

The Effect of Design Thinking in Hybrid Learning Environment on Developing the Required Persuasive Speaking Skills and Academic Self Concept for 4th Year English Section Students of the Faculty of Education, Helwan University

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Abstract

The study aimed at developing the required persuasive speaking skills and academic self concept for the 4th year English Section students of the Faculty of Education, Helwan University through using design thinking in hybrid learning environment. The participants of the study were 82 who represented the study group . They split into A-B teams as they alternate sessions between being at home and being in person . The study employed a persuasive speaking skills test and an academic self concept questionnaire . The necessary persuasive speaking skills and the academic self concept aspects were determined through the use of two checklists approved by a jury of specialists in teaching EFL. The experiment lasted for three months. The analytical descriptive method and quasi experimental design were followed. The statistical analysis of the obtained data from the two administrations of the test and two applications of academic self concept scale confirmed the effect of using design thinking in hybrid learning environment on developing persuasive speaking skills and academic self concept for the 4th year English students of the Faculty of Education, Helwan University. Thus, the aim of the study was achieved as using design thinking in hybrid learning environment showed a large effect size on developing persuasive speaking skills and academic self concept for the participants . Based on the results, it was recommended that teachers should give due attention to the development of persuasive speaking skills and academic self concept through design thinking in hybrid learning environment . In addition, using design thinking in developing other language aspects was suggested.

Keywords: design thinking ,persuasive speaking skills, hybrid learning environment and academic self concept

فاعلية التفكير التصميمي فى بيئة تعلم الهجين فى تنمية مهارات التحدث الاقناعى ومفهوم الذات الاكاديمى لطلاب الفرقة الرابعة شعبه لغة انجليزية كلية التربية جامعة حلوان

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مستخلص البحث :

هدفت الدراسة الي تنمية مهارات التحدث الاقناعى ومفهوم الذات الاكاديمى لطلاب الفرقة الرابعة شعبه لغة انجليزية كلية التربية جامعة حلوان باستخدام التفكير التصميمي فى بيئة تعلم الهجين والعينة تكونت من ٨٢ طالب من طلاب الفرقة الرابعة شعبه لغة انجليزية كلية التربية جامعة حلوان وقد تم تحديد المهارات وجوانب مفهوم الذات الاكاديمى تم تصميم الاختبار لمهارات التحدث الاقناعى واستبيان مفهوم الذات الاكاديمى استمرت التجربة ثلاثة أشهر استخدم المنهج الوصفى التحليلى وشبه التجريبي وتحليل النتائج قد تم التحقق من فاعلية التفكير التصميمي فى بيئة تعلم الهجين فى تنمية مهارات التحدث الاقناعى ومفهوم الذات الاكاديمى لطلاب الرابعة شعبه لغة انجليزية كلية التربية جامعة حلوان وقد اقترحت الدراسة أن يولي المعلمون الاهتمام اللازم لتنمية مهارات التحدث الاقناعى ومفهوم الذات الأكاديمي من خلال التفكير التصميمي في بيئة التعلم الهجين ، بالإضافة إلى استخدام التفكير التصميمي في تطوير جوانب لغوية أخرى لدي الطلاب المعلمين بكلية التربية جامعة حلوان.

الكلمات المفتاحية: التفكير التصميمي - بيئة تعلم هجين - التحدث إقناعي - مفهوم

الذات الأكاديمي.

Introduction

The goal of speaking English is to communicate messages . Learning how to speak English confidently is incredibly important for any student studying English. Language learners find speaking as a daunting process as they are able to socialize better and communicate effectively with others. To speak confidently, students need knowledge of vocabulary , sentence structure and pronunciation .So, the more students speak , the more comfortable they feel about speaking .

Singh (2020) stated that there are four types of speaking. First; ceremonial speaking which is an emotional speech that marks a major event or rite of passage. Second; demonstration speaking which is a form of informative when the speaker's primary desire is to teach the audience how to complete the task. Third; informative speaking which commonly centers on talking about people , events and informs audiences about them. Fourth; persuasive speaking which is the definite kind of speech . The speaker seeks to satisfy the audience to accept his/her *point of view*.

According to Bruno(2020), persuasive speaking is used when presenters seek to convince their ideas and persuade people to believe in a certain point of view. The speaker tries to influence the audience to think or behave in a particular way. The art of convincing others is propelled by reasoned argument . This argument is considered the cornerstone of persuasive speaking and consists of facts and narratives. It is employed to motivate audiences to think or behave differently than before hearing his speech .In planning persuasive speaking, it is important to understand what persuasion really is and how it is different from other types of speaking.

By analyzing the importance of persuasive speaking, it has become a common way of communication and part of the area about persuasion.Toolsharo(2014) emphasized the importance of persuasive speaking in the following:

- 1- Changing audience's opinions and providing knowledge about specific topic.
- 2- Providing feelings and impressions to the audience.
- 3- Allowing people to take a certain position and persuading them by their plans and visions .

Constructing persuasive speaking is the culmination of skills that have already been learned. It demonstrates to the audience how to do something. The speaker should build an argument, It forms around three components

- 4- The claim : it is the statement that is supported by evidence. The thesis is the overarching claim for the speech. The speaker makes other claims with the speech to support the larger thesis.
- 5- Evidence: it supports the claim. The main points of persuasive speech and supporting the materials serve as evidence.
- 6- The warrant: it is the underlying justification that connects the claim and evidence (University of Minnesota 2013).

According to Coleman(2003) ,there are three types of persuasive speaking that are used to convince the audience

- 1- Factual persuasive speaking: It is whether or not a particular topic becomes true and is backed by concrete evidence. It persuades the audience as to whether something exists or does not exist.
- 2- Value persuasive speech : It is a speech about whether or not something is right or wrong . It addresses the moral and ethical aspects of the topic.
- 3- Policy persuasive speech: it is used to convince audience to whether it supports or rejects a policy , rule or candidate.

Harlingen(2021) stated that of all the kinds of speaking, persuasive speaking is the most complex and challenging . In some persuasive speeches , students present controversial topics that simulate listener's basic attitudes, values and beliefs . This increases listener's resistance to persuasion . So, the task will be more difficult. In addition, the content itself may represent challenge as it can not only affect the audiences' knowledge but also their attitudes .They may be adamantly opposed to the speaker's point of view .

Generally ,improving students' persuasive speaking and being fluent while speaking requires students to achieve high level of self confidence and self esteem which are the main components of self concept . So,self concept is one of the most important factors that can affect learning a foreign language. Student needs to have a high level of self concept to afford the new situation and conditions of learning (Meshkat and Shahid 2015).

Rady et al (2016) stated that the prime relationship of persuasive speaking and communication to self lies in its function in the development of the self .In addition, the activities involved in persuasive speaking demonstrate more positive self concept (Blackwood and Douglas 2015).Self concept is the core of human personality . It refers to the totality of individual's perception about his/her physical , social and academic competence. It has multi dimensional construct , one general facet and part is academic self concept.

Hopce et al (2014) indicated that academic self concept refers to the personal beliefs someone can develop about academic abilities . It develops with mental and physical growths and begins to develop at early childhood. Moreover, it is a connection between how students feel about their capacity to develop new learning and understanding (learner self concept) and how they feel about their ability in school related tasks (student self concept). Learner self concept is analogous to learning goal orientation , students are focused on development and mastery . On the other hand, student self concept is analogous to performance goal orientation ,so students are focused on outcomes and grades in school.

Developing academic self concept is required for improving students' performance and achievement . Many strategies can be used that are based on students' participation in the learning (Herry ,Maltais and Mougeot, 2012). As students continuously exposed to new ways of thinking and doing ,they should learn to work fluidly with a wide range of processes . Design thinking is non liner ,iterative

and analytic process that engages individuals in opportunities to experiment, create and prototype models. It involves how they see and consequently think(Razzouk and Shute 2012).

Rudresh and Varghase (2019) assured that design thinking can be adopted in foreign language classroom to create better and interactive language instruction. It depends on treating cases through innovations and creative ideas. It helps teacher understand the act of creating reflective and intentional learning environment. It also helps in constructing students who are shapers of knowledge, not receivers of information. It begins from deep empathy , understanding of needs and motivation of learners. It is structured approach to generate and develop ideas. It is also so called as investigate learning as it is about believing that learners can make a difference and give a faith in creative abilities with them.

Kohls (2019) stated that as design thinking becomes more important in higher education ,it is necessary to think about ways to enable educators and students to learn about it and how to be applied . One approach is to create hybrid learning spaces with tools that support design thinking . Boyarsky (2020) mentioned that hybrid learning is an educational model where some students attend class in person while others join the class virtually from home . Educators teach remote and in person at the same time using tools as video conference.

Hudson (2020) indicated that the core principles of hybrid learning involve

- 1- Design for online : every student learns online at some points and uses in person time for coaching , conferencing or collaboration. This allows for online students to participate .
- 2- Design for equity : All students have access to high quality instruction and content. They should have opportunities to speak and be listened to and connected to teachers and peers

3- Design for active learning : It focuses on discussion, visible thinking, collaborative note taking and application .All tasks are powered by digital tools to allow students to participate and produce evidence of learning .

Charlotte (2020) indicated that the components of hybrid learning include:

- 1- Digital content : It can be used to find free resources for the course .
- 2- Digital videos: Teacher can use these tools to either find existing videos or create their own .
- 3- Canvas tools : They include
 - Canvas discussion forum to discuss concepts and issues asynchronously,
 - Canvas assignments : students turn in work to be graded either as individuals or in groups .
- 4- Synchronous learning tools :Through video conferences, students are allowed to have face to face style interaction .

Therefore, the researcher of the present study suggested using design thinking in hybrid learning environment for developing persuasive speaking skills and academic self concept for the 4th year English section students of the Faculty of Education, Helwan University .

Context of the Problem.

In spite of the importance of developing persuasive speaking skills and academic self concept for the 4th year English section students of the Faculty of Education, Helwan University , the researcher found that they had difficulty in persuasive speaking skills and academic self concept . To make sure of the existence of the problem she felt, the researcher did the following procedures:

• First : Interview

The researcher held informal interview with ten staff members of the Faculty of Arts and Education who taught those students. It aimed at identifying the following

- Realizing the importance of teaching persuasive speaking skills for those students
- The persuasive speaking skills that should be developed for the 4th year English section students of the Faculty of Education, Helwan University
- The methods and strategies used for developing persuasive speaking skills
- The methods and strategies that are suggested for developing persuasive speaking skills for those students

The results of the interview revealed that in the conversation course ,students were trained on speaking and expressing points of views. They were weak in presenting ideas with evidence and were not able to make argument with others . In general, they lacked most of persuasive speaking skills. They were not aware about the importance of developing persuasive speaking skills for those students . Seven of the ten staff members used teaching strategies which did not put emphasis on developing these skills. They used regular instruction that was based on choosing topics and asking students to present them. All of them assured that students were not given sufficient opportunities to practise the persuasive speaking skills and did not suggest successful strategies for developing persuasive speaking skills .

• Second : Administering a persuasive speaking test

The researcher administered a persuasive speaking test to 30, 4th year English section students of the Faculty of Education, Helwan University .It included two main questions . The first was “Choose the correct answer “ . It contained seven statements .The second was a topic to speak about” as students were asked to present the topic. 18

students could not pass the exam which referred to their weakness in persuasive speaking skills. So, there was a pressing need to develop them for those students.

- **Third : Using academic self concept scale**

To be more sure, the researcher of the present study applied an academic self concept scale for the same 30, 4th year English section students of the Faculty of Education, Helwan University because they were the available ones at that time . It included fifteen items concerning the different academic self concept aspects . The researcher found that 20 of the students had negative academic self concept .

- **Fourth : Reviewing Previous studies**

Some previous studies ensured that there was a weakness in persuasive speaking skills for the 4th year English section students such as Deda (2012) and the academic self concept as Villegas ,2013). So, having been sure of the existence of the problem , the researcher conducted this study in a trial of developing those skills for the 4th year English section students of the Faculty of Education, Helwan University .

Statement of the Problem

The problem of the present study is represented in the weakness of the required persuasive speaking skills and the a low academic self concept of the 4th year English section students of the Faculty of Education, Helwan University . Thus, in a trial of overcoming this problem, the present study attempted to use the design thinking in hybrid learning environment for those students in a trial of overcoming their problem of developing their required persuasive speaking skills and academic self concept .

Questions of the Study

In order to tackle the above problem, the present study attempted to answer the following main question:

- What is the effect of design thinking in hybrid learning environment on developing the required persuasive speaking skills and academic self concept for the 4th year English section students of the Faculty of Education, Helwan University?

From the main question, the following five sub- questions were derived:

- 1- What are the required persuasive speaking skills to be developed for the 4th year English section students of the Faculty of Education, Helwan University?
- 2- What are the required academic self concept aspects to be developed for the 4th year English section students of the Faculty of Education, Helwan University?
- 3- What is the proposed framework of using design thinking in hybrid learning environment for developing the required persuasive speaking skills and academic self concept for the 4th year English section students of the Faculty of Education, Helwan University?
- 4- To what extent will design thinking in hybrid learning environment develop the required persuasive speaking skills and academic self concept for the 4th year English section students of the Faculty of Education, Helwan University?
- 5- What is the relationship between developing persuasive speaking skills and increasing academic self concept for the 4th year English section students of the Faculty of Education, Helwan university ?.

Hypotheses of the Study

The present study hypothesized that :

- 1- There is a statistically significant difference between the mean scores of the study group students on the pre and post administrations of the persuasive speaking skills test at the level of (0.01) , in favour of the post administration of the test
- 2- There is a statistically significant difference between the mean scores of the study group students on the pre and post applications of the academic self concept scale at the level of (0.01) , in favour of the post application
- 3- The design thinking in hybrid learning environment is effective in developing each of the persuasive speaking skills for the 4th year English section students of the Faculty of Education, Helwan university .
- 4- There is a positive relationship between developing persuasive speaking skills and increasing academic self concept for the 4th year English section students of the Faculty of Education, Helwan university ''.

Aim of the study

The present study aimed at developing the required persuasive speaking skills and academic self concept for the 4th year English section students of the Faculty of Education, Helwan University through design thinking in hybrid learning environment .

Variables of the Study

The present study variables are as follows:

- 1- The independent variable : design thinking in hybrid learning environment
- 2- The dependent variable : developing the required persuasive speaking skills and academic self concept

In the present study , the researcher measured the effect of the independent variable (design thinking in hybrid learning environment) on the dependent variable (developing the required persuasive speaking skills and academic self concept) for the 4th year English section students of the Faculty of Education, Helwan University .

Delimitations of the Study

The present study was confined to

- 1- 82 , 4th year English section students of Faculty of Education, Helwan University. The reason for choosing this sample was because they would be graduated soon . So, there was an urgent need to improve their way of presenting ideas and expressing their points of views .
- 2- Developing only the required persuasive speaking skills (using ideas, attention , logical appeal, emotional appeal , confidence and engagement, delivery ,and invention and style) for the 4th year English section students of the Faculty of Education, Helwan University .

Significance of the Study

The present study significance lies in the fact that it attempted to develop the required persuasive speaking skills and academic self concept for the 4th year English section students of the Faculty of Education, Helwan University . It is hoped that the results of the present study would contribute to

- 1- Attracting the attention to the importance of developing the required persuasive speaking skills and academic self concept for the 4th year English section students of the Faculty of Education, Helwan University.
- 2- Providing a list of the required the required persuasive speaking skills and academic self concept aspects for the 4th year English section students of the Faculty of Education, Helwan University.

- 3- Encouraging the use of design thinking in hybrid learning environment for developing the required persuasive speaking skills and academic self concept for the 4th year English section students of the Faculty of Education, Helwan University.

Definitions of terms

Design thinking

Torabi(2020) defined design thinking as a powerful approach in helping people envision new opportunities and become comfortable with uncertainty. It provides process to experiment with and learn how to uncover creative insights and innovative solutions following clear and guided process consequently transforming regular people into creative ones.

Stuart (2021)defined design thinking as an iterative user centric process that seeks to understand the user , challenge traditional assumption and redefine problems in an attempt to identify alternative strategies and solutions.

In the present study, design thinking is defined as a process that includes six steps including warm up, empathy, define, ideate, prototype and test .They are based on organizing and planning the students ‘ thoughts to reach innovative solutions

Hybrid learning

Klimova and Keati (2015) defined hybrid learning in foreign language learning as it is a combination of traditional face to face teaching and computer assisted language learning .

Sharen (2020) defined hybrid learning as it is a way of combining traditional classroom experiences , experiential learning objectives and digital course delivery that emphasizes using the best option for each learning objective

In the present study ,it is defined as using face to face instruction with online at the same time for the participants . It provides facility

in place and time. Using-only the split AB model of the hybrid learning as students were divided into two teams A and B . They alternated each week between being at home and being in person

Persuasive speaking

Baker and Marlinson (2021) defined persuasive speaking as a specific type of speech in which the speaker has a goal of convincing the audience to accept his or her point of view. The speech is arranged in such a way as to hopefully cause the audience to accept all or part of the expressed view.

Mapes (2021) stated that persuasive speaking means addressing a public controversy and advocating for a perspective that speaker hopes the audience will adopt.

In the present study ,persuasive speaking skills are the abilities of convincing others to accept the other's point of view using body language as inventions, style, logical appeal and emotive appeal.

Academic self concept

Kadir and Yeung (2016 ,p 1118)defined academic self concept as” personal beliefs about academic abilities or skills ‘’.

Trautwein (2016,p 853) defined academic self concept as “one's academic self perception or one's perception of one's general ability in school”.

In the present study, academic self concept is defined as 4th year English section students' perspective of their abilities in their academic studies at the Faculty of education, Helwan University.

Theoretical background

It is divided into four parts as follows

First: : Design Thinking

Laurent et al (2017) stated that design thinking is half way between analytical thinking and intuitive thinking. Analytical thinking involves deductive reasoning and inductive logical reasoning that use quantitative way to come to conclusions. On the other hand,

intuitive thinking refers to knowing something without any kind of reasoning. Thus, design thinking makes use of both the extremes in an optimum manner . The intuitive thinking helps in invention for the future while analytical thinking is used to make something creative in the present which is applicable.

Design thinking involves two types of thinking

- 1- Divergent thinking : It is the process of designing more than one solution . It refers to the thought process of generating creative solutions and free flowing chain of ideas . It happens in a non linear manner.
- 2- Convergent thinking :It is exactly opposite of divergent thinking . It requires to go through all the possible solutions and come up with correct solution . It requires speed , accuracy and logical reasoning (Liedtka and Oglivie, 2011) .

Misconception of design thinking

Malhotra(2020) stated that the misconceptions of design thinking include the following assumptions:

- 1- Focus on learning ,not final deliverable : It is said that design thinking does not involve learning . This is not true as it is based on exploring different ideas and eliminating the inappropriate ones before doing effort into refining them.
- 2- Design thinking is not linear : There is a common misconception that design thinking is a linear process and uses step by step model .it is not true as it is non linear and can begin at any stage.
- 3- Think like child : It is said that design thinking has limits .But, it is not true as it aims to remove all constraints . Thinking like a child eliminates these constraints and creates endless possible solutions and ensures that no one feels that his/her idea is out of reach.

- 4- -It can be measurable : There is misconception that design thinking can not be measurable. It is not true as measuring success is an important part in implementing it .There are some ways to measure design thinking as follows:
- a- The number of people up skilled and coached in design thinking
 - b- The number of projects that applied it and the impact of design thinking on employee satisfaction , determined through surveys and feedback from project
- 5- Design with people , not for them : It is said that design thinking does not care about and involve people. It is not true. It is about developing a deep connection with people involved. The best solution results when input from different perspectives can include potential users.

Foundation of design thinking

Design thinking draws on methods from engineering and design . It connects them with ideas from Arts , tools from the Social Sciences and insights from the Business work. It can be used to address a huge range of challenges in a variety of different disciplines . Mason (2020) mentioned that design thinking is not one thing ,it is bundle of mind sets and philosophies in one term.

Peter Rowe 1987 first introduced the concept in his book Design Thinking. He describes the concept in the context of Architecture and urban planning challenges. It is used as a process or a method which has been planned to various disciplines including education. For education , it is a creative process that helps in designing effective solutions in classroom (Morrism,2014).

Fredrickson (2017) stated that design thinking in relation to education has its historical roots in constructivist approach. Constructivist thinking immerses the learners in the context of the teaching environment. While constructivism played an effective role ,thinking research . Simon 1969 planned the ground work for modern

research .He authored insightful design centered theories that reverberated across the scientific fields of organizational theory . Simon's design thinking includes seven stages ; define, research, ideate, prototype ,choose, implement and learn .

Features of design thinking

Roterbery (2018) identified features of design thinking as follows:

- 1- Being an integrative approach as the process of solving the problem is considered together with its framework conditions,
- 2- Emphasizing empathy : The central element is to put oneself in the position of the user and observe him/her in details,
- 3- Striving to make ideas tangible at a nearly stage .So, prototypes must be created as quickly as possible,
- 4- Consisting of frequent iteration loops between the development phases . The return to a previous phase reflects the learning success,
- 5- Directing attention to the diversity of the participants . It combines knowledge, experience and perspectives of a team of different careers with different ages and gender,
- 6- Creating team oriented and creative work spaces .They involve the spaces for individual work and the spaces for group,and
- 7- Combining analytical phases (collecting , organizing and evaluating)and synthetic phases (developing , testing and improving solutions).

Rules of design thinking

There are four rules of design thinking process

- 1- The human rule : Design is social nature problem that should be solved in a way that satisfies human's needs and acknowledges the human elements
- 2- The ambiguity rule : It is inevitable experiment at the limits of people's knowledge .It is the limit of ability to control events with the freedom to see things in a different light.

- 3- The re- design rule : All design is redesign . Technology and social circumstances evoke to understand how human needs were met in the past.
- 4- The tangibility rule: It involves making ideas more tangible to facilitate communication. This refers to creating prototypes (Brown, 2020).

Modes of developing design thinking

Wise (2016) stated the four modes for developing design thinking as follows:

- 1- Leading with empathy : It involves pushing someone to get closer to people and to do so consistently with conviction.
- 2- Challenging assumptions : It means when individual confronted with a problem ,s/he seizes the opportunity to do better than what s/he has done before.
- 3- Making experiments happen: It means individuals try something and learn from it.
- 4- Sharing process: Design can not thrive in isolation. Individuals share what is hard as they share empathy and share what they have learned.

Stages of design thinking

Curedale ,(2013)identified the following seven stages of design thinking

- 1- **Empathy**: involves the work students do to understand people within design challenge and the idea that they seek to achieve.
- 2- **Define** : includes identifying the actual problem to reach the right solution .A designer should be self motivated and focused to find direction.
- 3- **Ideate** : involves generation of ideas as it starts from concepts and goes to outcomes .The designer takes the idea and puts it on a paper in countless ways.

- 4- **Prototype** : deals with testing ideas which provides a ground for comparison .It is tested not only for design but also for functionality which is the essence of design thinking .
- 5- **Select** : includes picking one of the proposed designs when suiting with the purpose .
- 6- **Implement**: involves passing the artwork and format to those who will be supplying the final product.
- 7- **Feedback** :involves identifying what worked well and how to improve it when needed.

The characteristics of design thinker

Razzouk and Shute (2012)identified the following characteristics of design thinkers

- 1- **Human and environment centered concern**: They should consider what is being created with regarded to human needs ,
- 2- **Ability to visualize** : They see the world from their points of views and can see each other more clearly as human beings ,
- 3- **Predisposition toward multi functionality**: They should look at multiple solutions to the problem,
- 4- **Systematic vision**: They should deal with problems as system problems with opportunities for systematic solutions,
- 5- **Using language as a tool** : They should be able to verbally explain their creative process forcing invention,
- 6- **Affinity for team work**: They should develop interpersonal skills that allow them to communicate across disciplines and work with others,and
- 7- **Avoiding the necessity of choice** : They search competing alternatives before moving to choice making.

Ways of using design thinking in English classroom

Mud and Ink Teaching (2012) mentioned different ways for using design thinking in English classroom in the following

- 1- Research : the scope of the research starts with posing the problem through the brainstorming process, teacher asks students to list possible solutions to research.
- 2- Fiction: Through story, fictional characters face problems and conflicts .So, design can be applied to these issues .Teacher asks them how to solve the problem and find solution through Socratic seminar or writing.
- 3- Rhetorical analysis : Teacher asks students about the speaker ,purpose , the audiences and how to convince them. Design thinking helps students look at the argument and in creating the way a product is being pitched to the audience.
- 4- Project based learning : students begin by selecting the issue and try to find a solution. Teacher can know what belongs in the introduction of the writing and a clear line of reasoning all the way down to the conclusion.

Assessment of design thinking

When assessing design thinking, teachers ask themselves whether they assess the finished product or the process. As for the finished product, students assess their creative process in the design cycle in self assessment . They rate how well they are able to accomplish the tasks. The aim is to master the standards that teachers are teaching . They use a standards based Grid to know exactly what standards they master .On the other hand, assessing as process is something different. Teacher identified standards as students progress through the project. They fill out formative feedback in the mastery level category during each step of the project. They provide feedback to help students improve their performance (Juliani,2020).

Challenges of design thinking

Students' difficulties when exposed to education focusing on design thinking are

- 1- Integrative approaches are not straight forwardly implemented .They included approaches where developed knowledge, established development models and new knowledge.
- 2- A more holistic view in education where soft capabilities are trained to provide for a change in thinking .
- 3- Social competence as making use of design thinking requires collaborative skills (Ericson et al , 2009) .

Generally, design thinking requires students to immerse themselves in the experience of those who are impacted by social challenge.

Singh (2020) identified the challenge of design thinking in the following

- 1- Calling for the need to develop human centered approach that takes into account technology considerations .
- 2- Bringing clarity and establishing focus on the design. It is an explicit expression of the problem. It uses three elements use. Insight and need.
- 3- Starting from concepts and going to outcomes requires the broadest set of ideas .There are three ways to do this sketching , mind mapping and body storming.
- 4- The winning design should meet the design brief and cover a significant part. So, it should be prominent , convincing and unique.
- 5- The production specifications are finalized and designs are given the shape of reality . It is iterative process that should be tested , measured and reflected.
- 6- It is an open ended communication . It picks inadequacies in the brief and deduces what aids the feedback process and how to strength the relationships .

Second :Hybrid learning environment

Miller (2020) indicated that during hybrid learning, students do some work on their own outside of an in person experience .They have experiences in a face to face setting. The class is designed to present the content in both virtual and in person experiences.

Some researchers used blended learning and hybrid learning as the same as they contain many of the same instructional elements .However , both are two distinct learning models (Boyarsky ,2020). Blended learning is an educational model where all students attend class in person .They engage in asynchronous online learning methods outside of class . On the other hand, hybrid learning is a teaching method where teacher instructs in person and remote students at the same time. Asynchronous teaching methods can be used to supplement synchronous and face to face instruction (Robinson ,2020).

Benefits of hybrid learning

Hybrid learning has great benefits for students and faculty

First : Students

- 1- Students have more time to think deeply about the subject when they go through online materials at their own pace and on their own time.
- 2- Students re watch instructional videos and asking questions in online forums reflecting on what they learn .
- 3- Students have flexibility in learning schedule , teaching modes, how to engage with learning materials , collaboration and communication between peers and the instructor (Miller , 2020 and Boyarsky , 2020) .

Second : The benefits for Faculty

- 1- Personalization: Faculty determines the level of personalization of online and face to face interaction .
- 2- Flexibility : Faculty is free to determine the time spent in each mode and the activities used online or offline depending on the course goals and resources.
- 3- Reusability : Faculty can reuse digitized content and materials (Charlotte,2020)

Tools used in the hybrid learning

The tools used in the hybrid learning include

- 1- Video calling : Students can attend class through live videos ,at the same time as in person . It allows for face to face collaboration on student projects or interaction with instructors.
- 2- Online discussion forums : They provide students opportunity for more flexibility to participate in group discussion . It creates a learning environment that is accessible to all types of students.
- 3- Pre recorded model :It allows remote students to watch lectures as their schedules permit.
- 4- Online exercises : They give access to the same activities and assignments to create equal instruction for both types of students.
- 5- Learning management system: Slideshow or course materials , accessible to online can help students who do not come to campus (American environmental college ,2021).

Hybrid learning in different educational stages

Hybrid learning can be used in different educational stages as Robinson (2020).stated

- 1- Elementary school: Some schools use a model in which students participate in person learning and online learning .Students have three days a week in class instruction using a typical school classroom . The other two days students attend class virtually and complete assignments online from home.
- 2- High school : Educators have an opportunity to implement virtual learning tools to supplement in person learning in more complex ways . Students learn new concepts through online learning models . They are divided into two cohorts and attend in classes on two days

- 3- College : It is the most common at the college level where instructors have flexibility about how they structure their courses. It is used to accommodate students who are not able to attend class in person . It also provides students with opportunity for flexibility in choosing to attend class in person or from distance, All students learn the same material and complete the same assignment throughout the semester .

Hybrid learning environment

According to Boyarsky(2020), to create a successful hybrid learning environment, it is important to do the following

- 1- Setting the goals : It involves setting short and long term goals for the class.
- 2- Mapping it out: Teachers need to map out how they navigate the class , create a chart , table , timeline to outline course modules and their respective act.
- 3- Determining course objectives are best served as in person activities. The determined activities include
 - Synchronous group brainstorming sessions.
 - Establishing a collaborative trust based learning environment.
 - Providing immediate feedback to students .
- 4- Determining the online portion of the course : It includes
 - Self paced learning and activity completion.
 - Asynchronous group discussion.
 - Automatic grading programmes as multiple choice of true/false quizzes.
 - Written critical analysis.
- 5- Creating source content : It involves creating assignments , finding reading materials and source video content.
- 6- Giving hybrid learning plan a trial run : Before the course begins , teacher does a trial run of the online portion of the course.

Ways of structuring hybrid learning

There are five ways that are used to apply hybrid learning as Spenser (2020) emphasized

- 1- The differentiated model : Students of both groups (at home and in person) interact synchronously on the same lesson.
 - At home : Students use video conferencing to access the lessons .Direct instruction can be carried through flipped videos and students interact together.
 - In person : Students meet in person . They watch the same direct instruction videos as the virtual group. They have key moments where they interact with students at home.
- 2- The multi track model : Students work on the same lessons . They are divided into cohorts that exist in separate tracks .The cohorts rarely interact.
 - At home : Students work asynchronously in an online track. They do the same lesson in a way that does not require them to interact with.
 - In person: Students engage in learning face to face in a typical way . Teacher uses certain activities to work with the virtual cohort via video.
- 3- The split AB model : Students alternate days between being at home and being in person .It is done asynchronously with few opportunities for video conferencing.
 - At home : Students work on asynchronous assignments . They watch videos , listen to podcasts and do reading complete assignments
 - In person: They make most of face to face time by engaging in projects, doing games or getting targeted academic help from teachers.

- 4- Virtual accommodation model: Small group can function as a virtual small group and use video chat to join the in person classroom.
- At home : Students participate in all of the same face to face activities . They use video conferencing software to access learning.
 - In person : They participate in a typical face to face class One student works as the liaison with the virtual students to ensure that they can see the instructor.
- 5- The independent project model : When a face to face lesson does not work and students need to work virtually .
- At home : They work independently on a project or an adaptive learning module. The process is fully personalized.
 - In person: They continue to work in their face to face environment

Constructing hybrid learning

Hudson (2020) stated that the systematic approach to constructing hybrid learning design course includes

- 1- Planning model and deciding how to teach,
- 2- Introducing model to students : involves navigating the module space and preparing students for online learning,
- 3- Structuring weekly content and topic content,
- 4- Designing collaboration and constructing of knowledge : includes adopting active learning through collaboration and communication,
- 5- Pulling learning into application : involves building learning through learning activities and formative assessment ,
- 6- Designing summative assessment, and
- 7- Conducting the model : includes further learning and wrapping up .

Obstacles of hybrid learning

Mason (2020) identified the obstacles of hybrid learning as follows:

- 1- The tools : Saving available tools can be considered as a challenge because of a lack of resources or special needs .So, computer and a projector are the tools that can be used with students online and in person at the same time .
- 2- -Isolation : Learning online creates a feeling of isolation and the lack of social interaction or lesser element of social interaction Once students have signed in, teacher does a quick whip around ,use call and response to connect students online with others in the classroom .
- 3- Online feedback :It is challenging to check in on students online .So, teacherconsiders using an interactive presentation to share content with all students and give feedback.
- 4- Technology: It is another challenge if students can not get into zoom room and their screen freezes .So, teachers share a list of common technological issues and troubleshooting strategies.
- 5- Access the lesson: When students miss the lesson or can not access it . Teachers record the lesson .So, students can re watch the videos .
- 6- Students feel boring ,if it is done wrong.
- 7- -Educators have an opportunity to implement virtual learning tools to supplement in person learning in more complex ways . Students learn new concepts through online learning models . They are divided into two cohorts and attend in classes on two days .

Third : Persuasive speaking

Characteristics of persuasive speaking

The main characteristics of persuasive speaking as described by Schmitz(2012) include

- 1- It is interactive: The transactional model of communication is relevant to persuasive speaking as to other kinds of communication . It involves engagement between listener and speaker.
- 2- It is not coercive : Persuasive speaking relies on artistic proofs that require art or skill. The speaker uses reasons and words to motivate the audience to do what the speaker wants.
- 3- It is gradual or incremental : During persuasive speaking, the audiences compare the arguments with their experiences and knowledge. When the speaker presents strong argument, good evidence and a coherent organization the audiences can change their attitudes or performances.

Components of persuasive speaking

Genard(2019) stated that persuasive speaking is composed of both logical and emotional appeals

- 1- Logical appeals : They are arguments that introduce information and show why the conclusion must be true. The audience evaluates the speaker so s/he should present a rational argument. There are three tips to create the logical appeal:
 - a- Keep it succinct : The speaker understands that the audience never remembers key points.
 - b- Use simple language :The speaker uses words and phrases that audiences are familiar with and avoids technical and complex explanation
 - c- Have gradual revelation : When the speaker uses slides, s/he uses gradual disclosure and builds up the entire diagram.

- 2- Emotional appeals: They aim to make the audiences sympathize to accept the conclusion. The speaker influences the audience's emotion when presenting the following
 - a- Stories :The speaker uses them to emotionally connect audience to their agenda so their presentation can be improved.
 - b- Humor: When audiences laugh , they are having fun. They like to listen to the speaker as s/he has got their attention.
 - c- Vivid , sensory language and metaphors : They captivate the audience so the speaker speaks with warmth and the audiences feel emotions.

The techniques of persuasive speaking

Wench (2011) stated that the techniques of persuasive speaking are

- 1- Ethos: involving the materials and resources that should be trust worth to convince others . So, the way used while speaking should engage the audience,
- 2- Logos: containing the speaker's way of showing data that should be related to the resources,
- 3- Pathos : dealing with the affective side as the speaker should stir the audience's feelings to appeal them to follow,
- 4- Cognitive dissonance: making audiences feel uncomfortable by choosing topic that challenges their values,
- 5- Positive and negative motivation: including the art of convincing audience to the good side of speech to accept and the consequences of not accepting the speech, and
- 6- Appealing to need : seeking that the speech should suit audience's needs ie the social , self esteem, self actualization and physiological needs.

Developing persuasive speaking

Developing persuasive speaking requires emotional appeal and well reasoned arguments. So, it is important as suggested by Carlos (2019) to:

- 1- Brainstorm current issues: The topic should be newsworthy and attractive,
- 2- Choose a topic that is original and interesting :The speaker should choose a common topic with original perspective .Everyone should not be familiar with it,
- 3- Consult an online list of speech ideas: There are many online lists to prompt the speaker's inspiration. They are organized according to specific criteria such as topics that urge actions or topics about advocating a change of perspective on a specific issue, and
- 4- Choose topic that the speaker cares about :The speaker should address a topic that not all audiences feel the same about it .So, s/he should do his/her best to actually persuade them.

Hogan(2011) mentioned the following tips for developing effective persuasive speaking

- 1- Making eye contact , body language , facial expressions with the audience to let them know that the speaker is talking to them,
- 2- Using a variety in voice and tone of voice that should be appropriate to what the speaker says,
- 3- Picking examples or analogies that are appropriate for the audiences,
- 4- Expressing opinions strongly that the speaker makes an impression from the beginning and finds a way to grab the audience's attention, and Paying attention to audience 's analysis as the audiences should be convinced for their own reasons not for the speaker's reasons.

Stages of persuasive speaking

Persuasive speaking goes through the following steps

- 1- Capturing audience attention: It is important to grab the audience's attention for the topic and describe the goal. It is important to make the topic more relevant to the audience.
- 2- Describing the need : The speaker discusses the problem and describes what happens when the problem is not resolved. The speaker needs to cite evidence to support the fact that the issue needs to be addressed.
- 3- Defining solutions: The speaker outlines how the solution can solve the problem. S/he persuades the audience that is feasible .
- 4- Mitigating objections : The speaker makes note of the objections and explains how the problem can be solved and eliminated with solution.
- 5- Visualizing the change : The speaker describes how solution impacts people and places as well as the positive attributes of new experience. S/he takes the audience beyond the solution and helps them visualize the positive results of implementing of it and the negative consequences of not implementation.
- 6- Call to action : The speaker finishes with a call to action` and describes what s/he needs each person to do to bring the suggested change to reality .The speaker presents the audience the concrete steps to follow to engage in a particular action or to change behavior. (Www Toastmaster org ,2018).

Moreover, White(2020)identified the steps of persuasive speaking in the following way :

- 1- Selecting a topic and angle: The speaker chooses a controversial topic that can develop heated debates regardless of position .S/he also selects a particular angle to ensure the topic.

- 2- Defining persuasive goal : The speaker identifies exactly the goal to persuade audience and knows how to present the speech.
- 3- Analyzing the audience : The speaker understands the perspectives of the audiences . The aim not only gets them to listen but also they take a particular action .
- 4- Building an effective persuasive argument: The speaker creates and presents argument to deliver in the form of speech.

Classification of persuasive speaking

Genard(2019) stressed that persuasive speaking skills include:

- 1- Clarity : spoken language is clear and easily understood,
- 2- Vocal variety: using tone ,speed and volume tools,
- 3- Eye contact: using eye contact to engage audience,
- 4- Gestures : using physical gestures effectively,
- 5- Audience awareness: demonstrating awareness of the audience,
- 6- Comfort level: demonstrating comfort with audience,
- 7- Interest: engaging audience with interesting and well constructed content .
- 8- Persuasion : delivering a speech that is clearly intended to persuade the audience .

On the other hand ,persuasive speaking skills should include

1- Arrangement : The speaker can

- a- Clearly and effectively introduce the topic and explain its importance and relevance.
- b- Preview the argument and main points.
- c- Highlight the structure of the speech and make it easy to follow the artful transitions.
- d- Arrange the main points appropriately to persuade an oppositional audience.

2- Delivery: It includes

- a- Use notes and engage the audience
- b- Speak at a pace that contributes to the meaning and rhythm of speech.
- c- Move and use gestures in a natural way that contributes to speech.
- d- Speak confidently and with appropriate projection for the space.
- e- Use the delivery that contributes to the speaker's ethos and persuasiveness.

3- Invention and style : The speaker can

- a- Identify and respond to the most relevant and pressing concerns of the opposition.
- b- Appeal effectively to the areas where the audience can be moved.
- c- Use a variety of proofs to persuade an opposition audience.
- d- Use a variety of supporting materials.
- e- Use language that increases the persuasiveness of the argument.

4- Others : The speaker can

- a- Address a controversial issue .
- b- Create argument that is suitable for time constraints and assignment.

(Www Creative Common Attribution Share ,2020)

Formulating proposition

When thinking about a central idea statement in persuasive speaking , the terms proposition or claim should be used. Trucker (2019) stated that persuasive speaking consists of the following four types of propositions or claims:

- 1- Proposition of fact: It attempts to establish the truth of a statement .The core is based on this statement is supported by evidence or not.
- 2- Proposition of definition: It means that a word or a concept has a particular meaning . There are various ways to define words such as negation, operating, classification and division . It is used in legal and scholarly arguments.

- 3- Proposition of value : It includes using words such as good, bad ,best , worst and just .
- 4- Proposition of policy : It involves using the word ‘should’ and calling for the audience to adopt a certain behavior.

The audience of persuasive speaker

Persuasive speakers adapt their persuasive approach based on audience members' orientation toward the proposal .

Bone(2008)classified audiences into three categories :

- 1- When the audiences agree with the proposal , the speaker focuses on intensifying their agreement and moving them to action.
- 2- When audiences are neutral to the proposition, the speaker provides background information to inform them about the topic . S/he also introduces information that demonstrates the relevance of the topic to the audience.
- 3- When audiences disagree with the proposal, the speaker focuses on establishing credibility , builds common ground with them and incorporates counterargument and refutes them .

Waterman(2020) mentioned that the audiences can be classified into four categories

- 1- The supportive audiences: They are friendly and the easiest audiences because they support and promote the speaker's idea.
- 2- The uncommitted audiences: They are neutral, they are not for or against the speaker . They need information to make up their minds . The speaker's job is to convince them.
- 3- The indifferent audience :They are adaptive toward the speakers . While they are opposed to the speaker, they can appear openly bored. They are captive and forced to attend.
- 4- The opposed audiences: They are hostile to the speaker to what s/he is promoting . They do not feel warmth and sympathy to the speaker's feelings .

Evaluation of persuasive speaking skills

Andy (2014) mentioned that in evaluating persuasive speaking, specific criteria should be taken into account through answering the following questions

- 1- Is the specific goal clear?
- 2- Is the goal designed to affect audience's belief and reaction?
- 3- Is the organizational pattern appropriate for the type of goal?
- 4- Is the language clear ,vivid and appropriate?
- 5- Does the speaker use emotional language to motivate audience?
- 6- Is the speaker effective in establishing his/her credibility on the topic?
- 7- Does the delivery convince audience?

Fourth : Academic Self Concept

Self concept is one of the oldest constructs in the social sciences . So. Improving student's self concept is the target goal of education .It has been associated with other educational aims concerned with academic achievement, perservance and course work choice. It consists of a someone's self perceptions acquired through experiences and interpretations of his/her environment .

Component s of self concept

According to Miles and Naumann,(2019), Self concept consists of:

- 1- Self image : It comes down to how the person sees him/herself in the present .It also includes the labels s/he gives him/herself about his/her personality and the belief s/he has about how the world perceives him/her. It is not necessarily based on reality .
- 2- Self ideal: It is how s/he wishes s/he could be at the future.
- 3- Self esteem: It encompasses his/her current emotional experiences .It refers to the extent to which s/he likes or approves to him/herself or the extent to which s/he values him/herself.

Aspects of self concept

MCLead (2008) clarified that the aspects of self concept involves

- 1- the existential self : It is the main part of self concept. It deals with the sense of being separate and distinguished from others and the awareness of the constancy of the self. It begins in two or three months and arises due to the relationship child connect and interact with the world.
- 2- The categorical self: The child becomes aware that s/he is an object in the world that can be experienced and has various characteristics .

Domains of Self Concept

Ackerman (2021) stated that there are various theories proposed different ways of thinking about self concept such as

- 1- Social identity theory: It highlights the idea that self concept is composed of two main parts. The first is personal identity : it involves the traits and characteristics that make each person unique. The second is Social identity : it includes how persons identify with community , religion or political movement.
- 2- Self concept maintenance theory :It deals with how individuals maintain their sense of self. It is fixed in adulthood stage . It can also change with experiences.
- 3- Social comparison theories : They consider academic self concept is derived from how a student compares his/ her academic progress with his/her peer in group work and so it is very important for students' progress in learning and their future.

Academic self concept

It is the perception and evaluation that a student has or does about his/her academic abilities . it is one of the most important variables in the academic domains due to its positive effect on appropriate cognitive functioning .It also helps in creating many self regulative strategies that reflect on the academic performance .

In educational psychology, Miles and Naumann(2019)stated that academic self concept is important construct that has stimulated widespread research. A positive academic self concept is beneficial for motivating students to improve academic performance. The main distinction between general self concept and academic self concept lies in the fact that self concept refers to individual 's global self perceptions . As for the academic self concept, it concerns with individual's perception of his/her academic competence. It functions as a significant predictor of student's academic performance. Level .

The importance of developing academic self concept

Academic self concept considers how students feel about themselves as learners in school contexts.It has a remarkable effect on students' achievement, self confidence and well being. In addition ., it informs about not only their current tasks and school related activities but also their future goals and academic ambitions. So, students with low academic self concept select academic and career paths that are less challenging , creating a potential loss of skills and advancement for individual and society (Hopce et al 2014) .

Villages (2013) indicated that academic self concept is one of the main variables in the academic domains because of its significant influence on the cognitive domain . It directly affects learning processes, academic achievement and expectations of students. It enhances creating various cognitive and self regulative strategies which reflect on academic performance. In addition, Miles and Naumann(2019) mentioned that academic self concept is also considered one of the most valued college student outcomes due to its influence on academic success. It is a subcomponent of one's self esteem and connected to students' perceptions of their leadership.

Types of academic self concept

According to Minchekar (2019), there are various types of academic self concept as follows:

- 1- **Self concept of academic ability:** It deals with evaluation of self emotions ,motivations , attitudes and habits.
- 2- **Self concept of academic interests :** It involves student's feelings, motivations , habits and views of his/ her academic interest .
- 3- **Self academic of study:** It is evaluation of self abilities , interests , habits , motivations and imaginations of the students about study.
- 4- **Self concept of academic efforts :** It involves a set of self thoughts and beliefs about efforts relating to his/her education.
- 5- **Self concept of curriculum:** It concerns students' beliefs ,attitudes about the curriculum and evaluation of perceptions of curriculum of various subjects.
- 6- **Self concept of academic future:** It is a set of specific attitudes and perceptions of students about what is the benefit of education in his/ her future.

The development of academic self concept

Lives (2013) mentioned that Academic self concept develops and evokes through student's development in ages . It starts in early childhood from 3 till 5 due to parental family and teachers. On the other hand, other studies assured that academic self concept does not develop until age 7 or 8 when students evaluate their academic abilities based on receiving feedback from their teachers, parents and peers. In the age of 10or11., students view their academic abilities by comparing themselves to their peers. For college students it is important to develop academic self concept as it affects progress and achievement in different courses.

Instruments of the Study

1- A persuasive speaking skills test

To ensure the progress of the participants in persuasive speaking skills , a pre-post test for measuring the required persuasive speaking skills for the 4th year English section students , the Faculty of education, Helwan university was designed . It consisted of three questions including complete, answer Wh questions (concerning the main persuasive speaking skills with giving examples and present a specific topic). It was submitted to jury members specialized in the field of methods of teaching English to test the validity and the appropriateness.

To measure the reliability of the test, the test –retest reliability was counted. It was $r=0.78$.So, the test was reliable and could be used before and after the experiment. The final version of the test is shown in appendix (c).

2- Persuasive speaking skills rubric

In order to measure the students' progress in persuasive speaking skills , the researcher designed persuasive speaking skills scoring rubric as a pre- post measuring instrument . It measured the seven persuasive speaking skills required for the participants . It was submitted to jury members specialized in the field of methods of teaching English to test the validity and appropriateness. Having done their modifications, the rubric became valid. The final version is shown in appendix (d).

3-Academic self concept questionnaire

In order to measure the students' progress in academic self concept , the researcher designed an academic self concept questionnaire as a pre- post measuring instrument . It measured 30 academic self concept aspects required for the participants . It was submitted to jury members specialized in the field of methods of teaching English and Psychology to test the validity and appropriateness. Having done their modifications, the questionnaire became valid.The final version is shown in appendix (e).

Method of the study

The present study followed the descriptive analytical method for reviewing the theoretical background of the study. Furthermore, the quasi experimental pre- post tested one group design was used in the experimental part of the study to investigate the effect of design thinking in hybrid learning environment on developing persuasive speaking skills and academic self concept for the 4th year English students, faculty of education, Helwan university

Participants of the study .

The participants of the study consisted of 82, 4th year English section students, faculty of education, Helwan university. They were considered as the study group and divided into (A – B) group as one group attends at home and the other attends in person alternatively every week. The reason for choosing the participants was due to their bad need of training on how to speak confidently to persuade others especially in classroom with secondary school students during the practicum .

Duration of the experiment

The experiment lasted for three months, one section per a week. It started on 17th Oct., and continued to 23rd Jan 2021 . It is worth noting that the pre administration of the test and the application of the questionnaire were on 15th Oct while the post administration of the test and the application of the questionnaire were on 26th Jan .The instruments of the study were used before and after the experiment. The study group was taught through the design thinking in hybrid learning environment.

The Suggested framework of using design thinking in hybrid learning environment

- **The aim:** It aimed at developing the required persuasive speaking skills and academic self concept for the 4th year English students of Faculty of Education, Helwan University through design thinking in hybrid learning environment

- **The content** : The content consisted of nine sessions . Each three sessions deal with specific type of proposition.
 - The first three sessions dealt with fact
 - The second type dealt with value
 - The third type dealt with policy

Procedures :The proposed framework of the present study displayed in Appendix (f)went through

1- Warm up with nine whys

- a- In person: Teacher asked students to show a film and discussed with them some concepts and posed why till nine times.
- b- At home: Students watched a film and discussed with them online some concepts.

2- Empathy with personas and users journey mapping

- a- In person: Teacher asked students to answer some questions and made interviews with teams. Teacher asked students in each team to use personas during the interviews
- b- At home : Students used journey mapping : Students drew a map for their search journey from the beginning till finishing the product . It included what the interviewees felt, thought and did at each stage

3- Define with considering everything at once and assumptions mapping

- a- In person : Teacher identified the problem and used the following exercise consider everything at once through
 - Creating four quadrants like the graphic shows
 - Filling the top left with what understanding from various resources
 - Discussing and naming recurring themes in the right quadrant
 - Writing down the perspective changing insights statements from the group in the bottom right quadrant

- b- At home : teacher used assumptions mapping Teacher asked students to explore the assumptions through Desirable : Do they want this? Create a circle to include known /unknown , important / unimportant
 - Viable : Should they do this? Draw a circle including the perspective changing insight statements from the group
 - Feasible : Can they do this? Draw a circle including what they actually do.
- 4- **ideate** Teacher asked student s to brainstorm and generate ideas to find a solution to this problem
- a- In person : Teacher asked students to use the crazy 8s exercise as follows
 - grabing a piece of paper and folding it into 8 sections
 - 2-sketching 8 distinct ideas in 8 minutes as a distinct idea in each section to generate a wide variety of solutions to your challenge.
 - b- At home : students used comparable problem Teacher asked students to present best ideas in new context or combined with other problems as to relate between the problems . Students were asked to review similar problems and solutions and share their examples with the group.

The problems	Related with similar problems	Different comparable problems

5- Prototype

- a- In person: Each student tested his / her proposal , s/he should present evidence that makes his / her solution applicable Teacher asked students to use create a kanban board through the following
 - Teacher asked students to create three columns
 - Students used post its to capture job task description and placed them in the to do column

- Students sorted the jobs by priority as the highest priority jobs came at the top
 - Teacher assigned each task to a team member by writing the initials on the post it
 - Once the task was completed, the team member moved the post it to the done column
- b- At home : Students used story board
- Teacher portrayed the problem in the form of story as students meet
 - Students wrote down the whole story in a script,
 - They divided the scene into scenes
 - They created a picture for each scene-
 - They used story board to tell the story

6- Test with usability testing

- a- In person : In this step, the best solution was selected

Students conduct usability test through the following steps

- Preparation : -Students wrote a usability test plan
 - ✓ Students recruited the moderator, note aker ,participant and observers
 - ✓ Students wrote script
 - Conduct: Students prepared ,interviewed and observed
 - Analyze and report :Students discussed finding from observations during test sessions .They met after each session to discuss and reflect . Research findings can be presented to the team
- b- At home: students discussed their solutions and gave feedback to select the best one

Data Analysis and Results

The results of the study are discussed and interpreted in relation to the study questions and hypotheses, mentioned earlier, as follows:

1- Answering the first sub- question

To identify the required persuasive speaking skills for the 4th year English section students, faculty of education , Helwan university, a checklist was designed by the researcher. The checklist was submitted to nine jury members who approved it . It included seven main skills in its final version (see appendix A) . Thus, the first sub- question of the present study was answered.

2- Answering the second sub –question

To identify the required academic self concept aspects for the 4th year English section students, faculty of education , Helwan university, a checklist was designed by the researcher. The checklist was submitted to the same jury members who approved it . It included 30 items in its final version (see appendix B) . Thus, the second sub- question of the present study was answered.

3- Answering the third sub –question

The third sub- question was answered as a suggested framework for using design thinking in hybrid learning environment was designed and displayed as shown before . For more details, the suggested framework of the present study is shown in appendix (E) .

4- Answering the fourth sub -question

Answering the fourth question is related to verifying the hypotheses of the present study. So they will be dealt with together as follows:

A- Findings related to the first hypothesis

The first hypothesis stated that “-There is a statistically significant difference between the mean scores of the study group students on the pre and post administrations of the persuasive speaking skills test at the level of (0.01) , in favour of the post administration of the test

The persuasive speaking skills test was administered to the study group before and after the experiment. Data obtained were treated statistically . Findings are shown in table(2).

Table (1) *t*- Value , Mean scores , Standard of Deviation of the Experimental Group on the Pre and Post Administrations of the Test and the Effect Size

Experimental Group	Mean score	Standard Deviation	Calculate d t value	Level of significance	The Effect Size
Pre	19.20	19.24	18.44	(0.01)	0.82
Post	41.15	35.5			

Table (2)revealed that the calculated (*t*) value (18.44) was significantly higher than the tabled (*T*)value (3.94) .Thus, using design thinking in hybrid learning environment had significantly improved the study group persuasive speaking skills . Hence, the second hypothesis was verified.

Moreover, the effect size was calculated using eta square . It was (0.82) i.e higher than the large effect size value (0.8) .This showed that using design thinking in hybrid learning environment significantly improved the study group persuasive speaking skills and had a large effect size on developing them .

B- Findings related to the second hypothesis

The secondd hypothesis stated that “There is a statistically significant difference between the mean scores of the study group students on the pre and post applications of the academic self concept scale at the level of (0.01) , in favour of the post application”. The academic self concept scale was applied on the study group after the experiment. Data obtained were treated statistically . Findings are shown in table(2)

Table (2) *t*- Value , Mean scores , Standard of Deviation of the Pre and Post Applications of the academic self concept scale and the Effect Size

Group	Mean score	Standard Deviation	Calculated t value	The Effect Size
Pre	1.4	5.12	18.3	0.81
Post	17.1	24.12		

Table (2) revealed that the calculated (*t*) value (18.3) was significantly higher than tabled the (*T*)value (3.94). Thus, using design thinking in hybrid learning environment significantly improved the study group academic self concept had a large effect size . Hence, the second hypothesis was verified.

Moreover, the effect size was calculated using eta square . It was (0.81) i.e higher than the large effect size value (0.8) . This showed that using design thinking in hybrid learning environment significantly improved the study group academic self concept .

C- Findings related to the third hypothesis

The third hypothesis stated “The design thinking in hybrid learning environment is effective in developing each of the persuasive speaking skills for n the 4th year English section students of the Faculty of Education, Helwan university ” . The persuasive speaking test was administered to the study group before and after the experiment. Data obtained were treated statistically . Findings are shown in table(3).

Table (3) *t*- Value , Mean scores , Standard of Deviation of the Experimental Group on the Pre and Post Administrations of the Test and the Effect Size on Each Main Skill

Study Group	Meanscore of the pre and post administrations	Standard Deviation	Calculated t value	The Effect Size
1-Attention	1.21 3.65	1.1 3.61	28.47	0.94
2- Ideas	2.43 4.87	4.67 19.03	25.89	0.82
3-Logical appeal	3.65 6.09	12.88 29.64	28.4	0.9 3
4- Emotional appeal	1.82 7.92	2.7 5.27	27.9	0.83
5-Confidence &Engagement	3.4 4.26	7.41 14.58	18.4	0.81
6- Delivery	4.32 6.76	1.5 3.6	19.8	0.82
7-Invention& Style	2.68 7.56	5.5 4.61	8.4	0.7 1

Table (3)revealed that the calculated (*t*) value of each persuasive speaking skill was significantly higher than the tabled (*T*)value . Thus, using design thinking in hybrid learning environment was effective in developing each of the persuasive speaking skills for the 4th year English section students of the Faculty of Education, Helwan university. Hence, the third hypothesis was verified .

Moreover, the effect size of each skill was calculated using eta square formula. It was higher than the large effect size value (0.8) as shown in table (3) expect for one skill (invention& Style) . It had a medium effect size .This showed that using design thinking in

hybrid learning environment was effective in developing each of the persuasive speaking skills for the 4th year English section students of the Faculty of Education, Helwan university except for the invention & style skill . This may be due to the nature and difficulty of this skill. It had a large effect size on developing most of the main persuasive speaking skills for the study group. Thus, the fourth sub question was answered as shown before in table(3). In turn, the main question of the study was answered as the effect size on the persuasive speaking skills as a whole was large (0.85) as shown too in table (4)

5- Answering the fourth sub -question

Answering the fourth question is related to verifying the fourth hypothesis.

In order to verify the fourth hypothesis stating ‘‘there is a positive relationship between developing persuasive speaking skills and increasing academic self concept for the 4th year English students of Faculty of Education, Helwan university ’’.

To verify the validity of this hypothesis , the value of Pearson correlation coefficient between the participants’ scores in persuasive speaking test and academic self concept scale was calculated . The following table shows that there is a strong positive correlation statistically significant between the participants’ scores in persuasive speaking test and academic self concept scale at the level of (0.01) where the value reached was (0.99).

Table 4 correlation coefficient between the participants’ scores on persuasive speaking test and academic self concept scale

Tools	Number of participants	Pearson correlation coefficient	Level of Significance
Persuasive speaking test Academic self concept scale	82	0.99	the level of (0.01)

This indicated that there is a statically significant strong positive relationship between developing persuasive speaking skills and increasing academic self concept for the 4th year English section students of the Faculty of Education, Helwan university .

Findings of the study assured that the main question and its fifth sub questions were answered as design thinking in hybrid learning environment significantly improved the study group in persuasive speaking skills as a whole and all of them separately except for one and had a large effect size on the academic self concept aspects .

Discussion of results

The statistical analysis presented above , resulted in the verification of all the hypotheses of the study and answering the study questions. It also realized the achievement of the study main aim , which was to develop the required persuasive speaking skills and academic self concept for the 4th year English section students, faculty of education, Helwan university throughout the use of design thinking in hybrid learning environment.

The comparison between the performance of the study group before and after the experiment showed the improvement achieved in the required persuasive speaking skills and academic self concept in the post performance . The researcher attributed this improvement to the following factors:

- 1- Creating an effective hybrid learning environment as students had option to attend class or work online . It saved effort , space and time. Students became more interested in speaking and doing tasks . It encouraged collaboration among students .This view supported Klimova and Keati's view (2015) as they stated that the main reason why hybrid learning can be employed in teaching is that it contributes to pedagogy as it supports more interactive strategies . It encourages collaboration and deepens intercultural awareness since it puts together educators and students from anywhere .It also matches students' learning styles.

- 2- Planning the tasks and activities in hybrid learning provided students a chance to interact together with more confidence. They organized their ideas through following logical steps .So, their self confidence in presenting topic correctly increased . This view supported Dorst's view (2011) as he indicated that planning is the key to success. Teacher wants to make sure that what s/he asks students to do online was a good fit for online and the same was true for the face to face component. The hardest part of teaching hybrid was figuring out how to integrate the two experiences to capitalize on and amplify each other.
- 3- Using various tools to interact and collaborate with peers ,students were more exposed to the language and online materials allowed access to the target culture . This view supported Klimova and Keati 's view(2015) as they stated that using internet and online materials could help students improve key skills . The web based materials gave students chance to revisit lectures.
- 4- Garbing students' attention during carrying out the steps of design thinking.So, they were trained on following specific stages as they organized their ideas and ordered them in a logical way. This view supported Curedale 's view (2013) as he stated that design thinking is based on the idea of frequent iteration loops between the development phases , The return to a previous phase shows the learning success in this process and fail fast to succeed sooner.
- 5- Selecting various persuasive topics . They varied to meet students' interests and needs . The ninth sessions dealt with nine topics divided into three propositions (fact, value , policy) to engage different audiences. This view supported Bone et al (2003) as they stated that topic selection is important and is influenced by many factors . Good persuasive speeches are current ,controversial and have important implications for society . They will be more engaging for audience.

- 6- The idea of developing academic self concept was important for English section students as they lost confidence in exchanging responses , justifications and defense . This view supported Villages(2013) as he indicated that academic self concept is one of the most important variables in the academic domains, due to its significant influence on appropriate cognitive functioning . It directly affects learning processes, academic achievement expectations of students. It helps create various cognitive and self regulative strategies that reflect on academic performance,
- 7- The focus on students' needs in design thinking was used to meet students' needs and interests as the steps followed included identifying the users' needs . This view supported Gibbons ' s view (2021)as he stated that design thinking builds on students' needs . It is a user centered process that starts with user data , creates design artifacts that address real and not imaginary user needs . It tests those artifacts with real users.
- 8- Creating a sense of challenge and making something new . So, students thought as a designer who plan ,apply and test. This is consistent with Numan ' s (2014)opinions as she stated that thinking like a designer brings together what is desirable from human point of view and technologically feasible and economically viable . It allows people who are not trained as designers to use creative tools to address a vast range of challenges.
- 9- The idea of the frequent feedback as additional step in the design thinking cycle made . Students get feedback from their peers and teacher , try to correct their mistakes and avoid repetition of mistakes .This view supported Klimova and Keati's view (2015) as they assured that in hybrid learning , the more frequent teacher's feedback means students are able to practice the language more often and are able to avoid repeating errors .

- 10-The effective role of teacher as mentor tutor , lecturer and supervisor helped students .This is consistent with Liedtka and Oglivie 's view (2011) as teachers' role in design thinking can vary . They act as lectures offering topics and proposing activities. They also can guide less experienced students by offering indications. They act as simple supervisors of what is happening during training sessions,
- 11-Facing the challenge during the experiment as some students at the very beginning did not prefer working online as they had no facility in attending online classes . The researcher tried to help them by allowing them to revisit and re watch lectures.

Recommendations

In the light of the results of the present study, the following recommendations are suggested

- 1- More emphasis should be placed on developing students' persuasive speaking skills in different educational stages.
- 2- Students should be given opportunities to use hybrid learning tasks to practise language skills .
- 3- Applying design thinking in early learning stages to train students on using their minds in the learning process.
- 4- Directing the attention towards developing academic self concept in different educational stages

Suggestions for further research

- 1- Further research is needed to examine the effect of design thinking on developing listening and reading for college students.
- 2- Using other modern approaches or strategies for developing persuasive speaking skills for English teachers .
- 3- Further research is suggested to investigate the effect of hybrid learning tasks on improving teachers' linguistic performance .

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