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## SELF-EFFICACY IN LEARNING ENGLISH AS A FOREIGN LANGUAGE VIA ONLINE COURSES IN HIGHER EDUCATION

Ilan Daniels Rahimi*	ONO Academic College, Israel	<a href="mailto:irahimi@ono.ac.il">irahimi@ono.ac.il</a>
Gila Cohen Zilka	Bar-Ilan University and Achva Academic College, Israel	<a href="mailto:gila.zilka@gmail.com">gila.zilka@gmail.com</a>

\* Corresponding author

### ABSTRACT

Aim/Purpose	Higher education institutions face difficulties and challenges when it comes to distance learning. The purpose of this paper is to examine self-efficacy indicators and student satisfaction during online English classes.
Background	E-learning has been very relevant since the Covid-19 era and is still relevant today. It is possible for students to study regardless of their location or time. By measuring students' self-efficacy, instructors can gain valuable insights into their students' ability to create social interaction, cope with technology, and acquire knowledge and tools to manage the learning process.
Methodology	This study uses mixed methods along with two measurements. Before and after the course, quantitative and qualitative data were collected. Higher education students in Israel participated. A total of 964 students enrolled in English as a foreign language courses at the pre-basic, basic, and advanced levels.
Contribution	Analyzing self-efficacy from several angles provides insight into students. What influences students' confidence and belief in their ability to succeed in online courses. Moreover, how students perceive their own learning and how they cope with challenges.
Findings	Compared to the measurement before the course, self-efficacy decreased on average. Most significant decreases occurred in 'creating social interactions' and 'acquisition of knowledge and tools' to manage the learning process. A slight decrease was observed in the ability to cope with technology. Additionally, self-efficacy and satisfaction with the course were positively correlated.

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Recommendations for Practitioners	An overview is provided of the most effective tools and techniques for teaching languages in digital format in this paper. This will allow instructors to design and deliver courses in a more effective way. Thus, they will be able to make better informed decisions, resulting in better outcomes for students.
Recommendations for Researchers	Distance Learning courses should resemble the common digital environments in everyday life, rather than imitating face-to-face courses mainly in the field of social interaction.
Impact on Society	Digital tools should be encouraged that facilitate effective learning processes instead of sticking to traditional methods that characterize face-to-face courses. Using common interfaces in daily use among the general population will enable the implementation of these recommendations.
Future Research	Future studies could be helpful if they compared the English courses developed in the CEFR model with those taught face-to-face as well as those taught online. In addition, motivation and self-monitoring should be examined in both synchronous and asynchronous courses as well.
Keywords	information and communication technology (ICT), 21st century abilities, social emotional learning, distance learning, digital environment, e-learning

## INTRODUCTION

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In 2019, the Council for Higher Education in Israel approved a reform of English studies in academic institutions. Universities and colleges will be required to adopt a European standard for English studies, Common European Framework of Reference - CEFR, by 2025 as part of the reform. Additionally, all students starting to study in the higher education system from 2022 will have to take two English-taught courses during their undergraduate studies (The Council For Higher Education, 2019). The CEFR - Common European Framework of Reference, is an international standard for describing language ability. Language ability is graded on a scale of six points at three levels: 'Pre-basic' A1 and A2 for beginners, 'Basic' B1 and B2, and 'Advanced' C1 and C2 for masters. Each level consists of four skills: reading, writing, listening, and speaking (Cambridge English, 2019). CEFR does not prescribe a specific pedagogical approach. This approach views language as a tool of communication rather than as a subject of study, and learners as language users and social agents. According to the CEFR, language learning should allow learners to act in real situations, express themselves, and accomplish meaningful tasks. Therefore, the criterion is communicative ability in the real world (Council of Europe, 2020).

This study aims to examine (1) self-efficacy in creating social interaction, coping with technology and acquirement of knowledge and tools to manage the learning process as well as (2) degree of satisfaction in students who have taken online English as a foreign language courses in higher education, based on the CEFR model.

The research question: Are there differences among students in self-efficacy in creating social interaction, and coping with technology, between the first measurement before the course begins, and the second measurement when the course ends. Also, what are the students' satisfaction levels and what are they satisfied with when taking the course?

## BACKGROUND

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### *LEARNING ENGLISH AS A FOREIGN LANGUAGE*

Cognitive development and native language proficiency is important in foreign language acquisition (Collier, 1989). Learning English has three main motivations: (1) to provide short- and long-term benefits, (2) to increase personal development and autonomy, and (3) to satisfy contextual social

needs. Motivation to learn English in a digital environment is influenced by external motives, such as academic requirements, which also influence internal motivation. Despite the fact that some students felt the teacher was accompanying them online, they note the loneliness, lack of immediate response, and prefer face-to-face learning (Fandiño et al., 2019). It has been shown that social isolation contributes to depression and anxiety (Hortulanus et al., 2006) and may lead to withdrawal, burnout, or dropping out (Ali & Smith, 2015).

Students' attitudes and their English language achievement show a low positive relationship (Fakeye, 2010). It is also found that academic ability and achievement in English are related. Although there was a low positive correlation, teachers were advised to develop effective teaching and learning strategies in order to foster students' positive attitudes towards English. According to Ozverir et al., Osam (2016), learning English in an authentic context is important. In studies, attitudes towards and motivations for learning a foreign language influence the acquisition of a foreign language. (Dubiner, 2012). Based on a review of articles in the field of motivation and learning, a learner with a positive attitude towards language studies is motivated to invest in language studies, and motivation helps a learner succeed (Masgoret & Gardner, 2003). Academic motivation refers to academic performance and success (Schunk, 2008) and has a significant positive relationship between student motivation and academic performance (Rotgans & Schmidt, 2012; Sogunro, 2017).

### ***SELF-EFFICACY***

Bandura (1986) and Schunk (1984, 1989) define self-efficacy as the individual's judgment regarding his abilities to organize and successfully carry out tasks and actions. The researchers write that self-efficacy affects the choice of activities, the effort and the persistence of the learner. Those who have a self-efficacy concept invest higher effort and persistence than those who doubt their ability. Self-efficacy stems from previous experience, receiving feedback and physiological arousal. If the student feels that he will succeed in completing an assignment, self-efficacy increases, and if not, self-efficacy decreases (Bandura, 1995; Schneider & Preckel, 2017). A person may perceive the situation as 'positive' or as 'stressful' in an encounter with an environment. This cognitive process is influenced by three factors: (1) the characteristics of the situation - the extent to which the situation is familiar or ambiguous; (2) factors that relate to social norms: requirements, values and customs; and (3) factors related to the person's personality (Lazarus, 2000). As for an online learning environment - it is a space filled with emotions. Learners report frustration, anger, rage, joy, enthusiasm, satisfaction, boredom, envy, hatred and liking for this learning (Brown et al., 2015).

### ***ONLINE LEARNING***

The term online-learning refers to the process of learning via a digital teaching system that connects learners and teachers who are physically separated. Because of its dynamism and variety of possibilities, online environments enhance the learning process; foster interpersonal communication skills; encourage cooperation and space division; provide a variety of exciting and varied learning and sharing opportunities since there is no time or space limitation (Akram et al., 2021; Ellis et al., 2021; Elumalai et al., 2020; Feenberg, 2010; Mahler, 2012; Zilka, 2021, 2022; Zilka et al., 2021); it involves exploratory learning, combining texts (visual, auditory, and verbal), and high-level thinking tasks (Cole et al., 2014; Mbatl & Minnaar, 2015). However, physical separation between a teacher and a learner can lead to 'transactional distance'. This term, coined by Moore (1993) refers to the psychological or communicative space that separates teacher from learner. This space may generate feelings of threat, anger, gaps in understanding, or misconceptions about the learners' capabilities and learning process. Moore argues that psychological or communicative space is not a fixed factor, but a variable that can be reduced. In fact, the literature review found positive aspects of online learning, including flexibility and convenience, improved interaction with the lecturer, and a positive overall learning experience. As well as concerns about technology and workload (R. Cohen et al., 2019;

Valenta et al., 2001). According to Rahimi and Zilka (2022), Rahimi et al. (in press), and Rahayu (2020), students were positive about Zoom learning.

In English studies, learning English online with technological tools allows for reflection, access to materials, and creating content. By using Google Forms and TED lectures, one can listen to academic lectures and search the Internet. Therefore, the lessons become stimulating, innovative, and enriching (Petrovic, 2021). According to students of online English studies, online forums are effective and convenient learning tools. They improve the language level and the exchange of cultural knowledge (Liu et al., 2020). Conversely, students from native languages other than English prefer face-to-face instruction (Cuasialpud-Canchala, 2010). With a digital environment, students can share and learn across time and place (Feenberg, 2010; Mahler, 2012). A digital environment refers to Information and Communication Technology (ICT) accessibility to content platforms, the Internet, computers, and other devices. Sources of information: materials with multiple representations (text, motion, sound, video, etc.); hypertexts; illustrations by means of images, simulations, etc.; Interactive environments for developing knowledge in a friendly and creative way, and environments with various sources of information such as data processing programming and more.

The aims of this study are to assess the self-efficacy and satisfaction of students learning English in online courses in higher education according to the European CEFR model. This will be accomplished by (a) examining differences in self-efficacy before and after the course, in parameters of creating social interaction, coping with technology and acquirement of knowledge and tools to manage the learning process. (b) Measuring the satisfaction of the students after the course, quantitatively and qualitatively.

The research question: Are there differences among students in self-efficacy in creating social interaction, and coping with technology, between the first measurement before the course begins, and the second measurement when the course ends. Also, what are the students' satisfaction levels and what are they satisfied with when taking the course?

## STUDY DESIGN

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### *DATA COLLECTION AND ANALYSIS*

#### **Methodology**

The research is a mixed-method study (Denscombe, 2008) from data collected in 2021-2022 in two measurements. First measurement before the start of the course, and second measurement after the end of the course. The subjects answered the questionnaire that contained open and closed questions by Google Forms questionnaires and statistical analyzes were made. In this study, including the quantitative and the qualitative, triangulation was crossed and completed, and a broad and deep picture was obtained extending to the studied issue (Denscombe, 2008).

#### **Participants**

This research group is composed of students who studied English as a foreign language in 2021-2022 at Israeli higher education institutions. The course was attended by 964 students, 637 before taking the course and 327 after. Both have the same proportion of demographic data: 62% women and 38% men. 62% under 25 and 38% older than 25. Pre-basic courses (A1, A2) were studied by 57% of students. The basic (B1+2) course - 19% and 23% studied an advanced level (C1) course. A link to an anonymous questionnaire was sent to all students who studied the relevant courses, some students answered the questionnaire, out of choice.

## The research

The course "English as a Foreign Language for BA Students" (Rahimi ,2022) designed according to the European teaching method (CEFR) by flex model of learning, in accordance with the Council for Higher Education in Israel guidelines. This course is produced by K2P-Knowledge to People, a techno-pedagogical professional body.

The students in the research studied the courses in the first semester of fall 2021/2022 according to their course level. The course is taught in an asynchronous online format that includes significant self-learning aspects. In addition, three synchronous 3-hour support sessions were provided.

Distribution and data collection occurred on two different dates: (1) October 2021, a week before the first semester, a self-efficacy questionnaire was distributed. (2) In February 2022, a week after the first semester ended, self-efficacy and attitude-satisfaction questionnaires were administered. Students were instructed to fill out the questionnaire anonymously, and their answers were to only be used for research purposes.

In the questionnaires, the students were asked about their attitudes towards the course structure, the teaching method and the internet interface. (1) Quantitative section of multiple choice and statements to rate. (2) Qualitative section of open-ended questions (Table 1). Based on the questionnaires, a study was conducted and its findings are presented below.

**Table 1: End-of-course questionnaire structure**

Subject	Type of question		Total
Demographic			
Self- Efficiency	Closed	Rating scale, Likert	4
<u>Attitude-Satisfaction:</u>			
Quantitative	Closed	Rating scale, Likert	4
Qualitative	Open		4
Learning tool	Closed	Multiple choice	1
	<b>Total</b>		<b>13</b>

## Tools

Questionnaires are used as a research tool as follows:

1. **Demographic questionnaire.** Age, gender, marital status, number of children, social sector and course level.
2. **Self-efficacy.** The questionnaire measures the perception of the ability to learn according to Bandura's model (Bandura, 1986). Students are asked before the course how they feel about the elements they will encounter, then at the end, how they feel about the course elements. These questions referred to four parameters of self-efficacy: creating social interaction, coping with technology and acquirement of knowledge and tools to manage the learning process. On a scale of 1 to 5, 1-Not at all, 2-Only a little, 3-Neutral, 4-Rather much, 5-Very much. The reliability of the factors was tested using Cronbach's alpha coefficients and good internal consistency was found (Cronbach's  $\alpha = 0.90$ ).
3. Attitudes and satisfaction questionnaire consists two subparts which are based on questionnaires by A. Cohen et al. (2020), and Fox (2020):

**Quantitative section.** Rating of statements on a Likert scale: 1 - 'Less Satisfied', 2 - 'Neutral', and 3 - 'Satisfied'. The statements: (1) I would like to take more online English courses; (2) I

would recommend this course to a friend; (3) I understand what is expected of me; (4) I understand the course's requirements and how to use it.

**Qualitative section.** The four open questions: (1) Share your positive experiences on the course. (2) Share your negative experiences on the course. (3) What emotional and social conflicts have you encountered during your course? (4) What are your most meaningful experiences from the course?

4. **Learning Tools.** A question asked, "Which learning materials contributed to your learning on the site?" The student could select more than one answer from the following options: podcast and practice; watching a video and practicing speaking; vocabulary; articles for reading and practice; interactive activity; videos on skills; none.

### Data analysis

An analysis of quantitative data was conducted to gain insight into self-efficacy, student attitudes and using learning tools. The descriptive statistics and analysis were conducted using the R programming language version 4.2.0 for closed questions. In addition, a qualitative analysis was conducted regarding the satisfaction with the course. The answers to the open questions were 90% agreed upon by two researchers. No implicit attributions are used for variable definitions, only explicit attributions.

Analysis of qualitative took place in a spiral manner, the basic elements found at the beginning of the process, became thicker and prominent recurring trends were identified (Glaser & Strauss, 2012). The processing of the data for deaths is done in three stages (Galletta, 2013):

1. Open coding, in this process the concepts in the collected data were located and defined.
2. Axial coding, at this stage the concepts were grouped into categories, in the process of merging and separating and finding connections between the concepts.
3. selective coding, at this stage themes were formulated and all the data that did not converge to the found themes were screened.

## FINDINGS

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### *MEASUREMENTS*

#### **Self-efficacy**

In this section, the findings for self-efficacy will be presented in a comparison between the two measurements, use of learning tools and attitudes-satisfaction. Based on the distribution of the answers given by the students in the two measurements, the parameters of self-efficacy (Bandura, 1982, 1986, 1995) were analyzed and their statistical significance was checked using the t-test.

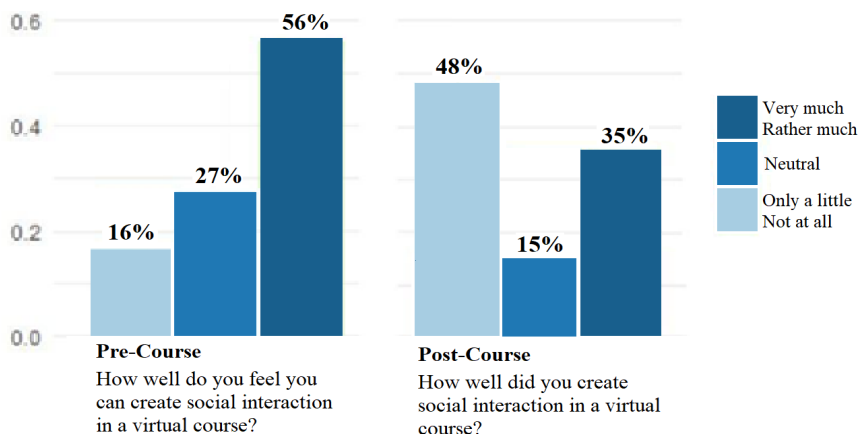
Measuring self-efficacy involves measuring our abilities to perform tasks and considering the results. This is the extent to which an individual believes he is capable of facing challenges and difficulties. Before the course begins, students are measured on how they perceive themselves, their abilities, and their behavior. After completing the course, a questionnaire measured the emotions toward the course tasks. To determine whether self-perception has changed, the gap between the two measurements is analyzed.

The questionnaires measured social self-efficacy as well as the acquirement of knowledge and tools to manage the learning process through questions formulated as follows:

Before the course: How well do you feel you **can accomplish** the following in a virtual course?

After the course: How well did you **accomplish** the following in a virtual course?

Figure 1 shows the distribution of responses related to social interaction.



**Figure 1. Respondents' frequency of referring to their ability to create social interaction before and after the course**

Table 2 presents Distribution creating social interaction, coping with technology and acquirement of knowledge and tools to manage the learning process. For illustration purposes, we combined those who answered positively 4 and 5 (4-Rather much, 5-Very much) to one bar and those who answered negatively 1 and 2 (1-Not at all, 2-Only a little). For statistical analysis, the original rating remains unchanged. Results show a gap between students' self-perceptions before and after they faced the course assignments. Before the course, the percentage of positive respondents decreased on all parameters of self-efficacy compared to after the course. Social interaction (Figure 1) decreased by 12% after the course. About half of the students thought that creating social interactions would be high during online classes, but only a third felt that such interactions occurred. The other parameters of self-efficacy also showed a similar trend (Table 2). Despite 71% believing they could handle the course's technological components, the percentage of positive feelings dropped to 61% during the course. According to the parameters of acquirement of knowledge and tools to manage the learning process, about 75% expected to acquire these tools during the course, but after the course, about 45% did. A third of participants reported that they didn't acquire enough knowledge and tools for managing their learning compared to only 4% who didn't expect more.

**Table 2. Respondents' frequency of referring to their coping with technology and acquirement of knowledge and tools to manage the learning process before and after the course.**

Subject	Pre-Course How well do you feel you can accomplish the following in a virtual course?		Post-Course How well did you accomplish the following in a virtual course?	
	Highly	Lowly	Highly	Lowly
Coping with technology	71%	6%	61%	19%
Knowledge acquirement	76%	3%	47%	28%
Acquirement of tools to manage the learning process	73%	5%	46%	31%

Table 3 presents statistically significant t-tests for the four parameters and their means and standard deviations. It appears that the differences between before and after are real and do not fall within statistical error.

Measuring ‘creating social interaction’ before the course indicated a higher self-efficacy for interaction than after the course, significantly:  $t(385) = 4.22, p < 0.000$ . In other words, interaction was perceived as more likely to occur as compared to how it actually was during the course.

Measuring ‘coping with technology’ before the course indicated higher self-efficacy than after the course, significantly:  $t(496) = 2.81, p < 0.005$ . In other words, the perception of coping with technology was higher compared to how it actually was during the course.

Measuring ‘Knowledge acquirement’ before the course indicated higher self-efficacy than after the course, significantly:  $t(417) = 7.89, p < 0.005$ . In other words, the perception that knowledge would be acquired was higher compared to how it actually was during the course.

Measuring ‘acquirement of tools to manage the learning process’ before the course indicated higher self-efficacy than after the course, significantly:  $t(404) = 6.14, p < 0.005$ . In other words, the perception that learning management tools would be acquired was higher compared to how it actually was during the course.

**Table 3. Analyzing the significance of differences in self-efficacy before and after the course**

Subject	Pre-Course N = 637		Post-Course N = 325		t
	Mean	SD	Mean	SD	
Creating social interaction	3.71	1.14	3.29	1.32	<b>4.22*</b>
Coping with technology	4.02	0.95	3.80	1.19	<b>2.81**</b>
Knowledge acquirement	4.11	0.83	3.47	1.25	<b>7.89*</b>
Acquirement of tools to manage the learning process	4.05	0.88	3.54	1.26	<b>6.14*</b>

*p* < .000\*, *p* < .005\*\*

Additionally, we analyzed changes in self-efficacy by age group (Tables 5) and course level (Tables 4) to see if they differed from the study group overall.

The outcomes analysis according to the course levels (Table 4), indicate high self-efficacy before the course compared to afterwards. These patterns appear in the three levels of the course. (1) ‘Pre-basic level’ measurements showed an average reduction of 7% in all four parameters after the course compared to measurement before the course. Except for ‘coping with technology’ where the results are not significant. (2) ‘Basic level’ measurements showed an average reduction of 10% in all four parameters after the course compared to measurement before the course. (3) ‘Advanced level’ measurements showed an average reduction of 9% in acquirement of knowledge and tools to manage the learning process after the course compared to measurement before the course. Insignificant results indicate that there are no differences in ‘creating social interaction’ and ‘coping with technology’ before and after the course.



**Table 4. Analyzing the significance of differences in self-efficacy before and after the course, by course level**

Course Type	Subject	Pre-Course N = 448	Post-Course N = 325	t	Sig.
		Mean (SD)	Mean (SD)		
<b>Pre-Basic A</b>	Creating social interaction	3.68 (1.13)	3.28 (1.31)	2.95	<b>0.000</b>
	Coping with technology	3.94 (1.00)	3.81 (1.20)	1.13	0.261
	Knowledge acquirement	4.03 (0.87)	3.41 (1.24)	5.55	<b>0.000</b>
	Acquirement of tools to manage the learning process	4.02 (0.88)	3.43 (1.22)	5.21	<b>0.000</b>
<b>Basic B</b>	Creating social interaction	3.83 (1.21)	3.33 (1.27)	2.21	<b>0.030</b>
	Coping with technology	4.24 (0.80)	3.73 (1.30)	2.59	<b>0.011</b>
	Knowledge acquirement	4.16 (0.78)	3.51 (1.30)	3.32	<b>0.001</b>
	Acquirement of tools to manage the learning process	4.03 (0.82)	3.69 (1.31)	1.70	<b>0.093</b>
<b>Advanced C</b>	Creating social interaction	3.62 (1.14)	3.29 (1.42)	1.45	0.151
	Coping with technology	3.96 (0.98)	3.82 (1.09)	0.88	0.380
	Knowledge acquirement	4.17 (0.77)	3.60 (1.26)	3.19	<b>0.002</b>
	Acquirement of tools to manage the learning process	4.07 (0.88)	3.73 (1.28)	1.80	<b>0.076</b>

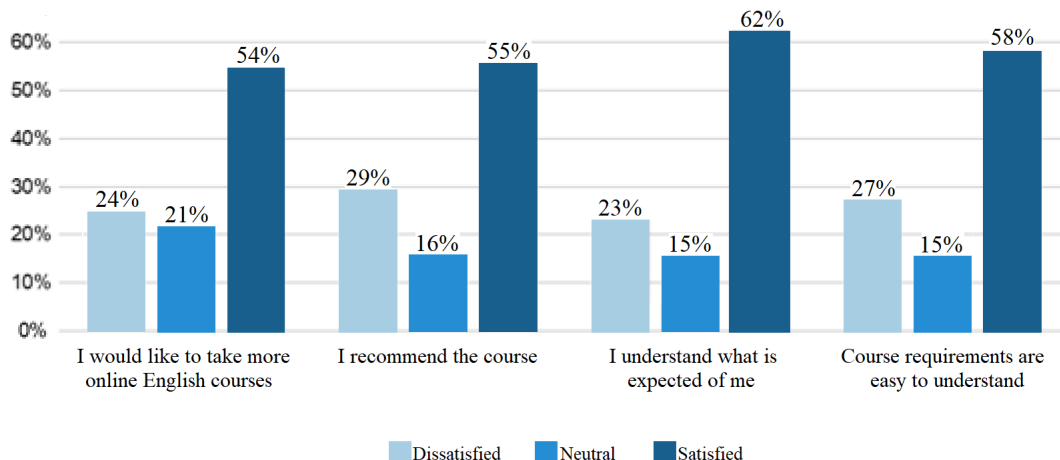
A further assessment was made based on respondents' ages. Self-efficacy was measured in two age groups: 18 to 25-year-olds, referred to as generation Z (Mitchell, 2008), and over 25-year-olds. The outcomes analysis according to these groups indicate high self-efficacy before the course compared to afterwards (Table 5). (1) 'Ages 18 to 25' measurements showed an average reduction of 10% in all four parameters after the course compared to measurement before the course. (2) 'Age 25 and over' measurements showed an average reduction of 9% in three parameters after the course compared to measurement before the course. The results of 'coping with technology' were not significant.

**Table 5. Analyzing the significance of differences in self-efficacy before and after the course by age**

Age	Subject	Pre-Course	Post-Course	t	Sig.
		Mean (SD)	Mean (SD)		
<b>Ages 18 to 25</b> N=394	Creating social interaction	3.69 (1.18)	3.27 (1.34)	3.338	<b>0.001</b>
	Coping with technology	4.02 (0.95)	3.70 (1.23)	3.044	<b>0.003</b>
	Knowledge acquirement	4.08 (0.87)	3.39 (1.32)	6.393	<b>0.000</b>
	Acquirement of tools to manage the learning process	4.02 (0.93)	3.48 (1.31)	4.893	<b>0.000</b>
<b>Age 25 and over</b> N=241	Creating social interaction	3.74 (1.08)	3.34 (1.29)	2.559	<b>0.012</b>
	Coping with technology	4.01 (0.95)	3.94 (1.12)	0.615	0.539
	Knowledge acquirement	4.15 (0.76)	3.62 (1.13)	4.383	<b>0.000</b>
	Acquirement of tools to manage the learning process	4.09 (0.78)	3.66 (1.16)	3.469	<b>0.001</b>

### Attitudes and satisfaction

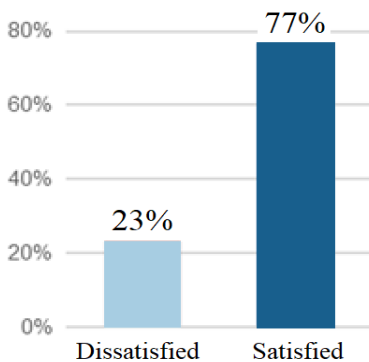
A satisfaction questionnaire was used to measure attitudes toward the course. A quantitative section with closed questions and a qualitative section with open questions. 'Satisfaction' refers to the course interface, its structure, the online teaching method, and the learning tools. The quantitative section presents descriptive statistics on the level of satisfaction. At the end of the course, students were asked to rate the following statements: Course requirements are easy to understand; I understand what is expected of me; I recommend the course; I would like to take more online English courses. The statements were ranked as follows: 1 - 'Dissatisfied', 2 - "Neutral" and 3 - 'Satisfied'. Figure 2 shows a similar frequency for all statements. The satisfaction rate is 55%-62%, and the dissatisfaction rate is 15%-21%.



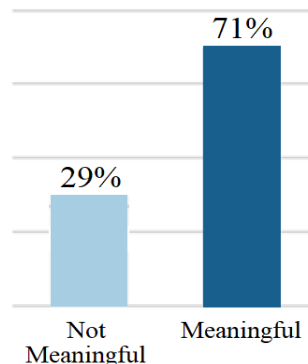
**Figure 2. The frequency of satisfaction measures reported by respondents after completing the course.**

The qualitative section uses open questions to measure student satisfaction. Since the questions were optional, 134 students answered. In order to conduct the analysis, data was extracted from the responses. The questions asked: (1) Share your positive experiences on the course. (2) Share your negative experiences on the course. (3) What emotional and social conflicts have you encountered during your course? (4) What are your most meaningful experiences from the course?

According to the students’ responses, 77% (103 students) were satisfied with the course (Figure 3a). In terms of course levels, 90% of those who took courses at the B and C levels (53 students) were satisfied. This percentage was also similar among students aged 30 and over (34 students). Flexibility is an important aspect of time management. This allows students to work and study at the same time. Among the 134 respondents who expressed satisfaction with the courses, 30 cited the time factor as a positive. Students said that they could study when it was convenient and without a schedule to follow, had a free hand in learning, practice options, flexible assignment schedules, and saved time. In addition, students were asked how meaningful the course experience was to them (Figure 3b). This was mentioned by 95 respondents. The courses were highly regarded by 71% of students, especially for improving vocabulary knowledge, reading skills, and speaking abilities.



**Figure 3a. General satisfaction among respondents**



**Figure 3b. Students who felt the course was meaningful**

## Learning Tools

Students were asked which tool they found useful for learning in the course (Figure 4). It was possible to choose more than one tool from a list. A majority of 83% said that at least one tool helped them, with about half marking 'reading texts and practice'. One third selected the video for learning speech, vocabulary, and podcasts. Ungraded enrichment activities, such as skill videos and interactives, are marked as less useful. Similar results are obtained by course level, social sector, or age.

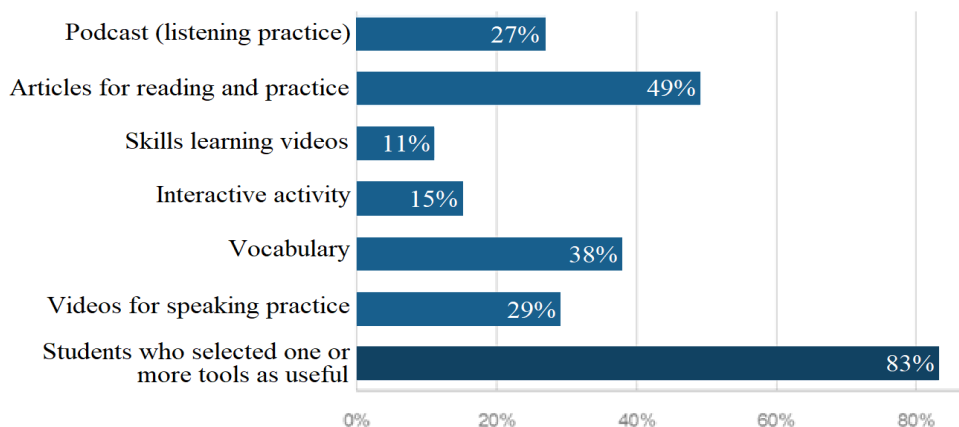


Figure 4. Frequency of the useful course tools according to the students

## DISCUSSION

In this study, self-efficacy was examined regarding English as a foreign language acquisition in higher education. Four aspects of self-efficacy were measured before and after the course: Creating social interaction, coping with technology and acquirement of knowledge and tools to manage the learning process.

### Self-efficacy

The results indicate a decrease in self-efficacy according to the measurements before and after the course. Prior to starting the course, the students were evaluated on how they perceived themselves, their abilities, and their behavior towards the course components. After the course, students were asked to share their experiences with the course components. The gap between the two measurements illustrates the change in the students' self-concept. Based on the results, the measurement of creating social interaction decreased by 21% between the first and second measurements (Figure 1). Also, 'coping with technology' decreased by 10%, and acquirement of knowledge and tools to manage the learning process decreased by 28% (Table 2).

**Self-efficacy in creating social interaction.** Pre-course perceptions of self-efficacy to create social interactions were higher than post-course (Table 3). This gap can be explained by their expectations of digital environments. Since students conduct digital interactions in social networks, it can be assumed that significant interactions were expected during the course. The question is, does the academy wish to promote a fruitful digital discourse through forums and applications in online courses as well as social interactions between learners? A social interaction is defined as the creation of a collaborative discourse space and educational discourse. It is a place where students feel comfortable expressing their opinions and needs. The presence of social presence enriches individual and group learning (Allen & Seaman, 2010; Engstrom et al., 2008; Zilka et al., 2018). Furthermore, it facilitates a feeling of security and closeness among students in online learning by narrowing the communication-psychological gap (Edwards et al., 2011; Holley & Dobson, 2008).

It was found that online learning environments had more extensive communication than face-to-face learning environments, since discussion forums encouraged dialogue and created a space for distributed cognition. Meaning, social interactions are significant and branching components in learning processes (DeGennaro, 2008; Gomez et al., 2010; Velasquez et al., 2013). Earlier studies have shown that lecturers who encourage learning communities increase social presence and reduce virtual distance (Edwards et al., 2011; Pittman & Richmond, 2008). During COVID-19 crisis, forums were not widely used and their potential for bridging the physical distance was not maximized (Aboagye et al., 2020; Kapasia et al., 2020; Zilka et al., 2021). For this reason, forums and virtual chat rooms should be integrated into online courses if the academy is seeking significant social interaction between learners. It would be helpful to use friendly discourse platforms like those we use every day. Additionally, lecturers must demonstrate teacher presence. Lecturers in face-to-face courses differ from those in online courses in a number of ways. Through teacher presence, cognitive and social processes can be shaped, community cohesion can be encouraged, and a social presence can be created (Garrison, 2007; Zilka et al., 2018) and also prevents feelings of social isolation (Fandiño et al., 2019).

**Self-efficacy in creating social interaction, coping with technology and acquirement of knowledge and tools to manage the learning process.** Pre-course perceptions of self-efficacy in coping with technology were higher than post-course and significantly so acquirement of knowledge and learning management tools (Table 3). Based on course level segmentation (Table 4) the trend is similar to the overall trend of the study group, but as the level of the course increases, the gap between the two measurements decreases, both in terms of significance intensity and in terms of significant indices. Segmentation by age (Table 5), defines two age groups. Generation Z, ages 18-25 (Mitchell, 2008) and ages 25 and older based on the assumption that Generation Z is technologically oriented, able to learn new things and has a high level of skill in online applications and services (Kohnová et al., 2021). According to the findings, both groups showed higher ability scores pre-course than post-course. A similar average ability score was found in Gen Z and over 25, pre-course, 3.95 - 4.00, and 3.46 - 3.65 post-course, respectively.

A high sense of self-efficacy regarding digital environments in everyday life may explain the gap in students' sense of self-efficacy, between the two measurements. The academic digital environment, however, is different. There is a need to bridge the gap between the environment used every day and the academic environment and apply adjustments. Studies have shown that learning in digital environments has a positive effect on the learning process. They see the digital environment as a resource of building and processing knowledge, Activating reflective metacognitive processes, self-direction processes, cognitive processes and emotional and differential processes (Livingstone & Sefton-Green, 2016; Talukdar & Gauri, 2011; Voogt & Pelgrum, 2005).

### **Attitudes and satisfaction**

In the post-course measurement, the students rated the statements about their satisfaction with the course. The findings (Figure 2) show 55% would recommend the course, and 54% would like to take more online English courses, 62% understood well what was expected of them in this course, and 58% found the course requirements are easy to understand. It is consistent with previous studies that students feel more comfortable taking an online course rather than a face-to-face one (Cuasialpud-Canchala, 2010) and that students' experiences with Zoom learning are positive (Rahayu, 2020; Rahimi & Zilka, 2022; Rahimi et al., in press). Moreover, 77% of respondents reported general satisfaction with the course (Figure 3a). Students who studied 'basic' and 'advanced' courses report a higher level of satisfaction, about 90%, as do those over 30.

Analyzing qualitative data reveals learning tools, the interface, the online method and the structure of the course all contribute to student satisfaction. Also, the practice options are convenient and accessible, and the recorded lectures can be listened to again and again. Students noted the well-designed

system and user-friendly interface that facilitate learning. Overall, the system produces good experiential learning. Negatively, students point out that the instructions and task order are sometimes unclear.

**Time management flexibility.** Students mentioned flexibility time management as a significant advantage. Studying and practicing at a time and place convenient to students is the added value of these courses, which allow students to work while studying. In the support sessions and in his performance, two thirds of respondents expressed positive opinions about the lecturer. It appears that online learning and support sessions are a combination that receives support from students. It confirms findings from previous studies (R. Cohen et al., 2019; Valenta et al., 2001) which found that flexibility in time management led to greater student satisfaction.

**A meaningful experience from the course.** 71% said that they found the course meaningful (Figure 3b). The respondents agreed that improving English knowledge was the most important thing, meaning that the language was gained well. Additionally, students indicated learning new things, especially vocabulary, reading text, speaking, practicing, and managing with unseen text were also important. Again, a high percentage of students over 30 found the course meaningful.

**Learning tools.** The use of ‘articles for reading and practice’ is the most common tool used for contributing to learning in this study (Figure 4), similar to face-to-face classes and less digital learning materials. It is essential to encourage the lecturers to integrate digital learning materials and students to use it rather than drawing on familiar learning materials from the frontal environment. A richer learning environment and a more effective learning process are provided by digital tools.

Based on this study and previous studies, we can conclude that online learning changes students’ attitudes toward learning in a digital environment. An individual’s behavior, lifestyle, thinking patterns, and the way in which he communicates with others change as a result of a digital environment. Likewise, his ability to locate and process information and the extent to which he needed it (Christensen et al., 2008; Katz & Rice, 2003; Talukdar & Gauri, 2011; Wareham et al., 2004; Zilka, 2016, 2019). In addition, researchers have discovered that the digital environment increases motivation among learners, academic and social engagement, and provides fascinating and diverse environments (J. Cohen et al., 2015; Jan et al., 2016; Johnson et al., 2011; Rahimi et al., 2019; Zilka et al., 2018). Clearly, students are becoming more aware of the advantages of digital learning environments over time and adopted learning habits appropriate to this environment.

## CONCLUSIONS

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Digital courses should resemble the common digital environments in everyday life, rather than imitating face-to-face courses mainly in the field of social interaction. Digital tools should be encouraged that facilitate effective learning processes instead of sticking to traditional methods that characterize face-to-face courses. Using common interfaces in daily use among the general population will enable the implementation of these recommendations.

This analysis can contribute to teachers as well as teaching guides. By utilizing the tools and techniques presented in this paper, instructors are able to design and deliver courses in a more effective manner. Therefore, a supportive learning environment can be created in order to enhance the learning process. It enables better informed decisions to be made for better student outcomes. An educator can provide opportunities for students to succeed in learning, help them build their self-efficacy, and motivate them to continue learning. By doing so, they will be able to build their confidence and continue to work hard. Furthermore, it identifies challenges, acknowledges students’ abilities, and reflects on their learning progress.

For researchers, Self-efficacy can be measured using validated instruments, ensuring reliable and valid results and enabling longitudinal studies to track self-efficacy beliefs over time. Additionally, it can be used to promote the development of self-efficacy studies in academic English courses.

## ***RECOMMENDATIONS***

### **for Practitioners**

An overview is provided of the most effective tools and techniques for teaching languages in digital format in this paper. This will allow instructors to design and deliver courses in a more effective way. Thus, they will be able to make better informed decisions, resulting in better outcomes for students.

### **for Researchers**

Distance Learning courses should resemble the common digital environments in everyday life, rather than imitating face-to-face courses mainly in the field of social interaction.

## ***IMPACT ON SOCIETY***

Digital tools should be encouraged that facilitate effective learning processes instead of sticking to traditional methods that characterize face-to-face courses. Using common interfaces in daily use among the general population will enable the implementation of these recommendations.

## ***FUTURE RESEARCH***

Future studies could be helpful if they compared the English courses developed in the CEFR model with those taught face-to-face as well as those taught online. In addition, motivation and self-monitoring should be examined in both synchronous and asynchronous courses as well.

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## AUTHORS

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**Ilan Daniels Rahimi**, DBA, is a faculty member at ONO Academic College, Israel. Lecturer, researcher, and Head of the Pre-Academic Studies. Rahimi's research focuses on E-learning fields: Implementation of E-learning systems, English as a foreign language course, CRM integration in academic instruction and challenges in post-COVID-19 higher education. The mainly studies aspects are- comparative examination of online, HyFlex, hybrid and face-to-face courses. And students' and teachers' coping with the transition to online learning. Ilan also lecturer on the integration of AI and Machine-Learning in E-learning, information systems and projects management.



**Gila Cohen Zilka**, Ph.D., Israel. Zilka is affiliated with Bar-Ilan University as lecturer and re-searcher, the Director of the Department for Teaching Social Science and Communication and with Achva Academic College as Head of the Academic Department of Education.

Zilka's research aims to explain the phenomenon of understanding the younger generation in all aspects relating to global changes following digital developments, in a digital age that crosses all boundaries.