different ($\chi(4) = 24.72$, $p = .000$). It seems possible that the employers wish to create a relaxed casual working atmosphere. Our next question on employees casually chatting during breaks might confirm or reject the hypothesis. 40.4% of the students believe that employers will not at all be bothered if employees casually chat during their breaks. Interestingly, 70.5% of the employers are actually not bothered with casual employees' chats ($\chi(4) = 22.35$, $p = .000$), which supports our hypothesis of the employers' wish to create a relaxed working atmosphere.

Furthermore, we wanted to know if befriending with coworkers is important for employers from the perspective of the interviewees. Only 3.3% of the employers opted for "of average importance" option while a relatively high 22.2% of the students think that employers are not that concerned about friendly relationships of their employees ($p = .001$). To put it differently, only 29.3% of the students believe it is absolutely essential to employers for

newcomers to befriend with coworkers compared to 54.1% of the employers who think a friendly atmosphere is a necessity ($p = .002$). According to workplace experts questioned by Forbes in 2013, befriending and socializing with coworkers is essential for one's job satisfaction and productivity because it develops and strengthens relationships thus creating a fruitful working atmosphere, which supports Raziq and Maulabakhsh's (2015) research.

Our next survey question was related to the issue of defaming coworkers. Only 11.1% of the students believe employers find talking behind someone's back intolerable when in fact 60.7% of the employers do not tolerate that ($p = .000$). It is evident that the students do not perceive vilifying a coworker as important as the employers do thus supporting Jungert's (2012) results. Another explanation of this result is that the students do not believe employers have time to deal with, from their viewpoint, such an irrelevant issue. However, the employers are obviously aware of the risks engaging in defamation place on good working relationships and work productivity.

Finally, 42.4% of the students think that sharing relevant information with coworkers is absolutely essential to employers as opposed to 78.7% of the employers who perceive that as a must for efficient functioning ($p = .000$). A team can only function productively if every member does his/her task and share relevant information and ideas. Our teamwork skill results support our hypothesis that the employers aspire to create a welcoming and productive working atmosphere beneficial to both a company and their employees' satisfaction whereas the students do not perceive that as important as they should. Successful business leaders are aware of the benefits a satisfied and fulfilled employee brings to a company as demonstrated by numerous studies (Sias, 2009; Froman, 2010; Fay and Kline, 2012; Neves and Eisenberger, 2012; Swart and Rothmann, 2012) and our own. On the other hand, according to the students' answers, they expect, and probably hope, that employers will not demand developed teamwork skills. This opinion possibly stems from the students' experience with teamwork assignments. What we noticed from informal class discussions and the students' feedback is that whenever the students are assigned group work, they feel reluctant to engage themselves in group activities. Even though we did not conduct a formal survey to study this issue so we cannot draw conclusions, practical examples and the students' class feedback as well their survey answers point to the students disliking teamwork activities and hoping that employers will share their opinion, which is in line with Pfaff and Huddleston's (2003), Delaney et al.'s (2013) and Jackling et al.'s (2015) research results, i.e. not in agreement with Hansen's (2006) and Jackson's (2014) results.

As is evident from our research results, the employers strive to create a positive working atmosphere because they recognize the correlation of it with accomplished employees. Workplace is a home away from home so creating a friendly, positive and encouraging environment where you can fruitfully collaborate as well as socialize with coworkers is a necessity recognized by the employers. However, as our results show, the students are not fully aware of what employers are looking for and in order to be competitive on the labor marker, they have to apprehend it fast.

4.4. Writing skills

The importance of developing and brushing up on one's writing skills lies in the nature of writing per se – it is an activity of sending a message to a large group of people in a time-saving manner. Sound writing skills are beneficial to professionals irrespective of the field they work in. Research studies (Gray et al., 2005; Andrews and Higson, 2008;

Carnevale and Smith, 2013; McMurray et al., 2016) point to writing skills gradually becoming one of the most sought-after skills in the labor market, i.e. skills which differentiate an average from an excellent employee providing the latter one with a distinctive competitive edge. Therefore, acquiring writing skills is vital for both employers and employees.

Due to pervasive technology advances which allow instantaneous communication, the world has become a global village where running a business internationally is a normal thing. For the purpose of both domestic and international communication, employees use e-mails whose omnipresent nature is the prime reason why developing writing skills is pivotal. Given the array of available sources, applying the e-mail etiquette and using a proper structure (salutation, short introduction, clear subject line, signature, etc.) are expected. Having that in mind, we asked our interviewees if they are bothered by poor e-mail structuring. So, 19.2% of the students believe that employers will not tolerate the use of an improper e-mail structure whereas 31.1% of the employers opted for the "intolerable" option, which is not a significant difference ($\chi(4) = 10.35$, $p = .087$). The result suggests that both the students and the employers are equally aware of the importance the proper e-mail structuring has.

Even though the 21st century communication is trending towards the casual end of spectrum, written communication still demands professionalism. What is more, cover e-mail messages are regarded as pre-screening for a potential job interview. Hence, writing a professional and linguistically sound e-mail is important for making the (first) impression. Further, employees participate in writing leaflets, memos and website text all of which contribute to conveying an impression about employees, a company and the way business is run. So, in order to make a good impression and encourage someone to reach out to one's company, textual materials have to be grammatically accurate. Total of 78.8% of the students believe that it is very important (52.5%) or absolutely essential (26.3%) to employers that employees write in a grammatically sound manner compared to 91.8% (49.2% and 42.6%, respectively) of the employers who think that way, which is not a statistically different result ($\chi(4) = 8.35$, $p = .080$). The high percentages point to both groups of interviewees being aware of the importance professional e-mails have. Additionally, making fewer grammatical mistakes might correlate with making fewer work-related mistakes hence diligence in making linguistic and professional mistakes might be associated and very important to employers. Another natural association is writing grammatically correct texts and using fewer jargon and slang words so we decided to examine the correlation. There 30.8% of the students and 53.8% of the employers opted for "absolutely essential/intolerable" options for these two questions, which is a statistically significant difference ($\chi(1) = 6.33$, $p = .004$). To put it differently, a significantly lower percentage of the students think that it is absolutely essential for employees to write grammatically correct texts and simultaneously use fewer jargon and slang words than the percentage of the employers who demand that is. In a similar fashion, only 26.7% of the students think that it is absolutely essential for employees to use a formal structure and fewer jargon and slang words when writing e-mails compared to 60% of the employers, which is a significantly different opinion ($\chi(1) = 16.72$, $p = .000$). These results point to the employers being more demanding of strict professionalism than the students are aware of thus corroborating Stevens' (2005) and Patoko and Yazdanifard's (2014) results.

Due the fact that the official language of the country our interviewees reside in is not English, we were curious to find out whether they mind employees using Anglicism in formal written communication. Almost identically, 17.2% of the students and 16.4% of the employers do not find using Anglicism problematic at all ($\chi(4) = 5.93$, $p = .896$). Given the highly anglicized fields electrical and computer engineering are, the result comes as no

surprise. Translation of electrical and computer engineering vocabulary is rather challenging and occasionally almost impossible so using Anglicism instead of unnatural and non-existent translation is expected and, as proven, acceptable.

The Internet and social networks have greatly modified the way people communicate. Since verbal tone and body language cannot be translated into written messages, alternative ways have been developed to convey nuanced meaning. The mostly used alternative ways are modern hieroglyphic languages – emoticons and emoji. Emoticons are sets of punctuation marks used as front-based representations of human faces while emoji are pictographs of emoticons. Since written texts on social networks, where emoticons and emoji are acceptable, are informal in their nature, we were curious to find out whether the interviewees find their usage acceptable in formal writings. Even though the difference is not statistically significant ($\chi(1) = 12.4$, $p = .099$), the interviewees' answers slightly differ. Only 22.9% of the employers find using emoticons and emoji in formal writings as very botherful (13.1%) or intolerable (9.8%) compared to 35.3% of the students (21.2% and 14.1%, respectively). This finding is somewhat surprising because the employers are more tolerant of the usage of emoticons and emoji than the students expect them to be. Despite the informal nature of emoticons and emoji, their use might not be utterly negative because they can be used to convey a tone of voice and/or emotions thus avoiding ambiguity and misunderstandings. They are contextualization cues which serve to organize interpersonal relationships in written interaction (Skovholt et al., 2014). Before making a decision whether to use emoticons and emoji in formal writings, the best rule of thumb is take the impression one wants to convey into account. If one wants to present oneself as a friendly and easy-going person, the use of emoticons and emoji is acceptable. However, the most recent research on the issue done by Glikson et al. (2017) refutes the common belief that emoticons and emoji increase perceptions of warmth. If, on the other hand, one wishes to put the emphasis on professionalism and competency, emoticons and emoji are not recommended.

The research results on writing skills suggest an impetus for developing professional writing skills due to the necessity of communicating with colleagues, superiors and potential clients either vie e-mail or by official written materials. Unlike the previously reported results on listening, speaking and teamwork skills, we were unable to record significant differences in the interviewees' opinion on developing writing skills, which suggests that the interviewees recognize writing as a threshold skill for carrying out successful business activities.

4.5. Presentation skills

In order to get one's message across, presenting information in an efficient, clear and concise manner is of utmost importance. There are numerous occasions an employee might need presentation skills. An employer might ask an employee to report one's findings to coworkers, present information to clients, deliver briefings, conduct training sessions for junior colleagues or engage oneself in other possible tasks that include speaking before large audience. Delivering easy-to-understand, engaging and persuasive speeches are primary components of strong presentation skills all of which are expected by employers as studies done by Pittenger et al., (2004), Andrews and Higson (2008) and Lowden et al. (2011) suggest. Additionally, the ability to adapt to the audience, proper visual-aids handling, demonstrating dynamic body language techniques and successful handling of questions are vital for demonstrating verbal deftness and stylistic versatility

of presenters so we aimed to examine if the interviewees are aware of the complexity presentation skills include.

As expected, 94% of the students think that employers perceive making a good presentation as very important (57.6%) or absolutely essential (36.4%). Similarly, 86.3% of the employers believe that a clear and concise presentation is very important (42.6%) or absolutely essential (44.3%), which is not significantly different ($\chi(3) = 5.86$, $p = .119$). Furthermore, presentations comprised of both narrative and visual contents are more effective than ones exclusively containing narrative elements. Power Point and Prezi software packages have de facto become presentation tools used by the majority of presenters. Given the very straight-forward and uncomplicated nature of handling the tools, our next result is rather expected. Almost identically, 88.9% of the students and 91.8% of the employers think that it is very important (48.5% and 55.7%) or absolutely essential (40.4% and 36.1%) that employees can handle their presentations confidently ($\chi(3) = 3.10$, $p = .541$). To put it differently, the inadequacy of technical expertise in handling a presentation, a presentation done by someone other than a presenter, improper beginnings or ineptitude in presenting the content are not tolerated by the interviewees.

Due to stage fright or a lack of time for speech preparation, presenters occasionally decide to read instead of presenting materials. However, reading and presenting are two different concepts involving different pace, tone, body language, contact with the audience, etc. so it is reasonable to assume that supervisors do not tolerate reading instead of presenting. 88.9% of the students and 80.3% of the employers believe it is very important (43.4% and 47.5%) or absolutely essential (45.5% and 32.8) that materials are presented and not read, which is a similar opinion ($\chi(4) = 4.98$, $p = .289$). When materials are read, a presenter shifts one's focus on reading notes thus losing a contact with the audience. Additionally, a presenter's tone of voice becomes monotonous and speech pace sometimes too fast for keeping track on the message consequently resulting in the audience losing interest. On the other hand, when a person presents, delivery is more energetic and involved thus keeping the audience engaged and interested.

In addition to overcoming a potential fear of public speaking, 29.5% of the employers expect that their employees use standard language forms during speech delivery while only 11.1% of the students think it is absolutely essential for employers, which is a statistically different result ($\chi(1) = 11.11$, $p = .003$).

Public speaking is an edgy experience because it causes a lot of stress due to the need of meeting one's own and the audience's expectations. There are different levels of stage fright ranging from mild nervousness to inability to speak at all. The abundance of online materials suggests strategies such as researching materials, practicing and thinking positively to reduce the level of anxiety during public speeches. 81.8% of the students think it is very important (53.5%) or absolutely essential (28.3%) that a presenter is relaxed during a speech. Similarly, 85.3% of the employers perceive a relaxed presenter as very important (57.4%) or absolutely essential (27.9%) for a successful speech. The high percentages of the both groups of the interviewees point to them recognizing the impact of unstressed and natural delivery of a speech has on the audience ($\chi(3) = 0.36$, $p = .947$).

As already discussed in our listening skill results, one element of communication is non-verbal. As well as rating the content of one's speech, the audience evaluates non-verbal means of communication. A presenter's face communicates one's emotions of fear, sincerity or anger louder than words and a body is a powerful tool for sending messages of nervousness, eagerness and trustworthiness. Therefore, despite stage fright, a presenter should try to

establish a contact with the audience in order to share one's feelings and make a presentation more conversational and personal, i.e. a good presenter should try to establish a rapport (Beebe and Beebe, 2006; Fraleigh and Tuman, 2009). Even though the result is not significantly different ($\chi(1) = 3.63$, $p = .102$), 31.7% of the employers believe that establishing an eye contact with the audience is absolutely essential compared to 20.2% of the students who think that way. If defined as an amplified conversation, making an eye contact and speaking directly to the audience is natural. A failure to do so may be interpreted as dishonesty and indifference resulting in misinterpretation of a message and speech intentions themselves. Furthermore, the ability to control one's voice is equally recognized by the interviewees ($p = .499$). Namely, 17.2% of the students and 19.7% of the employers recognize that as absolutely essential when delivering speeches. The tone of voice, pitch, volume, pace, resonance and enunciation reveal presenter's emotions, covert intentions and the significance of words one stresses hence it can affect both sending and receiving messages, which the interviewees recognize. There 73.8% of the students and 77.1% of the employers believe that appropriate body language (hand gestures, head nodding, facial expression, controlled walking around the available space, etc.) is very important (55.6% and 60.7%) or absolutely essential (18.2% and 16.4%) during presentations, which is a similar opinion ($p = .558$). Body language reveals a lot of information about a presenter. Fidgeting with hands or fingers as well as uncontrolled or no walking display the sings of nervousness or inexperience in public speaking. No facial expressions might point to the lack of interest in displaying one's results of selling a product and/or services all of which can consequently result in the audience losing interest or not being persuaded in a presenter's story, which will not satisfy employers who are aware of what a modern engineer needs to be equipped with (Riemer and Jansen, 2003).

Finally, handling questions is an essential element of a presentation. 96% of the students and 93.4% of the employers think that handling questions is very important (28.3% and 37.7%) or absolutely essential (67.7% and 55.7%), which is another similarity ($p = .446$). Presenters are usually very afraid of the questions part because they lose control over their presentation. Even though they prepare for delivering a speech, the questions part is difficult even for experienced presenters. The anxiety level can be decreased if questions are considered as an integral part of a presentation and not perceived as a punishment for not explaining something. Also, anticipating questions and preparing additional interpretations might help reduce the nervousness of a presenter.

Effective presentation and public speaking skills are important facets of employability. Irrespective of the type of a presentation (internal briefing, selling a product/service, impromptu presentation), demonstrating the ability to successfully speak in front of a group of people is a daunting and challenging task which consists of both verbal and non-verbal training and preparation. On the one hand, a presenter has to deliver a speech and technically handle a presentation and accompanied questions confidently and skillfully. On the other hand, one needs to effectively use body language to create an aura of enthusiasm, confidence and warmth aiming to establish a rapport with the audience and support one's verbal messages. Our results on presentation skills show that both the students and employers are equally aware of the impact different presentation subskills have.

5. PEDAGOGICAL IMPLICATIONS

Upon carrying out the analysis including both the students' and employers' opinion regarding the development of communication skills, we came to realize the imperative need for communicative competency at the workplace. In our opinion, higher education institutions should design and implement a specialized course aiming to develop listening, writing, teamwork and presentation skills. Additionally, lecturers should undergo a paradigm shift of mere teaching engineering courses and play the role of soft skill coaches by assigning teamwork tasks whose results should be disseminated in both a written and presentation form thus developing soft skills which prospective employers expect.

6. CONCLUSIONS

The research aimed to compare the employers' and students' perceptions on communication skills employers demand from their employees. The students were asked to predict what their potential employers will demand regarding communication skills while the employers expressed their actual demands. There were 99 students attending the course *Communication skills* taught at the Faculty of Electrical Engineering, Computer Science and Information Technology Osijek and 61 company representatives cooperating with the Faculty who voluntarily participated in the research. Both groups of the interviewees were asked to complete an online anonymous survey composed of 40 closed-ended Likert-type scale questions designed in Google Docs. The results were processed with SPSS which was used to perform the chi-square test for independence.

The results generally show that both the students and the employers rate communication skills high; however, the employers are more aware of their importance than the students are. The employers demand active listeners who will pay attention to both verbal and non-verbal content of messages with the final aim of appropriate understanding utterances while the students are yet to comprehend the importance of active listening. The results on speaking skills demonstrate another significant difference in the opinion of the students and employers. While the employers demand professionalism stemming from the use of the standard Croatian and advanced level English language, the students believe that the language use is on either-or basis. Also, the students do not perceive using slang or jargon as problematic as the employers do demanding strict professionalism and the highest standardized linguistic forms of both a native and foreign language. Despite recognizing the importance of speech clarity, the students do not fully acknowledge the importance of straightforwardness while the employers appreciate unambiguous and clear-cut speeches. Furthermore, the employers strive to create a healthy, friendly and productive workplace environment where employees will socialize and share relevant information and ideas. On the other hand, the students are completely oblivious of the teamwork skills their future employers will demand. Unlike the previously reported results, both groups of the interviewees are aware of the significance of writing skills such as conforming to e-mail etiquette and exhibiting excellent grammar and style. Surprisingly, the employers are more tolerant of the usage of emoticons and emoji than the students are, which is in line with the current trends. Finally, the interviewees believe that a detailed and skillfully managed presentation as well as confidently presented materials are significant. They believe that both verbal and non-verbal part of a presentation are important because both components aim to attract and retain the audience's attention accompanied by establishing a rapport consequently resulting in overall business success.

6.1. Limitations of the research

The scope of this study was limited in terms of the number of interviewees, which does not allow us to make generalizations about employers' and students' perceptions regarding communication skills. Another possible weakness of the study is in the closed-ended nature of survey questions which might have deprived the interviewees of addressing some important issues we did not anticipate. Nevertheless, the research has shed some light on demands the employers have regarding communication skills and discrepancy with the students' perceptions.

6.2. Recommendations for future research

The study brings a new perspective of educating future engineers. An immediate way to proceed is to conduct a study on a larger scale including more students and engineering companies in the sample. It would be interesting to examine perspectives from other branch students and future employers. Further research might explore perspectives of higher education institutions management. This will provide a feedback from all participants involved in tertiary education and have an applicable outcome in terms of revising current curricula to meet the labor market needs.

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